

Federal Court of Appeal



Cour d'appel fédérale

Date: 20121220

Docket: A-477-11

Citation: 2012 FCA 333

**CORAM: NADON J.A.
GAUTHIER J.A.
MAINVILLE J.A.**

BETWEEN:

**WENZEL DOWNHOLE TOOLS LTD.
AND WILLIAM WENZEL**

Appellants

and

**NATIONAL-OILWELL CANADA LTD.,
NATIONAL OILWELL NOVA SCOTIA COMPANY,
NATIONAL OILWELL VARCO INC.,
DRECO ENERGY SERVICES LTD.,
VECTOR OIL TOOL LTD. AND FREDERICK W. PHEASEY**

Respondents

Heard at Edmonton, Alberta, on October 10, 2012.

Judgment delivered at Ottawa, Ontario, on December 20, 2012.

REASONS FOR JUDGMENT BY:

GAUTHIER J.A.

**CONCURRED IN BY:
CONCURRING REASONS BY:**

**NADON J.A.
MAINVILLE J.A.**

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REASONS FOR JUDGMENT

GAUTHIER J.A.

[1] Wenzel Downhole Tools Ltd. (Wenzel Ltd.) and William (Bill) Wenzel appeal from the decision of Snider J. (the Judge) (public reasons reported at 2011 FC 1323) dismissing their patent infringement action against the Respondents and allowing the counterclaim invalidating Canadian Patent No. 2,026,630 (the '630 Patent) on the basis of anticipation and obviousness.

[2] The Appellants contest the Judge's finding that the rental and use of a tool incorporating what is referred to as the "3103 assembly" made the invention claimed in the '630 Patent available to the public. In the alternative, the appellants submit the judge misconstrued Claim 2 of the '630 Patent by failing to recognize the parallel shoulders in the bearing assembly amounted to an essential element. Consequently, the 3103 assembly lacking this element could not be held to anticipate the '630 Patent.

[3] Finally, the Appellants say that the Judge applied the wrong test in her obviousness analysis and therefore the matter should be sent back to her for re-determination.

[4] For the reasons that follow, I do not believe that the Judge made an error that would justify this Court's intervention.

Factual Background

[5] Bill Wenzel, the inventor named in the '630 Patent, has four brothers. He worked for his older brother Kenneth (Ken) in a machine shop connected to the oil field industry in the 1970's, before proceeding to work in the same field with his other brothers Doug and Bob.

[6] In 1984, the Wenzel brothers all worked together. At some point, Ken left the company to work with one of the Respondents, Dresco Energy Services Ltd. (Dresco). In their memorandum, the Appellants refer to a dispute between the brothers relating to the use of certain components in a downhole tool.

[7] On October 1, 1990, Bill Wenzel applied for a patent relating to a “method of increasing the off-bottom load capacity of a bearing assembly”. His application was published on April 2, 1992. The ‘630 Patent, which contains only 3 claims, was issued on May 17, 1994. It was assigned to Wenzel Ltd. in 1997 at a time when it operated under another corporate name.

[8] Ken Wenzel provided Dreco with services in the design and development of drilling tools through his consulting company. Once such design was a bi-directional thrust bearing assembly for use in a downhole drilling motor referred to as the 3103 assembly. This was a shorter than usual drilling motor better suited for tighter turns with a shorter radius (Appeal Book Volume 10 at page 3011).

[9] The Judge found that such tool was designed in the fall of 1989. This is no longer in dispute. It was used on a job in Dilley, Texas in early 1990 (the Dilley job), that is, prior to October 1, 1990, when Bill Wenzel filed his application. More particularly, the 3103 assemblies (three of them) were constructed by Griffith Oil Tools (Griffith), a company in which Ken Wenzel was a shareholder with Dreco until about 1980 when Dreco became the sole owner. These tools were rented through a Griffith rental office in Rosenberg, Texas, to Ensco Technology Company (Ensco), which used them on the Dilley job for Orynx Energy Co.

[10] By statement of claim filed July 29, 2005 (Federal Court File no. T-1327-05), the Appellants claimed that the Respondents were infringing their rights through the manufacture and sale or rental of bearing assemblies identical in all material respects to those protected by the ‘630 Patent.

[11] At that time, the Appellants knew that the Respondents would rely on the rental and use of the 3103 assembly to dispute the novelty of the invention claimed in the '630 Patent. This same defence was raised by Schlumberger, one of Vector's clients in the United States, when the Appellants (or their predecessor in title) attempted to enforce the US equivalent to the '630 Patent, and sent Schlumberger a cease and desist letter in respect of similar downhole drilling motors.

[12] Except for some additional drawings, it appears that the documentary evidence in relation to the rental and use of the 3103 assembly tools by Ensco was limited to what had been obtained by Schlumberger's lawyer in the fall of 1993.

The Federal Court Decision

[13] In her 88 page public reasons (the reasons) the Judge reviews in some detail the evidence put forward in the 9-day trial, including the testimony of various experts who testified about issues of construction, anticipation, obviousness and utility.

[14] After summarizing the law applicable to the construction of patent claims and defining the person of ordinary skills in the art (the POSITA) (the reasons at paragraphs 42-46), the Judge went on to construe the two independent claims at issue. She addressed in particular the four points that were in dispute at the time between the parties (the reasons at paragraph 54).

[15] I will only refer to her findings in respect of the third point, which is the only one contested in this appeal: the significance of the use of the words "generally aligned" in claim 1 as opposed to "generally parallel" in claim 2.

[16] In that respect, the Judge acknowledged that the word “parallel” ordinarily has a precise mathematical meaning while “aligned” does not. Referring to the evidence of one of the Respondents’ experts, Mr. Miller, she noted that the use of different words in the two claims was somewhat of a mystery given that parallelism without alignment would not be enough to form the containment chamber as envisioned in claim 2. In fact, with respect to the latter, all the experts agreed.

[17] According to Mr. Miller, whose evidence the Judge clearly accepted, when one considers the claims with the drawing and after sketching the claimed elements, a POSITA would come to the conclusion that “parallel” means the same thing as “aligned” in this context. The Judge adopted this interpretation, noting that both expressions were further qualified by the word “generally” and were meant to describe that the shoulders in the outer and inner tubular members are positioned in such a manner as to form a containment chamber.

[18] At paragraph 77 of her reasons, the Judge summarized the essential elements of the two claims as follows:

[77] In summary on the issue of claims construction, I conclude that Claim 1 (the method) and Claim 2 (the improvement) are directed to a downhole drilling motor that includes an outer tubular member, an inner tubular member and bearings between the inner tubular member and outer tubular member to facilitate relative rotation of the outer tubular member and inner tubular member while accommodating radial and axial loads. The inner tubular member is a cylinder with a hollow centre. The essential elements of the invention disclosed by Claims 1 and 2 are as follows:

1. first shoulder and a second shoulder in opposed spaced relation on an interior surface of the outer tubular member.

2. A first shoulder and a second shoulder in opposed spaced relation on an exterior surface of the inner tubular member.
3. The shoulders on the inner tubular member being generally aligned (or parallel) with the shoulders on the outer tubular member in such a manner as to define a containment chamber.
4. At least one thrust bearing in the containment chamber.
5. The thrust bearing having a first side race and a second side race such that:
 - (a) when the bearing assembly is placed in compression the first shoulder of the outer tubular member bears against the first side race and the second shoulder of the inner tubular member bears against the second side race; and
 - (b) when the bearing assembly is placed in tension the second shoulder of the outer tubular member bears against the second side race and the first shoulder of the inner tubular member bears against the first side race.

[19] Turning to anticipation, the Judge considered the relevant authorities from the Supreme Court of Canada (*Apotex Inc. v. Sanofi-Synthelabo Canada Inc.*, 2008 SCC 61 (*Sanofi*); *Lac Minerals Ltd. v. International Corona Resources Ltd.*, [1989] 2 S.C.R. 574, [1989] S.C.J. No. 83 (QL)) and from this Court (*Baker Petrolite Corp. v. Canwell-Enviro Industries Ltd.*, 2002 FCA 158 (*Baker Petrolite*); *Bauer Hockey Corp v. Easton Sports Canada Inc.*, 2011 FCA 83 (*Bauer*); *Weatherford Canada Ltd. v. Corlac Inc.*, 2011 FCA 228 (*Weatherford*)).

[20] She expressly noted that the core issue in respect of the 3103 assembly was whether, on the facts before her, one could conclude that the claimed invention became available to the public. She was guided in this respect by the analysis of Rothstein J.A. (as he then was) in *Baker Petrolite* of the concept of “became available to the public” within the meaning of the section 28.2 of the *Patent Act*, R.S.C. 1985, c. P-4. In that case, the learned judge made a non-exhaustive list of relevant

principles developed in Europe, including England, which, in his view, was relevant given that the same criteria (available to the public) was applicable in Europe since the adoption of the *European Patent Convention 1973* (EPC), and in England since at least 1977 when a new *Patents Act 1977* was adopted.

[21] The Judge found items 3 and 6 in the above-mentioned list particularly relevant. These two items, set out at paragraph 86 of her reasons, are as follows:

3. The prior sale or use of a chemical product will constitute enabling disclosure to the public if its composition can be discovered through analysis of the product

6. It is not necessary to demonstrate that a member of the public actually analyzed the product that was sold. In *Lux, supra*, Aldous J. stated at page 133:

Further it is settled law that there is no need to prove that anybody actually saw the disclosure provided the relevant disclosure was in public. Thus an anticipating description in a book will invalidate a patent if the book is on a shelf of a library open to the public, whether or not anybody read the book and whether or not it was situated in a dark and dusty corner of the library. If the book is available to the public, then the public have the right to make and use the information in the book without hindrance from a monopoly granted by the State. [Emphasis added]

Although the comments of Aldous J. use the example of prior publication to make the point, *Lux* was a prior use case and the principle derived from his example is equally applicable to prior use or sale as well as prior publication.

[Underlining and italics in original.]

[22] Relying on Aldous J. in *Lux Traffic Controls Limited v. Pike Signals*, [1993] R.P.C. 107 (Pat Ct) at 134 (*Lux*), the Judge further acknowledged at paragraph 87 of her reasons that to invalidate a patent, the description a POSITA could write after examining a machine must be a clear and unambiguous description of the invention claimed. It must also be sufficient to enable the POSITA to practice the invention.

[23] She further recognized at paragraph 89 of the reasons that the public has been defined as “a person who is free at law and in equity to use the information”. This would thus exclude information disclosed on a confidential basis or in circumstances giving rise to an implicit duty of confidentiality. She also properly instructed herself as to the meaning of “experimental use”.

[24] Applying such law to the facts before her, the Judge found that the only difference between the 3103 assembly and the claims of the ‘630 Patent is that the shoulders in the 3103 assembly were bevelled whereas the ‘630 Patent does not explicitly refer to bevelled shoulders, or to a specific design for such shoulders. Having considered the expert evidence before her, she was satisfied that the ‘630 Patent did not prohibit bevelled shoulders.

[25] Relying on the analysis of Dr. Wooley and Mr. Nelson, the Judge agreed that the 3103 assembly contains all the essential elements of the independent claims in the ‘630 Patent (the reasons at paragraph 100). She found that a person making a bearing assembly in accordance with the design of the 3103 bearing assembly would be making a bearing assembly that falls within the scope of claims 1 and 2 of the ‘630 Patent, if this had taken place after the issuance of the patent.

[26] In her analysis as to whether the rental of the drilling tools to Ensco constituted sufficient disclosure to anticipate the ‘630 Patent, the Judge acknowledged that the 3103 bearing assembly, like the other parts of the motor, was encased in a steel tube, and thus a visual inspection of the three units rented to Ensco would not have disclosed their inner workings (particularly of the 3103 assembly).

[27] However, she held that the tools rented to Ensco were available for more than a visual inspection (the reasons at paragraph 119). Although the Judge also acknowledged that, as a matter of fact, the tools were intact when they were returned to Griffith, she noted that the tools could be dismantled (the reasons at paragraph 121).

[28] Moreover, in her view, the fact that the tools were rented rather than sold did not detract from the fact that there were opportunities for examination of those tools (the reasons at paragraph 121). She then found that Ensco was free at law and in equity to use whatever information could be gathered during the rental. Further, the use of these tools for drilling at the Dilley site was not an experiment.

[29] In addition to the above, the Judge made an alternative finding that the drawing of the 3103 assembly could be considered as anticipation by publication. In that respect, she had noted earlier that the said drawing was available (although not necessarily reviewed) to Ensco when Ken Wenzel attended the Dilley site at the beginning of the rental (the reasons at paragraph 120). She also considered that this drawing and any additional information requested from Ken Wenzel by Ensco were available to Ensco had the need arisen, for example, if the drilling tool had broken down the hole and so-called “fishermen” had to be called to retrieve it (the reasons at paragraph 121).

[30] Before turning to the Judge’s finding in respect of obviousness, it is worth noting that the Respondents had argued that the claimed invention was also anticipated by a type of core barrel which was readily available and well-known at the time (As noted in the reasons at paragraph 79, a core barrel is a device used in coring, an operation often part of drilling in oil and gas wells).

Remarking on the differences between those tools, the Judge concluded that the core barrel did not anticipate the subject matter defined in claims 1 and 2 of the '630 Patent, noting, however, that the impact of such art would be discussed at greater length in her analysis on obviousness (the reasons at paragraph 190).

[31] After setting out the four-step approach developed in *Windsurfing International Inc. v. Tabur Marine (Great Britain) Ltd.*, [1985] R.P.C. 59 (CA) and *Pozzoli v. BDMO SA*, [2007] F.S.R. 37, [2007] E.W.C.A. Civ. 588, and adopted in *Sanofi* (the reasons at paragraph 150), the Judge identified the POSITA and the common general knowledge that POSITA would possess at the relevant time (the reasons at paragraphs 152-172). Of particular relevance is the fact that she accepted that the construction of core barrels described in the *World Oil Composite Catalog* was part of that common general knowledge, which included core barrels of the type relied upon by the Respondents in respect of anticipation, and discussed in the reasons under "obviousness".

[32] The Judge found that such knowledge also included the so-called Geczy Patent for a "thrust and radial bearing assembly" in a downhole drilling tool. This was a patent in the same field as the '630 Patent (the reasons at paragraph 163).

[33] In the Judge's view, the inventive steps in the claims of the '630 Patent (an aspect not disputed before this Court) was the inventor's placement of one or more bi-directional thrust bearings into a single containment chamber with shoulders placed within the chamber such that the same bearings could handle both off-bottom and on-bottom loads during a drilling operation.

[34] She found that the common general knowledge included the use of bi-directional thrust bearing in such a single container chamber in the context of core barrels, and that the purpose for using a single barrel thrust bearing described in the Halvorsen Patent (a core barrel patent also part of the Canadian general knowledge) bore a striking resemblance to the purpose described in the '630 Patent.

[35] The Judge adopted the Respondents' experts' analysis of the essential elements of the '630 Patent found in the Halvorsen Patent (the reasons at paragraph 181). She noted, however, that there were two differences acknowledged by all experts in respect of core barrels. First, a core barrel is not part of a drilling motor. Second, the inner core barrel remains stationary as the coring bit digs deeper, while in a downhole drilling motor, the inner tubular member is not fixed. She also expressly rejected the additional differences presented by Mr. Thicke, the Appellant's expert (the reasons at paragraphs 184-190), noting that some were not borne out by the evidence while others were minor or irrelevant.

[36] In respect of the Geczy Patent, the Judge acknowledged that the differences were such that she could not see how, without anything else, the POSITA could apply this teaching to come up with the '630 Patent. She noted, however, that this patent could have a role as part of a mosaic in making the '630 Patent obvious.

[37] At the fourth step of her analysis, the issue was whether the two differences between the '630 Patent and the core barrels discussed above would constitute steps which would have been obvious to the POSITA or if they required a degree of inventive skill (the reasons at paragraph 192).

[38] It is at this step of her analysis that the Judge allegedly erred at law when she reviewed, at paragraphs 193-195, Rothstein J.'s comments in *Sanofi* with respect to the so-called "obvious to try" approach, which may be part of the analysis at the fourth step of the *Sanofi* test. She noted that in such cases, a judge must be convinced on a balance of probabilities that it was more or less self-evident to try to obtain the invention and that it was more or less self-evident that what is being tried ought to work. She then listed the factors referred to in paragraphs 69-71 of *Sanofi*: number of identified predictable solutions; extent and nature of efforts required; nature of the experimentation involved, motivation to find a solution; and actual course of action followed by the inventors.

[39] Having said at paragraph 197 of her reasons that the "obvious to try" analysis was warranted in this case, the Judge referred to the expert evidence before her, with which she agreed, to conclude that it would be obvious to apply the elements of the bearing assembly in a core barrel to one in a downhole drilling motor.

[40] As an alternative finding, she also held that even if one assumed that some residual inventiveness would be required to transfer the teaching from a core barrel to a drilling motor, the POSITA would know that one could use a bi-directional bearing as part of a downhole drilling tool from the Geczy Patent. This, in her view, would alleviate any doubt that the teaching from the core barrel could be applied to a downhole drilling tool.

[41] On a final note, the Judge observed that the invention came quickly and apparently with little effort to the inventor. Even accounting for the fact that Bill Wenzel was more than the

POSITA, she found that the short time frame involved here was quite remarkable. She concluded at paragraph 205:

In sum, in light of the general knowledge from the combination of the core barrel and the Geczy Patent, it is more or less self-evident that the skilled person would have come to the '630 bearing assembly for use in a drilling motor, with the essential elements of the '630 Patent as set out in paragraph 77 of these Reasons.

[42] In light of her findings in respect of anticipation and obviousness, the Judge held that it was not necessary to discuss the other issues raised in this case, such as lack of utility, and she declared the '630 Patent invalid.

Analysis

Standard of Review

[43] This is an appeal from a decision of a court of first instance. Questions of law are to be reviewed on the correctness standard while questions of fact and mixed fact and law (apart from extricable errors of law) are to be reviewed on the standard of reasonableness (*Housen v. Nikolaisen*, 2002 SCC 33, [2002] 2 S.C.R. 235, at paragraphs 8, 10, and 36 (*Housen*)).

[44] The construction of the claims of a patent is a question of law. However, the weight to be given to the expert evidence as to how particular words would be understood by the POSITA is a question where the trier of facts is entitled to deference. Anticipation and obviousness are usually considered to be questions of fact or mixed fact and law. The Appellants argue that in respect of obviousness, the Judge here made an extricable error of law as she applied the wrong test.

Claims Construction

[45] There was a conflict between the evidence of Mr. Thicke, the Appellants' expert, and that of the other experts with regard to how the POSITA would construe claim 2.

[46] First, Mr. Thicke opined that the word "improvement" used in the preamble of claim 2 would be understood as referring to the purpose or utility of the invention which is an increase in the off-bottom load capacity. Thus, the Appellants say that the Judge erred at law by failing to include this element in the list of essential elements of claim 2.

[47] Second, Mr. Thicke testified that "generally parallel" would be understood as pure and simple parallelism, meaning two lines that do not intersect. His view on this point was unshakeable. Thus, according to the Appellants, this is the view the Judge should have adopted, for it is the only one that gives true meaning to the words used. Two different words must be assumed to mean different things.

[48] It is well accepted that a single invention may be claimed in different ways. Here, claim 1 refers to a method, while claim 2 is a product claim (the reasons at paragraphs 50 and 51).

[49] There are various ways of drafting a product claim. The so-called "Jepson claim" (or "German claim") is one. As noted in "The Art of Claiming and Reading a Claim", by William L. Hayhurst, Q.C. at page 210 (in Gordon Henderson, *Patent Law of Canada* (Scarborough, Ont: Carswell, 1994) at pages 177-220), this Jepson form is described as "one which attempts to recite, at

the beginning of a claim, elements that are shared with the prior art, and then to recite those features which the applicant has contributed to the art”.

[50] I have no doubt that the use of the words “improvement” and “the improvement comprising:” in claim 2 were meant to focus on the novel elements of the product claimed as described in paragraphs (a) to (c) of the claim.

[51] The Judge was entitled to give little weight to Mr. Thicke’s evidence and, in my view, she correctly found that the alleged utility (increase in the off-bottom load capacity) in the patent was not an essential element of claim 2.

[52] With respect to the second argument, being that “generally parallel” means pure parallelism, it is clear that the Judge was alert and alive to the conflict in the expert evidence in relation to this. As mentioned, she expressly recognized the ordinary meaning of the word “parallel”, but discarded it on the basis of the evidence provided by the other experts who testified before her and who considered its meaning to the POSITA in the particular context of this patent. She was entitled to do so.

[53] As mentioned by the Respondents, it is interesting that the Appellants recognized in their final argument before the Judge that it would make little sense for claim 2 to be construed without any reference to the alignment of the shoulders, and suggested that the Court should read both claim 1 and 2 as including the words “generally aligned” and “generally parallel”, thereby adding words to each claim.

[54] Having carefully considered the wording of the claims in the context of the disclosure as a whole and the expert evidence accepted by the Judge, there is no reason to interfere with the Judge's interpretation set out at paragraph 17, above.

Anticipation

[55] The Appellants argue that the Judge erred in her application of the law to the facts of the case more particularly by: (i) equating the 3103 assembly with a book on the shelf in the public library or an engine under the hood of a car because the Judge's conclusion did not take into consideration the accepted evidence that the claimed invention was encased in metal and could not have been and was not observed at the Dilley job; and (ii) failing to consider that there was no evidence that a POSITA was at the site or that such person would have the skills to open the drilling tool to examine the 3103 assembly and discern the invention.

[56] In the Appellants' view, given that the rig hands were not POSITAS, the Judge should have come to the same conclusion as the trial judge in *Folding Attic Stairs Limited v. The Loft Stairs Company Limited*, 2009 EWHC 1221 (PAT) who appears to have accepted the plaintiff's argument (summarised at paragraph 84 of the decision) that the test unit in that case was not available to the public because it was only shown during a tour of private premises to a Minister and a photographer who were not POSITAS and who had not manifested any interest in the testing unit.

[57] Finally, according to the Appellants, the Judge's approach, which considered the serendipitous broken tools (*i.e.*, what would have happened if a rented drilling motor had broken

during the drilling operations and a “fisherman” needed access to the drawings and those present at the site would be able to see the inner parts of the tool), is not supported by any authority.

[58] Essentially, the Appellants argued that, had the Judge not made the above-mentioned errors, she had to come to the conclusion that the Respondents had failed to establish that the invention became available to the public, considering the facts and the present state of the law. I cannot agree with this proposition.

[59] As mentioned, the Appellants no longer dispute the Judge’s findings that Ensco was free at law and in equity to use whatever information was available from the product it rented. Thus, if there was sufficient disclosure, it was a public one.

[60] Moreover, the Appellants do not appear to take issue with the fact that if a POSITA could observe the inner workings of the drilling motor, including the 3013 assembly, the POSITA could then write down a complete description of the invention (the whole subject to their arguments on proper construction discussed earlier).

[61] There was some suggestion that this, in turn, would not amount to an enabling disclosure. In that respect, the Appellants submitted that the Judge failed to take into account the evidence of Ken Wenzel that Dreco and Griffith did not manufacture more than three of these units because they were difficult to manufacture or to service properly (due to the bevelled shoulders). However, the Judge is presumed to have considered all of the evidence before her (*Housen* at paragraph 46).

[62] Moreover, I am not persuaded that the Judge made a palpable and overriding error in her assessment of the evidence in that respect in light of a number of factors, namely: a skilled person is entitled to trial and error in relation to enablement; the Judge expressly stated that to conclude that there was anticipation she needed an enabling disclosure; and she was satisfied on the evidence that the enablement branch of the test for anticipation had been met (reasons at paragraph 144). She clearly preferred to rely on the fact that Griffith was able to manufacture drilling tools containing the 3103 assembly that worked well at the Dille job. Her finding that this branch of the anticipation test had been met was open to her.

[63] That being said, the real focus in this appeal was on whether an accurate and full description of the invention was available in this case, applying the undisputed principles set out in the reasons at paragraphs 80-90. As noted in the Appellants' Outline of oral argument on Anticipation, did the judge misapply the law when one considers her findings of facts with respect to what actually occurred? For the Appellants, the Judge erred because "disclosure, not hypothetical disclosure of the invention is a necessary precursor to a determination of anticipation"

[64] In *Lux*, Aldous J. made it clear that he did not accept the argument before him that the task of the Court was to ascertain "what actually happened during the use of the prototype [the product embodying the claimed invention in his case] and from that conclude what a skilled man would assimilate" (*Lux* at page 134).

[65] In this case, I believe that the Appellants exhibit a similar misunderstanding.

[66] The test for anticipation by disclosure through a product (and for that matter, for anticipation by publication) is an objective one. Whether or not a real person fitting the description of the POSITA was actually present at the drilling site is irrelevant, as is what actually happened at the site during the rental period.

[67] What is relevant in the case of a product like the drilling tools at issue “is that which the skilled man would, if asked to describe its construction and operation, write down having carried out an appropriate test or examination.” [my emphasis]” (*Lux* at page 134 in the passage actually cited by the Judge in her reasons at paragraph 87).

[68] My understanding, based on the relevant jurisprudence, is that becoming available means that, the public, as defined earlier, had an opportunity to access the information that is the invention. As previously mentioned, it does not require that one actually took advantage of this opportunity. Once the opportunity is established as a fact (here, for example, that: (i) Dreco had unrestricted access to the drilling tools, and any information derived from such access was not protected by confidentiality; and (ii) a method to open such tools and examine their internal structures was known), the Court applies the legal test for anticipation developed in *Sanofi* (full disclosure of all the essential elements of the invention and enablement) to the information that the fictional POSITA would derive from the fictional examination.

[69] The Appellants disagree with the analogies used by the Judge, being: (i) a book in a public library (the reasons at paragraph 118); and (ii) the “lifting of the hood” (the reasons at paragraph 123). They say that the drilling tools in this case are not analogous to a book in a library, nor was the

opening of the tools like the lifting of the hood of a car. Again, I cannot agree. Aldous J. in *Lux*, later quoted by Rothstein J.A. in *Baker Petrolite*, referred to the book in a public library even though he was looking at a case of prior use of a product, not anticipation by publication. The book in the public library could be in Japanese, even though the library is located in a remote village where no one speaks Japanese. This would still be a disclosure that would make whatever information it contained available, even though accessing the information that is available requires the use of a dictionary or even an interpreter that would not be available in that village. As for the lifting of the hood, it is true that opening the sealed joints to examine the internal structure may be a bit more tedious than lifting a hood but that does not detract from the validity of the analogy. As mentioned, this is not relevant; being available does not require that access to the information be easy, simply that it be possible using known methods and instruments.

[70] Again, I reiterate that it is my understanding of the law as it stands now that even if the library listed in a ledger all those who entered the library and recorded each book they reviewed, and a defendant would accordingly be able to prove that nobody had actually accessed the book in the library, my conclusion would be the same. The presence of the book in the library is sufficient to make the information available, and thus to meet the requirements for anticipation within the meaning of section 28.2.

[71] Although this may appear harsh, it is less so than the test that was applied in Canada prior to the adoption of paragraph 28.2(1)(a), and in England prior to the adoption of their *Patents Act 1977* implementing the EPC. There is no evidence that, by adopting this new paragraph, the Canadian legislator meant to achieve any purpose other than harmonization with the test applied in Europe. I

note that a similar amendment will come into force in the United States in 2013 (*Leahy-Smith America Invents Act*, 35 U.S.C. at §102 (coming into effect on March 16, 2013)).

[72] As mentioned in *Baker Petrolite*, paragraph 28.2(1)(a) now excludes from anticipatory uses products the examination of which would not give an accurate and complete description of the invention even if the most complex of the known analytical methods were used by the POSITA (see paragraph 42, particularly subparagraphs 1, 4, and 7, in *Baker Petrolite*). Typical examples would be where the composition or internal structure of a compound or product would not give any information as to the method used to make it (claimed invention) or as to the starting material used (essential element of a claimed invention). One can also think of the use of a known compound or product for a new technical effect that may not be discernable through examination of the product itself as it must be used in combination with another the product (where the claim is for a new use of the combination).

[73] It is also worth noting that, in its opinion dated December 18, 1992, the European Patent Office Enlarged Board of Appeal made it very clear that the composition or internal structure of a product (and the same principle applies to all products) is part of the state of the art “when the product can be analysed and reproduced by a skilled person irrespective of whether or not particular reasons can be identified for analysing the composition [my emphasis]” (G 1/92 *Availability to the Public* [1993] O.J. EPO 277, [1993] E.P.O.R. 241. Note that this opinion was referred to by the House of Lords in *Synthon BV v. SmithKline Beecham plc*, [2005] UKHL 59 at paragraph 29). In the Board’s view, there is simply no legislative requirement for a motive; it is not necessary that the POSITA have a reason for looking for the product composition. Like Rothstein J.A. in *Baker*

Petrolite, I find this to also be true in Canada. This is perfectly in line with the fact that the court does not have consider whether the notional POSITA would be interested by a relevant prior art publication in respect of anticipation by publication. The hypothetical POSITA is presumed to have properly read the document.

[74] Applying the principles set out above to the present matter, the Judge had to determine whether, in this case, there was an *opportunity* to access the relevant information during the rental.

[75] It is on this question that the Judge distinguished the case before her from the situation in *Bauer*. In the latter case, the products were not rented or used by a third party, they were simply shown in an arena open to the public during a practice, but in a manner that prevented anybody not bound by confidentiality to do anything more than a visual inspection from afar. It was found as a fact in that case that such inspection would not have enabled the POSITA to write down a full description of the invention. However, on the facts before her, the Judge concluded that the rented drilling tools were available for more than visual inspection (the reasons at paragraph 119) and that these tools could be dismantled (the reasons at paragraph 121). She expressly held that the fact that the tools were rented rather than sold outright did not detract from the conclusion that there were opportunities for their examination (the reasons at paragraph 121).

[76] The Judge does not discuss in her reasons the evidence she considered to arrive at the conclusion that the 3103 assembly could be dismantled, and what this would involve. She had several drawings of the relevant drilling motors and their parts, as well as drawings of other similar motors. She had a picture and an actual sample of the Plaintiffs' own drilling motor

similar to the one in the 3103 assembly, except for the clear section of the outer casing over the bearing assembly (used for exhibition only). Ken Wenzel indicated that the drilling motors rented to Ensco, like the other drilling motors at issue in this case, were built to be serviced (or maintained) (Appeal Book Volume 10 at pages 3036, 3082, 3100). This implies that access to their inner structure was possible. Ken Wenzel also said during his cross-examination that to take the motor apart, one needed something to hold it while the joints were unsealed with the appropriate tool(s). Such tool(s) would have been available at the Rosenberg shop that Ensco shared with Griffith (Appeal Book Volume 10 at pages 3024, 3099-3100).

[77] The fact that such appropriate tool(s) may not have been usually available at the drilling site *per se* or that opening of the joints is not usually done at a drilling site is irrelevant. There is no evidence that Ensco was prohibited from bringing appropriate tool(s) to the drilling site or from bringing one of the drilling motors to the machine shop.

[78] In the absence of express contractual provisions to the contrary, at common law, a lessee would be entitled to use the rented equipment as he wishes so long as he returns it in good order and condition (H.G. Beale et al., eds., *Chitty on Contracts*, 30th ed. (London, England: Thomson Reuters, 2008) at page 238, section 33-077). There was no evidence that the opening of the drilling tools would in any way damage them. In fact, given that such tools are made to be serviced, one could assume that the opening and closing of the joints of the steel casing protecting the motor and bearing assembly in order to examine the inner workings was something that Ensco could do. As mentioned, whether they were actually interested in doing so is irrelevant.

[79] Ken Wenzel was clear that no information whatsoever about these rented tools was confidential. The Judge accepted this evidence. From that, it also becomes clear that the sealing of the joints on the drilling tools had nothing to do with confidentiality.

[80] When asked before us why the rental of the tools as opposed to their sale was significant, the Appellants replied that Ensco had possession of the equipment for only a short period of time. Still, I cannot see how it was not open to the Judge to hold as she did that a rental rather than a sale of the drilling equipment had no impact.

[81] Coming back to the analogies used by the Judge, the reference to the engine under the hood may not, as mentioned, be the most appropriate in terms of how one could get to the inner workings of the drilling tools at issue. Nevertheless, this statement indicates to me that the Judge was satisfied that it was rather simple for the POSITA to get to the inner structure to examine and describe the invention underlying the '630 Patent.

[82] As pointed out by the Appellants, it is true that the Judge does not expressly discuss whether the POSITA had the necessary skill to use the appropriate tool to open the steel casing in order to observe the 3103 assembly. It may simply be that she did not find the Appellants' argument (if it was actually made before her, the transcript does not disclose anything in that respect) was worth discussing.

[83] In fact, it is difficult to imagine how the POSITA described in paragraph 46 of the reasons would not be able to open the drilling motor to get to the bearing assembly. There was no evidence

that the use of the appropriate tool to do so required any special skills or any inventive step. Certainly, the means to open the drilling motor were available.

[84] I shall now deal with the last argument raised by the Appellants in relation to anticipation. They argue that the Judge erred in combining sources of prior art (the drawings of the 3103 assembly and the physical tools rented to Ensco) to reach her conclusion that there was anticipation.

[85] I first note that the Judge expressly stated in her reasons at paragraph 82 that to conclude that the invention was not new, she had to find that the invention was disclosed to the public in a single disclosure.

[86] Second, in her reasons at paragraph 122, she made clear that, in her view, the drawing of the 3103 assembly itself could constitute anticipation by publication, and that this was an alternative finding.

[87] Despite the fact that paragraphs 120 and 121 of the reasons could have been better structured (the Judge appears to have tried to express too many ideas at once), in the circumstances, I have not been persuaded that the Judge in fact erred in law by using a mosaic of prior art to reach her ultimate conclusion.

[88] In view of the foregoing, I conclude that the Judge made no palpable and overriding error in concluding to anticipation based on the rental of the drilling motors to Ensco. The evidentiary record may well be thin in respect of some of her findings of fact but the Judge was satisfied that

she had enough before her to come to such findings. She is entitled to deference in respect of such matters.

[89] There is no need to deal with her alternative finding in respect of the drawing itself. Nothing herein should be construed as an endorsement of her conclusion in that respect.

[90] Normally, I would not comment on the issue relating to the Judge's finding in respect of obviousness, as her conclusion that the '630 Patent was invalid is supported by her finding that it was anticipated. However, in light of the concerns expressed by my colleague Mainville J.A. as to the sufficiency of the evidentiary record, it is appropriate to deal with the Judge's finding regarding obviousness.

Obviousness

[91] The Appellants' argument here is essentially that the Supreme Court of Canada in *Sanofi* made it clear that the "obvious to try" approach as part of step 4 of the obviousness analysis is appropriate only in situations where advances are often won by experimentation (*Sanofi* at paragraph 68). On this subject, the Appellants referred this Court to an article entitled "the Supreme Court's *Sanofi* decision: three years later", by Patrick S. Smith and Donald M. Cameron, (2012) 27 C.I.P.R. 281.

[92] Both sides agree that they presented their case without any reference to the "obvious to try" approach discussed in *Sanofi*. The Respondents confirmed that their experts' opinions were that the subject matter of the '630 Patent was obvious without the need for any experimentation. In fact, if

one looks at the report of Mr. Nelson, one of the Respondent's experts (at page 1145 of Appeal Book Volume 4, tab 57) he states at paragraph 94 that:

94. It is my opinion that the task of developing a method of increasing of the off bottom load capacity of a bearing assembly (i.e. the title of the '630 Patent) had already been developed and patented by Halvorsen in the '338 Patent on September 27, 1927 and could have been undertaken by an ordinarily skilled technician in 1990 without any need for experimentation and without the exercise of any inventiveness. [my emphasis]

To the same effect, see paragraphs 5.2 and 5.4 of Mr. Wooley's Report at page 1478 of Appeal Book Volume 5, tab 59.

[93] Still, the Judge stated at paragraph 197 of her reasons that "[a]n 'obvious to try' analysis is clearly warranted here." In that respect, she noted that most of the evidence at trial focused on whether or not it was more or less self-evident that what was being tried ought to work. In fact, she immediately followed her statement that the "obvious to try" analysis was warranted by saying "simply put, was the invention more or less self-evident?" She then noted that the POSITA would not just examine the prior art; he would be able to make some non-inventive adaptation to make the prior art solve his problem. In that respect, she commented that even Mr. Thicke, the Appellants' expert, acknowledged this.

[94] Rothstein J. in *Sanofi* did not restrict the "obvious to try" approach to pharmaceutical cases involving, for example, chiral chemistry. However, considering the case before him, Rothstein J. certainly had this particular technology in mind, and that is what he used to exemplify what he meant by a field where advances are often won by experimentation.

[95] That is not to say however that the “obvious to try” approach cannot apply in a mechanical field. It will always depend on the facts and the evidence in each case.

[96] I agree with the Appellants that before a judge can conclude that this approach is useful in a particular field, whatever it may be, he or she should give some indication regarding the reasons for coming to that conclusion. Ideally, a judge should refer to the evidence on which he or she based this conclusion. In the absence of such an express reference, the premise underlying the approach may be apparent from the analysis carried out by the judge in applying it, particularly when addressing the number of predictable variables that are involved and the type of experimentation program they involve.

[97] The fact that a person may need to adapt in his or her mind to what he or she sees in the prior art or knows as part of the common general knowledge does not automatically mean that reference to the “obvious to try” approach (or “obvious it ought to work” approach as it is called in the Smith and Cameron article cited above) is warranted.

[98] Here, other than this reference to adaptation, which does not necessarily involve experimentation on a number of variables, there is very little in the reasons to help this Court understand the Judge’s statement at paragraph 197 that an “obvious to try” approach was warranted.

[99] I note that, in his testimony, Ken Wenzel referred to the fact that all Dreco motors were tested prior to their use (Appeal Book Volume 10 at pages 3015 and 3086). In my view, this is not the type of evidence upon which one should conclude that advances in his particular art are won by

experimentation. In fact, Ken Wenzel appeared to be referring to the testing that one would expect any diligent manufacturer to do before putting any product on the market, irrespective of whether such product embodied a new invention or a proven design.

[100] Thus, I am satisfied that it was not appropriate to refer to the obvious to try approach in this case.

[101] The Respondents submit that this error could not affect the Judge's final conclusion in this case, as it is clear that the Judge was satisfied that the invention was more or less self evident, that is, plain and obvious. They say that the Judge accepted the evidence of their experts which did not involve any need for experimentation. At paragraph 200, the Judge stated:

All of the experts, but for Mr. Thicke, agreed that it would be obvious to apply the elements of the bearing assembly in a core barrel to one in a downhole mud motor. I agree. It is more or less self-evident that the bearing assembly in a core barrel can be readily adapted for use in a downhole drilling motor. Faced with the problem identified by Bill Wenzel, I am satisfied that the person of ordinary skill in the art would see the use of a bi-directional thrust bearing in a different but related application; it would have been an obvious thing to try the bearing assembly disclosed in the Christensen core barrel or Halvorsen Patent in a downhole motor. The adaptations required are, in my view and in the opinion of the Defendants' experts, minimal. The effort needed to adapt the bearing assembly would not be prolonged or arduous.

[102] Later on, in respect of her alternative finding, she noted at paragraph 202:

In my view, the combination of the knowledge gleaned from an examination of the core barrel together with the knowledge from the Geczy Patent would lead the person of ordinary skill in the art to the '630 Patent with little effort.

This is the language of Hugessen J. in *Beloit Canada Ltd v. Valmet Oy*, [1986] 64 N.R. 287, 8 C.P.R. (3d) 289 (FCA) – the traditional test applied before *Sanofi*.

[103] As a matter of fact, given that the Judge's focus was on whether the invention was more or less self-evident, I agree that her conclusion at paragraphs 200 and 202 would stand on the basis of the evidence she accepted under the more classical approach to the fourth step of the obviousness inquiry referred to in *Sanofi*.

[104] It is also worth noting here that the factors one would normally consider under step 4 are essentially the same as those Rothstein J. enumerated as relevant factors under the "obvious to try" approach, except that in the latter case, the approach would involve discussion of the numerous inter-related variables, a number of identified predictable solutions, and a need to assess the nature of the experimentation program involved. The actual course of action followed by an inventor, the climate in the industry, and secondary indicia such as commercial successes or awards are all factors that can be relevant in an obviousness inquiry in any field.

[105] Finally, one must recall that the Supreme Court of Canada in *Sanofi* clearly indicated that there is no single or mandatory approach in the obviousness inquiry. Indeed, accepting that the "obvious to try" approach might be useful depending on the circumstances was part of a move away from rigid rules that had limited the obviousness inquiry, towards a more flexible, expansive, and fact driven inquiry (*Sanofi* at paragraphs 61-63). The Court only wanted to bring more structure, clarity, and objectivity to the analysis (*Sanofi* at paragraph 67).

[106] In the present case, despite her reference to the "obvious to try" approach, the Judge undertook a careful and objective analysis of the relevant factors, including those set out in the first three steps of the preferred analysis in *Sanofi*. In the end, she was clearly satisfied that the invention

was plain or, as she said, more or less self-evident. This means it was obvious by any standard, irrespective of her particular approach. She accepted evidence that supported this conclusion, and I do not believe that this Court should intervene.

Conclusion

[107] In light of the foregoing, it is my view that the Appellants failed to establish an error that would warrant this Court's intervention and the appeal should be dismissed with costs.

“Johanne Gauthier”

J.A.

“I agree
M. Nadon”

MAINVILLE J.A. (CONCURRING)

[108] I have read the reasons prepared by my colleague Gauthier J.A., and I agree in the result she suggests. I agree with my colleague that though the Judge had no basis for applying the “obvious to try” test in this case, the application of that test in this case was not fatal to the Judge’s decision. As discussed by my colleague, the Judge nevertheless found the invention obvious under the ordinary test for obviousness, and her finding on this issue should not be disturbed by our Court.

[109] I however respectfully disagree with my colleague concerning the issue of anticipation.

[110] The appellants submit in this appeal that the Judge erred in law by modifying the test for anticipation in an impermissible and unwarranted manner (see paras. 27, 36 and 40 of the appellant’s memorandum). They also submit that the judge made palpable and overriding errors in her assessment of the facts relating to anticipation. I agree with the appellants that the Judge erred in these matters. In my view, she applied an unwarranted subjective test for anticipation, and she made palpable and overriding errors of fact by drawing inferences which were not supported by the evidence placed before her.

(a) The Judge’s findings on anticipation

[111] The Judge did not dispute that the 3103 Assembly had never been in fact disclosed to the public. Rather, her decision on disclosure was based on the concept of constructive disclosure, whereby a person could have obtained information by consulting Ken Wenzel at the Texas site where it was briefly used. She applied an analogy of a book in a library which constitutes disclosure whether or not anybody read the book. She was of the view that the availability of Ken Wenzel for

consultation was analogous to the book in the library (at paras. 118 to 122 of the Reasons). She viewed this not only as anticipation by use, but also as “anticipation by publication” (at para. 122 of the Reasons).

[112] Furthermore, in the Judge’s view, anyone at the Texas site could have “lifted the hood” and examined the 3103 Assembly by dismantling it: at paras. 121 and 124 of the Reasons. In the alternative, she concluded that had the 3103 Assembly broken, a “fisherman” could have hypothetically seen its inner workings while retrieving its pieces from the drilling hole (at para. 121 of the Reasons).

(b) The standard of review

[113] Anticipation of an invention raises issues of mixed fact and law: *Corlac Inc v. Weatherford Canada Inc.*, 2011 FCA 228; 422 N.R. 49 (“*Weatherford*”) at para. 36; *Calgon Carbon Corporation v. Corporation of North Bay (City)*, 2008 FCA 81, 64 C.P.R. (4th) 337 at para. 6; *Baker Petrolite Corp. v. Canwell Enviro-Industries Ltd.*, 2002 FCA 158, [2003] 1 F.C. 49 (“*Baker Petrolite*”) at para. 46.

[114] Questions of mixed fact and law involve applying a legal standard to a set of facts: *Canada (Director of Investigation and Research) v. Southam Inc.*, [1997] 1 S.C.R. 748, at para. 35. Where an error can be attributed to the application of an incorrect standard, a failure to consider a required element of a legal test, or similar error in principle, such an error can be characterized as an error of law, subject to a standard of correctness. An appellate court must be cautious, however, in finding errors in law, as it is often difficult to extricate the legal questions from the factual. It is for this

reason that these matters are referred to as questions of “mixed law and fact”. Where the legal principle is extricable, a more stringent standard applies. However, where the issue on appeal involves the interpretation of the evidence, it should not be overturned absent palpable and overriding error: *Housen v. Nikolaisen*, 2002 SCC 33, [2002] 2 S.C.R. 235 at para. 36.

(c) *The burden of evidence*

[115] The party claiming invalidity of the patent through anticipation bears the burden of proof on the standard of the balance of probabilities: *Weatherford* at paras. 45-46. *Diversified Products Corp. and Brown Fitzpatrick Lloyd Patent Ltd. v. Tye-Sil Corp.* (1991), 125 N.R. 218, 35 C.P.R. (3d) 350 (F.C.A.) at para. 26 of the N.R. edition.

(d) *The law relating to anticipation*

[116] Prior to the amendments brought into force in 1989, the *Patent Act*, R.S.C. 1985 c. P-4 provided that a patent could be challenged on the basis of anticipation if it had been known or used before the patentee invented it. In the case of prior use, there was no legislative requirement that the use actually disclose the invention. Subsection 27(1) of the *Patent Act* then read as follows:

27.(1) Subject to this section, any inventor or legal representative of an inventor of an invention that was

(a) not known or used by any other person before he invented it,

(b) not described in any patent or in any publication printed in Canada or in any other country more than two years before presentation of the petition hereunder mentioned, and

(c) not in public use or on sale in

27. (1) Sous réserve des autres dispositions du présent article, l'auteur de toute invention ou le représentant légal de l'auteur d'une invention peut, sur présentation au commissaire d'une pétition exposant les faits, appelée dans la présente loi le « dépôt de la demande », et en se conformant à toutes les autres prescriptions de la présente loi, obtenir un brevet qui lui accorde l'exclusive propriété d'une invention qui n'était pas:

a) connue ou utilisée par une autre

Canada for more than two years prior to his application in Canada

personne avant que lui-même l'ait faite;

may, on presentation to the Commissioner of a petition setting out the facts, in this Act termed the filing of the application, and on compliance with all other requirements of this Act, obtain a patent granting to him an exclusive property in the invention.

b) décrite dans un brevet ou dans une publication imprimée au Canada ou dans tout autre pays plus de deux ans avant la présentation de la pétition ci-après mentionnée;

c) en usage public ou en vente au Canada plus de deux ans avant le dépôt de sa demande au Canada.

[117] The *Patent Act* was amended in 1987 by *An Act to amend the Patent Act and to provide for certain matters in relation thereto*, R.S.C. 1985 (3rd Supp.), c. 33. These amendments were brought into force on October 1, 1989. The thrust of the amendments was to provide that patents would be granted on a “first-to-file” basis, thus facilitating Canada’s participation in the system of international patent filing contemplated by the *Patent Cooperation Treaty*. It was in this context that the 1989 amendments repealed the prior use rule, and replaced it with prior disclosure rules. These disclosure rules are now set out in paragraphs 28.2(1)(a) and (b) of the *Patent Act* adopted under the 1993 amendments provided under the *Intellectual Property Law Improvement Act*, S.C. 1993, c. 15, brought into force on October 1, 1996:

28.2 (1) The subject-matter defined by a claim in an application for a patent in Canada (the “pending application”) must not have been disclosed

28.2 (1) L’objet que définit la revendication d’une demande de brevet ne doit pas :

(a) more than one year before the filing date by the applicant, or by a person who obtained knowledge, directly or indirectly, from the applicant, in such a manner that the subject-matter became available to the public in Canada or elsewhere;

a) plus d’un an avant la date de dépôt de celle-ci, avoir fait, de la part du demandeur ou d’un tiers ayant obtenu de lui l’information à cet égard de façon directe ou autrement, l’objet d’une communication qui l’a rendu accessible au public au Canada ou ailleurs;

<p>(b) before the claim date by a person not mentioned in paragraph (a) in such a manner that the subject-matter became available to the public in Canada or elsewhere;</p>	<p>b) avant la date de la revendication, avoir fait, de la part d'une autre personne, l'objet d'une communication qui l'a rendu accessible au public au Canada ou ailleurs;</p>
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[118] Thus, since at least 1989, prior use cannot alone lead to the invalidation of a patent.

Invalidation though anticipation rather requires prior disclosure. The disclosure may be made by any means, such as prior publication, oral communication, prior sale or prior use, etc. However, no matter how the disclosure is made, it must be assessed using an objective test in order to determine whether two essential requirements have been met: (a) prior disclosure occurred, and (b) that disclosure allowed the enablement of the invention. These two requirements should usually be considered separately: *Sanofi-Synthelabo Inc. v. Apotex Inc.*, 2008 SCC 61, [2008] 3 S.C.R. 265 (« *Sanofi* ») at para. 28.

[119] The first element, whether prior disclosure has occurred, must be assessed from the perspective of a person skilled in the art or science to which the invention pertains (herein referred to as the “skilled person”). That skilled person must be in a position to understand the invention with no room for trial or experimentation: *Sanofi* at paras. 24-25, citing *Synthon B.V. v. SmithKline Beecham plc*, [2005] UKHL 59, [2006] 1 All E.R. 685 (“*Synthon*”). At this stage, the skilled person is reviewing the disclosure to understand the invention and to determine its special advantages: *Sanofi* at paras. 25 and 32.

[120] The second element, enablement, is assessed once it has been determined, on an objective basis, that the subject matter of the invention has indeed been disclosed. For the purposes of

enablement, the question is no longer what the skilled person understands from the disclosure, but whether that person would be able to work the invention without undue burden: *Sanofi* at paras. 26 and 37. When considering whether there is undue burden, the nature of the invention must be taken into account. Some trial and error or experiments are allowed at this stage. But experiments or trials and errors are not to be prolonged, even in fields of technology in which trials and experiments are generally carried out: *Sanofi* at paras. 27 and 33 to 37.

[121] It is important to keep in mind that disclosure and enablement are distinct concepts subject each to their own rules: *Synthon* at para. 28. The same disclosure may however satisfy both requirements for disclosure and enablement, as an example when a product is “available to the public” and a skilled person can discover its composition or internal structure and reproduce it without undue burden: *Synthon* at paras. 29-30. Nevertheless, the concepts of disclosure and enablement should generally be considered distinctly.

[122] However, some adaptation may be required to fit the circumstances in which the anticipation occurs. Thus the courts have recognized that anticipation by prior publication may be adapted to fit the circumstances of anticipation by oral communication or by prior use. As noted by Rothstein J.A. (as he then was) in *Baker Petrolite* at para. 35 (emphasis added):

... below a certain level of generality, the principles governing anticipation by prior publication may need to be tailored to fit the particular characteristics of anticipation by prior public use or sale. For example, the principle that the prior publication must contain so clear a direction that a skilled person reading and following it would be led, without error, to the invention claimed, applies to the specific context of prior publication. In the case of prior publication, the skilled person will read the publication. In the case of prior use or sale, reading may not be relevant. When faced with having to decide whether there has been anticipation by disclosure through prior use or sale under paragraph 28.2(1)(a), it is necessary for the Court to have

regard to the circumstances of prior use or sale, in order to determine how a person skilled in the art might be led, without error, to the invention claimed.

[123] For the purposes of this appeal, we must examine the principles governing anticipation by (a) publication, (b) oral communication, and (c) use. In all these circumstances, and as noted above, anticipation must be assessed on an objective basis in order to determine whether prior disclosure occurred, and whether that disclosure allowed the enablement of the invention. In any event, evidence of anticipation must also, in all circumstances, be subjected to close scrutiny: *Baker Petrolite* at para. 35.

Prior publication

[124] Anticipation by prior publication requires that the invention be in fact disclosed in written documentation made available to the public, such as patent specifications, journal articles, and trade literature, including instruction and repair manuals and brochures. The objective test for disclosure by prior publication is set out as follows in *Beloit Canada Ltée/Ltd. v. Valmet Oy* (1986), 8 C.P.R. (3d) 289, 64 N.R. 287 (“*Beloit*”), at para. 30 of the N.R. edition:

One must, in effect, be able to look at a prior, single publication and find in it all the information which, for practical purposes, is needed to produce the claimed invention without the exercise of any inventive skill. The prior publication must contain so clear a direction that a skilled person reading and following it would in every case and without possibility of error be led to the claimed invention. Where, as here, the invention consists of a combination of several known elements, any publication which does not teach the combination of all the elements claimed cannot possibly be anticipatory. (Emphasis added).

[125] This test for anticipation by prior publication set out in *Beloit* was cited with approval by the Supreme Court of Canada in *Free World Trust v. Électro Santé Inc.*, 2000 SCC 66, [2000] 2 S.C.R. 1024 at para. 26, which further noted that it was a difficult test to meet. Subject to the distinction

between disclosure and enablement, the *Beloit* test for anticipation by publication still applies: *Sanofi* at para. 28.

[126] Since disclosure must be assessed objectively, it suffices that the publication be available for consultation by the public (such as in a public library or over the internet), whether or not the publication has in fact been read: *Lux Traffic Controls Limited v. Pike Signals Limited*, [1993] R.P.C. 107 (“*Lux*”) at p. 133. However, private manuscripts which are not publicly available or papers which are kept in filing cabinets or archives not normally accessible to the public do not meet the threshold since such documents are not objectively “available to the public”.

[127] Moreover, the publication must not only be available to the public, but it must also clearly set out all the information required to understand the invention: *General Tyre and Rubber Co. v. Firestone Tyre and Rubber Co. Ltd.*, [1972] R.P.C. 457 (C.A.) at pp. 485-486.

[128] Once prior disclosure by publication has been established, then enablement must be considered, i.e. would the skilled person have been able to perform the invention without undue burden.

Prior oral communication

[129] An invention may also become “available to the public” where it has been communicated orally to a member of the public who was free to use it as he or she pleased, insofar as that information allowed a skilled person to clearly understand the invention. Plainly, evidentiary difficulties will often arise in proving what was said, and this makes anticipation by oral

communication a particularly difficult case to make out for those who bear the burden of proof: *Terrel on the Law of Patents*, 15th ed. (London, Sweet & Maxwell, 2000) at para. 7.11; *CIPA Guide to the Patent Acts*, 7th ed. (London, Sweet & Maxwell, 2011) at para. 2.06.

[130] Like anticipation by prior publication, anticipation by oral disclosure must also be assessed through an objective test. An actual communication to the public must have occurred in order to establish that the information is objectively “available to the public”. Simply keeping information in one’s own mind cannot constitute a disclosure to the public. An actual conveyance of information must occur.

[131] Moreover, the same requirements as for disclosure through prior publication apply in the case of an oral disclosure, i.e. the disclosure must set out all the information required to understand the invention: *Lux* at pp. 131-132. In addition, once disclosure has been established, enablement must be made out as set out above.

Prior use

[132] Prior use may still result in anticipation under subsection 28(1) of the *Patent Act* despite the legislative change of 1989. However, the legislative change means that prior use alone is now insufficient for establishing anticipation. Rather, anticipation by prior use requires positive proof that a disclosure occurred as a result of the use, and that this disclosure was such that the subject matter of the invention became available to the public: *Baker Petrolite* at para. 32.

[133] In *Baker Petrolite* at para. 42, Rothstein J.A. (as he then was) drew on the jurisprudence of the United Kingdom and some European decisions under the *European Patent Convention* in order to deduce eight principles relevant to disclosure through prior use. Though these principles were developed in the context of litigation concerning a chemical process patent, they are nevertheless instructive and may be adapted to mechanical inventions, such as the one contemplated by these proceedings. I will briefly set out these principles, and proceed, inasmuch as they are useful for the purposes of this appeal, to a closer analysis of the most pertinent cases from the United Kingdom and the European Patent Office, which were cited approvingly in *Baker Petrolite* (at para 42):

- a. Sale to the public or use by the public alone is insufficient to prove anticipation. Disclosure of the invention is required.
- b. For a prior sale or use to anticipate an invention, it must amount to “enabling disclosure”.
- c. The prior sale or use of a chemical product will constitute enabling disclosure to the public if its composition can be discovered through analysis of the product.
- d. The analysis must be able to be performed by a skilled person in accordance with known analytical techniques available at the relevant time. That skilled person, using available analytical techniques, must be able to find the invention without the exercise of inventive skill.
- e. When reverse engineering is necessary and capable of discovering the invention, an invention becomes available to the public if a product containing the invention is sold to any member of the public who is free to use it as she or he pleases.
- f. It is not necessary to demonstrate that a member of the public actually analyzed the product that was sold.
- g. The amount of time and work involved in conducting the analysis is not determinative of whether a skilled person could discover the invention. The relevant consideration, in this respect, is only whether inventive skill was required.
- h. It is not necessary that the product that is the subject of the analysis be capable of exact reproduction. It is the subject matter of the patent claims (the

invention) that must be disclosed through the analysis. Novelty of the claimed invention is destroyed if there is disclosure of an embodiment which falls within the claim.

[134] In all circumstances, in order to find anticipation, disclosure of necessary information concerning the invention is required. This principle was taken from *Merrell Dow Pharmaceuticals v. H.N. Norton & Co. Ltd.*, [1996] R.P.C. 76 (U.K H.L.) (“*Merrell Dow*”) where Lord Hoffman found (at p. 86) that “use of a product makes the invention part of the state of the art only so far as that use makes available the necessary information”.

[135] In *Merrell Dow*, a pharmaceutical company had patented the chemical composition of an acid metabolite formed in the liver after ingesting an anti-histamine drug called terfenadine. The patent was challenged on the basis of anticipation by prior use and of anticipation by prior publication. The prior use was said to be the fact that humans who had in the past ingested terfenadine produced the acid metabolite in their liver. This claim of anticipation by prior use was rejected by Lord Hoffman on the ground that such use alone, though allowing the acid metabolite to be produced in the liver of those who ingested the drug, did not disclose the invention since no information was conveyed by the use: *Merrell Dow* at pp. 86-87. However, Lord Hoffman found that knowledge of the acid metabolite was nevertheless made available to the public by prior publication of the terfenadine specification under the description “a part of the chemical reaction in the human body produced by the ingestion of terfenadine and having an anti-histamine effect”. This finding of anticipation by prior publication may no longer be valid in light of the enablement requirement set out in *Synthon* - and in fact Lord Hoffman, writing in *Synthon* at para. 33, appears to have himself questioned his prior finding of anticipation by publication in *Merrell Dow*. Nevertheless, Lord Hoffman’s discussion in *Merrell Dow* clearly sets out the principle that a prior

use which does not disclose necessary information concerning the invention cannot lead to a finding of anticipation.

[136] In *Lux*, the issue was whether a patent for a traffic light control system that included a common controller responsive to the detection of moving vehicles and capable of adjusting traffic lights accordingly was anticipated by the use of prototypes of the invention on commercial jobs. The court interpreted “made available to the public” as requiring that the use allow for an enabling disclosure, but that it suffices that that such enabling disclosure could be gained by observation of the use. In the particular circumstances of *Lux*, the court found that by simply observing the operation of the lights controlled by the invention, a person skilled in the art would have acquired enough information to allow him or her to understand how the invention worked: *Lux* at pp. 134-135. Conversely, if simple observation of an invention being used does not allow a skilled person to understand how it works, *i.e.* does not provide an enabling disclosure, that use cannot constitute anticipation.

[137] This approach was reiterated and expanded by the European Patent Office in both its *Opinion of the Enlarged Board of Appeal*, December 18, 1992 G/92 (“*Opinion G/92*”) and in *FISONS PLC v. Packard Instrument BV*, case number T 0952/92-3.4.1 of the European Patent Office Technical Board of Appeal – August 17, 1994 (“*Fisons v. Packard*”). Both the case and the Opinion involved the scope of Article 54(2) of the *European Patent Convention* which provides that “[t]he state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use or in any other way, before the date of filing of the European patent application.”

[138] In *Opinion G/92*, the Enlarged Board of Appeal found (at para. 2.1) that an objective test must be used in all cases, including through prior use, for determining whether an invention has been made available to the public. It further determined (at para. 1.4) that when a product is available to the public and where it is possible for a skilled person to discover the composition or internal structure of the product and to reproduce it without undue burden, then both the product and its composition are deemed available to the public.

[139] *Fisons v. Packard* added that there is no undue burden where the analysis of the product's composition or internal structure is possible in accordance with the known analytical techniques which are available for use by the skilled person. Conversely, when a product's composition or internal structure are not made available for analysis or cannot be ascertained with known analytical techniques, no public disclosure has been established and anticipation has not been made out:

In the first place it appears to be very well established in the case law of the Boards of Appeal that for a claimed invention to have been "made available to the public" in the sense of Article 54(2) EPC before the relevant filing date, information equivalent to the claimed invention must have been accessible to a skilled person. As stated by the Enlarged Board in Decisions G 2/88 and G 6/88 (OJ EPO 1990, 93 and 114), "The word 'available' carries with it the idea that, for lack of novelty to be found, all the technical features of the claimed invention in combination must have been communicated to the public, or laid open for inspection"...

(*Fisons v. Packard* at para. 2.1)

(e) Application of these principles to this case

[140] As discussed above, the test for anticipation by prior publication requires that "anticipation must be found in a specific patent or other published document" (*Beloit* at para. 30 of the N.R. edition). The test for anticipation by oral communication also requires that an actual disclosure must have occurred. In all cases, the disclosure must set out all the information required to understand the

invention in clear and unmistakable directions so as to allow the skilled person to do what the patentee claims to have invented.

[141] In this case, the elements considered as “publications” by the Judge were the drawing of the 3103 Assembly held by Ken Wenzel at the job site, and the availability of Ken Wenzel for consultation: see paras. 120 to 122 of the Reasons. However, in her assessment of the evidence, the Judge made no factual determination as to whether the drawing amounted to a publication available to the public, or whether any information concerning the 3103 Assembly was actually communicated by Ken Wenzel. She simply equated the possibility of consulting Ken Wenzel – who held the drawing – as amounting to anticipation by prior publication, without first determining whether or not any information was in fact published or disclosed.

[142] Ken Wenzel’s testimony was that the drawing was not disclosed. He also testified that he was available for consultation for the very short time he was at the site, but he did not state whether he was actually consulted, and if so, what was the information he would have conveyed:

Q. MR WAKEFIELD: Were the drawings available to Oryx or EnSCO while you were down in the Dille, Texas area in 1990?

A I don’t remember whether I went over the assembly drawings, I wouldn’t – not with Oryx, no, never, but with EnSCO, if they would have asked me, would want assembly would have one, but I can’t remember whether I – I don’t recall giving them a drawing or I don’t even recall going over it with them.

Q The drawings were there?

A While I was there.

Q And same question about you. Were you available for consultation?

A Oh, yes.

(Appeal Book (“AB”) v. 10 at pp. 3020-3021)

[143] This is not evidence of prior disclosure by either publication or oral communication.

[144] Using an objective test, I can only conclude that an undisclosed drawing does not amount to a publication which is available to the public. There is no analogy here with a published book sitting on a shelf in a public library. In the case of the book, the disclosure can be objectively ascertained by the fact that it is publicly available from a third party, i.e. the public library. In the case of a drawing held by an inventor, public disclosure cannot be objectively ascertained without evidence of it being made available to the public through a deposit in a public library, placing it on the internet, publishing it in a trade journal, etc., or through actual disclosure to a member of the public not otherwise held to an obligation of confidence.

[145] A drawing held by an individual, and information held in the mind of an individual, are not in the public domain until such time as they are effectively conveyed to the public.

[146] There is no evidence that such a conveyance of information occurred in this case. Ken Wenzel did not testify that he disclosed the drawing or that he in fact provided information concerning the 3103 Assembly; he simply testified that he was available for consultation. Being available for consultation is not the same as disclosing information. For an oral communication of information to be effective for the purposes of anticipation, the information must be actually conveyed. Someone like Ken Wenzel may well be sitting in an office, an airplane or a convention hall with all the information in his mind, however, that information cannot be deemed to have been available to the public unless it is established by positive evidence that it was indeed conveyed to

the public by some form of communication. Simply put, “being available for consultation” is not a form of communication. This is equivalent of saying “had they asked me I would have told them”. This may well be true, but until someone effectively “tells them”, no information is conveyed.

[147] In order to find anticipation in this case, the Judge added a subjective element to the test., *i.e.* that Ken Wenzel could have disclosed information had he been requested to do so. The introduction of such a subjective element disregards the legislative provisions of subsection 28.2(1) of the *Patent Act*, which specifically requires that the information be conveyed “in a manner that the subject-matter became available to the public”. Moreover, due diligence research of prior art for patenting purposes would become a difficult, if not impossible task if this subjective element were introduced, thus adding unnecessary uncertainty into patent practice and law. Indeed, researching what could have been published or orally communicated to the public (but was in fact not published or communicated) is an impossible task. Such a subjective approach may well lead back to the discarded notions of “prior use without disclosure” and “first to invent” which existed before the 1989 amendments to the *Patent Act*.

[148] By deciding as she did, the Judge introduced an unwarranted subjective element into the test for anticipation which makes it virtually impossible to assess objectively both elements of anticipation, namely disclosure (whether necessary information required by a skilled person to understand the invention was available to the public) and anticipation (whether a skilled person would have been able to perform the invention without undue burden).

[149] I also am of the view that the Judge erred in finding anticipation by prior use.

[150] The principles for finding anticipation by prior use are notably set out in *Baker Petrolite, Merrell Dow, Lux and Fisons v. Packard*, discussed above. Drawing from these principles, in order to succeed in their anticipation by prior use challenge in this case, the respondents had to adduce evidence establishing on a balance of probabilities that, under an objective determination, a person skilled in the art could have been in a position to understand and analyze the invention so as to allow that person to work the invention without undue burden.

[151] To establish disclosure by prior use entails proving that the public was free to inspect and analyze the invention. Barring contrary evidence - such as a confidentiality and non-disclosure agreement - this may be assumed when the equipment is sold: *Baker Petrolite* at para. 42 principle 5, and paras. 96-97. Here however, the equipment (*i.e.* the 3103 Assembly) was used for a short time under a rental arrangement. Since here there is no written rental agreement, the terms of the rental must be determined from the circumstances.

[152] A rental or lease of equipment is a subtype of bailment for valuable consideration, known as hire of chattel: *Chitty on Contracts, Volume 2: Specific Contracts*, 30th ed. (Toronto, Thomson Reuters, 2008) ("*Chitty on Contracts*") at section 33-063, p. 229. A hirer may use the chattel only for the purpose for which it was let to him. In this regard *Chitty on Contracts* provides as follows at section 33-077:

The hirer may use the chattel only for the purpose for which it was let to him. So, in the early cases, if a horse was let for riding, the hirer was not permitted to use it for jumping; if a horse was let for a particular journey, the hirer was not allowed to exceed that journey. But the authority granted to the hirer to use chattel will be construed as conferring on him implied authority to do in relation to the chattel anything reasonably incidental to its reasonable use, unless there is express provision to the contrary in the contract. The hirer who uses a chattel for a purpose not

contemplated by the contract of hiring will be liable both in contract and in tort for any loss caused by such use.

[153] In this case, to establish disclosure by prior use required submitting evidence that either the operation of the equipment would itself allow for enabling disclosure (as in the case of *Lux*), or that the skilled person would have been capable of accessing and analyzing the inner workings of the equipment without undue burden, as in the case of *Fisons v. Packard*.

[154] The only evidence submitted at the trial on the issue of prior disclosure by use was the testimony of Ken Wenzel. He testified that the 3103 Assembly was “a small drilling motor with a sealed bearing assembly” (AB v. 10 at p. 3001, lines 6 and 7, emphasis added). He also testified that it was not possible to see the inner workings of the 3103 Assembly units from their use in Texas, and that these units could only be taken apart in the repair shop and not at the rig site:

Q And when you saw them [the 3103 Assembly units], would they just be a piece of pipe, more or less, from the outside?

A Yes.

Q Would you be able to see the inner workings of them just by looking at them?

A No.

Q And do you know whether these 3103s were disassembled at the rig site?

A I wasn't there to see, but normally, you – no, you don't take a motor apart at the rig site. They go to the repair shop for repairing.

Q To take a motor apart, in fact, you require special tools, right?

A Yes, you got to break the joints and somewhere to hold them, yeah, no, they are always taken to the shop for repair. I don't know – not aware of them ever being taken apart in the field.

Q Okay, so if you were a rig hand, say, and you were working on that rig in Dilley [Texas], would you have any way to tell what the inner workings of that 3103 bearing assembly were?

A No.

(AB at p. 3100 lines 1 to 22, emphasis added)

[155] This testimony is inconsistent with the Judge's finding that "anyone at the drill site could have 'lifted up the hood' and examined the 3103 assembly": at para. 144 of the Reasons. In fact, the testimony of Ken Wenzel leads to the contrary conclusion. Since the burden of proving anticipation through disclosure by prior use fell on the respondents, I can only conclude that this burden was not discharged and that the Judge committed a palpable and overriding error in finding otherwise.

[156] I add that the Judge's reliance (at paras. 123-124 of the Reasons) on *Gibney et al v. Ford Motor Co. of Canada Ltd.*, [1967] 2 Ex. C.R. 279, 52 C.P.R. 140 for the "lifting up the hood" analogy was misplaced. That decision was rendered under the old provisions of the *Patent Act* under which a patent could be challenged on the basis of prior use alone. The issue in that case was whether the use at issue was captured under the exception of experimental use. With respect, I do not consider that decision to set out principles which govern the modern notion of anticipation, which requires both prior disclosure and enablement.

[157] The Judge also stated (at para. 121 of her Reasons) that if the 3103 Assembly tool had broken while drilling, a "fisherman" would have seen the inner workings of the 3103 assembly as pieces were retrieved from the drilling hole. With respect, the testimony of Ken Wenzel concerning such a hypothetical situation did not establish disclosure leading to a finding of anticipation.

[158] The "fisherman" evidence consisted in the testimony of Ken Wenzel found at pp. 3022-3023 of the Appeal Book. A "fisherman" is someone who retrieves broken pieces of machinery when a drilling tool breaks in an oil drilling hole. Ken Wenzel testified that had the 3103 Assembly tool broke in the drilling hole (this did not in fact occur), a "fisherman" may have been required to

retrieve its pieces. He added that in such circumstances, the owner of the 3103 Assembly (not the renter) may have provided information to the “fisherman” as to the shape or size of the equipment in order to facilitate it being “fished” out of the drilling hole. No evidence was submitted as to whether information as to shape and size allowed the “fisherman” to be in a position to understand the operation of the 3103 Assembly. Moreover, there was no evidence tendered to establish that broken pieces of equipment “fished” out of the drilling hole would have enabled a skilled person to understand and eventually work the invention. In the absence of such evidence, anticipation could not be made out through the self-serving “fisherman” testimony of Ken Wenzel. I point out once again that the burden of proving anticipation through a hypothetical disclosure of shape and size to a “fisherman” or through the retrieval of broken pieces of equipment fell on the respondents.

[159] Since the elements of anticipation, public disclosure and enablement, have not been met, I conclude that the Judge committed reviewable errors in finding that the ‘630 Patent was invalid on the basis of anticipation.

Conclusions and disposition

[160] It follows that the ‘630 Patent was not anticipated by the 3103 Assembly. However, as discussed by colleague Gauthier J.A., the Judge’s finding of invalidity on the basis of obviousness should be upheld.

[161] I would consequently dismiss this appeal with costs.

« Robert M. Mainville »

J.A.

FEDERAL COURT OF APPEAL

NAMES OF COUNSEL AND SOLICITORS OF RECORD

DOCKET: A-477-11

STYLE OF CAUSE: Wenzel Downhole Tools Ltd. and
William Wenzel v.
National-Oilwell Canada Ltd. et
al.

PLACE OF HEARING: Edmonton, Alberta

DATE OF HEARING: October 10, 2012

REASONS FOR JUDGMENT BY: Gauthier J.A.

CONCURRED IN BY: Nadon J.A.
CONCURRING REASONS BY: Mainville J.A.

DATED: December 20, 2012

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