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5 UNITED STATES DISTRICT COURT
6 EASTERN DISTRICT OF CALIFORNIA

7
8 DUHN OIL TOOL, Inc.,
9 Plaintiff,
10
11 v.
12 COOPER CAMERON CORPORATION,
13 Defendants.

1:05-cv-01411-OWW-GSA

MEMORANDUM DECISION REGARDING
MOTIONS FOR ENTRY OF JUDGMENT,
MOTION FOR JUDGMENT AS A
MATTER OF LAW

14 I. INTRODUCTION.

15 Plaintiff Duhn Oil Tool, Inc. proceeds with a patent
16 infringement action against Defendant Cooper Cameron Corporation.
17 On February 2, 2011, a jury found Defendant liable for infringement
18 and contributory infringement. (Doc. 668). The jury also found
19 several of the patent's claims invalid and returned an advisory
20 verdict on Defendant's counterclaim for inequitable conduct.

21 On February 9, 2011, the parties filed motions for entry of
22 judgment. (Docs. 675, 676). The court heard the parties' motions
23 on February 11, 2011 and requested briefing on a dispute between
24 the parties regarding the scope of the jury trial. The parties
25 submitted briefing on the jury issue on February 28, 2011. (Docs.
26 681, 682). The parties submitted proposed findings of fact on
27 March 7, 2011. (Docs. 685, 686). The parties proposed findings
28

1 are based on their respective positions regarding the scope of they
2 jury's verdict.¹

3 **II. FACTUAL BACKGROUND.**

4 Duhn Oil Tool, Inc. ("Duhn Oil" or "Plaintiff") and Cooper
5 Cameron Corporation ("Cameron" or Defendant") are manufacturers of
6 wellhead systems and components for the oil and gas industry.
7 Cameron is a former purchaser of Duhn Oil wellhead components,
8 including Duhn Oil's W2 tubing heads and W92 casing heads. Cameron
9 purchased Duhn Oil components for resale to end users.

10 In 1996, Duhn Oil obtained a patent for a device it named the
11 "Quicklock Drilling Flange" ("QDF"), a drilling flange capable of
12 being quickly attached to a wellhead assembly. Duhn Oil's QDF is
13 designed to be secured to the casing head of a wellhead assembly by
14 lock screws that engage a groove cut in the body of the drilling
15 flange. Use of lock screws to secure wellhead components in the
16 manner disclosed in Duhn Oil's QDF patent is a standard method for
17 securing wellhead components in the oil and gas industry.

18 In or about February 2001, Cameron employee John Rogers called
19 Rex Duhn, Duhn Oil's president, and requested development of a
20 wellhead isolation tool for Barrett Resources, an end user of Duhn
21 Oil's products. Rogers conveyed that Barrett Resources desired a
22 "frac mandrel" that would permit Barrett Resources to continue
23 using Duhn Oil's existing wellhead components, including the W2
24 tubing heads, W92 casing heads, and lock screws. A frac mandrel is
25 a wellhead isolation tool designed to protect a well's hydrocarbon
26

27 ¹ Defendant submitted a second set of proposed findings on June 8, 2011. (Doc.
28 701).

1 production components from pressures entailed by fracturing
2 operations, which exceed the pressure rating of conventional
3 production components. Fracturing operations stimulate an existing
4 well's production by introducing abrasive material into the well's
5 producing regions at high pressure in order to create pathways for
6 hydrocarbon extraction. The frac mandrel Rex Duhn set out to
7 create after speaking to John Rogers ultimately culminated in
8 United States Patent No. 6,920,925 ("925 Patent").

9 After his conversation with John Rogers, Rex Duhn began
10 working on an extension of Duhn Oil's QDF system that would provide
11 Barrett Resources with a frac mandrel compatible with Duhn Oil's W2
12 and W92 products. However, the single set of lock screws employed
13 in Duhn Oil's original QDF device proved to be insufficient for
14 retaining the frac mandrel in a tubing head under high pressure.
15 Rex Duhn sought assistance from Robert Meek, Duhn Oil's chief
16 engineer. Ultimately, a secondary flange with a second set of lock
17 screws was conceived that rendered the frac mandrel functional
18 under the extreme pressures generated by the fracturing process.

19 Rex Duhn sent preliminary design drawings to John Rogers in
20 order to obtain feedback from Rogers and Barrett Resources. Rogers
21 provided suggestions that Duhn Oil endeavored to incorporate into
22 the design. Final design drawings for a "QDF frac mandrel" were
23 completed in May, 2001 and Duhn Oil began marketing the QDF frac
24 mandrel to end users. Rogers left Cameron and joined Duhn Oil in
25 May, 2001 to begin marketing Duhn Oil's QDF frac mandrel. Rogers
26 was terminated from Duhn Oil in 2005 for cause.

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1 **The '925 Patent**

2 Duhn Oil filed a provisional patent application for its QDF
3 frac mandrel on February 19, 2002 listing Robert Meek and Rex Duhn
4 as inventors. On February 19, 2003, Duhn Oil filed application
5 number 10/363,070 ("070 Application"), which claimed priority to
6 the provisional patent application filed in 2002. On May 16, 2003,
7 Duhn Oil submitted a Petition to Make Special requesting expedited
8 review of the '070 Application. The Petition to Make Special
9 stated that Cameron was infringing at least some of the claims
10 disclosed in Duhn Oil's patent application.

11 The Examiner initially rejected Duhn Oil's patent application
12 as anticipated by prior art. In response, Duhn Oil added a clause
13 to claim 1 referred to by the parties as "the wherein clause." The
14 wherein clause is critical to the parties respective claims. Duhn
15 Oil's application matured into United States Patent No. 6,920,925
16 ("the '925 Patent"), entitled "Wellhead Isolation Tool," on July
17 26, 2005. The '925 Patent is comprised of 88 claims.

18 The '925 Patent teaches a casing head coupled to a wellbore and
19 a tubing head mounted over the casing head. The tubing head has a
20 first radial flange extending from it at an upper end. A generally
21 elongate annular member (the frac mandrel) is suspended
22 concentrically within the tubing head and aligned with a production
23 casing suspended below in the wellbore. The frac mandrel has a
24 second radial flange extending from it. In some embodiments, the
25 first flange extending from the tubing head and the second flange
26 extending from the frac mandrel are fastened together.

27 All claims at issue in this action depend from claim 1 of the
28 '925 Patent. Claim 1 specifies a wellhead assembly having various

1 components as follows:

- 2 1. A wellhead assembly comprising:
- 3 . a casing;
 - 4 . a first tubular member mounted over the casing;
 - 5 . a first tubular member flange extending from the first tubular member;
 - 6 . a generally elongate annular member ("frac mandrel") suspended in the first tubular member, said annular member having a first end portion extending above the first tubular member and a second end portion below the first end portion;
 - 7 . a secondary flange extending from the frac mandrel;
 - 8 . a plurality of fasteners fastening the secondary flange to the first tubular member flange; and
 - 9 . a production tubular member aligned with the frac mandrel, wherein an axial force acts on the generally frac mandrel and is reacted in both the first tubular member flange and the secondary flange.

10 Claim 1 identifies the components either by their location and/or
11 their functionality. For example, the production tubular member is
12 aligned with the annular member in such a way that an axial force
13 acts on the annular member and such force is reacted in the first
14 tubular member flange and the secondary flange to which it is
15 attached.

16 The court has interpreted the critical "wherein" clause of
17 claim 1 as follows:

18 [The "wherein" clause] requires that the wellhead
19 assembly be in an environment where there is an axial
20 force present and acting on the frac mandrel. Given that
21 an axial force is present and acting on the frac mandrel,
22 the wherein clause imports the functional limitation that
23 said axial force be reacted in both the first tubular
24 member flange and the secondary flange. The clause does
25 not require that an axial force be applied by a user nor
26 does it specify a method as to how the force is provided.

27 This "wherein" clause also requires a "dual load path" -
28 which means that there must be an independent force path
(engagement) between the claimed "elongate annular
member" (e.g., a "frac mandrel") and each of the two
claimed flanges, which are the "first tubular member

1 flange" (e.g., the upper flange of a "tubing head") and
2 the "secondary flange." These two separate independent
3 force paths (engagements) must each have contact with
4 the frac mandrel, which provides for a transmission of
5 the axial force from the elongate annular member to the
6 first tubular member flange, and a separate transmission
7 of the axial force from the elongate annular member to
8 the secondary flange.

9 (Doc. 660 at 75).

10 **The Parties' Claims**

11 Duhn Oil asserts that Cameron's Time Saver Wellhead ("TSW")
12 frac mandrel infringes claims 2, 3, 5, 19, and 29 of the '925
13 Patent. Each of these claims depend from claim 1 and includes the
14 "wherein" clause. Duhn Oil seeks damages and injunctive relief.

15 Cameron seeks a declaration that the '925 Patent is invalid
16 for obviousness and anticipation. Cameron's obviousness claim is
17 based on two prior art references: (1) U.S. Patent No. 6,289,993
18 ("'993 Patent"); and (2) a 1994 Catalogue ("'94 Catalogue")
19 describing an "MTBS Tubing Hanger" offered for sale by Cameron.
20 The '993 Patent is one of the U.S. Patents listed in the References
21 Cited section of the '925 Patent. The '94 Catalogue was not before
22 the Examiner.

23 Cameron also asserts that the '925 Patent is unenforceable due
24 to Duhn Oil's inequitable conduct. Specifically, Cameron contends
25 that Duhn Oil committed inequitable conduct by failing to name John
26 Rogers as an inventor and by failing to disclose the '94 Catalogue
27 to the Patent Office. Cameron also asserts that Rex Duhn is
28 improperly listed as an inventor on the '925 Patent.

29 **Jury Demand Confusion**

30 The only jury demand properly submitted by either party is
31 Plaintiff's demand for a jury trial on the limited issue of willful
32

1 infringement. (See Doc. 424). The Third Amended Complaint ("TAC")
2 provides: "Plaintiff hereby demands a trial by jury on the issue of
3 whether Defendant's infringement is willful." (Doc. 424 at 9).
4 Defendant never demanded a jury trial on any issue.

5 Prior to 2010, both parties expressed their understanding that
6 the court would be the trier of fact. For example, on January 6,
7 2009, the court conducted a hearing during which the following
8 exchange took place between the court and counsel:

9 THE COURT: ...[Whether] this specific instance...is...an
10 example of non-infringement or infringement, that's going
11 to be for the jury to determine. That's going to be a
12 question of fact. And whether the pressures make a
13 difference or not, it's going to be a question of fact.
14 It is that. And so -

15 MR. DALY: One point, Your Honor, there is no jury
16 demand in this case, so --

17 THE COURT: There is no jury demand by either side?

18 MR. DALY: No.

19 MR. ROGERS: None by us either. You'll be the trier
20 of fact, Your Honor.

21 MR. DALY: You'll be the trier of fact

22 THE COURT: Now you have really ruined my day because
23 in all the patent cases that we have tried in this Court,
24 when they've gone to the federal circuit, quite frankly,
25 and they -- we've had some adverse rulings, but every one
26 of them has been affirmed. I believe there's four. And
27 the bottom line was it was the jury who made the findings
28 of fact. So that I didn't know.

MR. ROGERS: I appreciate that. I think I can close
this issue out.

THE COURT: Maybe the Court is going to appoint an
advisory jury to give me some help.

MR. ROGERS: I appreciate that, Your Honor.

(Doc. 287 at 46-47).

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1 Confusion regarding the scope of the jury trial arose in 2010
2 during formulation of the joint pretrial statement required by
3 Local Rule 281(a)(2). E.D. Cal. R. 281. On August 25, 2010,
4 Plaintiff's counsel emailed a draft joint pretrial statement to
5 Defendant's counsel. Plaintiff's draft stated "Duhn has demanded
6 a jury trial." (Doc. 682, Rogers Decl. Ex. A). Defendant's
7 counsel responded to Plaintiff's counsel by emailing a modified
8 draft joint pretrial statement on August 31, 2010. Defendant's
9 draft joint pretrial statement changed the language regarding
10 Plaintiff's jury demand to read "Duhn **Oil** has demanded a jury trial
11 **for its allegation of willful infringement.**" (Id., Ex. B)
12 (emphasis added to reflect Defendant's modification). On September
13 1, 2010, Plaintiff's counsel emailed a second draft joint pretrial
14 statement to Defendant's counsel which eliminated Defendant's
15 changes so that the jury statement read "Duhn as demanded a jury
16 trial." (Id., Ex. C). On September 2, 2010, Defendant's counsel
17 emailed to Plaintiff's counsel a draft joint pretrial statement
18 which combined the parties' respective statements regarding the
19 jury demand:

20 Duhn contends that it has demanded a jury trial. Cameron
21 contends that Duhn Oil has only demanded a jury for its
22 willful infringement allegations and cites to Duhn Oil's
Third Amended Complaint (Doc. No. 424).

23 (Id. Ex. D). The jury demand language contained in Defendant's
24 September 2, 2010 draft became the operative language submitted in
25 the parties' joint pretrial statement. (Doc. 444). The joint
26 pretrial statement was signed by counsel for both parties.

27 During the pretrial conference on September 13, 2010, the
28 court noted the divergent contentions regarding the jury demand

1 reflected in the joint statement and asked the parties to express
2 their respective positions. The following exchange took place:

3 THE COURT: My sense is that on the infringement issues,
4 you're entitled to jury. And on other issues, we're going
5 to have a jury, we could have an advisory jury where
6 there are factual findings. I find that that often is
7 very helpful. And so what's the parties' view?

8 MR. ROGERS: The only jury demand in this case is the
9 plaintiff has a demand for a jury on their singular issue
10 of alleged willful infringement. As far as all the other
11 issues, I believe we talked in the past about you wanting
12 an advisory jury on the other issues.

13 MR. WHITELOW: Your Honor, we do not object. In fact,
14 [sic] suggest that a jury sit on the factual issues for
15 infringement because before you get to willfulness,
16 you've got to find infringement. And I'd leave it to the
17 discretion of the Court in terms of which --

18 THE COURT: The damages is normally a jury triable
19 issue as well.

20 MR. ROGERS: We understood, from our past hearings,
21 that we would have advisory jury on -- that there would
22 be a jury on all issues, that it would be as of -- as of
23 the demand for the willful infringement issue and then
24 advisory for all other issues.

25 THE COURT: Defendant has not demanded a jury. There
26 will be a jury on willful infringement issues and other
27 issues, to which the entitlement exists as a legal right.
28 In all other respects, the jury shall be advisory.

(Doc. 465 at 14-15). No party expressed any objection to the scope
of the jury trial announced by the court at the pretrial
conference.

The court entered a Final Pretrial Order ("FPO") on September
29, 2010. (Doc. 468). The FPO provides:

II. Jury/Non-Jury Trial

1. Duhn contends that it has demanded a jury trial. Cameron contends that Duhn Oil has only demanded a jury for its willful infringement allegations and cites to Duhn Oil's Third Amended Complaint (Doc. No. 424).

2. Defendant has not demanded [sic] jury. There will be

1 a jury trial on willful infringement issues and other
2 issues to which the entitlement exists as a legal right.
3 In all other respects, the jury shall be advisory.

4 (Doc. 468 at 1-2). The FPO further provides:

5 The Final Pretrial Order shall be reviewed by the parties
6 and any corrections, additions, and deletions shall be
7 drawn to the attention of the court immediately.
8 Otherwise, the Final Pretrial Order may only be amended
9 or modified to prevent manifest injustice pursuant to the
10 provisions of Fed. R. Civ. P. 16(e).

11 (Id. at 37). Neither party sought clarification, amendment, or
12 modification of the FPO.

13 At the close of evidence, both parties moved for judgment as
14 a matter of law on various issues pursuant to Federal Rule of Civil
15 Procedure 50. *Inter alia*, Plaintiff moved for judgment as a matter
16 of law on the issues of obviousness, anticipation, and
17 inventorship. (Doc. 696 at 15-22). Defendant moved for judgment
18 as a matter of law on infringement, inventorship, and damages,
19 among other issues. (Id. at 28-40). The court denied certain of
20 the parties motions on the record and took others under submission.

21 **The Jury's Verdict**

22 A fourteen day jury trial commenced on January 12, 2011. On
23 February 2, 2011, the jury returned verdicts finding Defendant
24 liable for infringing claims 2, 3, 5, 19, and 29 of the '925 Patent
25 and for contributory infringement regarding claims 2, 3, 5, and 29,
26 but not claim 19. (Doc. 668). The jury found that Plaintiff is
27 entitled to \$5,909,974 in lost profit damages and \$2,750,000 in
28 lost royalties. The jury rejected Plaintiff's claims of inducing
infringement and willful infringement and also rejected Defendant's
inequitable conduct defenses.

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1 During deliberations, the jury sought clarification of the
2 court's instructions on independent and dependent claims. The jury
3 asked the following question:

4 Can we have additional clarification on independent and
5 dependent claims? There are different interpretations
6 regarding claims. If an answer is yes/no on one claim,
7 are all subsequent claims the same answer?

8 (Doc. 698 at 12). The court responded, in pertinent part:

9 There are two types of patent claims. Independent claims
10 and dependent claims. An independent claim sets forth all
11 of the requirements that must be met in order to be
12 covered by that claim. Thus it is not necessary to look
13 at any other claim to determine what an independent claim
14 covers.

15 For example, claim 1 of the '925 patent is an independent
16 claim. And so it stands alone. You don't have to look to
17 any other part of the patent to determine what its
18 requirements are. Claims 2, 3, 4, 5, 19 and 29 in the
19 '925 patent are dependent claims, which depend directly
20 or indirectly on claim 1. A dependent claim does not
21 itself recite all the requirements of the claims, but
22 refers to another claim for some of its requirements. In
23 this way, the claim depends on another claim. A dependent
24 claim incorporates all of the requirements of the claims
25 to which it refers. And I think the parties will agree
26 that all these dependent claims refer to claim 1...To
27 determine what a dependent claim covers, it is necessary
28 to look at both the dependent claim and any other claims
to which it refers.

(Id. at 17-18). Juror number three then asked a follow up
question:

22 JUROR NUMBER THREE: do those instructions that you just
23 gave regarding number 1, question number 1, also apply,
24 and specifically the way that you designated how we are
to approach 1 and 2...Do those also apply to questions 2,
3, 4, et cetera?

25 THE COURT: Yes. You are -- specifically you are to
26 approach, in the verdict form, the finding on
27 anticipation and the finding on obviousness, you approach
28 that in the same manner. You go through and you analyze
each one of those questions in relation to the test you
have for anticipation or obviousness.

1 (Id. at 22).

2 Ultimately, the jury found that Defendant proved by clear and
3 convincing evidence that claims 2, 3, 4, 5, 19, and 29 are invalid
4 for obviousness, and that claims 2, 3, 4, 5, and 29 are invalid for
5 anticipation. However, the jury found that claim 1 was not proven
6 to be anticipated or obvious. Claim 1 is the independent claim
7 from which claims 2, 3, 4, 5, 19, and 29 depend. After receiving
8 the jury's verdicts on anticipation and obviousness, the court
9 called a side bar in order to give the parties an opportunity to
10 respond to the inconsistency in the jury's verdict. Neither party
11 requested that the jury be sent back for further deliberations to
12 resolve the inconsistency. Instead, at the parties' request, the
13 court received the remainder of the jury's verdict. The court then
14 discharged the jury and thanked them for their service.

15 **III. DISCUSSION.**

16 **A. Scope of the Jury Trial**

17 The parties dispute the scope of the jury trial. Plaintiff
18 avers the jury's verdicts are advisory on all issues other than
19 willful infringement. Defendant contends that all issues were
20 submitted to the jury for binding determination with the exception
21 of Defendant's equitable defenses.

22 **1. The Seventh Amendment in Patent Infringement Actions**

23 The Seventh Amendment right to jury trial applies in patent
24 infringement actions for damages. *E.g., Tegal Corp. v. Tokyo*
25 *Electron Am., Inc.*, 257 F.3d 1331, 1339 (Fed. Cir. 2011)
26 (discussing *Gardco Mfg., Inc. v. Herst Lighting Co.*, 820 F.2d 1209,
27 1212 (Fed. Cir. 1987) and *Markman v. Westview Instruments, Inc.*,

1 517 U.S. 370 (1996)).²

2 For purposes of the right to a jury trial in patent
3 cases, it is inconsequential whether the parties are
4 aligned in the conventional manner (patentee as plaintiff
5 and accused infringer as defendant and invalidity
6 counterclaimant) or in the manner that results when the
7 accused infringer initiates the action as a declaratory
8 judgment (accused infringer as plaintiff and patentee as
9 defendant and infringement counterclaimant).

7 *In re Tech. Licensing Corp.*, 423 F.3d 1286, 1288 (Fed. Cir. 2005)
8 (citing *In re Lockwood*, 50 F.3d 966, 974-75 (Fed. Cir. 1995)
9 *vacated at* 515 U.S. 1182 (1995)). The accused infringer or
10 declaratory judgment counterclaimant is entitled to a jury trial if
11 the infringement claim, as asserted by the patentee, would give
12 rise to a jury trial. *E.g.*, *Tech. Licensing Corp.*, 423 F.3d at
13 1290.

14 Infringement and validity are legal issues that entail the
15 right to a jury trial. *See, e.g.*, *Gardco*, 820 F.2d at 1212;
16 *Lockwood*, 50 F.3d at 980; *Tech. Licensing Corp.*, 423 F.3d at 1290-
17 91. The Seventh Amendment jury trial right does not attach to
18 claims based in equity, such as the defense of inequitable conduct.
19 *E.g.*, *Gardco*, 820 F.2d at 1213 ("the defense of inequitable conduct
20 is 'equitable in nature and thus does not give rise to the right of
21 trial by jury'"). If factual issues common to both legal and
22 equitable claims are involved in a single case, the legal claims
23 must be determined by the jury prior to any final court
24 determination of the equitable claims. *Shum v. Intel Corp.*, 499
25 F.3d 1272, 1277 (Fed. Cir. 2008) (citing *Dairy Queen, Inc. v. Wood*,

26
27 ² Federal Circuit law controls the scope of the jury trial right in patent cases.
28 *E.g.*, *Gardco*, 820 F.2d at 1212 (noting that question "clearly implicates the
jurisprudential responsibilities in [patent law,] a field within [the Federal
Circuit's] exclusive jurisdiction").

1 369 U.S. 469, 479 (1962) and *Beacon Theatres v. Westover*, 359 U.S.
2 500, 508 (1959)). Where "substantial commonality" exists between
3 the factual questions presented by legal and equitable claims, jury
4 findings pertaining to the legal claims constrain the court's
5 determination of equitable claims. *E.g.*, *Cabinet Vision v.*
6 *Cabnetware*, 129 F.3d 595, 600 (Fed. Cir. 1997) ("the facts
7 underlying Cabnetware's inequitable conduct defense and its Walker
8 Process counterclaim possess 'substantial commonality' so that,
9 because the jury answered question 7, the Seventh Amendment
10 constrains the court's equitable determination") (citing *Gardco*,
11 820 F.2d at 1212); *Shum*, 499 F.3d at 1277; *Beacon Theatres*, 359
12 U.S. at 508.

13 **2. The Federal Rules of Civil Procedure**

14 The Federal Rules of Civil Procedure preserve all jury trial
15 rights under the Seventh Amendment and federal statutes. *E.g.*,
16 *Craig v. Atlantic Richfield Co.*, 19 F.3d 472, 475 (9th Cir. 1994)
17 (citing Fed. R. Civ. P. 38(a)). Rule 38(b)³ proscribes the
18 procedural requirements for demanding a jury trial:

19 On any issue triable of right by a jury, a party may
20 demand a jury trial by:

21 (1) serving the other parties with a written
22 demand--which may be included in a pleading--no later
23 than 14 days after the last pleading directed to the
24 issue is served; and

25 (2) filing the demand in accordance with Rule 5(d).

26 Fed. R. Civ. P. 38(b). A demand pursuant to Rule 38(b) is
27 considered a demanded for a jury trial on all issues triable as of

28 ³ Unless otherwise noted, all citations to Rules in this opinion are citations
to the Federal Rules of Civil Procedure.

1 right unless the demand indicates that the demanding party only
2 seeks a jury trial on specified issues. Rule 38(c) provides:

3 In its demand, a party may specify the issues that it
4 wishes to have tried by a jury; otherwise, it is
5 considered to have demanded a jury trial on all the
6 issues so triable. If the party has demanded a jury trial
7 on only some issues, any other party may--within 14 days
8 after being served with the demand or within a shorter
9 time ordered by the court--serve a demand for a jury
10 trial on any other or all factual issues triable by jury.

11 Fed. R. Civ. P. 38(c). Rule 38(c) presents a party seeking a jury
12 trial with a choice: "either list specific issues for the jury to
13 consider, or make a general demand, which will be deemed to cover
14 all issues triable to a jury." *Lutz v. Glendale Union High Sch.*,
15 *Dist. No. 205*, 403 F.3d 1061, 1065 (9th Cir. 2005).⁴ "A jury demand
16 will be deemed to cover all issues only if it doesn't specify
17 particular issues." *Id.* (emphasis added).

18 "A party waives a jury trial unless its demand is properly
19 served and filed," Fed. R. Civ. P. 38(d), but courts must "indulge
20 every reasonable presumption against waiver" and "accept jury
21 demands that fall far short of the ideal," *Lutz*, 403 F.3d at 1064.
22 Although there is a strong presumption against waiver of the right
23 to a jury trial, in order to satisfy Rule 38's requirements and
24 preserve the right to a jury trial, a jury demand be sufficiently
25 clear to alert a careful reader that a jury trial is requested on
26 an issue. *See, e.g., id., see also Solis v. Los Angeles*, 514 F.3d
27 946, 954 (9th Cir. 2008) (citing *Lutz* for the proposition that
28 "because Solis's jury demand was 'sufficiently clear to alert' both

⁴ Regional circuit law controls application of procedural rules related to jury demands in patent cases. *E.g., Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1296 (Fed. Cir. 2010).

1 the Defendants and the district court 'that a jury trial [wa]s
2 requested,'" plaintiff was entitled to jury trial). Once a party
3 has filed a proper jury demand pursuant to Rule 38, the trial on all
4 issues encompassed in the party's Rule 38 demand must be by jury
5 unless the parties stipulate to a nonjury trial or the court finds
6 that there is no federal right to a jury trial on some or all of
7 those issues. Fed. R. Civ. P. 39(a). Issues on which a jury trial
8 is not properly demanded must be tried by the court. Fed. R. Civ.
9 P. 39(b).

10 Rule 39 provides two alternatives that permit cases to be tried
11 to a jury notwithstanding the absence of a proper jury demand under
12 Rule 38. First, Rule 39(b) authorizes district courts, on motion,
13 to order a jury trial on any issue for which a jury trial might have
14 been demanded. *Id.* A district court's discretion under Rule 39(b)
15 is narrow and does not permit a court to grant relief when the
16 failure to make a timely demand results from an oversight or
17 inadvertence, *E.g., Zivkovic v. S. Cal. Edison Co.*, 302 F.3d 1080,
18 1086-87 (9th Cir. 2002) (citations omitted).

19 Second, Rule 39(c) permits courts to try matters to the jury
20 with the parties' consent. Rule 39(c) provides:

21 Jury Trial by Consent. In an action not triable of right
22 by a jury, the court, on motion or on its own:
23 (1) may try any issue with an advisory jury; or
24 (2) may, with the parties' consent, try any issue by
25 a jury whose verdict has the same effect as if a jury
26 trial had been a matter of right, unless the action is
27 against the United States and a federal statute provides
28 for a nonjury trial.

26 Fed. R. Civ. P. 39(c). Several circuit courts of appeal have held
27 that Rule 39(c) does not require express consent, and that failing
28 to object to conduct of a jury trial constitutes implied consent

1 sufficient to satisfy Rule 39(c). *E.g., Bereda v. Pickering Creek*
2 *Indus. Park*, 865 F.2d 49, 52 (3rd Cir. 1988) ("If one party demands
3 a jury, the other parties do not object, and the court orders trial
4 to a jury, this will be regarded as trial by consent" under Rule
5 39(c)) (citing *C. Wright & A. Miller*, 9 Federal Practice and
6 Procedure § 2333 (1971) and *Stockton v. Altman*, 432 F.2d 946, 949-50
7 (5th Cir. 1970), *cert. denied*, 401 U.S. 994, 28 L. Ed. 2d 532, 91
8 S. Ct. 1232 (1971)); *Broadnax v. City of New Haven*, 415 F.3d 265,
9 273 (2nd Cir. 2005) ("if the parties do not object, a non-jury claim
10 may be tried and decided by a jury."); *Pals v. Schepel Buick & GMC*
11 *Truck, Inc.*, 220 F.3d 495, 501 (7th Cir. 2000) ("mutual implied
12 consent supports the jury's authority to resolve issues that
13 normally would be decided by the court"); *Thompson v. Parkes*, 963
14 F.2d 885, 886, 888 (6th Cir. 1992) (finding consent to try equitable
15 claims to a jury under Rule 39(c) where parties' course of conduct
16 and pretrial order indicated trial by jury). Although the court has
17 not located published Ninth Circuit authority establishing that
18 participation in a jury trial without objection is tantamount to
19 consent under Rule 39(c), this result necessarily extends from
20 binding Ninth Circuit precedent.

21 Pursuant to Ninth Circuit law, the procedural protections of
22 Rules 38 and 39 are subject to waiver. *See, e.g., Craig*, 19 F.3d at
23 477 (citing *Reid Bros. Logging Co. v. Ketchikan Pulp Co.*, 699 F.2d
24 1292, 1304 (9th Cir. 1983), *cert. denied*, 464 U.S. 916 (1983) for
25 the "general proposition that a party's course of conduct may
26 prevent it from relying on procedural protections in Rules 38 and

27
28

1 39"))).⁵ It is well settled that participation in bench trial
2 without objection effects waiver of the jury trial right, e.g.,
3 *White v. McGinnis*, 903 F.2d 699, 703 (9th Cir. 1990) (en banc),
4 notwithstanding the constitutional mandate to "indulge every
5 reasonable presumption against waiver," *Lutz*, 403 F.3d at 1064.
6 *A fortiori*, where there is no risk to the venerable constitutional
7 jury trial right hanging in the balance, participation in a jury
8 trial without objection must effect waiver of the procedural
9 protections afforded by Rules 38 and 39. See *O2 Micro Int'l Ltd.*
10 *v. Monolithic Power Sys., Inc.*, 399 F.Supp. 2d 1064, 1087 (N.D.
11 Cal. 2005) (citing *Thompson*, 963 F.2d at 890 and Rule 39(c) for the
12 proposition that court lacked power to treat jury's verdict on
13 patent issues as advisory after case was submitted to a jury);
14 *Simonelli v. Univ. of Cal.- Berkeley*, 2007 U.S. Dist. LEXIS 81634
15 * 8 (N.D. Cal. 2007) ("Where a party demands a jury trial on an
16 issue that is not jury triable, the opposing party's failure to
17 object may be deemed 'consent' to the jury") (citing *Broadnax*, 415
18 F.3d at 270); see also *Pradier v. Elespuru*, 641 F.2d 808, 811 (9th
19 Cir. 1981) ("the parties are entitled to know at the outset of the
20 trial whether the decision will be made by the judge or the jury.");
21 Fed. R. Civ. P. 1 (Federal Rules of Civil Procedure "should be
22 construed and administered to secure the just, speedy, and
23

24 ⁵ In *Craig*, the Ninth Circuit held that where certain defendants did not
25 "unambiguously and determinedly consent" to a co-defendant's jury demand, the
26 defendants were not estopped from opposing the plaintiff's motion asserting an
27 untimely jury demand under Rule 39(b). 19 F.3d at 477 (quoting *Reid Bros.*, 699
28 F.2d at 1305 (9th Cir.1983)). *Craig* offers no analysis of Rule 39(c). To the
extent *Craig* can be read for the proposition that consent to jury trial under
Rule 39(c) requires "unambiguous, determined consent," the parties' course of
conduct and assent to the pretrial order constitute the requisite level of
consent in this case.

1 inexpensive determination of every action and proceeding”).

2 **3. The Final Pretrial Order**

3 A final pretrial order supersedes all prior pleadings and
4 controls the subsequent course and scope of the action. *E.g.*,
5 *Rockwell Int'l Corp. v. United States*, 549 U.S. 457, 475 (2007)
6 (quoting Fed. Rule Civ. Proc. 16(e)). Claims, issues, defenses,
7 or theories of damages not included in the pretrial order are waived
8 even if they appeared in the complaint, and conversely, the
9 inclusion of a claim in the pretrial order is deemed to amend any
10 previous pleadings which did not include that claim. *Id.* (citation
11 omitted). Because the pretrial order has the power to supercede
12 pleadings with respect to the substantive claims advanced by the
13 parties, *id.*, it follows that the pretrial order also has the power
14 to supercede the portions of the parties' pleadings setting forth
15 jury demands, *see, e.g., Pals*, 220 F.3d at 501 (noting that if the
16 court orders a trial to a jury and the parties do not object, both
17 sides are deemed to consent to have the case decided by the jury and
18 “the pleadings are deemed amended to give permission”); *Bereda*, 865
19 F.2d at 52 (noting that where court ordered trial to jury and
20 neither party objected, jury's verdict was binding); *see also* Fed.
21 R. Civ. P. 15(b) (permitting amendment of pleadings after trial to
22 conform pleadings based on issues tried by implied consent).
23 Parties are entitled to rely on the scope of the jury trial
24 described in the pretrial order. *Pradier*, 641 F.2d at 811; *see also*
25 *Thompson*, 963 F.2d at 886, 888.

26 Here, after the court discussed with the parties that the jury
27 would decide all issues triable as of right to a jury, the FPO was
28 drawn to so provide. The FPO contains an express provision that

1 instructed any party that believed amendment to the FPO was
2 necessary to make the appropriate motion. No party sought to amend
3 the FPO. Although the FPO is not a model of clarity, the plain
4 language and the parties' course of conduct establish its meaning
5 beyond the shadow of a doubt.

6 In order to interpret the meaning of an ambiguous provision of
7 a pretrial order, the court must first consider the plain language
8 of the order. See, e.g., *DP Aviation v. Smiths Indus. Aero. & Def.*
9 *Sys.*, 268 F.3d 829, 842 (9th cir. 2001) (undertaking analysis of
10 competing interpretations by first examining the language of the
11 pretrial order and ultimately adopting most reasonable
12 interpretation). Although the court's interpretation of the
13 language employed in its own order is most authoritative, *Lampkin*
14 *v. Int'l Union, United Auto., Aero. & Agric. Implement Workers of*
15 *America*, 154 F.3d 1136, 1147 (10th Cir. 1998), the parties' course
16 of conduct is also relevant to ascertaining the meaning of ambiguous
17 portions of a pretrial order, see *DP Aviation*, 268 F.3d at 842
18 (evaluating parties' conduct at trial in construing the meaning of
19 ambiguous language in pretrial order); accord *Johnson v. Geffen*, 294
20 F.2d 197, 199-200 (D.C. Cir. 1960) (same).

21 The plain meaning of the specific language employed in the FPO
22 explicitly provides that this case was tried to a jury on all issues
23 to which the Seventh Amendment jury trial right attaches, as the
24 court intended and to which the parties assented. The FPO provides,
25 in pertinent part:

26 1. Duhn contends that it has demanded a jury trial.
27 Cameron contends that Duhn Oil has only demanded a jury
28 for its willful infringement allegations and cites to
Duhn Oil's Third Amended Complaint (Doc. No. 424).

1 2. Defendant has not demanded [sic] jury. **There will be**
2 **a jury trial on willful infringement issues and other**
3 **issues to which the entitlement exists as a legal right.**
4 In all other respects, the jury shall be advisory.

5 (Doc. 468 at 1-2) (emphasis added). After noting Defendant's
6 contention that Plaintiff only demanded a jury trial on the issue
7 of willful infringement and Plaintiff's assertion of a general jury
8 demand, the FPO ordered a jury trial on willful infringement "and
9 other issues to which the entitlement exists as a legal right."
10 (Id.) (emphasis added). By ordering a jury trial on issues other
11 than willful infringement, the FPO rejected Defendant's assertion
12 that the jury trial should be limited solely to the issue of willful
13 infringement and accepted Plaintiff's assertion of a general jury
14 demand on all legal issues so triable.

15 Plaintiff now opportunistically reverses course and contends
16 that, because the parties had already waived their jury trial rights
17 on all other claims, the only issue "to which entitlement exist[ed]
18 as a legal right" at the time the FPO was entered was willful
19 infringement. Plaintiff argues that in light of the parties'
20 respective waivers under the Federal Rules of Civil Procedure, the
21 FPO should be construed as setting a jury trial only on the issue
22 of willful infringement. Plaintiff's construction of the FPO is
23 unreasonable and contrary to law, as it reads out the critical FPO
24 phrase "and other issues to which the entitlement exists as a legal
25 right," which is rendered completely superfluous. Plaintiff's post
26 hoc construction of the FPO also negates the language in the FPO
27 setting forth Plaintiff's implicit contention that it had made a
28 general jury demand.

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1 The plain meaning of the language employed by the FPO cannot be
2 reconciled with Plaintiff's revisionist construction.

3 Plaintiff argues that the parties' course of conduct, the form
4 of the jury instructions, and certain statements by the court
5 support its construction of the FPO. With respect to the parties
6 conduct, Plaintiff notes that during a pretrial conference on
7 September 13, 2010, Defendant "fought to limit Duhn's jury demand
8 to the singular issue of willfulness." (Doc. 681 at 7). The FPO
9 issued on September 29, 2010, however. The fact that Defendant
10 correctly noted the limited scope of the jury demand asserted in
11 Plaintiff's TAC prior to issuance of the FPO is of no moment, as the
12 FPO superceded the pleadings and all prior motions.

13 Contrary to Plaintiff's contentions, the conduct of the parties
14 at trial was consistent with the plain meaning of the FPO, which set
15 for jury trial "willful infringement issues and other issues to
16 which the entitlement exists as a legal right." Critically, at the
17 close of evidence, both parties moved for judgment as a matter of
18 law pursuant to Rule 50 on issues that did not pertain to willful
19 infringement, such as patent validity. As the Federal Circuit has
20 noted, accepting the argument that a jury's verdict on validity
21 issues is merely advisory after the parties have argued Rule 50
22 motions "would make charades of [such] motions...in patent cases,"
23 as Rule 50 motions apply only to binding jury verdicts.
24 *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 985 n.5
25 (Fed. Cir. 1984); Fed. R. Civ. P. 50.

26 Plaintiff next contends that the jury verdict form suggests an
27 advisory jury on validity issues because

28 The jury verdict form had two questions on invalidity:

1 Question 5 directed to anticipation, and Question 6
2 directed to obviousness. (See Verdicts of Trial Jury, pg.
3 6-7, attached as Ex. G to the Decl. of J. Whitelaw)
4 Irrespective of how the jury found on these questions,
5 the jury was instructed to continue making findings on
6 Inventorship (Questions 7a and 7b), Inequitable Conduct
7 (Questions 9a and 9b), Lost Profits (Questions 10a and
8 10b), and Reasonable Royalty (Question 11). Had the
9 parties intended the jury to be binding on the issue of
10 invalidity, there would be no reason to have the jury
11 continue to these other Questions if the jury found all
12 of the asserted claims to be invalid. Having the jury
13 undertake these additional burdens would only be useful
14 in the case where an advisory jury found the claims
15 invalid, but the Court did not follow the jury's
16 guidance.

17 (Doc. 681 at 9). Plaintiff's argument is not persuasive in light of
18 the totality of the record, as the parties contemplated having the
19 jury answer the damages inquiries upon a finding of infringement,
20 notwithstanding the verdict form's inclusion of validity and
21 equitable conduct issues. During a hearing on January 28, 2011, the
22 following exchange took place:

23 MR. ALEXANDER: That's perfectly correct, Your Honor.
24 That's slightly different from the version that was sent
25 around last night. And so the Court apparently has the
26 right version, so I apologize for taking the Court's
27 time. The only other issue with the charge that may be
28 correct in the Court's version, is that in the version
that we received, the damages questions were not
predicated on a positive finding with regard to
liability.

THE COURT: All right. Where do you find that?

MR. ALEXANDER: Your Honor, if the Court will turn to
question 11. Excuse me. Question 10.

THE COURT: Yes.

MR. ALEXANDER: And the lack of instruction with regard to
predicating. Actually, page 10, under "Inequitable
Conduct."

THE COURT: Yes.

MR. ALEXANDER: It simply instructs the jury to answer
questions 10a and 10b and it carries on that request

1 following all the damages issues. And we submit it makes
2 sense, and I think it was agreed upon -- in fact, I
3 thought it was in an earlier draft, that the damages
4 questions, as typically done, would be predicated on
5 positive findings as to liability.

6 THE COURT: This is the Court's understanding. We
7 designed the questions on liability such that if they
8 found no infringement under any theory, they were to sign
9 and return the verdict. So they would not get to this
10 question.

11 MR. ALEXANDER: I apologize. I must have misunderstood the
12 way the verdict form went.

13 THE COURT: That was the structure of the verdict.
14 So they would only get to damages if they had found on
15 one of the infringement issues.

16 MR. ALEXANDER: The -- I'm obviously missing it. The
17 instructions, at least in the verdict form I was
18 submitted, Your Honor, or that we were submitted, each
19 question is followed by a request to answer the following
20 question. I don't see an instruction to the jury that if
21 they --

22 THE COURT: All right. Somehow it got omitted. Because
23 there should be at the bottom of -- this is inducing
24 infringement, page 4. If you answered no -- well, let me
25 retract that. What I remember now of our discussion was
26 that because there are the invalidity and
27 unenforceability defenses, if you will, that we were
28 going to have the jury go forward to decide those claims.
29 And so that having been made, we do need the instruction
30 which would, at the -- it would be on page 10. And it
31 would be at line 24.

32 If your answers to questions 1 -- and I'm going to
33 say as to all subparts of question 1, question 2,
34 question 3 -- we don't have to give them 4, because if
35 they answer no, they don't have to answer question four.

36 MR. ALEXANDER: I agree.

37 THE COURT: If one, two and three are no, sign and
38 return this verdict. And then otherwise answer questions
39 10a and 10b.

40 MR. REDDEN: Or at least 10a, Your Honor. Because if
41 they answer 10a "no," they don't get to 10b.

42 THE COURT: Well, let's just have them answer
43 question 10.

44 MR. REDDEN: Okay.

1 THE COURT: All right. That's the proposed change,
2 which would make the verdict form, then, I think fully
3 explanatory and correctly directive of how the jurors are
4 to proceed in their deliberations. Do the plaintiffs have
5 any input in this?

6 MR. SCHUCK: We have no objection to that change,
7 Your Honor.

8 (Doc. 697 at 13-14).

9 Plaintiff also notes that during an in-chambers jury
10 instruction conference on the eve of deliberations, Plaintiff
11 objected to the inclusion of an obvious instruction and to Question
12 6 of the verdict form, pertaining to obviousness. Plaintiff argued:

13 that neither the Instruction, nor the Question was
14 proper, as Cameron offered no evidence at trial regarding
15 obviousness, and that Cameron had limited its invalidity
16 position to asserting just two pieces of art as
17 anticipatory. [Plaintiff] further argued that it would be
18 prejudicial and confusing to ask the Question regarding
19 obviousness, when there was no evidence presented.

20 (Doc. 681 at 10). Plaintiff's arguments during the in-chambers
21 conference do not suggest that it viewed the jury's findings on
22 validity questions as advisory; to the contrary, Plaintiff's
23 arguments are comparable to the same arguments advanced in
24 connection with its Rule 50 motion on the obviousness issue. Citing
25 the declaration of James Whitelaw, Plaintiff also avers:

26 The Court...acknowledged that the Court would make the
27 ultimate decision since the jury was advisory on
28 obviousness.

(Id.). This extra-record statement was purportedly made *after*
Defendant had already presented its case at trial based on the
understanding that validity issues would be decided by the jury.⁶

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⁶ The court and the parties worked in chambers for approximately 15 hours finalizing the jury instructions.

1 Plaintiff also contends that "at a hearing during trial on
2 inventor-misjoinder, the Court confirmed the jury's advisory
3 nature." (Doc. 681 at 2, 12). In overruling Plaintiff's objection
4 to Defendant's motion to conform the pleadings to proof under Rule
5 15 regarding the issue of Rex Duhn's inventorship, the court stated:

6 as with the amendment to conform with proof that the
7 plaintiffs have made, if the matter is one that is
8 advisory, because it is an equitable or a non-jury issue,
9 then the jury would provide an advisory finding, but it
would be the Court that would be granting or denying any
relief with respect to the claim

10 (Doc. 697 at 7).⁷ The court's comment regarding any advisory nature
11 of the jury's inventorship finding is consistent with the plain
12 language of the FPO that the jury would be advisory on equitable
13 issues to which the jury trial right does not attach.⁸

14 Finally, Plaintiff points to the following statement by the
15 court during the February 2, 2011 motion for judgment hearing:

16 I was trying to get the parties to have a jury trial, and
17 the parties came in not wanting a jury trial except on
18 the one issue I think I talked you into, quite frankly,
19 was willful infringement. But beyond that, the parties
20 said this not a jury trial, it hadn't been demanded, and
that is reflected there is that inconsistency in the
final pretrial order, and that's another matter for the
Court to interpret.

21 (Doc. 679 at 23). As the court noted, interpretation of
22 inconsistency contained in the FPO is a matter for the court to
23 resolve in light of the plain language of the FPO and the conduct

24 ⁷ Due to counsel's designation of the Rule 15(b) motion as a "request" on the
25 court's CM/ECF docket, no hearing date was set, permitting the motion to slip
26 through the cracks. The motion is moot in light of this decision.

27 ⁸ In response to the court's comment, Defendant urged the court to treat
28 inventorship as an invalidity issue under 35 U.S.C. § 102. (Id.). As discussed
below, the inventorship issues raised in this case must be treated as legal
claims.

1 of the parties.

2 Notwithstanding the parties' initial positions on the scope of
3 the jury trial, Plaintiff made the deliberate strategic choice to
4 submit language in the joint pretrial statement suggesting that
5 Plaintiff had made a general jury demand, and that the jury trial
6 would not be limited to willful infringement. Plaintiff submitted
7 this language over Defendant's repeated attempts to provide an
8 accurate statement regarding Plaintiff's jury demand. Plaintiff
9 cannot complain that the court accepted its invitation to submit
10 issues other than willful infringement to the jury.

11 In light of the plain language of the FPO, the parties' assent
12 to the FPO and their conduct at trial, and the representation of a
13 general jury demand Plaintiff advanced in the joint pretrial
14 statement, the FPO must be interpreted to order a jury trial on all
15 issues to which the Seventh Amendment jury trial right attaches.
16 This result is buttressed by the principal that, to prevent
17 prejudice, parties are typically bound by the statements they
18 advance in connection with formulation of the pretrial order. See
19 *Dream Games of Ariz., Inc. v. PC Onsite*, 561 F.3d 983, 996 (9th Cir.
20 2009).

21 The jury returned findings on the following issues: (1) direct
22 infringement; (2) contributory infringement; (3) inducing
23 infringement; (4) willful infringement; (5) anticipation; (6)
24 obviousness; (7) inventorship; (8) inequitable conduct; (9) patent
25 damages-lost profit; and (6) patent damages-reasonable royalty. The
26 Seventh Amendment right to jury trial does not attach to Defendant's
27 equitable claim of inequitable conduct. *E.g., Gardco*, 820 F.2d at
28 1213 ("the defense of inequitable conduct is 'equitable in nature

1 and thus does not give rise to the right of trial by jury").
2 Pursuant to the FPO, the jury's verdict regarding inequitable
3 conduct is advisory.

4 Infringement, validity, and damages are issues to which
5 entitlement to a jury trial exists as a legal right; pursuant to the
6 FPO these issues were properly submitted to the jury. See, e.g.,
7 *id.* at 1212 (confirming that infringement and validity are issues
8 to which the jury trial right attaches); *Minks v. Polaris Indus.*,
9 546 F.3d 1364, 1370-71 (Fed. Cir. 2008) (noting violation of Seventh
10 Amendment where court reduced jury's damages finding in patent
11 infringement case). Although Defendant's inventorship claim was
12 raised in the context of an inequitable conduct defense, under the
13 circumstances of this case, had Defendant successfully proved its
14 contentions that Rex Duhn was deceptively named as an inventor and
15 that John Rogers was omitted as an inventor in bad faith, it appears
16 that the '925 patent would have been rendered invalid as a matter
17 of law under section 35 U.S.C. § 102(f). See *Pannu v. Iolab, Corp.*,
18 155 F.3d 1344, 1349 (Fed. Cir. 1998) ("section 102(f) [] makes the
19 naming of the correct inventor or inventors a condition of
20 patentability; failure to name them renders a patent invalid");
21 *Boston Sci. Corp. v. Johnson & Johnson*, 550 F. Supp. 2d 1102, 1114
22 (N.D. Cal. 2008) (citing *Pannu* for the proposition that where the
23 patentee does not claim relief under 35 U.S.C. § 256 and incorrect
24 inventorship is proven, the court should hold the patent invalid as
25 a matter of law for failure to comply with section 102(f));⁹ see

26
27 ⁹ Had Defendant proved its inventorship theories, relief under section 256 would
28 have been unavailable to Plaintiff. See 35 U.S.C. § 256; see also *Eli Lilly &
Co. v. Aradigm Corp.*, 376 F.3d 1352, 1358 (Fed. Cir. 2004) (noting that section
256 "creates a cause of action in the district courts for correction of

1 also *Memry Corp. v. Ky. Oil Tech., N.V.*, 2007 U.S. Dist. LEXIS 73315
2 *38 (N.D. Cal. 2007) ("If nonjoinder of an actual inventor is proved
3 by clear and convincing evidence, a patent is rendered invalid");
4 but see *St. Jude Med., Inc. v. Access Closure, Inc.*, 2010 U.S. Dist.
5 LEXIS 124810 * 9-10 (D. Ark. 2010) (distinguishing inventorship
6 claims asserted as invalidity defenses from inventorship claims
7 under section 256 for purposes of ascertaining right to jury trial
8 on the issue); *Shum*, 499 F.3d 1272, 1278-79 (Fed. Cir. 2007) (noting
9 that alleged co-inventor would not be entitled to jury trial on
10 stand-alone claim under section 256). Further, the jury
11 instructions provided on anticipation expressly required the jury
12 to consider whether Defendant had proven that "Rex Duhn did not
13 himself invent the invention." (Doc. 660 at 30). Accordingly,
14 inventorship is most properly treated as a validity issue in this
15 case and was subject to a binding jury determination under the FPO;
16 this result is consistent with Defendant's request to treat
17 inventorship as a validity issue in its Rule 15(b) motion at the
18 close of evidence, the jury instructions taken as a whole, the
19 parties' mutual conduct in filing Rule 50 motions on the issue, and
20 Defendant's concession that the jury's findings on inventorship are
21 binding. (Doc. 685 at 27).

22 **B. The Jury's Verdict**

23 The jury found that Defendant proved by clear and convincing
24 evidence that claims 2, 3, 4, 5, 19, and 29 are invalid for
25 obviousness, and that claims 2, 3, 4, 5, and 29 are invalid for
26 anticipation. However, the jury found that claim 1 was not proven

27
28 non-joinder of an inventor on a patent *provided* the non-joinder error occurred
without deceptive intent.") (emphasis added).

1 to be anticipated or obvious.¹⁰ The jury's findings are legally and
2 irreconcilably inconsistent. The jury received the following
3 instruction on anticipation:

4 For inventors to be entitled to a patent, the invention
5 must actually be "new." Cameron claims that the '925
6 patent is anticipated. The '925 patent's claims are
7 anticipated if they are not new.

8 Anticipation must be determined on a claim-by-claim
9 basis. Cameron contends that claims 1, 2, 3, 4, 5, 19 and
10 29 of the '925 patent are invalid because these claims
11 are not new (anticipated). Cameron must prove
12 anticipation by clear and convincing evidence.

13 Here is a list of alternative ways that Cameron can show
14 that a patent claim is anticipated. If:

15 (1) The claimed invention was known to or used by others
16 in the United States before the date of invention. An
17 invention is known when the information about it was
18 reasonably accessible to the public on or before that
19 date; and/or

20 (2) The claimed invention is not new if it was already
21 patented or described in a printed publication, anywhere
22 in the world before the date of invention; and/or

23 (3) The claimed invention was publicly used, sold, or
24 offered for sale in the United States prior to February
25 19, 2001; and/or

26 (4) Rex Duhn did not himself invent the invention;

27 (5) The claimed invention was described in a patent
28 granted on an application for a patent by another filed
in the United States before the date of invention.

(Doc. 660 at 30). The jury received the following instruction on
obviousness:

¹⁰ Defendant contends that, because Plaintiff did not seek damages for infringement of Claim 1, and because Defendant sought only declaratory relief concerning the validity of Claim 1, the jury's findings regarding Claim 1 are advisory. Defendant's argument lacks merit. The verdict form for both the obviousness and anticipation issues expressly required the jury to examine asserted claims 2, 3, 4, 5, 19, and 29 with reference to "all the requirements of claim 1." The jury's fact-finding on the asserted dependant claims necessarily entailed resolution of the same factual issues raised by Defendant's request for declaratory relief concerning Claim 1, the independent claim from which each of the asserted claims depends. The jury's fact-finding is binding with respect to claim 1. See, e.g., *Cabinet Vision*, 129 F.3d at 600 (where "substantial commonality" exists between the factual questions presented by legal and equitable claims, jury findings pertaining to the legal claims constrain the court's determination of equitable claims); *Shum*, 499 F.3d at 1279 (same).

1 Cameron also asserts that the claimed invention was
2 obvious. Cameron must prove obviousness by clear and
convincing evidence.

3 Even though an invention may not have been identically
4 disclosed or described before it was made by an inventor,
5 in order to be patentable, the invention must also not
6 have been obvious to a person of ordinary skill in the
field of wellhead isolation tools and wellheads
incorporating such tools, at the time the invention was
made.

7 In determining whether a claimed invention is obvious,
8 you must consider the level of ordinary skill in this
9 field at the time of the claimed invention; the scope and
content of the prior art; and any differences between the
prior art and the claimed invention.

10 The existence of each and every element of the claimed
11 invention in the prior art does not necessarily prove
12 obviousness. In considering whether a claimed invention
13 is obvious, you may but are not required to find
14 obviousness if you find that at the time of the claimed
15 invention, there was a reason that would have prompted a
16 person having ordinary skill in this field to combine the
17 known elements in a way the claimed invention does,
18 taking into account such factors as (1) whether the
19 claimed invention was merely the predictable result of
20 using prior art elements according to their known
function(s); (2) whether the claimed invention provides
an obvious solution to a known problem; (3) whether the
prior art suggests that the elements in the invention
should be combined or not; and (4) whether it would have
been obvious to try the combinations of elements, such as
when there is a need to solve a problem. To find prior
art rendered the invention obvious, you must find that
the prior art suggested a reasonable expectation of
success.

21 In determining whether the claimed invention was obvious,
22 consider each claim separately. Do not use hindsight,
23 i.e., consider only what was known at the time of the
24 invention. In making these assessments, you should take
into account any objective evidence that may have existed
at the time of the invention and afterwards that may shed
light on the obviousness or not of the claimed invention,
such as:

- 25 a. Whether the invention was commercially
26 successful as a result of the patented features;
- 27 b. Whether others copied the invention; or
- 28 c. Whether others in the field praised the
invention.

1 In considering whether the claimed invention was obvious
2 at the time it was made, you should consider the scope
and content of the following prior art:

- 3 1. The '993 Dallas patent; and/or
- 4 2. The '94-'95 Cameron catalogue and the MTBS tubing
spool and hanger. (Jury Instruction No. 26 (Doc.
660, pg. 30))

5
6 (Doc. 660 at 30-32).

7 The Jury received the following instruction on independent and
8 dependent claims:

9 There are two types of patent claims: independent claims
and dependent claims.

10 An "independent claim" sets forth all of the requirements
11 that must be met in order to be covered by that claim.
Thus, it is not necessary to look at any other claim to
12 determine what an independent claim covers. For example,
claim 1 of the '925 patent is an independent claim.

13 Claims 2, 3, 4, 5, 19, and 29 in the '925 patent are
14 "dependent claims" which depend directly or indirectly on
claim 1. A dependent claim does not itself recite all of
15 the requirements of the claim but refers to another claim
for some of its requirements. In this way, the claim
16 "depends" on another claim. A dependent claim
incorporates all of the requirements of the claims to
17 which it refers. The dependent claim then adds its own
additional requirements. To determine what a dependent
18 claim covers, it is necessary to look at both the
dependent claim and any other claims to which it refers.
19 A product that meets all of the requirements of both the
dependent claim and the claims to which it refers is
20 covered by that dependent claim.

21 (Doc. 660 at 17).

22 Claim 1 is the independent claim from which claims 2, 3, 4, 5,
23 19, and 29 depend. "A broader independent claim cannot be
24 nonobvious where a dependent claim stemming from that independent
25 claim is invalid for obviousness." *E.g., Comaper Corp. v. Antec,*
26 *Inc.*, 596 F.3d 1343, 1350 (Fed. Cir. 2010) (citing *Callaway Golf Co.*
27 *v. Acushnet Co.*, 576 F.3d 1331, 1344 (Fed. Cir. 2009) and *Ormco*
28 *Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1319 (Fed. Cir. 2007)).

1 Similarly, if an independent claim is not found invalid for
2 anticipation, claims that depend from the independent claim cannot
3 be either. *E.g., RCA Corp. v. Applied Digital Data Sys., Inc.*, 730
4 F.2d 1440, 1446 (Fed. Cir. 1984) (if prior art did not anticipate
5 independent claim, it could not anticipate dependent claim); *CNET*
6 *Networks, Inc. v. Etilize, Inc.*, 584 F. Supp. 2d 1260, 1264 (N.D.
7 Cal. 2008) (same). The jury's verdicts are irreconcilable as a
8 matter of law.

9 The court called the parties to a side bar and raised the issue
10 of the jury's inconsistent findings as the jury was returning its
11 verdicts. Despite being given the opportunity to address the jury's
12 inconsistent findings, both parties requested that the remainder of
13 the jury's verdicts be taken and entered and agreed to permit the
14 jury to be discharged.

15 **1. Nature of the Verdicts**

16 The parties dispute the nature of the jury's verdicts on
17 obviousness and anticipation. Plaintiff contends that the jury
18 rendered special verdicts pursuant to Rule 49(a). Defendant argues
19 that the jury's verdicts are general verdicts under Rule 49(b).
20 Neither position is entirely correct.

21 The Ninth Circuit's decision in *Zhang v. Am. Gem Seafoods,*
22 *Inc.*, provides the framework for determining whether a verdict is
23 special or general:

24 The Federal Rules of Civil Procedure explicitly
25 contemplate two types of verdicts, special verdicts, see
26 Fed. R. Civ. P. 49(a), and general verdicts with
27 interrogatories, see Fed. R. Civ. P. 49(b), and
28 implicitly contemplate common law general verdicts
without interrogatories. Both special verdicts and
interrogatories comprise only factual findings; a special
verdict is "in the form of a special written finding upon
each issue of fact," Fed. R. Civ. P. 49(a), and

1 interrogatories are returned "upon one or more issues of
2 fact the decision of which is necessary to a verdict,"
3 Fed. R. Civ. P. 49(b).

4 The Federal Rules do not define general verdicts, but
5 they imply that general verdicts do not involve factual
6 findings but rather ultimate legal conclusions. See *id.*
7 This view is of course consistent with the common law and
8 our own caselaw; in *Floyd v. Laws*, 929 F.2d 1390 (9th
9 Cir. 1991), we held that the theoretical distinction
10 between general and special verdicts is that general
11 verdicts require the jury to apply the law to the facts,
12 and therefore require legal instruction, whereas special
13 verdicts "compel the jury to focus exclusively on its
14 fact-finding role." *Id.* at 1395. Black's defines a
15 general verdict as "[a] verdict whereby the jury find
16 either for the plaintiff or for the defendant in general
17 terms." Black's Law Dictionary 1560 (6th ed. 1990). Thus
18 in a general verdict the jury announces only the
19 prevailing party on a particular claim, and may announce
20 damages.

21 A jury may return multiple general verdicts as to each
22 claim, and each party, in a lawsuit, without undermining
23 the general nature of its verdicts. See, e.g., 9A Charles
24 Alan Wright & Arthur R. Miller, *Federal Practice &*
25 *Procedure* § 2504.1 (2d ed. Supp. 2003) ("In cases
26 involving multiple claims . . . or defendants, the
27 district court may . . . have the jury render multiple
28 general verdicts."). Although some general verdicts are
more general than others, encompassing multiple claims,
the key is not the number of questions on the verdict
form, but whether the jury announces the ultimate legal
result of each claim. *If the jury announces only its
ultimate conclusions, it returns an ordinary general
verdict; if it makes factual findings in addition to the
ultimate legal conclusions, it returns a general verdict
with interrogatories. If it returns only factual
findings, leaving the court to determine the ultimate
legal result, it returns a special verdict.*

These terms are not adequate to capture every answer that
a jury may give. In addition to the ultimate legal
conclusion in a case, a jury may make legal conclusions
as to subsidiary issues, such as affirmative defenses, or
the amount of damages owed, which are neither findings of
fact nor quite "verdicts." Such answers are similar in
kind to general verdicts, because they require
application of the law to the facts, but we have found no
precise label for them.

339 F.3d at 1031 (emphasis added).

///

1 **b. Obviousness**

2 Obviousness under 35 U.S.C. § 103 is a mixed question of law
3 and fact. *E.g., Wyers v. Master Lock Co.*, 616 F.3d 1231, 1247 (Fed.
4 Cir. 2010) (Linn, J., concurring)¹¹ (citing *Takeda Chem. Indus.,*
5 *Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1355 (Fed. Cir.
6 2007)); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1547 (Fed.
7 Cir. 1983). In the ordinary patent case in which obviousness is
8 asserted, the trier of fact must answer the factual inquiries
9 outlined in *Graham v. John Deere Co.*, 383 U.S. 1 (1966) relating to:
10 (1) the scope and content of the prior art, (2) differences between
11 the prior art and the claims at issue; (3) the level of ordinary
12 skill in the art; and (4) whatever objective evidence may be present
13 as indicia of nonobviousness. *Connell*, 722 F.2d at 1547.

14 Under the well-settled law of the Federal Circuit, the legal
15 issue of obviousness may be determined by a jury. *E.g., id.*

16 [I]t is not error to submit the question of obviousness
17 to the jury. No warrant appears for distinguishing the
18 submission of legal questions to a jury in patent cases
19 from such submissions routinely made in other types of
20 cases. So long as the Seventh Amendment stands, the right
21 to a jury trial should not be rationed, nor should
22 particular issues in particular types of cases be treated
23 differently from similar issues in other types of cases.
24 Scholarly disputes over use of jury trials in technically
25 complex cases relate to the right to trial by jury
itself, and center on whether lay juries are capable of
making correct fact determinations, not over the
propriety of submitting legal questions to juries. The
obviousness issue may be in some cases complex and
complicated, on both fact and law, but no more so than
equally complicated, even technological, issues in
product liability, medical injury, antitrust, and similar

26 ¹¹ Justice Linn concurred in both the conclusion reached and the reasoning
27 expressed in the majority's opinion, but wrote separately to address concerns
28 raised following the Supreme Court's decision in *KSR International Co. v.*
Teleflex, Inc., 550 U.S. 398, 127 S. Ct. 1727, 167 L. Ed. 2d 705 (2007) with
respect to general verdicts relating to obviousness. *Id.* at 1247.

1 cases. Indeed, though the analogy like most is not
2 perfect, the role of the jury in determining obviousness
3 is not unlike its role in reaching a legal conclusion
4 respecting negligence, putting itself in the shoes of one
5 "skilled in the art" at the time the invention was made
6 in the former and in the shoes of a "reasonable person"
7 at the time of the events giving rise to the suit in the
8 latter.

9 *Connell*, 722 F.2d at 1547. While, "the judge must remain the
10 ultimate arbiter on the question of obviousness," this role is
11 properly exercised on "giving proper instructions on the law to the
12 jury before it considers its verdict" and again "when presented with
13 a motion for JNOV or new trial." *Wyers*, 616 F.3d at 1248 (Linn, J.,
14 concurring) (citing *R.R. Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d
15 1506, 1515 (Fed. Cir. 1984)).

16 "Submission of the obviousness question to the jury should be
17 accompanied by detailed special interrogatories designed to elicit
18 responses to at least all the factual inquiries enumerated in
19 *Graham*, and based on the presentations made in the particular
20 trial." *Connell*, 722 F.2d at 1547. Although "Black box" general
21 verdicts on obviousness are disfavored, they are permissible.
22 *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1356 (Fed. Cir.
23 2001).

24 Here, the verdict form for the issue of obviousness did not
25 require the jury to make specific factual findings on the *Graham*
26 inquiries, rather, it asked only for the jury's ultimate legal
27 conclusion on the obviousness of each claim. The verdict form
28 provides:

Obviousness

Question 6: Has Cameron proved by clear and convincing
evidence that any of the following claims would have been
obvious to a person of ordinary skill in the field at the
time the invention was made?

1 Claim 1:
2 Yes No
3 Claim 2 (including all the requirements of claim 1):
4 Yes No
5 Claim 3 (including all the requirements of claims 1
6 and 2):
7 Yes No
8 Claim 4 (including all the requirements of claim 1):
9 Yes No
10 Claim 5 (including all the requirements of claims 1
11 and 4):
12 Yes No
13
14 Claim 19 (including all the requirements of claims
15 1 and 4):
16 Yes No
17
18 Claim 29 (including all the requirements of claim
19 1):
20 Yes No
21
22
23
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28

(Doc. 668).

Under *Zhang*, the jury's obviousness findings resemble general verdicts. 339 F.3d at 1031 ("If the jury announces only its ultimate legal conclusions, it returns an ordinary general verdict"); accord *Sjolund v. Musland*, 847 F.2d 1573, 1575 (Fed. Cir. 1988) ("when the legal question of obviousness is submitted to the jury, it is technically improper to characterize that question as a special verdict under Fed. R. Civ. P. 49 (a), because Rule 49 (a) only provides for the submission of fact questions to the jury"). However, the jury's obviousness verdicts do not fit neatly into the general verdict classification, as the verdict form did not permit the jury to "find for either for the plaintiff or for the defendant in general terms" on Defendant's affirmative defense of invalidity. *Zhang*, 339 F.3d at 1031 (quoting Black's Law Dictionary 1560 (6th ed. 1990)). Instead, the jury's verdicts on obviousness fall within

1 the interstice between ultimate legal conclusions and legal
2 conclusions on subsidiary issues entailed in an affirmative defense,
3 "which are neither findings of fact nor quite 'verdicts.'" *Id.*
4 "Such answers are similar in kind to general verdicts, because they
5 require application of the law to the facts," but there is no
6 precise label for them. *Id.*

7 **a. Anticipation**

8 Anticipation is a factual issue for the jury to decide based
9 on resolution of subsidiary questions of fact such as whether
10 knowledge of an invention was publicly accessible, whether use of
11 the invention was publicly accessible, or whether the invention was
12 subject to a commercial offer for sale in the United States more
13 than one year prior to the application date of the patent. *See,*
14 *e.g., 3M v. Chemque, Inc., 303 F.3d 1294, 1306-07 (Fed. Cir. 2002)*
15 (discussing anticipation generally in the context of review of
16 denial of judgment as a matter of law). The verdict form on the
17 issue of anticipation provides:

18 Anticipation

19 Question 5: Has Cameron proved by clear and convincing
20 evidence that the following claims of the '925 patent are
"anticipated" (not new?)

21 Claim 1:

Yes _____ No _____

22 _____ Claim 2 (including all the requirements of claim 1):

Yes _____ No _____

23 Claim 3 (including all the requirements of claim 1):

24 Yes _____ No _____

25 Claim 4 (including all the requirements of claim 1):

26 Yes _____ No _____

27 Claim 5 (including all the requirements of claim 1):

Yes _____ No _____

28 Claim 19 (including all the requirements of claim

1 1): Yes No
2

3 Claim 20 (including all the requirements of claim
4 1): Yes No

5 (Doc. 668).

6 The jury's verdict on the issue of anticipation is comprised
7 of ultimate factual findings on whether each contested claim was
8 anticipated, although the jury did not return specific findings on
9 any subsidiary questions of fact. Compare *Therasense, Inc. v.*
10 *Becton, Dickinson & Co.*, 593 F.3d 1325 , 1330, 1336 (Fed. Cir. 2010)
11 (treating answer to jury question: "Have defendants proven by clear
12 and convincing evidence that Claims 11 and 12...are invalid by
13 reason of anticipation or obviousness?" as general verdict) and
14 *Roberts v. Sears, Roebuck & Co.*, 723 F.2d 1324, 1340 (7th Cir. 1983)
15 (finding that verdict form which broke validity issues down into the
16 components of obviousness and anticipation was not truly a "special
17 verdict" under Rule 49(a), as special verdicts resolve subsidiary
18 questions of fact pertaining to specific, contested issues)¹² with
19 *E. V. Prentice Co. v. Associated Plywood Mills, Inc.*, 113 F. Supp.
20 182, 187 (D. Oregon 1953) (illustrating clear example of special
21 verdict on anticipation issue where jury answered specific
22
23
24

25 ¹² As the reasoning in *Roberts* suggests, simply separating the obviousness and
26 anticipation inquiries into separate jury questions would not have transformed
27 the verdict in *Therasense* from a general verdict into a true special verdict.
28 *Accord Zhang*, 339 F.3d at 1031 ("Although some general verdicts are more general
than others, encompassing multiple claims, the key is not the number of questions
on the verdict form, but whether the jury announces the ultimate legal result of
each claim.").

1 subsidiary questions).¹³ Although the jury's verdict does not
2 provide answers to "subsidiary fact questions [] of the
3 who-did-what-to-whom variety" that are the hallmark of proper
4 special verdicts, see *Roberts*, 723 F.2d at 1347 (Posner, J.,
5 dissenting), the jury's anticipation verdicts are not in true
6 general form either, see *Zhang*, 339 F.3d at 1031 (noting that Rule
7 49(b) implies that general verdicts do not involve factual findings
8 but rather ultimate legal conclusions). Nor can it be said that the
9 jury's findings on anticipation are in the form of interrogatories
10 accompanying a general verdict, as the verdict form does not contain
11 a query on the general issue of invalidity. See *id.*

12 As *Zhang* acknowledges, the terms "general verdicts" and
13 "special verdicts" do not capture every answer that a jury may give.
14 339 F.3d at 1031. The jury's anticipation verdicts resemble special
15 verdicts (albeit very general special verdicts) under Rule 49(a),
16 as they embody only factual findings, technically leaving the court
17 to determine the ultimate legal result of invalidity. *Id.* However,
18 it would be anomalous to characterize the jury's verdicts on
19 anticipation as special verdicts under Rule 49(a) while treating the
20 jury's obviousness verdicts as general verdicts under Rule 49(b),

21 _____

22 ¹³ The special verdict submitted to the jury in *E.V. Prentice Co.* contained the
23 following queries: "1. Does the Raimann patent either alone or in combination
24 with the Anderson or Painchaud patents anticipate the Skoog patents? 2. Does the
25 combination of elements and steps in the Skoog patents produce an unusual and
26 surprising result? 3. Was there public knowledge of the accused machine in the
27 United States before the Skoog invention? 4. Was the accused machine disclosed
28 in publications before the Skoog inventions? 5. Was the accused machine 'on sale'
in the United States before the Skoog inventions?" 113 F. Supp. at 187.

1 as both anticipation and obviousness were presented to the jury as
2 subsidiary issues underlying Defendant's affirmative defense of
3 invalidity. Had the parties included a general verdict query on the
4 overarching issue of invalidity, the jury's findings on anticipation
5 would be easily characterized as answers to factual interrogatories
6 accompanying a general verdict under Rule 49(b).

7 **2. Import of the Jury's Inconsistent Verdicts**

8 Ordinarily, ascertaining whether a jury's verdict on an issue
9 is general or special is a prerequisite analytical step in
10 determining how to treat inconsistent jury findings. *Zhang*, 339
11 F.3d at 1031. From a procedural perspective, whether an
12 inconsistent verdict is general or special is often important
13 because the waiver rule applicable to general verdicts under Rule
14 49(b) does not apply to special verdicts under Rule 49(a). *Compare*
15 *Pierce v. Southern Pacific Trans. Co.*, 823 F.2d 1366, 1370 (9th Cir.
16 1987) (a party may object to inconsistent special verdicts under
17 Rule 49(a) even where no objection is raised prior to discharging
18 the jury) *with Home Indem. Co. v. Lane Powell Moss & Miller*, 43 F.3d
19 1322, 1331 (9th Cir. 1995) (citing *Los Angeles Nut House v. Holiday*
20 *Hardware Corp.*, 825 F.2d 1351, 1354-55 (9th Cir. 1987) for
21 proposition that counsel risks waiver of objections to any
22 inconsistencies in the jury's general verdicts if counsel does not
23 raise the issue before the jury is excused)). From a substantive
24 perspective, whether a verdict is general or special is of critical
25 importance because inconsistent general verdicts on separate claims
26 are typically permitted to stand, *Zhang*, 339 F.3d at 1036-38
27 (collecting cases), whereas irreconcilably inconsistent special
28 verdicts require a new trial, e.g., *Floyd v. Laws*, 929 F.2d 1390,

1 1396 (9th Cir. 1991) (courts have a duty under the Seventh Amendment
2 to harmonize a jury's seemingly inconsistent answers if a fair
3 reading allows for it and must order retrial in cases of
4 irreconcilable inconsistency) (citing *Gallick v. Baltimore & O.R.R.*
5 *Co.*, 372 U.S. 108, 110 (1963)). Here, however, it is unnecessary
6 to force round pegs into square holes in order to determine proper
7 treatment of the jury's irreconcilably inconsistent verdicts on
8 obviousness and anticipation.

9 Anticipation and obviousness are subsidiary issues raised by
10 Defendant's affirmative defense of invalidity. A true general
11 verdict (in the traditional sense of the term) on Defendant's
12 affirmative defense of invalidity would have been in a form of a
13 singular finding expressing whether the patent is invalid or valid.
14 On the opposite end of the spectrum, a true special verdict would
15 have been in the form of special written findings on specific issues
16 of fact unique to the parties contentions regarding obviousness and
17 anticipation of the '925 Patent. The verdict form submitted by the
18 parties in this case is located in the twilight zone of this
19 spectrum. The form of verdict on Defendant's invalidity defense is
20 comprised of (1) a series of quasi-general verdicts expressing
21 conclusions on the subsidiary legal issue of obviousness; and (2)
22 a series of generalized special verdicts expressing conclusions on
23 the subsidiary factual issue of anticipation. There are "no precise
24 lable[s]" for these verdicts. See *Zhang*, 339 F.3d at 1031.

25 The Ninth Circuit has not directly addressed how inconsistent
26 verdicts that are neither general nor special, and for which there
27 are no "precise labels," should be treated, but *Zhang* is
28 instructive. In *Zhang*, the Ninth Circuit contemplated

1 three ways in which legal conclusions such as general
2 verdicts might be alleged to be inconsistent: the jury
3 might disregard instructions requiring two general
4 verdicts to be harmonious; the jury might return a
5 general verdict that, under the facts of the case,
6 implies a lack of evidence underlying another general
7 verdict; or the jury might return two general verdicts
8 that, under any facts, seem to be legally irreconcilable.

9 339 F.3d at 1031. After noting that the circumstances at issue in
10 *Zhang* presented the latter two situations, the Ninth Circuit
11 concluded that it lacked authority to grant a new trial on the basis
12 of legally irreconcilable general verdicts:

13 We have found no Supreme Court or Ninth Circuit cases in
14 which an appellate court has directed the trial court to
15 grant a new trial due to inconsistencies between general
16 verdicts, and Ninth Circuit precedent dictates that we
17 cannot do so. In *International Longshoremens' Union v.*
18 *Hawaiian Pineapple Co.*, 226 F.2d 875 (9th Cir. 1955), we
19 explained that legally inconsistent verdicts "may
20 nonetheless stand on appeal even though inconsistent."
21 *Id.* at 881. In that case, the jury had returned general
22 verdicts holding the defendant unions liable while
23 "exonerating the individual defendants" who had acted on
24 behalf of the unions. *Id.* While the court admitted
25 difficulty in understanding "why the jury found [the
26 unions] liable and did not also hold some of the leaders
27 responsible," *id.*, it upheld that jury's right to do so.
28 "That is the jury's prerogative." *Id.*

19 *Id.* at 1035. Critically, however, the Ninth Circuit also stated:
20 "unless one legal conclusion is the prerequisite for another,
21 inconsistencies between them must stand." *Id.* at 1034.

22 In this case, the legal conclusion that independent claim 1 is
23 obvious is an absolute prerequisite to the legal conclusion that
24 dependent claims 2, 3, 4, 5, 19, and 29, each of which incorporates
25 all the elements of claim 1, are obvious. *E.g.*, *Comaper Corp.*, 596
26 F.3d at 1350. (broader independent claim cannot be nonobvious where
27 a dependent claim stemming from that independent claim is invalid
28 for obviousness). The jury's inconsistent findings on obviousness

1 present precisely the type of situation contemplated in *Zhang* in
2 which one legal conclusion is the prerequisite for another.
3 Analogously, a finding that dependent claims 2, 3, 4, 5, and 29 are
4 anticipated requires, as a matter of law, a prerequisite finding
5 that independent claim 1 is anticipated. See, e.g., *RCA Corp.*, 730
6 F.2d at 1446 (if prior art did not anticipate independent claim, it
7 could not anticipate dependent claim). *Zhang* establishes that
8 verdicts cannot stand in the face of such inconsistency, even
9 assuming *arguendo* that the issue is subject to waiver. See *Id.* at
10 1034. However, *Zhang* does not conclusively establish that a new
11 trial on the issue may be ordered. See *id.* at 1035 (“We have found
12 no Supreme Court or Ninth Circuit cases in which an appellate court
13 has directed the trial court to grant a new trial due to
14 inconsistencies between general verdicts, and Ninth Circuit
15 precedent dictates that we cannot do so”).¹⁴

16 Rule 49(b) does not directly address the unique situation
17 presented in this case, but the types of scenarios contemplated in
18 Rule 49(b)(4) are similar:

19 *Answers Inconsistent with Each Other and the Verdict.*
20 When the answers are inconsistent with each other and one
21 or more is also inconsistent with the general verdict,
22 judgment must not be entered; instead, the court must
23 direct the jury to further consider its answers and
24 verdict, or must order a new trial.

23 Fed. R. Civ. P. 49(b)(4) (emphasis added). Pursuant to Rule
24

25 ¹⁴ The Ninth Circuit also remarked: “We cannot sanction the time and expense of
26 a new trial on the basis of an alleged inconsistency that, had it been raised
27 earlier, could have been remedied by proper instructions to the jury.” *Id.*
28

1 49(b) (4), when there are fatal inconsistencies among one or more
2 factual findings and one or more of the factual findings is also
3 inconsistent with the general verdict, the court must either direct
4 the jury to further consider its answers or order a new trial.

5 When a jury returns a general verdict on obviousness, the
6 verdict entails implied resolution of factual disputes underlying
7 the legal question of obviousness. *See, e.g., McGinley*, 262 F.3d
8 at 1356. By finding that certain dependent claims were proven
9 obvious, while simultaneously finding that independent claim 1 was
10 not proven obvious, the jury returned implied findings on the
11 subsidiary factual issues attendant to analysis of claim 1 that are
12 inconsistent with the implied findings regarding the claims the jury
13 found to be obvious. The jury's implied factual findings regarding
14 the obviousness of certain dependent claims are also irreconcilably
15 inconsistent with the quasi-general verdict finding that independent
16 claim 1 was not proven to be obvious. The same type of inherent
17 conflict plagues the jury's findings on anticipation.

18 Under circumstances analogous to those presented here, Rule
19 49(b) (4) requires courts to either direct the jury to further
20 consider its answers and verdict, or to order a new trial. The
21 court raised the inconsistency in the verdicts with the parties to
22 given them an opportunity to address the inconsistency by further
23 deliberations before the jury was discharged. Only the latter
24 option is available now, as the parties chose to accept the jury's
25 findings and requested inconsistent verdicts be entered. Pursuant
26 to the guidance provided by *Zhang* and Rule 49(b) (4), a new trial on
27 the issue of obviousness is warranted to the extent the Plaintiff
28 is not entitled to judgment as a matter of law on the issue. For

1 the same reasons, a new trial on the issue of anticipation is
2 warranted.¹⁵

3 **C. Plaintiff's Rule 50 Motion on Obviousness**

4 Federal Rule of Civil Procedure 50 governs motions for judgment
5 as a matter of law in jury trials, and "allows the trial court to
6 remove cases or issues from the jury's consideration 'when the facts
7 are sufficiently clear that the law requires a particular result.'" *Weisgram v. Marley Co.*, 528 U.S. 440, 447-48 (2000).¹⁶ Rule 50(a)
8 provides in pertinent part:

10 If during a trial by jury a party has been fully heard on
11 an issue and there is no legally sufficient evidentiary
12 basis for a reasonable jury to find for that party on
13 that issue, the court may (A) resolve the issue against
14 the party; and (B) grant a motion for judgment as a
15 matter of law against the party on a claim or defense
16 that, under the controlling law, can be maintained or
17 defeated only with a favorable finding on that issue.

18 Fed. R. Civ. P. 50(a)(1). A Rule 50(b) motion for judgment as a
19 matter of law is a renewed Rule 50(a) motion. *E.E.O.C. v. Go Daddy*
20 *Software, Inc.*, 581 F.3d 951, 961 (9th Cir. 2009). The Ninth
21 Circuit states the standard for judgment as a matter of:

22 When confronted with a motion for judgment as a matter of
23 law, whether at the end of a plaintiff's case or at the
24 close of all the evidence, a trial court must scrutinize
25 the proof and the inferences reasonably to be drawn
26 therefrom in the light most amiable to the nonmovant . .
27 .In the process, the court may not consider the
28 credibility of witnesses, resolve conflicts in testimony,
or evaluate the weight of evidence . . . A judgment as a

24 ¹⁵ This result is easily reached if the jury's anticipation verdicts are treated
25 as true special verdicts under Rule 49(a). *E.g.*, *Floyd v. Laws*, 929 F.2d at 1396
(new trial on issue required where findings of fact expressed in special verdict
under 49(a) cannot be reconciled).

26 ¹⁶ Grant or denial of a motion for judgment as a matter of law ("JMOL") is a
27 procedural issue not unique to patent law, reviewed under the law of the regional
28 circuit in which the appeal from the district court would usually lie. *E.g.*,
Lucent Techs. v. Gateway, Inc., 580 F.3d 1301, 1309 (Fed. Cir. 2009).

1 matter of law may be granted only if the evidence, viewed
2 from the perspective most favorable to the nonmovant, is
3 so one-sided that the movant is plainly entitled to
4 judgment, for reasonable minds could not differ as to the
5 outcome.

6 *Gibson v. City of Cranston*, 37 F.3d 731, 735 (9th Cir. 1994)
7 (citations omitted).

8 Plaintiff's motion for judgment reasserts that Plaintiff is
9 entitled to judgment as a matter of law on the issue of obvious.
10 (Doc. 676 at 10-16).¹⁷ A patent is invalid for obviousness if
11 "differences between the subject matter sought to be patented and
12 the prior art are such that the subject matter as a whole would have
13 been obvious at the time the invention was made to a person having
14 ordinary skill in the art to which said subject matter pertains."
15 35 U.S.C. § 103(a). "Throughout the obviousness determination, a
16 patent retains its statutory presumption of validity, see 35 U.S.C.
17 § 282, and the movant retains the burden to show the invalidity of
18 the claims by clear and convincing evidence as to underlying facts."
19 *McGinley*, 22 F.3d at 1349 (citation omitted). In the ordinary
20 patent case in which obviousness is asserted, the trier of fact must
21 answer the factual inquiries outlined in *Graham v. John Deere Co.*,
22 383 U.S. 1 (1966) relating to: (1) the scope and content of the
23 prior art, (2) differences between the prior art and the claims at
24 issue; (3) the level of ordinary skill in the art; and (4) whatever
25 objective evidence may be present as indicia of nonobviousness.
26 *Connell*, 722 F.2d at 1547.

27 Defendant contends that Plaintiff is not entitled to judgment
28 as a matter of law on the issue of obviousness because "it would

¹⁷ Plaintiff did not advance a Rule 50 motion on the issue of anticipation at the close of evidence.

1 have been obvious at the time of invention for one of ordinary skill
2 in the art to have run in the lock screws shown in Figure 3 in the
3 Dallas '993 Patent." (Doc. 696 at 18).¹⁸ Defendant cites the
4 testimony of Cameron expert witness Gary Delvin ("Delvin") and
5 Plaintiff's expert, Ivan Boyadjieff ("Boyadjieff"), in support of
6 its contention. (Id.); (Doc. 685 at 17) (citing Doc. 692 at 74, 76;
7 Doc. 693 at 24). Defendant also contends that it would have been
8 obvious to a skilled artisan to modify the device depicted in the
9 '94 Catalogue to create a dual load path to lessen the retained load
10 on the lock screws employed by the device, but Defendant cites no
11 evidence in support of this proposition. (Doc. 685 at 20).

12 **1. Evidence Regarding the Scope and Content of Prior Art**

13 A prerequisite to making a finding on the scope and content of
14 the prior art is to determine what prior art references are
15 pertinent. *State Contr. & Eng'g Corp. v. Condotte Am., Inc.*, 346
16 F.3d 1057, 1069 (Fed. Cir. 2003) (citing *In re Clay*, 966 F.2d 656,
17 658 (Fed. Cir. 1992)). As the Federal Circuit has explained:

18 Whether a prior art reference is analogous is a question
19 of fact. A reference is analogous if it is from the same
20 field of endeavor as the invention. *Id.* at 658-59.
21 Similarity in the structure and function of the invention
22 and the prior art is indicative that the prior art is
23 within the inventor's field of endeavor. *In re Deminski*,
796 F.2d 436, 442 (Fed. Cir. 1986). If a reference is
24 outside the inventor's field of endeavor, it is still
25 analogous art if the reference "is reasonably pertinent
26 to the particular problem with which the inventor is
27 involved." *Clay*, 966 F.2d at 659.

28 ¹⁸ Defendant also argues that, although the evidence establishes that running the
lock screws in on the '993 Patent would damage the mandrel, it would have been
obvious to a skilled artisan to modify the mandrel by cutting grooves in the
mandrel to accommodate the lock screws. However, Defendant fails to make the
threshold showing that a person of ordinary skill in the art would have been
motivated to try using 5,000 psi lock screws to secure a frac mandrel, as
discussed below.

1 *Id.*

2 At trial, Delvin testified that he believed that the '993
3 Patent demonstrated most of the features disclosed in the '925
4 Patent. (Doc. 692 at 67-68). Delvin opined that the '993 Patent
5 teaches and invention:

6 much like a Tree Saver frac mandrel. It's much like the
7 frac mandrel in question here in this case. It's a
8 mandrel that is involved with a blowout preventer,
another piece of equipment on the wellhead. But they all
do basically the same things.

9 (*Id.* at 69). Delvin also testified concerning the pertinence of the
10 '94 Catalogue as prior art. Delvin testified that the '94 Catalogue
11 discloses a secondary flange mounted on top of a tubing spool,
12 inside of which is a tubing hanger secured by lock screws. (*Id.* at
13 90). Delvin described the function of the tubing spool, flange,
14 tubing hanger, and lock screws as follows:

15 There -- that hanger is trying to blow out of that -- you
16 know, trying to launch it in space. So these lock screws
17 are holding it down. You can see they're fully engaged
18 right here...But you have this seal assembly sitting in
19 there recessing in that pocket. The way this works is
20 when you bolt those two together, you basically cramp
those down and create a seal on the upper neck of that
tubing hanger. And obviously, as that force is generated
launching it up, it's going to transfer that force
through these seals and into this flange, which is the
secondary flange.

21 (*Id.* at 96-97).

22 Boyadjieff provided further testimony relevant to whether the
23 '993 Patent and '94 Catalogue constitute analogous prior art.
24 During voir dire, the following exchange took place:

25 WITNESS: I've had cases to analyze how mandrels are
26 installed in general. There are other kinds of mandrels
27 that are used in wellheads and wells. And so a mandrel is
a term of a device that goes inside a tubular area. And
I've had work and analyzed how you would install such
28 devices, how you would retain those devices, what kind of
forces would be involved in those devices, how you would

1 install them in the field. All those kinds of things. But
2 specifically to a unique frac mandrel, no.

3 THE COURT: And do you know whether there is any
4 difference, engineering difference in the mandrels you're
5 familiar with and frac mandrels?

6 THE WITNESS: No, there's no difference.

7 THE COURT: Same purpose and --

8 THE WITNESS: Same purpose.

9 THE COURT: -- operation?

10 THE WITNESS: They all have -- they all provide
11 purpose in the well

12 (Doc. 693 at 59).

13 In light of the testimony offered by Delvin and Boyadjieff, the
14 record is sufficient to support a rational finding that both the
15 '993 Patent and '94 Catalogue are analogous references for purposes
16 of the obviousness inquiry. Both references disclose structures
17 reasonably pertinent to the general problem the '925 Patent is
18 designed to address: reaction of axial loads in wellhead equipment.
19 *Clay*, 966 F.2d at 659.

20 **2. Differences between the '925 Patent and Prior Art**

21 Obviousness requires evaluation of the "differences between the
22 subject matter sought to be patented and the prior art" with an eye
23 on "the subject matter as a whole . . . at the time the invention
24 was made" from the perspective of "a person having ordinary skill
25 in the art." *KSR Int'l Co.*, 550 U.S. at 406 (quoting 35 U.S.C §
26 103(a)). Substantial evidence was presented at trial regarding
27 differences between the references advanced by Defendant and the
28 '925 Patent.

///

1 **a. The '993 Patent**

2 The '993 Patent teaches a mandrel device designed to protect
3 a tool referred to as a Blow Out Preventer used in fracing
4 operations. (Doc. 692 at 69; Doc. 693 at 106). The '993 Patent
5 discloses a structure including a first flange and a secondary
6 flange that each react axial force through a single load path.
7 (Doc. 691 at 44-45, RT. at 811-811).

8 Several witnesses testified about differences between the '925
9 Patent and the '993 Patent. Both Delvin and Meek testified that,
10 unlike the '925 Patent, the '993 Patent does not disclose a direct
11 connection between the secondary flange and the tubing head flange.
12 (Doc. 692 at 111-112) (Delvin) (Doc. 691 at 93-95) (Meek). Meek
13 testified that the lack of a direct connection between the secondary
14 flange and tubing head flange in the '933 Patent is a material
15 difference with respect to the potential functions of lock screws
16 in the device. (Doc. 691 at 94-95). According to Meek, lack of a
17 direct connection between the secondary flange and tubing head
18 flange makes use of lock screws to secure the mandrel impractical
19 in the '993 device due to manufacturing tolerances. (Doc. 691 at
20 94-95). Meek opined that manufacturing tolerances permitting slight
21 deviations in the length of components located between the secondary
22 flange and tubing head flange in the '993 Patent would make it
23 difficult to precisely locate lock screw groves in the mandrel body,
24 making it difficult to confidently seal the device. (Id.).
25 Defendant presented no evidence to controvert Meek's testimony.

26 Both Delvin and Meek testified that running in the lock screws
27 depicted in the '993 Patent to contact the mandrel body would cause
28 damage to the mandrel. Meek and Delvin also both testified that if

1 the lock screws on the '993 device are not run in, there is no dual
2 load path. Meek testified:

3 Q. Where I've drawn that green line, is that about right,
4 Mr. Meek? Can you read for us what this patent teaches.

5 A. Okay. What it says is "The mechanical lock down
6 mechanism secures the mandrel against the bit guide to
maintain a fluid seal but does not restrain the mandrel
from downwards movement."

7 Q. So what does that tell you about how the '993 is
8 constructed?

9 A. It tells me that the mandrel is in compression and it
10 must move downwards to seal on the bit guide. It tells me
the lock screws can not be run in.

11 Q. And so what does -- does that tell you anything about
12 the way the '993 must respond and react to forces?

13 A. It's a single load path.

14 (Doc. 695 at 95).

15 Boyadjieff also testified concerning general differences
16 between the '993 Patent and the '925 Patent:

17 Q. Now, throughout your engagement as an expert, you've
18 been required to look at the '993 patent; is that
correct?

19 A. Yes, I was.

20 Q. Is that -- is that a mandrel system? Is that a sleeve
system? How would you classify that?

21 A. Well, it's got a mandrel. But it's got a much
22 different purpose than a wellhead mandrel. It's what they
call a BOP mandrel. "BOP" stands for blowout preventer.
23 It's a great big 10, 15 foot tall pressure device that
you use when you're drilling a well. In case the well
24 blows out, it's supposed to be how you close the well
off. And that 9 -- that patent that you're talking about,
25 it describes a long mandrel that you would stick down
through the BOP device into the wellhead to protect the
26 BOP device from the erosion caused by the frac fluid. So
I don't even consider it anything similar at all.

27 (Doc. 693 at 106).

28

1 **b. The '94 Catalogue**

2 The '94 Catalogue discloses a device described as an "MTBS
3 Tubing Hanger" used for hanging tubing in a well whereby a set of
4 lock screws are run in to the tubing body in order to react axial
5 loads. (Doc. 695 at 90). Rex Duhn provided testimony relevant to
6 the general structure and function of the MTBS Tubing Hanger:

7
8 A tubing spool is a spool that has flange on top and a
9 flange on the bottom. Kind of like a sewing spool. So it
has flanges opposing each other.

10 (Doc. 690 at 23).

11 Meek testified that the MTBS Tubing Spool is designed in a
12 manner that prohibits the mandrel from moving upwards towards the
13 upper flange of the spool because movement of the mandrel would
14 damage the metal seal at the top end of the tubing hanger and cause
15 the seal at the bottom of the tubing hanger to become unseated.
16 (Doc. 695 at 90-91). Meek further testified that the lock screws
17 on the MTBS Tubing Spool are required to react the entire axial
18 force acting on the mandrel, and thus that no dual load path is
19 present in the device. (Id.). Devlin also testified that the '94
20 Catalogue does not depict a dual load path. (Doc. 692 at 119-120).

21 **3. Level of Ordinary Skill in the Art**

22 Obviousness requires a showing that a person of ordinary skill
23 at the time of the invention would have selected and combined those
24 prior art elements in the normal course of research and development
25 to yield the claimed invention. *Unigene Labs., Inc. v. Apotex,*
26 *Inc.*, 2011 U.S. App. LEXIS 17762 * 16 (Fed. Cir. 2011) (citing *KSR*
27 *Int'l. Co.*, 550 U.S. at 421). "Teachings from prior art,
28 suggestions beyond the literal teachings of those art references,

1 or even motivations from the store of common knowledge of one of
2 ordinary skill in the art field [...]...provide the sources of evidence
3 that an ordinary skilled artisan might have found and combined at
4 the time of the invention. *Id.* (citing *Ortho-McNeil Pharm., Inc.*
5 *v. Mylan Labs., Inc.*, 520 F.3d 1358, 1364-65 (Fed. Cir. 2008)).

6 Little evidence was presented at trial concerning the level of
7 ordinary skill in the art, but the record does contain testimony
8 relevant to the inquiry. Boyadjieff testified about the general
9 qualifications of a professional engineer:

10 To register as a professional engineer, you have to
11 qualify in your profession either through exam or
12 through...experience. [To qualify based on experience,]
13 You have to show that you have been practicing the
14 profession in a professional manner and that you are well
15 aware of all the elements of the profession that you have
16 to know in order to be very knowledgeable of that
17 profession.

18 (Doc. 693 at 42).

19 Boyadjieff also testified about the general approach to
20 designing equipment suitable for fracing operations. Boyadjieff
21 stated that, in order to design mandrels for use in wellhead
22 equipment, it is necessary to know the configuration of the
23 wellheads typically used. (Doc. 693 at 56). Boyadjieff further
24 testified about engineering practices attendant to designing frac
25 mandrels:

26 Q. What are some considerations you would have to take
27 into account when you're assembling and using these kind
28 of high pressure frac equipment?

29 A. You have to take into account the -- as I said, the
30 pressure forces. You have to consider any other potential
31 forces you might encounter. It's good engineering to,
32 when you -- when you select equipment, to avail yourself
33 of all the knowledge of the forces that are going to be
34 placed on that equipment. And that's what you do as an
35 engineer.

1 (Doc. 693 at 71).

2 **4. Objective Evidence of Nonobviousness**

3 Objective evidence of nonobviousness may include, *inter alia*,
4 commercial success and long-felt but unsolved needs. *E.g.*, *WMS*
5 *Gaming Inc. v. International Game Tech.*, 184 F.3d 1339, 1359 (Fed.
6 Cir. 1999). Evidence adduced at trial established that the
7 technology disclosed in the '925 Patent brought Duhn Oil commercial
8 success. Rex Duhn testified that, as a result of the '925 Patent
9 technology, Duhn Oil was able to expand its business and acquire
10 several new customers. (Doc. 689 at 55, 66 RT at 468, 479).
11 Evidence adduced at trial also established that the '925 Patent
12 solved long-standing problems attendant to larger systems available
13 at the time that were unwieldy, costly, and less safe. (Doc. 689
14 at 72-74, RT at 485-87).¹⁹

15 **5. Failure to Establish Prima Facie Case of Obviousness**

16 To establish a prima facie case of obviousness, evidence must
17 show "some objective teaching in the prior art or that knowledge
18 generally available to one of ordinary skill in the art would lead
19 that individual to combine the relevant teachings of the
20 references." *Tec Air, Inc. v. Denso Mfg. Mich., Inc.*, 192 F.3d
21 1353, 1359 (Fed. Cir. 1999) (citation omitted). There is no
22

23 ¹⁹ Defendant contends that there is no nexus between the indicia of
24 nonobviousness Plaintiff advances and the '925 Patent's dual load path.
25 Defendant's argument is of no avail, as Defendant failed to establish a prima
26 facie case of obviousness. *See, e.g.*, *WMS Gaming Inc. v. International Game*
27 *Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999) (noting "objective evidence of
28 non-obviousness may be used to rebut a prima facie case of obviousness based on
prior art references"). Further, it is clear that the '925 Patent's dual load
path enabled Duhn Oil to meet Barrett Resources' specific request for a frac
mandrel permitting re-use of existing Duhn products, including lock screws. The
nexus between the dual load path and the commercial success of the '925 Patent
is established.

1 suggestion to combine, however, if a reference teaches away from its
2 combination with another source. *Id.* If when combined, the
3 references "would produce a seemingly inoperative device," then they
4 teach away from their combination. *Id.* Specific findings
5 establishing why it would have been "apparent" to combine elements
6 of prior art are required to declare an invention obvious. *Ruiz v.*
7 *A.B. Chance Co.*, 234 F.3d 654, 665 (Fed. Cir. 2000).

8 The only two references asserted by Defendant are the '94
9 Catalogue and the '993 Patent. There is a failure of proof by
10 Defendant on the issue of whether a skilled artisan would have been
11 motivated to combine the elements of the '94 Catalogue and the '993
12 Patent to produce the dual load path disclosed in claim 1 of the
13 '925 Patent. No witness testified on this subject.

14 Defendant argues that the '993 Patent discloses a set of lock
15 screws that, if run in, could create a secondary pathway for
16 transmitting an axial force from the mandrel. (Doc. 692 at 47).
17 However, the evidence established that running the lock screws in
18 on the '993 device would damage the mandrel, potentially to the
19 point of rendering it inoperable. (Doc. 691 at 121-122; Doc. 692
20 at 114). Nothing presented at trial is sufficient to establish by
21 clear and convincing evidence that the '993 Patent would have
22 suggested use of a dual load path to a skilled artisan at the time
23 the '925 Patent issued, especially in light of the fact that the
24 '993 Patent was considered by the Examiner. *See, e.g., PowerOasis,*
25 *Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1304 (Fed. Cir. 2008)
26 (noting added burden of deference regarding evidence considered by
27 the Patent Office).

28 ///

1 Defendant contends that the '94 Catalogue renders the '925
2 Patent obvious because it employs a first flange, secondary flange,
3 and set lock screws to react axial loads. However, like the '933
4 Patent, the '94 Catalogue does not suggest use of a dual load path.
5 Although Delvin initially speculated that the MTBS Tubing Hanger
6 could suggest a dual load path whereby force is reacted by the lock
7 screws and secondarily in a flange located above the lock screws,
8 on cross-examination, Devlin conceded that a skilled artisan would
9 have designed the MTBS device so that the lock screws retained the
10 total axial load, preventing any axial force from traveling past the
11 lock screws. (Doc. 692 at 119-120). The evidence presented by both
12 parties supports only one result: the lock screws employed in the
13 '94 Catalogue are designed to retain the total axial load. (*Id.* at
14 91, RT at 1898).

15 Pursuant to the jury instructions, the only two references the
16 jury was permitted to consider in adjudicating obviousness were the
17 '94 Catalogue and the '993 Patent. Defendant presented no testimony
18 sufficient to establish by clear and convincing evidence that the
19 '94 Catalogue or the '993 Patent, either independently or in
20 combination, would have suggested implementation of the type of dual
21 load path structure disclosed in the '925 Patent to a person of
22 ordinary skill in the art at the time of the '925 Patent's issuance.
23 Nor did Defendant present sufficient evidence to establish that
24 either the '993 Patent or the '94 Catalogue suggests using lock
25 screws rated for 5,000 psi production equipment to secure a frac
26 mandrel. To the contrary, record evidence establishes that, to the
27 skilled artisan evaluating the two references, applying the '94
28 Catalogue's run-in lock screw feature with the '933 Patent's mandrel

1 design would have appeared likely to produce failure, not success.
2 In other words, combination of the only two references advanced by
3 Defendant teaches away from the '925 Patent's unique structure.
4 *See, e.g., Tec Air*, 192 F.3d at 1359.

5 The testimony and patent file establish that conception of the
6 dual load path disclosed in the '925 was prompted by the unique
7 engineering problem posed by a customer's specific request to employ
8 5,000 psi lock screws for the herculean task of reacting the extreme
9 axial force generated by fracturing operations. Defendant did not
10 prove by clear and convincing evidence that, absent specific
11 motivation to do so, there would be any "motivation to try" using
12 5,000 psi rated lock screws to retain a frac mandrel. Rather,
13 Defendant's Senior Principal Engineer, Thomas E. Taylor, testified
14 that because of the low psi rating of lock screws used in production
15 wellhead equipment, his engineering team *did not even consider* using
16 such production lock screws to retain a frac mandrel when they set
17 out to design Defendant's TSW frac mandrel. (Doc. 691 at 199).

18 Although expert testimony is not always required to establish
19 obviousness, *e.g., Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587
20 F.3d 1324, 1329 (Fed. Cir. 2009), in light of the record, the nature
21 of the art, and the onerous burden of proof that must be met to
22 establish obviousness, no rational jury could have found claim 1 of
23 the '925 Patent to be obvious based on Defendant's asserted
24 references. All other claims at issue in this action depend from
25 claim 1. Plaintiff's renewed motion for judgment as a matter of law
26 is GRANTED. Alternatively, pursuant to Rule 50(c), Plaintiff's
27 alternative request for a new trial on the issue of obviousness is
28 GRANTED. Fed. R. Civ. P. 50(c).

1 **D. Inequitable Conduct Defenses**

2 Defendant advanced two theories of inequitable conduct at
3 trial: (1) that Plaintiff committed inequitable conduct by failing
4 to disclose John Rogers' contributions to the Patent Office; and (2)
5 that Plaintiff committed inequitable conduct by intentionally
6 withholding the '94 Catalogue from the Patent Office with the intent
7 to deceive. The jury's finding that John Rogers should not have
8 been named as an inventor on the '925 Patent controls adjudication
9 of Defendant's inequitable conduct defense on the basis of
10 inventorship. See, e.g., *Cabinet Vision*, 129 F.3d at 600 (where
11 "substantial commonality" exists between the factual questions
12 presented by legal and equitable claims, jury findings pertaining
13 to the legal claims constrain the court's determination of equitable
14 claims). The jury returned advisory verdicts finding that neither
15 Rex Duhn, Robert Meek, or Constantine Marantidis (1) withheld
16 material information or submitted materially false information to
17 the Patent Office; or (2) knowingly failed to disclose material
18 information or misleading statements with an intent to deceive the
19 Examiner. The court is free to accept or reject the advisory jury's
20 findings, but is obligated to make its own independent assessment
21 of the issues submitted to the advisory jury. See, e.g., Fed. R.
22 Civ. P. 52(a) ("In an action tried on the facts...with an advisory
23 jury, the court must find the facts specially and state its
24 conclusions of law separately"). After reviewing the record and
25 considering the jury's advisory verdicts, the court issues the
26 following findings of fact and conclusions of law.

27 **Findings of Fact**

28 1. Rex Duhn, Robert Meek, and Constantine Marantidis each had a good

1 faith basis to believe, and actually believed, that there was no
2 basis for naming anyone other than Rex Duhn and Robert Meek as
3 inventors of the '925 Patent.

4

5 2. There is no substantial likelihood that a reasonable examiner
6 would have considered information regarding John Rogers' discussions
7 with Rex Duhn and Robert Meek important in deciding whether to allow
8 the application to issue as a patent.

9

10 4. In May 2003, Duhn Oil filed a declaration in connection with its
11 Petition to Make Special indicating that it had conducted complete
12 and thorough search of prior art.

13

14 5. Duhn Oil employed a professional search firm to survey prior art
15 relevant to Duhn Oil's patent application. Robert Meek also
16 performed a search for prior art. All items of prior art found by
17 Meek and the professional search firm were disclosed to the Patent
18 Office.

19

20 6. Robert Meek had the '94 Catalogue in his possession and chose
21 not to disclose it to the Patent Office.

22

23 7. Robert Meek did not submit the '94 Catalogue to the Patent
24 office in connection with prosecution of the '925 Patent because he
25 did not believe it was related to the subject matter of the '925
26 Patent. Robert Meek had a good faith basis to believe that the '94
27 Catalogue was not related to the subject matter of the '925 Patent
28 because the '94 Catalogue does not disclose a dual load path and

1 does not teach use of lock screws to secure a frac mandrel. Use of
2 lock screws to secure tubing hangers, as depicted in the '94
3 Catalogue, is a long-established prior practice in the oil and gas
4 industry and the '94 Catalogue would have been cumulative of other
5 references disclosed in the '925 Patent application.

6
7 8. Robert Meek did not intend to deceive the Patent Office in
8 deciding not to submit the '94 Catalogue in connection with
9 prosecution of the '925 Patent.

10
11 9. There is no substantial likelihood that a reasonable examiner
12 would have considered the '94 Catalogue material in deciding whether
13 or not to issue the '925 Patent.

14 **Conclusions of Law**

15 1. Inequitable conduct is an equitable defense to patent
16 infringement that, if proved, bars enforcement of a patent.
17 *Therasense, Inc. v. Becton, Dickinson & Co.*, 99 U.S.P.Q.2D 1065,
18 1069 (Fed. Cir. 2011) (en banc).

19
20 2. To prevail on the defense of inequitable conduct, the accused
21 infringer must prove, by clear and convincing evidence, that the
22 applicant misrepresented or omitted material information with the
23 specific intent to deceive the Patent Office. *Id.* (citing *Star*
24 *Scientific Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1365
25 (Fed. Cir. 2008)). Although circumstantial evidence may be
26 sufficient to constitute clear and convincing evidence of
27 inequitable conduct,

28 to meet the clear and convincing evidence standard, the

1 specific intent to deceive must be the single most
2 reasonable inference able to be drawn from the evidence.
3 Indeed, the evidence must be sufficient to require a
4 finding of deceitful intent in the light of all the
circumstances. Hence, when there are multiple reasonable
inferences that may be drawn, intent to deceive cannot be
found.

5 *Therasense*, 99 U.S.P.Q.2d at 1073 (citations omitted). A finding
6 that the misrepresentation or omission amounts to gross negligence
7 or negligence under a "should have known" standard does not satisfy
8 this intent requirement. *Therasense*, 99 U.S.P.Q.2D at 1072
9 (citation omitted).

10
11 3. Intent and materiality are separate requirements that must each
12 be satisfied. *Id.* at 1073. A court must weigh the evidence of
13 intent to deceive independent of its analysis of materiality. *Id.*

14
15 4. Where an inequitable conduct claim is based on failure to
16 disclose a reference, clear and convincing evidence must show that
17 the applicant made a deliberate decision to withhold a known
18 material reference. *Id.* at 1072.

19
20 5. Prior art is material if the Patent Office would not have
21 allowed a claim had it been aware of the undisclosed reference. *Id.*
22 at 7073. An exception to this standard applies "in cases of
23 affirmative egregious misconduct." *Id.* This exception to the
24 general rule requiring but-for proof incorporates elements of the
25 early unclean hands cases before the Supreme Court, which dealt with
26 "deliberately planned and carefully executed scheme[s]" to defraud
27 the PTO and the courts." *Id.* at 1974.

1 6. Defendant has not carried the burden of establishing its
2 inequitable conduct claim regarding Robert Meek's decision not to
3 provide the '94 Catalogue to the Patent office because Defendant did
4 not establish by clear and convincing evidence that Robert Meek
5 harbored intent to deceive the Patent Office when he made the
6 decision not to submit the '94 Catalogue. Mr. Meek satisfactorily
7 explained why he did not view the contents of the '94 Catalogue as
8 relevant to the elements of the invention.

9

10 7. Defendant has not met its burden of establishing the inequitable
11 conduct claim regarding Robert Meek's decision not to provide the
12 '94 Catalogue because Defendant did not establish by clear and
13 convincing evidence that the '94 Catalogue would have been material
14 prior art to the Examiner. The '94 Catalogue would not have been
15 material because, *inter alia*, it does not disclose a dual load path
16 and does not teach use of tie down lock screws to secure a frac
17 mandrel.

18

19 8. A person is a joint inventor only if she contributes to the
20 conception of the claimed invention. *E.g., Eli Lilly & Co. v.*
21 *Aradigm Corp.*, 376 F.3d 1352, 1359 (Fed. Cir. 2004) (citations
22 omitted). Contributions to realizing an invention may not amount
23 to a contribution to conception if they are too far removed from the
24 real-world realization of an invention. *Id.* One who simply
25 provides the inventor with well-known principles or explains the
26 state of the art without ever having a firm and definite idea of the
27 claimed combination as a whole does not qualify as a joint inventor.
28 *Nartron Corp. v. Schukra U.S.A., Inc.*, 558 F.3d 1352, 1356 (Fed.

1 Cir. 2010) (citing *Ethicon*, 135 F.3d at 1460). Inventorship
2 requires that a person "contribute in some significant manner to the
3 conception or reduction to practice of the invention [and] make a
4 contribution to the claimed invention that is not insignificant in
5 quality, when that contribution is measured against the dimension
6 of the full invention." *Id.* (citing *Pannu*, 155 F.3d at 1351).

7

8 9. Deliberate concealment of a true inventor's involvement in
9 conceiving and invention constitutes inequitable conduct that
10 renders a patent unenforceable. *E.g.*, *Advanced Magnetic Closures,*
11 *Inc. v. Rome Fastener Corp.*, 607 F.3d 817, 828 (Fed. Cir. 2010).

12

13 10. A good faith decision not to name a person as an inventor of a
14 patent does not provide the basis for an inequitable conduct ruling.
15 *See PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc.*, 225 F.3d
16 1315, 1321 (Fed. Cir. 2000).

17

18 8. Defendant has not carried its burden of proving inequitable
19 conduct regarding the issue of inventorship because Defendant failed
20 to establish by clear and convincing evidence that Rex Duhn, Robert
21 Meek, or Constantine Marantidis had a basis to believe, or actually
22 believed, that John Rogers should have been named as an inventor of
23 the '925 Patent. Neither Rex Duhn, Robert Meek, or Constantine
24 Marantidis intended to deceive the Patent Office with respect to the
25 identity of the named inventors included on the '925 Patent.
26 Because the decision not to include John Rogers as an inventor on
27 the '925 Patent was made in good faith, Defendant cannot prevail on
28 its inequitable conduct claim. The court adopts the jury's findings

1 on this issue.

2

3 9. Defendant has not carried its burden of proving inequitable
4 conduct regarding the inventorship issue because Defendant has not
5 established by clear and convincing evidence that information
6 regarding John Rogers input would have been material to the
7 Examiner. Despite providing ideas related to the '925 Patent such
8 as, *inter alia*, use of lock screws, John Rogers is not an inventor
9 of the '925 Patent because John Rogers' preliminary ideas were too
10 far removed from the real-world realization of the invention
11 embodied in the '925 Patent. *See Eli Lilly & Co.*, 376 F.3d at 1359.

12 **E. Judgment under Rule 54(b)**

13 Rule 54(b) provides that final entry of judgment should be made
14 on individual claims in multiple claim suits "upon an express
15 determination that there is no just reason for delay." Fed. R. Civ.
16 P.54(b). In determining whether just reason for delay of entry of
17 judgment exists, courts consider such factors as the
18 interrelationship of the claims so as to prevent piecemeal appeals.
19 *AmerisourceBergen Corp. v. Dialysist West, Inc.*, 465 F.3d 946, 954
20 (9th Cir. 2006).

21 Certification of partial judgment pursuant to Rule 54(b) is not
22 appropriate. A new trial is required on Defendant's affirmative
23 defense of anticipation. Because a judgment of invalidity
24 necessarily moots the issue of infringement, *see, e.g., Sandt Tech.,*
25 *Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344, 1356 (Fed. Cir.
26 2001), there is just reason for delay of entry of judgment under the
27 circumstances presented, *see Fin Control Sys. Pty v. Oam*, 265 F.3d
28 1311, 1321 (Fed. Cir. 2001) (noting that adjudication of invalidity

1 counterclaim was a prerequisite to entering final judgement in a
2 patent infringement case).

3 **ORDER**

4 For the reasons stated, IT IS ORDERED:

5 1) As a new trial is required on the defense of anticipation,
6 entry of judgment is not appropriate at this time;

7 2) Plaintiff's motion for judgment as a matter of law on
8 Defendant's claims of obviousness is GRANTED;

9 3) Plaintiff's alternative request for a new trial on the
10 issue of obviousness is conditionally GRANTED pursuant to Rule
11 50(c);

12 4) This case shall be reset for trial on the defense of
13 anticipation. In the event Defendant prevails, judgment shall
14 be entered against Plaintiff on all Plaintiff' claims and in
15 favor of Defendant. If Plaintiff prevails, judgment in favor
16 of Plaintiff shall in all respects be entered for Plaintiff
17 and against Defendant on liability and damages; and

18 5) A form of order consistent with this memorandum decision
19 shall issue.

20 IT IS SO ORDERED.

21 **Dated: September 30, 2011**

/s/ Oliver W. Wanger
UNITED STATES DISTRICT JUDGE