

Federal Court of Appeal



Cour d'appel fédérale

Date: 20220620

Docket: A-35-21

Citation: 2022 FCA 118

**CORAM: LASKIN J.A.
MACTAVISH J.A.
MONAGHAN J.A.**

BETWEEN:

**JASON SWIST and CRUDE SOLUTIONS
LTD.**

Appellants

and

MEG ENERGY CORP.

Respondent

Heard by online video conference hosted by the Registry on March 9 and 10, 2022.

Judgment delivered at Ottawa, Ontario, on June 20, 2022.

REASONS FOR JUDGMENT BY:

LASKIN J.A.

CONCURRED IN BY:

**MACTAVISH J.A.
MONAGHAN J.A.**

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REASONS FOR JUDGMENT

LASKIN J.A.

I. Introduction

[1] Canadian Patent No. 2,800,746, titled “Pressure Assisted Oil Recovery” (the 746 patent), describes a method of extracting heavy oil from underground reservoirs. The appellants, the named inventor and owner, respectively, of the 746 patent, brought an action in the Federal

Court against the respondent (MEG), an Alberta oil producer. They alleged that the methods MEG uses to extract oil infringe claims 1 to 6 and 8 of the 746 patent. MEG denied infringement, and counterclaimed for a declaration that claims 1 to 8 are invalid for anticipation, obviousness, inutility, and overbreadth. A bifurcation order was made deferring any quantification issues that might require resolution until after the liability phase of the proceeding.

[2] In the trial of the liability phase, which included eight days of expert and fact evidence, the Federal Court (2021 FC 10, Fothergill J.) found no infringement by MEG. It also granted MEG's counterclaim, finding claims 1 to 8 of the 746 patent invalid for anticipation and inutility. However, it did not accept MEG's submission that these claims were also invalid for obviousness, and found it unnecessary, given its other conclusions on invalidity, to consider MEG's further allegation of invalidity for overbreadth.

[3] In this appeal, the appellants submit that the Federal Court committed reversible errors in its construction of the 746 patent, in failing to find infringement, and in finding invalidity on the basis of anticipation and inutility. They further submit that the record in the appeal is sufficient to permit this Court to re-decide the issues on which they say the Federal Court erred, and that this Court should do so. Alternatively, they say, the matter should be remitted to the Federal Court for redetermination.

[4] For its part, MEG submits that the appellants fail to make out any of the errors they allege, and that claims 1 to 8 should also have been found invalid for obviousness. It says that if this Court finds the Federal Court committed any errors that warrant setting aside the judgment

under appeal, the entire matter, including MEG's allegation of overbreadth, should be remitted to the Federal Court.

[5] In my view, it is unnecessary to deal with all of the issues raised by the parties in order to determine this appeal. I conclude that the Federal Court committed no reversible errors in its construction of the 746 patent or in its findings on infringement and anticipation. On this basis, I would dismiss the appeal.

[6] Before explaining why I reach these conclusions, I will briefly provide some background concerning oil extraction methods, and set out the disputed claims of the 746 patent. I will then discuss the allegations of reversible error, reviewing as necessary the applicable standard of review, some further relevant background, and the reasons and determinations of the Federal Court.

II. Oil extraction methods

[7] Bitumen, the type of oil found in the Canadian oil sands, is too thick to be pumped out of the ground directly using traditional methods. The industry has therefore developed two main methods of getting the oil to the surface: cyclic steam simulation (CSS) and steam-assisted gravity drainage (SAGD). Both methods involve pumping steam into an underground reservoir, where it warms the oil and reduces its viscosity. This allows the oil to flow more freely towards a pump, which then brings it to the surface.

[8] The process of pumping steam into the reservoir is called “injection,” and the well that injects the steam is referred to as an “injector.” Similarly, the activity of pumping oil to the surface is referred to as “production,” while the well that pumps the oil is termed a “producer.”

[9] CSS and SAGD differ in the number of wells used in a single reservoir. In CSS, a single well injects steam into the reservoir, then changes to a producer and brings that oil to the surface. SAGD uses a pair of wells—one acting as injector, the other, as producer.

III. Relevant claims of the 746 patent

[10] The 746 patent claims a method for modification of SAGD that is said to result in faster and more efficient extraction of oil. This modification entails, among other things, positioning a third well between two adjacent SAGD well pairs.

[11] Claim 1 is an independent claim, and reads as follows:

1. A method comprising:

providing first and second well pairs separated by a first predetermined separation, each well pair comprising:

a first well within an oil bearing structure; and

a second well within the oil bearing structure at a first predetermined vertical offset to the first well, substantially parallel to the first well and a first predetermined lateral offset to the first well;

providing a third well within the oil bearing structure at a predetermined location between the first and second well pairs;

selectively injecting a first fluid into the first well of each well pair according to a first predetermined schedule under first predetermined conditions to create a zone of increased mobility within the oil bearing structure; and

generating a large singular zone of increased mobility by selectively injecting a second fluid into the third well according to a second predetermined schedule

under second predetermined conditions at least one of absent and prior to any communication between the zones of increased mobility.

[12] Claims 2 to 8 are dependent on claim 1. As the Federal Court recognized (at paragraph 70 of its reasons), they thus incorporate its elements by reference: *Apotex Inc. v. Shire LLC*, 2021 FCA 52 (*Shire FCA*) at para. 52, leave to appeal to S.C.C. refused, 39662 (October 7, 2021).

These claims read as follows:

2. A method according to claim 1 wherein,

the second predetermined schedule begins injection of the second fluid into the third well before a depletion zone resulting from injection of the first fluid into the first well of the first well pair merges with another depletion zone resulting from concurrent operation of the second well pair disposed in mirror relationship with respect of the third well with the first well pair.

3. The method according to claim 1 wherein at least one of:

the first well in at least one of the first and second well pairs does not inject the fluid whilst the second well of the at least one the first and second well pairs is producing; and

the fluid is at least one of steam, water, carbon dioxide, nitrogen, propane and methane.

4. The method according to claim 1 wherein,

injection into the third well is made at a higher pressure than injection into the first wells of each well pair.

5. The method according to claim 1 wherein,

at least one of:

the second predetermined conditions comprise at least injecting the second fluid at a pressure that is substantially at least one of lower and higher than the pressure at that at region of the oil bearing structure within which the second well of at least one of the first and second well pairs is disposed; and

the second predetermined schedule comprises at least operating the third well to extract oil from the oil bearing structure, and operating the third well whilst injecting a second fluid into the first well of at least one of the first and second well pairs under second predetermined conditions.

6. The method according to claim 1 wherein,
at least one of the:

first and second wells form a well pair comprising a predetermined portion of an array of well pairs and the third well is disposed in predetermined relationship between two well pairs; and

the first and second wells are disposed towards the lower boundary of the oil bearing structure and the third well is disposed vertically towards the upper boundary of the oil bearing structure.

7. The method according to claim 1 further comprising;

a second injection well disposed in predetermined relationship to the third well.

8. The method according to claim 1 wherein,

the large singular zone substantially depletes the oil bearing reservoir between the first and second well pairs.

IV. Claim construction

[13] In embarking on its construction of the claims, the Federal Court set out (at paragraphs 58 to 60 of its reasons) the canons of claim construction prescribed in *Whirlpool Corp. v. Camco Inc.*, 2000 SCC 67 at paras. 49-55, and *Free World Trust v. Électro Santé Inc.*, 2000 SCC 66 at paras. 44-54. Among them is that claim construction must be the same for the purpose of validity and for the purpose of infringement. The claims of a patent must receive “one and the same interpretation for all purposes”: *Whirlpool* at para. 49(b); *Evolution Technologies Inc. v. Human Care Canada Inc.*, 2019 FCA 209 at para. 4, leave to appeal to S.C.C. refused, 38846 (April 9, 2020).

[14] The Federal Court also recognized that claim construction is a matter of law for the judge, and stated that expert evidence is necessary only where the meaning of a term is not apparent from a reading of the patent specification. It found the expert evidence to be useful in construing five terms in claim 1 and a sixth in claim 2. Those terms, and their meaning as the Federal Court construed them in light of the expert evidence, were as follows (at paragraphs 71 to 104 of the reasons):

- (1) “well pairs”: The combination of an injector and a producer well used in traditional SAGD method (see paragraph 81 of the reasons);
- (2) “third well”: An additional well to the traditional “well pair” discussed above, acting either as an injector or producer well (see paragraph 86);
- (3) “zone of increased mobility”: A steam chamber with a “shell” or “rind” along its outer edge where liquid bitumen flows towards a producer well (see paragraph 90);
- (4) “communication”: The merger of previously separate steam chambers (see paragraph 95);
- (5) “generating”: Having a causal relationship, meaning a “material and substantial effect,” and not (as the appellants submitted) merely a “positive influence” on the speed of merger between steam chambers and the ultimate size of these chambers (see paragraphs 96-100);
- (6) “depletion zone”: An area where there has been sufficient steam that a substantial volume of bitumen has been drained and thus depleted (see paragraph 104).

[15] As will be apparent from the discussion below, it was the construction of “generating” that proved most significant to the outcome at trial. The Federal Court saw the construction of the term that it adopted as consistent with the purpose of the invention claimed in the 746 patent: “to accelerate the process and improve the percentage of the oil recovered” (at paragraph 99).

[16] The appellants submit that the Federal Court erred by conducting an incomplete and erroneous construction of the claims. They say that the Federal Court was wrong to construe only claim 1 and a single term in claim 2 when claims 1 to 8 were all in issue, and that the Court did not, in its construction analysis, address dependent claims 3 to 6 and 8. As a result, the appellants say, the Federal Court invalidated claims it did not construe.

[17] As a further consequence, the appellants submit, the Federal Court found anticipation by prior art that teaches methods different from the claimed method, without considering in its claims construction whether these methods fall within the scope of the claims. The appellants also submit that in considering infringement, the Federal Court applied a construction of claim 1 that failed to incorporate the features of dependent claim 5.

[18] Construction of a patent is a question of law, reviewable for correctness: *Whirlpool* at paras. 61 and 76. However, the first instance court is entitled to deference in its appreciation of the evidence that bears on construction. This includes, in particular, expert evidence as to how the skilled reader would understand the claim language.

[19] The first instance court's appreciation of this evidence is therefore reviewable only on the standard of palpable and overriding error: *ViiV Healthcare Company v. Gilead Sciences Canada, Inc.*, 2021 FCA 122 at para. 56. This Court has described the palpable and overriding error standard as "exacting," and elaborated that "[a] palpable and overriding error is one that is obvious and goes to the very core of the outcome of the case": *Bennett v. Canada*, 2022 FCA 73

at para. 7; *Pharmascience Inc. v. Teva Canada Innovation*, 2022 FCA 2 at para. 9, leave to appeal to S.C.C. sought, 40100 (April 27, 2022).

[20] I will consider here the appellants' submissions that the Federal Court's construction was incomplete, leaving for discussion later in these reasons the impact the appellants say that claim construction had on the Federal Court's determinations on infringement and anticipation.

[21] In my view, the Federal Court did not err by limiting its construction as it did. When construing claims, it is appropriate for the first instance court to focus on the issues in dispute between the parties, centering the analysis "where the shoe pinches": *Cobalt Pharmaceuticals Company v. Bayer Inc.*, 2015 FCA 116 at para. 83; see also, for example, *Guest Tek Interactive Entertainment Ltd. v. Nomadix, Inc.*, 2021 FC 276 at para. 49; *Shire Biochem Inc. v. Canada (Health)*, 2008 FC 538 at para. 22.

[22] In *Corlac Inc. v. Weatherford Canada Ltd.*, 2011 FCA 228 at paras. 21-35, this Court considered a submission similar to the submission made here, that the Federal Court erred by failing to construe dependent claims it subsequently invalidated. This Court held that, where the first instance court correctly determines that the validity of dependent claims rests on the inventiveness of the independent claim, it is not required to construe elements of the dependent claims that were not actually in dispute: see *Weatherford* at paras. 33, 35.

[23] Here, similarly, the Federal Court properly focussed its construction on the issues in dispute. As in *Weatherford*, the appellants assert that its approach was flawed without explaining how the failure to construe the claims led to reviewable error.

[24] Judging from the parties' submissions to the Federal Court, there was no significant dispute on the construction of claims 3 to 4 and 6 to 8: Respondent's Memorandum, Appendix B; see also Defendant's Outline of Closing Argument, Supplementary Appeal Book at 20064, PDF at 428. The appellants acknowledged in closing argument that the main construction matters in dispute related to claims 1 and 5 and possibly claim 2: Federal Court Transcript at 1765, 1769-1771, Supplementary Appeal Book at 20102-20104, PDF at 466-468.

[25] Consistent with the position that the terms of claims 3 to 6 and 8 were not in dispute, the appellants' written submissions to the Federal Court on claims construction dealt largely with claim 1. Only the submissions on claims 1, 2, and 5 went beyond summarizing the claim language: Plaintiff's Memorandum of Fact and Law at paras. 58-90, Supplementary Appeal Book at 19660-19671, PDF at 24-35.

[26] In setting out at trial the key terms they submitted required construction, the appellants again dealt mainly with terms in claim 1: Plaintiffs' Closing Submissions, Supplementary Appeal Book at 19733, PDF at 97 (outlining the key terms to be construed in claim 1 to be "well pair," "third well," "zone of increased mobility," "communicating," and "generating"); 19785-19790, PDF at 149-154 (discussing terms in claim 2 including "depletion zones" and "mirror

relationship”); and 19791, PDF at 155 (discussing terms in claims 3 to 5). The claims construction portion of the appellants’ closing presentation at trial did not mention claims 6 or 8.

[27] There was, moreover, little disagreement on the construction of claims 3 to 6 and 8.

- There was no dispute that claim 3 describes a listed fluid being injected into the well: compare Plaintiffs’ Closing Submissions, Supplementary Appeal Book at 19791, PDF at 155 and Defendant’s Closing Argument, Supplementary Appeal Book at 19999, PDF at 363.
- There was no dispute that claim 4 requires injection at the third well be done at a higher pressure than at the other well: compare Plaintiffs’ Closing Submissions, Supplementary Appeal Book at 19791, PDF at 155 and Defendant’s Closing Argument, Supplementary Appeal Book at 20000, PDF at 364.
- There was no dispute that claim 6 refers to the placement of the array of wells with the third well placed in between: compare Plaintiffs’ Memorandum of Fact and Law at para. 88, Supplementary Appeal Book at 19670, PDF at 34, and Defendant’s Closing Argument, Supplementary Appeal Book at 20001, PDF at 365; see also Federal Court Transcript at 1769, lines 13-14, Supplementary Appeal Book at 20103, PDF at 467 (conceding there was “no significant dispute” about these terms).
- Finally, there was no dispute that claim 8 refers to enhanced oil depletion in the area between the two traditional SAGD well pairs: compare Plaintiffs’

Memorandum of Fact and Law at para. 90, Supplementary Appeal Book at 19671, PDF at 35, and Defendant's Closing Argument, Supplementary Appeal Book at 20001, PDF at 365.

[28] As for claim 7, the appellants abandoned their assertion of this claim at trial. It remained in play only because MEG relied on the claim in its submissions relating to one of the patents that MEG submitted was anticipatory: Federal Court Transcript at 1975-1976, Supplementary Appeal Book at 20204-20205, PDF at 568-569. Those submissions failed at trial, and the point is not pursued in this appeal.

[29] In any event, there was no real dispute concerning this claim. The parties agreed that it involves another injection well inserted between the two original SAGD well pairs: Plaintiffs' Memorandum of Fact and Law at para. 89, Supplementary Appeal Book at 19670, PDF at 34; Closing Argument of the Defendant at para. 51, Supplementary Appeal Book at 20001, PDF at 365.

[30] Given the manner in which the parties approached the construction issues, and the centrality of claim 1 in the validity analysis, the Federal Court was entitled to focus its construction on the disputed terms within claims 1, 2, and 5 without explicitly construing the other claims.

[31] To the extent the Federal Court's analysis required implicit construction of other terms, I see no error in its approach: *Evolution Technologies* at paras. 18-19. Where the parties have not

provided expert evidence on how a skilled person would understand a term, or where that evidence is clearly not necessary, claim terms are to be given their plain and ordinary meaning: *Canmar Foods Ltd. v. TA Foods Ltd.*, 2021 FCA 7 at para. 36; *Janssen Inc. v. Teva Canada Ltd.*, 2020 FC 593 at para. 125; *Lundbeck Canada Inc. v. Ratiopharm Inc.*, 2009 FC 1102 at para. 41, cited with approval in *Hospira Healthcare Corporation v. Kennedy Trust for Rheumatology Research*, 2020 FCA 30 at para. 18, leave to appeal to S.C.C. refused, 39099 (December 23, 2020).

V. Infringement

[32] As the Federal Court stated in paragraph 105 of its reasons, section 42 of the *Patent Act*, R.S.C. 1985, c. P-4, grants the patent holder the exclusive right, privilege and liberty of making, constructing and using the invention and selling it to others to be used. A method patent like the 746 patent is infringed where someone other than the patent holder performs all of the essential steps of the claimed method: *Western Oilfield Equipment Rentals Ltd. v. M-I LLC*, 2021 FCA 24 at para. 48; *Canamould Extrusions Ltd. v. Driangle Inc.*, 2004 FCA 63 at para. 39, citing *Free World Trust* at paras. 68, 31. The burden of proving infringement rests with the party that alleges it: *Monsanto Canada Inc. v. Schmeiser*, 2004 SCC 34 at para. 29.

[33] In addressing the appellants' claim that MEG's extraction methods infringe the 746 patent, the Federal Court found (at paragraph 108 of its reasons) that there was no question that MEG uses third wells in its extraction processes, and (at paragraph 115) that these additional (or "infill") wells are usually activated before merger with the adjacent steam chamber.

[34] However, the Federal Court (at paragraph 129) was not satisfied that the appellants had established, on a balance of probabilities, that MEG's early injection of the third well has the effect of "generating a large singular zone of increased mobility." The Court observed (at paragraph 132) that it had concluded in its construction of "generating" that "the threshold of 'positively influence' is too low," and that "[g]enerating' requires a causal connection between injection of the third well and merger of the adjacent steam chambers sooner than would otherwise be the case"

[35] The Federal Court accepted (at paragraphs 133-135) the evidence of MEG's experts that MEG's injection of the infill wells is not sufficient to generate a large singular zone of increased mobility, in part because the infill wells are used largely for production, interspersed with much shorter injection cycles. It noted that MEG's expert evidence that injection into the infill wells did not generate a large singular zone had not been effectively challenged in cross-examination.

[36] Because the appellants' claim of infringement relied on "generation" as construed, the appellants' failure to establish that MEG's steam chambers merge sooner than would otherwise be the case was fatal to their allegation of infringement (at paragraphs 132-135, 137).

[37] Before concluding on infringement, the Federal Court also discussed (at paragraph 136) the appellants' submission, made with reference to claim 5, that the third well functioning as a producer, as described in that claim, would not have a negative effect on the generation of a large singular zone of increased mobility. While the Federal Court noted that one of MEG's experts agreed with that proposition, it found no support in the evidence for—and accordingly did not

accept—the appellants’ further assertion that drawing fluid towards the infill well from the adjacent SAGD well pairs must cause earlier steam chamber merger.

[38] The appellants submit that the Federal Court erred in several respects in its analysis of infringement.

[39] First, they say, the Federal Court failed to account for features of the dependent claims, specifically claim 5, that must necessarily form part of the independent claim 1. This failure, they submit, led to an unduly narrow construction of claim 1 and the erroneous finding that MEG’s methods did not fall within the claims. Second, they say, the Federal Court erred by using the disclosure rather than the claims in conducting the infringement analysis. And third, they say, the Federal Court erred by misapprehending the evidence and making contradictory findings.

[40] To the extent that the appellants allege an error in construction, the correctness standard of review applies, as set out above. But once a patent is construed, the question of infringement is one of mixed fact and law. Absent an extricable legal question, therefore, the decision on infringement is reviewable on the deferential standard of palpable and overriding error:

Whirlpool at para. 76; *Canmar Foods* at para. 21.

[41] In my view, the appellants fail to establish any of the errors they allege relating to infringement.

[42] As for the first—the alleged failure to account for claim 5 in the construction of claim 1—the appellants correctly state that an independent claim must ordinarily be construed to be consistent with the claims that depend on it: *Ratiopharm Inc. v. Canada (Health)*, 2007 FCA 83 at para. 33; *Whirlpool* at para. 49(f). However, the Federal Court did not fail to consider claim 5 in the construction of claim 1. With the benefit of expert evidence, it expressly took claim 5 into account (at paragraph 86) in construing the term “third well” in claim 1 potentially to include both an injector and a producer well. This conclusion did not detract from the construction of claim 1 to require that it be fluid injection into the third well that “generates” the large singular zone of increased mobility. That construction too was supported by expert evidence, including that of the appellants’ expert: see Responding Report of Dr. Vikram Rao at para. 44(b), Confidential Appeal Book Vol. 3 at 741, PDF at 49; Expert Report of Dr. Gates at paras. 114-117, 121, Public Appeal Book Vol. 43 at 16456-16457, 16459, PDF at 80-81, 83.

[43] As the appellants submit, it is trite law that the claims of a patent, not the disclosure, define the monopoly that it confers. In support of their second allegation of error—that the Federal Court improperly based its finding on infringement here on the disclosure rather than the claims of the 746 patent—the appellants refer this Court in oral argument to paragraphs 127 to 135 of the reasons of the Federal Court.

[44] In my assessment, a review of this portion of the reasons does not bear out the appellants’ contention. The key finding leading to the conclusion that there is no infringement is at paragraph 129, where the Federal Court found it was not satisfied the appellants had established, on a balance of probabilities, that MEG’s production methods meet the “generation” element of

claim 1. Paragraphs 127 and 128, similarly, refer to MEG's operational data and the conclusion to be drawn from it as to whether MEG's methods come within terms in claim 1. Paragraphs 130 and 131 refer to evidence and submissions on MEG's methods and steam chamber development. In paragraph 132, the Federal Court recapitulates conclusions of its construction analysis, and in paragraph 133, it refers to expert evidence further addressing the "generation" element of claim 1.

[45] While paragraph 134 discusses simulations referred to in the 746 patent, it also contains further information about MEG's operations, as well as evidence that the relative size of MEG's fluid injections makes it unlikely that they would be large enough to meet the terms of claim 1. Finally, paragraph 135 also refers to evidence concerning MEG's operations and the Federal Court's appreciation of that evidence, and does not discuss the patent disclosure.

[46] That brings me to the third infringement-related error the appellants allege—misapprehending the evidence and making contradictory findings.

[47] In their submissions on this point (at paragraph 81 of their memorandum), the appellants set out two paragraphs of the reasons of the Federal Court they say show that the Federal Court's "infringement finding contradicts itself":

[132] I have concluded in my analysis of claim construction that the threshold of "positively influence" is too low. "Generating" requires a causal connection between injection of the third well and merger of the adjacent steam chambers sooner than would otherwise be the case, ultimately permitting the operation of SAGD over deeper oil sand formations. [...]

[136] Referring to claim 5, which describes the third well functioning as a producer, [the appellants say] that this would not have a negative effect on the generation of a large singular zone of increased mobility. Dr. Gates [one of MEG's experts] agreed with this proposition.

[48] In the appellants' submission, these passages demonstrate that the Federal Court ignored the "second predetermined schedule" referred to in claim 1 (reproduced at paragraph 11 above). It thus erred, they say, in concluding both that the "causal connection" with chamber merger must result solely from injection into the third well and that there was no supporting evidence for the assertion that it is MEG's production at its third well that causes earlier chamber merger. They submit that if the Federal Court had turned its mind to the "second predetermined schedule," it would have had to construe and consider claim 5, since claim 5 "recites a specific mode of operation at the third well," and would have had to conclude that "generating" is the result of both injection of and extraction from the third well.

[49] I note first that the appellants' quotation of paragraph 136 of the reasons in their memorandum is a partial quotation only, and omits the next two sentences in paragraph 136. Those sentences read as follows:

However, [the appellants make] the further assertion that drawing fluid towards the infill well from the adjacent SAGD well pairs must cause earlier steam chamber merger than without the infill well. The latter assertion is not supported by the evidence.

[50] When this full paragraph is read together with paragraph 132 of the reasons, I see no contradiction or misapprehension. The fact that production from the third well would not have a negative effect on the generation of a large singular zone of increased mobility does not mean

that production is its cause. Moreover, in considering whether MEG's third well "generated" a large singular zone of increased mobility, the Federal Court specifically referred (at paragraph 136 of the reasons) to the second predetermined schedule.

[51] In the end, the Federal Court construed "generating" to include the third well's production and injection functions, but then found as a fact, supported by expert evidence, that production at the third well did not have a causal relationship with, and therefore did not "generate," the large mobilized zone. In my view, this conclusion reflects no reversible error.

VI. Anticipation

[52] The Federal Court began its discussion of anticipation by paraphrasing section 28.2 of the *Patent Act*, the statutory source of invalidity for anticipation. It then referred to case law, including the decision of the Supreme Court in *Apotex Inc. v. Sanofi-Synthelabo Canada Inc.*, 2008 SCC 61, setting out the two requirements for anticipation: prior disclosure and enablement. As stated in *Sanofi* at paras. 23-25, for the requirement of disclosure to be satisfied, it is not necessary that "the exact invention" have been made and publicly disclosed; rather, "the requirement of prior disclosure means that the prior patent must disclose subject matter which, if performed, would necessarily result in infringement of that patent." As for the requirement of enablement, it "means that the person skilled in the art would have been able to perform the invention": *Sanofi* at para. 26.

[53] As already noted, the Federal Court found claims of the 746 patent anticipated by each of three prior art United States patents—the Arthur, Brannan, and Cyr patents. There was no

dispute that all three are prior art and enabling. The only question, therefore, was whether they meet the disclosure requirement for anticipation. There was expert evidence in respect of each of them to support the conclusion that they do.

[54] With respect to the Arthur patent, the Federal Court found that it discloses all of the essential elements of claim 1: a third well is used alongside a pair of SAGD well pairs to expand the steam chamber and extract bitumen. In doing so, it relied on the evidence of two of MEG's experts—evidence on which, it noted, they had not been cross-examined. Although the Arthur patent states that activation of the third well preferably occurs after the merger of two adjacent steam chambers, it also foresees cases in which the third well is activated before merger. The Federal Court stated (at paragraph 151) that “[t]he fact that prior art ‘teaches away’ from an impugned patent, while potentially relevant to an obviousness allegation, is irrelevant to the anticipation analysis.” It found the Arthur patent to anticipate claim 1 and the dependent claims of the 746 patent.

[55] The Federal Court went on to find that, similarly, the Brannan patent discloses all of the essential elements of claim 1 of the 746 patent. While the Court agreed with the appellants that the Brannan patent distinguishes its claimed invention from SAGD, mainly because of the wide spacing between the injector and producer wells, it noted that the patent also states that its invention is not limited to any specific dimensions, and that disclosure of a point within a range prescribed by a patent is anticipatory. Finally, it observed that the appellants had not cross-examined MEG's expert on his opinion that the Brannan patent anticipates claims 1 to 3, 5, 6,

and 8. The Federal Court concluded, therefore, that those claims of the 746 patent are anticipated.

[56] The Federal Court proceeded to find that the Cyr patent too anticipates claims 1 to 8 of the 746 patent. The anticipation is less clear, the Court stated, than for the Arthur and Brannan patents. But the Federal Court was persuaded, based on its claim construction and on evidence including a concession on the part of the appellants' expert, that the staged procedure contemplated by the Cyr patent—the operation of an initial SAGD well pair in tandem with an offset CSS well, followed by the addition of an adjacent SAGD well pair—would create the requisite large zone of increased mobility aided by the operation of the CSS well. Nothing in the 746 patent, it stated, requires the development of the large singular zone of increased mobility to be symmetrical.

[57] There is no need to review here the basis for the Federal Court's finding that the two further patents, the Ong patent and the Coskuner patent, are not anticipatory (though I refer to them briefly below). MEG does not allege any error on the part of the Federal Court in its findings in that regard.

[58] Whether a patent claim is anticipated is a question of mixed fact and law. Therefore, except where the decision of the first instance court on anticipation can be attributed to an extricable error of law, which is reviewable on the correctness standard, the decision is subject to review only for palpable and overriding error—"a very stringent standard": *Bell Helicopter Textron Canada Limitée v. Eurocopter, société par actions simplifiée*, 2013 FCA 219 at para.

104, reconsideration refused, 2013 FCA 261; *Dugré v. Canada (Attorney General)*, 2021 FCA 8 at para. 42.

[59] The appellants say that the Federal Court committed a series of errors in finding the 746 patent to be invalid for anticipation. They present in their memorandum (beginning at paragraph 60) and in their oral submissions a detailed re-analysis of each of the three patents found to be anticipatory, and ask this Court, in effect, to reweigh the evidence. It is trite to say that this is a task we cannot take on, especially where, as here, there is evidence to support the Federal Court's finding in respect of each of the three patents in question. The appellants' re-analysis does not, in my view, disclose any palpable or overriding error.

[60] The appellants also put forward submissions that can be regarded as asserting errors of law. They say that the Federal Court erred by first, invalidating claims it did not construe; second, applying a broader construction of claim 1 in its validity analysis than in its infringement analysis; and third, applying the wrong legal test for anticipation, and as a result wrongly concluding that the three prior art references are anticipatory.

[61] I have already discussed, in addressing the appellants' submissions concerning construction (at paragraphs 21 to 31), the first error in this category they allege—an error of law in invalidating claims that were not construed. To repeat in brief, the Federal Court correctly found, given the submissions of the parties and the nature of the dispute, it was required to construe expressly only a limited number of claim terms.

[62] Though the appellants rely on *Zero Spill Systems (Int'l) Inc. v. Heide*, 2015 FCA 115, to suggest that the Federal Court was required to consider each dependent claim on its own, the situation in *Zero Spill* differed from that here. In *Zero Spill*, the Federal Court entirely avoided construing the dependent claims. It then conducted its anticipation analysis, failing to realize that some of the dependent claims might be valid even when the independent claim was not: *Zero Spill* at para. 94. Conversely, the Federal Court in this case considered the terms in dispute. It found, as in *Weatherford*, that the patent's inventiveness lay in the independent claim, and focussed its analysis accordingly. However, it did consider the dependent claims where relevant (see, for example, paragraphs 160, 161, and 173 of the Federal Court's reasons). I would therefore not give effect to the appellants' first alleged legal error.

[63] I turn then to the second alleged error of law on the part of the Federal Court, which the appellants describe in their memorandum (in the heading preceding paragraph 47) as “[applying] a different (broader) construction of claim 1 in its validity analysis compared to infringement.” Elaborating on this submission (at paragraphs 48 and 49 of their memorandum), the appellants say that while the Federal Court's infringement analysis turned on the failure to establish the claim term “generating”—all of the other elements of claim 1 were found to be present in MEG's methods—the Court “conducted its anticipation analysis leaving the essential claim 1 terms ‘generating ...’ and ‘second schedule ...’ wholly unaddressed.”

[64] I do not accept this submission. As set out above, the Federal Court found (at paragraph 159 of its reasons) that the Arthur patent discloses all of the essential elements of claim 1. In doing so it specifically referred to the role of the third well in “generating a large singular zone

of increased mobility.” Before coming to the same conclusion (at paragraph 171) with respect to the Brannan patent, the Federal Court specifically referred (at paragraph 164) to generation. Similarly, before setting out its conclusion (at paragraph 183 of its reasons) that the Cyr patent too anticipates claims 1 to 8 of the 746 patent, the Federal Court discussed (at paragraphs 176 and 181) the arguments and evidence before it concerning generation.

[65] The Federal Court’s reasons for rejecting MEG’s submissions on the Ong patent and the Coskuner patent further undermine the appellants’ submission that the Court “[left] the essential claim 1 terms ‘generating ...’ and ‘second schedule ...’ wholly unaddressed.” One of the reasons for its conclusion on the Ong patent (at paragraph 190) was that the patent was silent on the question of “generation.” One of the reasons for its conclusion on the Coskuner patent (at paragraph 196) was that the patent did not envisage the use of a “second predetermined schedule.” In my view, there can be little doubt that the Federal Court was alive to the anticipation issues that the parties brought before it: see *Teva Canada Limited v. Novartis Pharmaceuticals Canada Inc.*, 2013 FCA 244 at para. 12; *Weatherford* at para. 91.

[66] Though the parties do not raise this point, I note that MEG’s expert’s opinion on the Brannan patent did not address whether claim 7 was anticipated by that prior art, and the Federal Court did not make a finding on that point. In any event, as in *Weatherford* discussed above, the validity of the dependent claims in this case relies on the inventiveness of the independent claim. I am therefore satisfied that the Federal Court’s finding that the Brannan patent anticipates claim 1 was sufficient to invalidate its dependent claims. Indeed, the appellants seem to assume as

much at paragraphs 65 to 67 of their memorandum, focussing their attention on whether Brannan discloses the essential elements of claim 1.

[67] That brings me to the appellants' contention that the Federal Court erred by applying an incorrect legal standard for anticipation. They submit that the Federal Court did so in two principal ways.

[68] First, they set out (at paragraph 54 of their memorandum) the statement by the Supreme Court in *Sanofi* (at paragraph 25) that “[t]he disclosure requirement of anticipation ‘means that the prior patent must disclose subject matter which, if performed, would necessarily result in infringement of that patent.’” While they suggest that the Federal Court failed to apply this statement of the law, the Federal Court’s reasons include (at paragraph 150) both virtually identical language and a citation to the same paragraph in *Sanofi*, and the requirement is expressly addressed (at paragraph 159) in the Federal Court’s conclusion that the Arthur patent is anticipatory. I do not accept the appellants’ submission that there was legal error in this regard.

[69] The appellants further submit, also based in large part on *Sanofi*, that anticipation requires disclosure of the “special advantage” of the invention. They say that none of the three patents the Federal Court found to be anticipatory disclose the “special advantage” of the invention of the 746 patent, so that the findings of anticipation cannot stand.

[70] The concept of “special advantage” has been associated with selection patents. A selection patent is a patent (most commonly a pharmaceutical patent) “devoted to a selection of a

particular compound, or compounds, from a larger grouping of compounds previously disclosed in general terms and claimed in a pre-existing genus patent”: *Shire FCA* at para. 31.

[71] In *Sanofi* at paras. 10-11, the Supreme Court, borrowing from the case law in the United Kingdom, where the selection patent classification originated, set out three conditions of a valid selection patent:

1. There must be a substantial advantage to be secured or disadvantage to be avoided by the use of the selected members.
2. The whole of the selected members (subject to “a few exceptions here and there”) possess the advantage in question.
3. The selection must be in respect of a quality of a special character peculiar to the selected group. If further research revealed a small number of unselected compounds possessing the same advantage, that would not invalidate the selection patent. However, if research showed that a larger number of unselected compounds possessed the same advantage, the quality of the compound claimed in the selection patent would not be of a special character.

[72] It is said that a selection patent does not differ in substance or form from other patents; it is also “subject to the same requirements and vulnerable to the same attacks as any other patent, including attacks based on anticipation ...”: *Sanofi* at para. 9; *Shire FCA* at paras. 31-32; *Eli Lilly Canada Inc. v. Novopharm Limited*, 2010 FCA 197 at paras. 27, 33. Whether or not the patent has been formally classified as a selection patent, “[t]he focus of an anticipation ... inquiry is, as always, on what the patent actually claims in comparison to what is disclosed in the prior art”: *Shire FCA* at para. 34. However, classification as (or as not) a selection patent allows courts to understand the exact “nature of the beast” they are dealing with in a particular case, compared with others: *Shire FCA* at paras. 33-34.

[73] In my view, the appellants' reliance on "special advantage" does not advance their position on anticipation. This is so for several reasons.

[74] First, they adduced no expert or other evidence at trial squarely addressing the question of "special advantage."

[75] Second, and relatedly, they sought and obtained no finding on "special advantage" from the Federal Court. Thus, in substance they are asking this Court to make an original finding on the point. It is ordinarily not the role of an appellate court to make original factual or mixed factual and legal findings, particularly on a question raised for the first time on appeal: *Sandhu Singh Hamdard Trust v. Navsun Holdings Ltd.*, 2019 FCA 295 at paras. 58-60; *Crosslinx Transit Solutions General Partnership v. Ontario (Economic Development, Employment and Infrastructure)*, 2022 ONCA 187 at para. 36; *Conner v. Bulla*, 2010 BCCA 457 at para. 20. I would decline to do so here.

[76] Third, neither in their written nor in their oral submissions do the appellants refer to any authority for consideration of "special advantage" outside the context of selection patents. The position appears to be the same in the United Kingdom in whose law the selection patent concept originates: see, for example, *Dr. Reddy's Laboratories (UK) Ltd. v. Eli Lilly & Company Ltd.*, [2008] EWHC 2345 (Pat) at paras. 95-98, affirmed [2009] EWCA Civ 1362.

[77] Though for the preceding reasons it is not necessary to decide this question, I am not convinced that the concept of “special advantage” is helpful in assessing inventiveness outside the context of selection patents: see *Shire FCA* at paras 33-34.

[78] In sum, I see no basis for interfering with the Federal Court’s conclusions on anticipation.

VII. The remaining issues

[79] The validity issues potentially remaining for consideration are overbreadth, obviousness, and inutility.

[80] As noted above, the Federal Court declined, in light of its other conclusions, to consider invalidity for overbreadth. In these circumstances, and given my other conclusions, I would similarly decline to consider this issue. My conclusions on claims construction, infringement, and anticipation also render unnecessary consideration of obviousness and inutility: see *Bauer Hockey Ltd. v. Sport Maska Inc. (CCM Hockey)*, 2021 FCA 166 at para. 2.

VIII. Proposed disposition

[81] I would dismiss the appeal with costs.

“J.B. Laskin”

J.A.

“I agree.

Anne L. Mactavish J.A.”

“I agree.

K.A. Siobhan Monaghan J.A.”

FEDERAL COURT OF APPEAL

NAMES OF COUNSEL AND SOLICITORS OF RECORD

DOCKET: A-35-21

**(APPEAL FROM A JUDGMENT OF THE HONOURABLE JUSTICE FOTHERGILL
DATED JANUARY 4, 2021, DOCKET NUMBER T-1069-14)**

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SOLUTIONS LTD. v. MEG
ENERGY CORP.

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CONCURRED IN BY: MACTAVISH J.A.
MONAGHAN J.A.

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