Federal Court  Cour fédérale

Date: 20130718

Docket: T-279-07

Citation: 2013 FC 616

Ottawa, Ontario, July 18, 2013

PRESENT: The Honourable Mr. Justice Barnes

BETWEEN:

ZERO SPILL SYSTEMS (INT'L) INC.,
KATCH KAN HOLDINGS LTD.,
QUINN HOLTBY
and KATCH KAN RENTALS LTD.

Plaintiffs

and

614248 ALBERTA LTD.
dba LEA-DER COATINGS,
BILL HEIDE
dba CENTRAL ALBERTA PLASTIC PRODUCTS,
RAT PLASTIC LTD.
AND 1284897 ALBERTA LTD.

Defendants

AND BETWEEN:

614248 ALBERTA LTD. AND
1284897 ALBERTA LTD.

Plaintiffs by Counterclaim (Defendants)

and

ZERO SPILL SYSTEMS (INT'L) INC.,
KATCH KAN HOLDINGS LTD.,
AND QUINN HOLTBY

Defendants by Counterclaim
(Plaintiffs)

AMENDED REASONS FOR JUDGMENT AND JUDGMENT

[1] This action concerns allegations of infringement of two Canadian patents bearing Letters Patent No. 2,258,064 (064 Patent) and Letters Patent No. 2,136,375 (375 Patent) and a Canadian Design Registration bearing registration no. 86793 (793 Design) all related to oil field fluid containment products in which the Plaintiffs claim an interest.

[2] The Plaintiff, Quinn Holtby, controls all of the corporate Plaintiffs and he is the inventor named in the 375 and 064 Patents. The Plaintiff, Zero Spill Systems (Int'l) Inc. (Zero Spill), is a non-exclusive licensee of the 793 Design and the 375 and 064 Patents. Katch Kan Holdings Ltd. (KKHL) is an assignee from Mr. Holtby of the 375 Patent and the 064 Patent. According to Mr. Holtby, Katch Kan Rentals Ltd. (KKRL) had been in the business of renting the patented products in the Canadian market but since the end of 2008 it has been dormant. This rental business was then taken up by Katch Kan Ltd. which is not a party to this litigation.

[3] The Plaintiffs allege that the Defendants, Bill Heide, doing business as Central Alberta Plastic Products (CAPP) and Rat Plastic Ltd. (collectively, the Heide Defendants) and the Defendant, 1284897 Alberta Ltd. carrying on business as Lea-Der Coatings, have infringed the 064

Patent and the 375 Patent by manufacturing and/or selling competing oil field fluid containment products. They also allege that the Heide Defendants have infringed on the 793 Design by making and selling a product that is substantially similar in appearance. The Plaintiffs seek declarations of validity with respect to the patents in suit and the 793 Design.

[4] The Heide Defendants assert only that their products do not infringe. Lea-Der Coatings asserts non-infringement and invalidity and has counterclaimed for declarations that the Canadian Patent bearing Letters Patent No. 2,136,375 (375 Patent) issued to Quinn Holtby and assigned to the Plaintiff, KKHL, Letters Patent No. 2,166,265 (265 Patent) issued to the Plaintiff, KKHL, and Letters Patent No. 2,258,064 (064 Patent) issued to Quinn Holtby and assigned to the Plaintiff, KKHL, are invalid.

[5] In the course of this action the Plaintiffs abandoned their allegation that the Defendants have infringed either the 265 Patent or Canadian Letters Patent No. 2,163,322 and the Plaintiffs' action against the Defendant, 614248 Alberta Ltd., was settled.

General Background to the Asserted Claims

[6] The products that lie at the heart of this case are designed to capture fluids that either leak or are spilled during oil field operations. The 375 Patent claims protection for an upper containment tray that is attached to the top of the flow nipple of an operating drilling rig. The flow nipple is a pipe that extends upward from a ground level foundation to a point just below a drilling rig floor. The flow nipple houses the drill pipe or string that actually cuts the well hole. A flow nipple is typically of a split configuration to allow for ease of take-down if its removal is required. To assist

with drilling, either a water or petroleum-based fluid is pumped into the well bore. The drilling fluid circulates back to the top of the well where it is diverted and filtered to remove debris. It is then returned to the well bore.

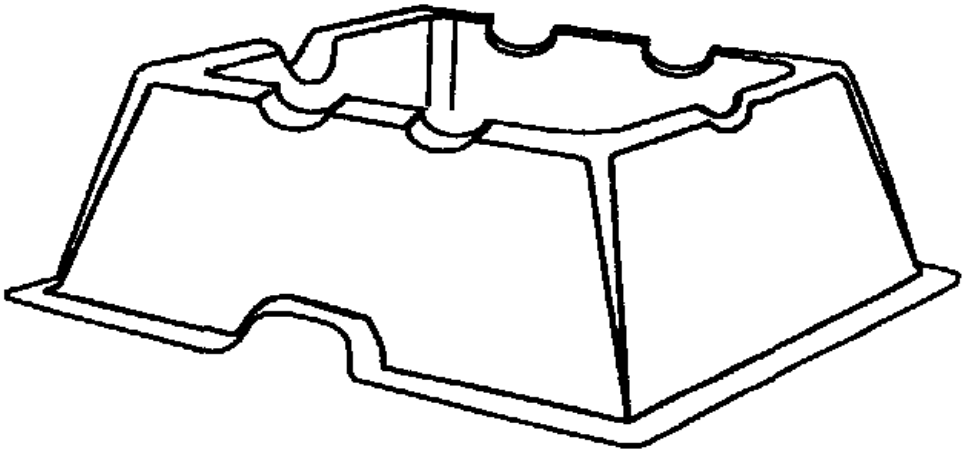
[7] From time-to-time it is necessary to remove the drill string from the well – often to replace the bit. When the string is pulled, the drill pipe sections are disconnected and stacked. This process typically results in the discharge of significant quantities of drilling fluid from the pipe. Unless this spillage is controlled, the rig crew gets "hosed" and the rig components are covered.

[8] Based on his personal experience as a rig worker, Mr. Holtby realized that the systems being used to control spillage and capture drilling fluid were inadequate. He came up with the idea of a light-weight canister that could be closed around two sections of drill pipe when they were disconnected. He patented this product and called it a "Kelly Kan". The Kelly Kan protected the rig crew from being hosed and it directed the flow of drilling fluid through the well floor in the vicinity of the top of the flow nipple. The upper fluid containment tray that is the subject of the 375 Patent (the Katch Kan upper tray) was developed by Mr. Holtby in 1994 to capture the drilling fluid that was directed by the Kelly Kan through the well floor. The Katch Kan upper tray is designed with two interconnected plastic tray halves that, when brought together, also form a central collar that wraps around and is sealed to a steel flange that is welded to the top of the flow nipple. The sealing arrangement is telescopic in the sense that the tray can move axially relative to the flow nipple flange to accommodate some downward movement of the rig floor. Fluid captured in the tray flows directly back into the flow nipple where it can be recirculated.

[9] The 064 Patent describes a sectional fluid containment tray that is mounted lower on the central stack of an oil well. The purpose of the Katch Kan lower tray is to capture fluid falling from above and to drain it to storage. A lower tray would typically protect a larger area below the well and it might be shallower to account for space limitations.

[10] The Plaintiffs' business model for their upper and lower containment trays is primarily based on extended rentals and not outright sales.

[11] The 793 Design was issued on May 28, 1999 by the Commissioner of Patents to KKHL for a fluid catchment tray or line pipe tray. The purpose of the line pipe tray is to horizontally support sections of drill pipe when they are being disconnected at ground level. When the pipe connection joints or unions are hammered open any escaping fluid is captured in the underlying tray cavity. Bellow is the Katch Kan line pipe tray as depicted in the 793 Design registration:



[12] The 265 Patent was published on June 29, 1997. The Plaintiffs no longer assert infringement of this patent but the Defendant, 1284897 Alberta Ltd., seeks a declaration of invalidity.

[13] The 265 Patent purports to claim a monopoly over a method of capturing and retaining fluid leaking from a wellhead and the apparatus for achieving that end. The claims describe an annular ring and an outer flange that is bolted to the central stack of a wellhead. A catch pan is attached and sealed to the outer flange of the annular ring. Fluids leaking from above are caught in the catch pan and drained away to storage. The 265 Patent contains no discussion about how the claimed invention differs from or improves upon prior methods for capturing leaking fluids on drilling rigs.

The Defendants and their Competing Products

[14] The Defendant, Bill Heide, carries on business under two business names – CAPP and Rat Plastic. CAPP is in the business of plastics fabrication using a rotational moulding process. Rat Plastic was initially an incorporated business but in 2012 Mr. Heide purchased the corporate assets and continued the business as a sole proprietorship. Rat Plastic is in the business of plastic welding.

[15] CAPP is the business entity that builds the line pipe trays that are alleged by the Plaintiffs to infringe the 793 Design. Rat Plastic produces upper and lower fluid containment trays that the Plaintiffs allege respectively infringe the 375 and 064 Patents.

[16] Sometime in 2005 Mr. Heide met Darrell Demers who, at that time, was employed by 614248 Alberta Ltd., then carrying on business as Lea-Der Coatings. Mr. Demers solicited

Mr. Heide's assistance in designing and building fluid containment trays for use on oil drilling rigs. The business concept was that Mr. Heide would supply these products to Lea-Der Coatings which would, in turn, sell the products to rig owners or operators. At that time, Mr. Heide was aware of the Katch Kan fluid containment trays and he knew they were patented. He undertook a patent search to ascertain the scope of the Katch Kan patents and then began to design prototype containment trays. By 2006 Mr. Heide was, through Rat Plastic Ltd., producing a commercially viable lower tray and by 2007 he was selling lower and upper trays to Lea-Der Coatings. At a later point Lea-Der Coatings took on another line of containment trays and Rat Plastic Ltd. began to sell its trays directly to customers. At the present time Rat Plastic wholesales its trays to Lea-Der Coatings (now the business name for the Defendant, 1284897 Alberta Ltd.) and it continues to sell directly to end-users.

[17] Mr. Heide testified that when he receives an order for an upper containment tray he will attend at the drilling site to determine what is required. This will involve a discussion with the rig manager about sizing and space limitations. He will then fabricate the tray to meet the customer's requirements. The Rat Plastic upper tray is, nevertheless, a standard design. It is built in two half sections each with its own containment cavity. Each half tray has a matching arctuate indentation which, when brought together, form a centre opening to accommodate the passage of the flow nipple. The interior containment walls of each half tray abut to one another and they are held in close proximity by straps. There is no need for the tray halves to be sealed to one another because an overhanging flashing covers the gap between the trays and prevents fluid from leaking through.

[18] When the Rat Plastic upper tray halves are brought together, they also form a circular descending collar. The leading edge of the tray collar is inserted into an upstanding steel collar that is part of a flange that is welded in two pieces near the top the flow nipple (the flange collar). The flange collar has inner and outer walls that receive the tray collar. The inner wall has perforations that permit liquids falling into the cavity to flow into the top of the flow nipple.

[19] The fit-up of the Rat Plastic lower tray is somewhat similar in that it involves two self-contained tray halves with arctuate indentations that encircle the central pipe or stack of a drilling rig. The tray halves abut along the face of their inner walls and are held together by a turnbuckle. The tray halves are passively supported by a circular base plate welded to the flow nipple of the drilling rig and by straps attached to the overhead rig superstructure. An overhanging flashing blocks fluid leakage between the abutting tray walls. Each tray half contains its own drainage aperture which allows captured fluid to run-off into a storage container.

[20] All of the above features are depicted in a Rat Plastic installation guide [exhibit P28] which describes the method of fit-up of the upper and lower tray systems in the following way:

> Existing Technologies are common in the field. Cumbersome, leak prone, and difficult to install.
>
> We have a system that is easy to install and is leak free. The installation process is very simple. Once the flow tee is modified to incorporate our system, the Rig Hand can install a top tray in minutes, and a bottom tray can also be install [sic] in minutes.
>
> Our System performs the task without the use of seals, directing the fluid into the Flow Tee where it belongs, not against seals where leakage is a common factor.

> As there are no seals in our system, there is no need for tedious fitting and care, trying to make the seals work. A simple set in place, and the tray performs it's task as it always should have.

[21] Typical installations of the Rat Plastic upper and lower trays are depicted in four photographs identified by Mr. Heide which form exhibit D19.

[22] Mr. Demers testified on behalf of 1284897 Alberta Ltd. carrying on business as Lea-Der Coatings. Mr. Demers was hired by Lea-Der Coatings in 1997 in a sales position. At that point Lea-Der Coatings was owned by the Defendant, 614248 Alberta Ltd., and it supplied traction matting for use on drilling rigs. In 2004 Mr. Demers was approached by Nabors Drilling and Precision Drilling to look at developing fluid containment trays for use on drilling rigs.

[23] Mr. Demers met Mr. Heide in 2005 at the Calgary Gas and Oil Trade Show and they discussed the idea of creating containment trays from moulded plastic. A few weeks later after consultation with Nabors Drilling, Mr. Heide developed the Rat Plastic prototype for an upper tray. According to Mr. Demers he relied upon Mr. Heide's assurances that the Rat Plastic trays did not infringe on any existing patents.

[24] In the early stages of this business venture Lea-Der Coatings purchased Rat Plastic trays from Rat Plastic Ltd. and resold them to drilling rig operators and rig contractors. In early 2007 Mr. Demers, through 1284897 Alberta Ltd., bought the assets of 614248 Alberta Ltd. and continued under the business name of Lea-Der Coatings to purchase and sell Rat Plastic fluid containment systems.

[25] In 2008 Lea-Der Coatings took on an additional line of containment trays made from carbon fiber supplied by Stealth Environment Filtration Systems (Stealth Environmental). Those products were marketed under the trade name of "Stealth". Stealth Environmental was subsequently purchased by Enviro Tek Manufacturing (Enviro Tek) which has continued to produce and sell the Stealth carbon fiber containment trays to Lea-Der Coatings. According to Mr. Demers when an order for a containment system is received, it will be referred to either Rat Plastic or to Enviro Tek. Thereafter, Mr. Demers is not involved with the identification of customer specifications or with the installation of the products.

[26] The business model of the Defendants is based on the sale, rather than rental, of their containment systems to oil rig operators or managers.

The Expert Witnesses

[27] The validity and infringement issues that arise in this case were addressed by three expert witnesses, namely, Anthony Wallace, James Seale and Brian Thicke. There is no disagreement among the parties about the essential qualifications of these witnesses, and their reports were tendered without objection. In my view all of these witnesses were qualified to testify to the issues in contention which were, in any event, neither highly technical nor fraught with special knowledge. A general summary of the key evidentiary points of controversy among these witnesses is set out below.

Anthony Wallace

[28] Anthony Wallace has many years of experience working in the oil drilling industry dating back to 1962. He has worked in various positions with several companies and in many locations. Included in this history is employment with Hudson's Bay Oil and Gas as Chief Drilling Engineer and later with Gulf Canada as the Drilling and Completions Manager. He holds a B.Sc. in Chemical Engineering from the University of Birmingham and an MBA from the University of Calgary. He currently teaches as a Drilling Instructor at the Southern Alberta Institute of Technology and is the President of a consulting business providing oilfield operational, engineering, and training advice to other businesses around the world.

[29] Mr. Wallace authored several opinion reports on behalf of the Plaintiffs dealing with the construction, validity and infringement issues and responding to the opinion reports authored by Mr. Seale and Mr. Thicke.

[30] He testified that the 375 Patent claims include a telescopic annular seal that blocks the passage of fluid between the tray collar and the flow nipple (see p 400). As with the other expert witnesses he agreed that this was an essential feature of 375 Patent but he differed with them on whether the Defendants' upper containment trays incorporated this feature.

[31] In comparing the 375 Patent with the Rat Plastic upper tray, Mr. Wallace saw some potential for telescopic movement. This was based on his belief that the Rat Plastic upper tray could be held up in the receiving flange collar by obtaining a friction fit between the tray collar wall and one of the walls of the flange collar (see p 435-436). According to Mr. Wallace this type of set up would

create "some form of seal" (see p 438) and it would allow for some downward or telescopic movement of the tray. Nevertheless, he was not sure why the inner receiving wall of the flange collar required drainage holes in the presence of such a seal (see p 440).

[32] Mr. Wallace seemingly accepted the method of fit-up for the Stealth upper tray described by Mr. Kenworthy (see p 416) but he maintained that the tray would still be capable of some telescopic movement (see p 415). According to Mr. Wallace the 375 Patent reference to "telescopic" would be infringed by any movement of the Stealth tray resulting from compression of its sealing gasket.

[33] In construing the 064 Patent claims, Mr. Wallace recognized that a person of skill would understand the reference to mated edges to mean "two edges that are brought together to provide a single pan" but not necessarily joined with a tongue and groove arrangement (see p 447). A mated edge would, however, need to be leak-proof (see p 448).

[34] Mr. Wallace's testimony about the several references in the 064 Patent to use on a completed oil well in conjunction with a Christmas tree was as follows:

> Q And then the next element is that the tray be "adapted to be positioned around a christmas tree."
>
> A Yes, sir.
>
> Q What do you understand that term to mean in the context of this patent?
>
> A In normal oilfield terminology, the Christmas Tree would be the collection of valves that are installed after the rig is gone to control production. This patent clearly shows the tray installed in the BOP [blow out preventer] and within the BOP stack. And I've changed my mind about the interpretation of Christmas Tree. Terminology, I believe, in this particular case, means anything that's

> installed above the surface casing flange, either a BOP stack or a production tree.
>
> Q And where would you find a BOP stack?
>
> A On the drilling rig or on a service rig during completion. [p 448-449]

This opinion was enhanced by the presence of diagrams in the 064 Patent that depicted the patented lower tray in use within a blow out preventer (BOP) configuration not typically found in a classic Christmas tree on a completed oil well (see p 454).

[35] Mr. Wallace dealt with the fact that the Rat Plastic system employed two separate trays with abutting walls by pointing out that it achieved the same purpose as the 064 Patent by using two necessary tray sections that are brought together around a wellhead pipe (see p 457).

[36] In comparing the 793 Design to the CAPP line pipe tray, Mr. Wallace testified that they are "designed to achieve the same function to lift the pipe connections off the ground and provide a catchment area for any potential leaks" and "they look the same" (see p 469).

[37] According to Mr. Wallace the Defendants' containment trays infringe either the 375 Patent or the 064 Patent and the CAPP line pipe tray infringes the 793 Design.

James Seale

[38] Mr. Seale is an engineer with professional experience in the design of drilling rigs. He was retained by the Heide Defendants to provide a professional opinion concerning the construction of

the 375, 265 and 064 Patent claims. He was also asked to opine on whether the Rat Plastic upper and lower trays infringe the 375 and 064 Patents.

[39] Mr. Seale was not fully instructed about the correct approach to patent construction. In the result he simply pointed out the differences between the patent claims and the Heide Defendants' products and he construed some of the claim language.

[40] One of the principal differences Mr. Seale noted between the Rat Plastic upper tray and the 375 Patent claims concerns the method of attachment of the tray to the flow nipple. The 375 Patent refers to a sealing arrangement that allows the tray to move telescopically in response to settlement of the rig. Mr. Seale's report of March 31, 2011 [exhibit D20] distinguished this aspect of the 375 Patent from a fit-up of the Rat Plastic upper tray as follows:

> The Rat Plastic "Top Tray" or "Upper Tray" uses a collar welded to the top of the flow nipple with the "Upper Tray" inserted into it in much the same manner as a funnel would be inserted into a jar to aid in filling it. This means that the Rat Plastic device does not seal to the flow nipple but relies on the Upper Tray being inserted into the collar to direct spilled fluid into the flow nipple.

[41] Under direct examination Mr. Seale explained this distinction in the following way:

> A Well, I think the primary would be the -- the words "cylindrical interior sealing surface," which is later said provides an annular seal and seals to the flow nipple. Now, the -- the Rat Plastic system, the top tray, which this -- this was -- this serves the same function, as I understand it, the Rat Plastic goes into an expanded collar on the top of the flow nipple, much as a funnel would go in a bottle, so it doesn't seal, and it certainly doesn't seal on an interior surface. The inner ring on that steel collar has many holes in it, so there's not much point to sealing it anyway. [p 1323]
>
> …

> A The annular seal which would be -- okay, to quote, "cylindrical interior sealing surface, and secondly, providing an annular seal, thirdly, securing the annular seal to the flow -- to a flow nipple disposed below an opening in the drilling platform." So that is describing a seal between the tray and the flow nipple, which doesn't exist in the Rat Plastic product.
>
> Q Okay.
>
> A And that's, again, repeated in, fourthly, positioning the semicircular indentations of both sides of the flow nipple with cylindrical interior sealing surface of the cylindrical collar engaging and being telescopically moveable. Again, the way the Rat Plastic is -- is built, it's not -- not intended to be telescopic. It -- it sits in that collar and that's what supports it.
>
> Now, claim 2 is quite similar, and, again, it's the-- the interior ceiling surface, I think, is -- is one of the keys to that one, which, again, doesn't -- doesn't exist in the Rat Plastic product. [p 1324]
>
> …
>
> Q Okay. All right. In claim 1, the -- the parts of the claim that refer to the annular seal start at line 15. It says, "secondly, providing an annular seal, thirdly, securing the annular seal to a flow nipple disposed below an opening in the drilling platform." The description of providing an annular seal and securing an annular seal, what do those phrases teach us as we try to interpret this patent?
>
> A Well, somehow there must be some way to provide a leak tight joint between the tray and the flow nipple, and as this product is configured, if there is not a seal there, then the -- the spilled fluid that's caught will flow down the outside of the flow nipple, so it must be sealed to function. [p 1326]

[42] Under cross-examination, Mr. Seale rejected the suggestion that a type of seal could be obtained for the Rat Plastic upper tray by creating a tight friction fit between the plastic tray collar and the steel flange collar. He pointed out that this would create a "very poor seal because the fit would not be close enough to be a good liquid seal" (p 1356). When asked if the reference to an annular seal in the 375 Patent required perfection, he responded by saying that it implied "a fairly

high level liquid tightness" (p 1356). With respect to the issue of tray movement, he acknowledged that there were ways to elevate the Rat Plastic upper tray above its usual resting point on the flange collar but he said this approach was not "inherent" in its design (p 1353).

[43] Mr. Seale found several differences between the 064 Patent claims and the Rat Plastic lower trays most notably:

(a) The 064 Patent claims refer to the apparatus being used on "a completed oil well". The Rat Plastic lower tray was used on drilling rigs and not on production wells.

(b) The 064 Patent describes two tray halves that seal together at a "mating edge" whereas the Rat Plastic system employs two independent or self-contained trays that abut along their interior walls but do not mate or seal.

[44] Mr. Seale's direct testimony was that the numerous references in the 064 Patent to the use of a tray on a "completed oil well" to be "positioned around a Christmas tree" meant that the scope of the claims was restricted to use on a production well and did not extend to use on a drilling rig. According to Mr. Seale, a Christmas tree is present on a completed well and not on a drilling rig. He also explained that the independent claims of the 064 Patent describe a single containment cavity formed by joining and sealing two tray halves. The Rat Plastic lower tray is constructed from two independent trays that abut along their interior walls but require no seal at the interface.

Brian Thicke

[45] Brian Thicke is the President of Anderson and Associates Consulting Engineers Inc. He is a professional engineer specializing in the field of mechanical engineering. He often consults with clients about product design and has provided advice in the area of patent infringement.

[46] Mr. Thicke was retained by 1284897 Alberta Ltd. to construe the claims of the 375 and 064 Patents and to consider whether the Rat Plastic and Stealth containment trays infringe those claims. He was also asked to compare the Plaintiffs' patents to the prior art with a view to assessing the validity of the 375, 064 and 265 Patents. Of all of the expert witnesses Mr. Thicke provided the clearest and most compelling evidence.

[47] Like Mr. Seale, Mr. Thicke identified several differences between the 375 and 064 Patent claims and the Rat Plastic and Stealth upper and lower containment trays.

[48] According to Mr. Thicke, the primary differences between the 375 Patent claims and the Rat Plastic upper tray involve the absence of a seal between the tray and the flow nipple, the use of two independent trays and the method of attachment of the tray to the flow nipple. He pointed out that no purpose would be served by sealing the Rat Plastic tray collar to the flange collar because the system works as a funnel and an effective leak-proof seal could not be achieved in any event. He concluded on this point by saying that "there is no annular seal, there is no need for a sealing surface in the Rat Plastic design" (p 1552). With respect to the potential for downward movement of the Rat Plastic tray, Mr. Thicke stated:

> Q All right. And the last point on Claim 1?

> A "And permits axial movement to accommodate settlement of the drilling platform." Yes, it rests on top of a collar. The trays are put down, are installed on top of a collar. There is no potential for axial movement or telescopic movement between the Rat Plastic trays and the -- and the – and the flow nipple, let alone the seal that doesn't exist. [p 1552]

[49] Mr. Thicke made the same point in connection with the installation of the Stealth upper tray. After inspecting the complete Stealth upper tray exhibit, including its seal and mounting flange, he came to the opinion that it was designed to be fixed in place around the flow nipple and that it was not capable of axial movement. This point was made in the following exchange:

> There's -- there's no possibility of any telescopic movement with this particular tray. It is confined by the bottom of the tray and by the flange on the bottom of the collar, it's held -- the seal is held in position so it can't move with the tray. And it can't move -- the seal can't move against the flow nipple either because the flange of the flow nipple fits in here, so there's no real movement allowed there. So that sliding movement that's required by the 375 patent isn't available here. [p 1559]

[50] According to Mr. Thicke the presence of any significant downward pressure on the Stealth upper tray would result in the loss of integrity of the annular seal.

[51] Mr. Thicke also identified differences between the Defendants' lower trays and the claims of the 064 Patent. Once again, he noted that the 064 Patent described a single containment cavity created by sealing the mating edges of two tray halves whereas the Rat Plastic tray system incorporated two independent trays brought into an abutting but unsealed relationship. As with Mr. Seale, he observed that the 064 Patent claims covered the use of lower trays on a completed oil

well or Christmas tree and would therefore not be infringed by the use of either a Rat Plastic or Stealth lower tray on a drilling rig.

Prior Art and Prior Use

[52] Divisible containment trays intended to capture liquids spilling or leaking from oil wells and, in particular, wellheads were known in the prior art. Such systems were also in use in Canada since at least the 1980s. An outline of the prior art can be found in the Gayaut Patent filed in the United States on January 3, 1995. In the background of that patent the problem and the history of how it had been addressed is described as follows:

> It is of course important to minimize spillage of fluids around both land based and off-shore wells. The problem with regard to both types of wells is identical in that spilled well fluids can cause pollution. With off-shore wells, the fluids can pollute the water surrounding the well; with on-shore wells the soil around the well, and in some cases the ground water also, can be polluted. The problem is particularly present with oil and gas wells and other wells dealing with harmful and hazardous materials.
>
> As a consequence of drilling and servicing wells, fluids containing hydrocarbons and other chemicals are released and spilled from the well casing. For example, during drilling, pulling drill pipe from the well bore can release drilling mud containing hydrocarbons and other chemicals. In the reworking of wells pulling production tubing from the wells can likewise spill liquids. While swabbing (cleaning out) wells, fluids can be forced to surface in large volumes, resulting in spills.
>
> Minimizing spills around oil wells and the advantages of doing so have long been recognized. As early as 1871 inventions were patented for gathering the oil from well tubes as they are being withdrawn from the wells. The structures were called by various names including catchers, pans, basins, containers and the like, and all function to prevent spills. U.S. Pat. No. 113,638 to Dewey, issued Apr. 11, 1871 shows this technology is almost as old as oil wells. As the oil industry progressed, refinements were made in the devices for catching spilled fluids around a well. For example, U.S. Pat. No. 1,448,172 Wellensiek, issued Mar. 13, 1923 shows a spill catcher

> mounted on the outside of the oil well casing. In the 1924 patents to Schuyler, U.S. Pat. No. 1,507,628, a spill catcher is shown clamped on the outside of the casing. The spill catcher is formed in multiple sections with flanges and seals between the sections for ease in installation on and removal from the outside of the casing.
>
> In off-shore applications such as the United States Patents to Roberts (U.S. Pat. No. 1,811,761, issued Jun. 23, 1931 and U.S. Pat. No. 1,867,030 issued Jul. 12, 1932) and to Grace (U.S. Pat. No. 2,077,044, issued Apr. 13, 1937), spill pans and structures located below the drill floor are shown for catching spilled liquids. The Roberts' patent '761 describes utilizing a pump to remove the oil and drilling mud from the pan. Roberts' '030 discloses pipe 46 and pump 47 for collecting the spilled liquids. The structure in the Grace Patent '044 has a compressible seal clamped around the casing (FIG. 7) and a drainpipe 38 connected to a suitable sump or pump to remove fluids from the catch basin.
>
> The 1962 to St. John, U.S. Pat. No. 3,023,808 and the 1990 U.S. Pat. No. 4,949, 784, to Evans, shows structures mounted on the outside of the well. U.S. Pat. No. 5,121,794, to Hibdon, et al., issued Jun. 16, 1992 describes a structure that has a flange integrally formed in the bottom thereof so that it can be bolted into the well structure between a pair of opposed interfacing flange surfaces. U.S. Pat. No. 5,121,796 to Wigington, issued Jan. 16, 1992 shows a catch device which is bolted to a plate which is in turn welded to the outside of a piece of casing bolted into the well.
>
> Thus the problem and many proposed solutions have existed.

[53] The Gayaut Patent describes an invention said to represent an improvement on the prior art. It refers to a sectional container or pan that can be loosely fastened and sealed around an existing wellhead pipe. The intent is to capture and divert fluids leaking from a wellhead. Under the detailed description of the invention, the containment pan is said to be suitable for use in conjunction with oil well casings, oil well pipes and other equipment attached to a well casing including BOPs. All that is required is a tubular section to which the tray collar can be affixed. Because of its sectional design, the device can be installed without any disassembly of the wellhead. It is typically mounted

beneath the work floor of a well. A seal between the collar flange and the pipe to which it is attached is maintained with the use of a gasket. The method of attachment of the pan collar to the stand pipe is described in the following way:

> The cylindrical flange is selected to be of a size to loosely fit around the exterior of common tubular members in place on existing wells. The annular gap or loose fit can be packed at the top with suitable gasket material (not shown) to form a seal or cap as shown in FIGS. 5 and 6 could be used. Alternatively, a splash assembly and/or skirt could be used with these embodiments.
>
> By mounting the container of the present invention without physically bolting or connecting it to the well, the container can be rotated or moved about the tubular member to the proper position to avoid interfering with well operations. In addition, by providing a mounting which can fit around an existing oil well tubular member, disassembly of the well is avoided. In some cases the disassembly of the well itself to install the drip plan causes spills and pollution. These problems are avoided by use of the applicant's spill container. In addition, the loose fitting assembly on an existing well tubular makes this invention more universal in that it is not required to exactly match a thread or flange bolt configuration.

[54] The Gayaut Patent then stipulates that the disclosure is illustrative only and that changes to the shape, size and arrangement of the parts are intended to be covered by the claims.

[55] The Schuyler Patent from 1924 also describes a system for capturing spillage from a production well. The Schuyler Patent concerns a sectional drip pan and a descending funnel mounted below the well floor and affixed to an oil standpipe with overlapping semi-cylindrical flanges sealed with rubber or packing. An aperture in the descending funnel permits the gravity outflow of captured fluid to a storage tank.

[56] The Arterbury Patent from 1991 similarly describes an interconnected two-part containment pan intended to capture fluids leaking from producing oil or gas wells, as do the Pearce Patent from 1993, the Norris Patent from 1994 and the Wigington Patent from 1992.

[57] Three witnesses were called on behalf of the Defendants to testify about the prior use of fluid containment systems, namely Robert Sawyer, Keith Wachter and Wayne Anderson. All of these witnesses gave consistent and uncontradicted testimony that upper and lower fluid containment systems were in common use on Canadian drilling rigs at least as early as the 1980s. These systems were custom-built to fit the rigs to which they were attached. The trays took many shapes and sizes. Some were single trays but, according to Mr. Sawyer, after the blowout of a Nabors rig at Lodgepole in 1984, the industry was required to split flow nipples and any accompanying tray attachments into two divisible sections. This was done to facilitate the takedown of the flow nipple in the case of a maintenance emergency.

[58] Keith Wachter testified on behalf of the Heide Defendants. He is employed by Savanna Drilling as a field superintendent and has responsibility for the management of a small fleet of drilling rigs. Before that he worked for Savanna as a rig manager. He has about 10 years of overall drilling rig experience including time spent as a driller with Nabors Drilling.

[59] Mr. Wachter testified that he was familiar with fluid containment systems used on drilling rigs including the systems offered by the Plaintiffs. He had worked on rigs where Katch Kan lower trays had been employed but he had never used one of the upper trays. According to Mr. Wachter, the companies he worked for usually custom-built their upper containment trays and attached them

to the flow nipple by using half moon clamps and a rubber seal (called a Victaulic clamp). Under cross-examination Mr. Wachter said that on one occasion the rig contractor did not want to incur the expense of renting a Katch Kan lower tray. He said that he initially contemplated building a lower tray but opted to purchase a Rat Plastic lower tray instead.

[60] Robert Sawyer has extensive experience working on drilling rigs dating back to 1968. For a number of years he was a tool pusher (rig manager) for Nabors Drilling. In 1986 he became a field superintendent supervising several drilling rigs and in that capacity he has worked in British Columbia, Alberta and Saskatchewan. In 1997 he advanced to the position of drilling supervisor managing up to 20 drilling rigs from the Nabors office.

[61] Mr. Sawyer testified that he was aware of the use of fluid containment trays on drilling rigs as early as 1970. He described the early containment trays and their set-up in the following way:

> Q Now, do you recall fluid containment trays in your experience?
>
> A Yes, yes.
>
> Q And just generally what sort of trays do you recall?
>
> A Well, the early years -- the early years they were metal round, rectangle, square, trays that were -- that were built by a welder and put on the top of the flow nipple, drill nipple, around the drill nipple, whatever, to contain the fluid the -- off the rig floor where you made connections and stuff.
>
> Q And did they -- were there upper trays and lower trays or --
>
> A Yes, there was. There was some right underneath the table beams and some that were lower down on the blowout prevention stack.
>
> Q And what period of time are you talking here?

> A The first one I seen was in 1970, it was on Brinkerhoff Rig 40 in 1970, it was a round tray, it was about 37 inches round, two foot -- two and a half foot height.
>
> Q Okay. And was that an upper tray?
>
> A Yes, it sat inside the drill nipple.
>
> Q It sat inside the drill nipple?
>
> A Yeah.
>
> [pp 1388-1389]

[62] Mr. Sawyer identified a series of photographs of custom-built upper containment trays that had been used by Nabors Drilling at least as early as the mid-1980s [see exhibit D5, pp 1001-1004; 1016-1021]. Each of those trays was formed from two tray halves joined and sealed either with abutting flanges or with a tongue and groove arrangement. All of these trays were attached to the top of the flow nipple either by a welded seam or by a sealed collar that surrounded the flow nipple. The example found at Exhibit D5, Tab 92 at pp 1018-1021 utilized a quick release clamp and a tongue and groove joint between the tray halves sealed with silicone. Mr. Sawyer gave the following description of the means by which this type of upper tray was attached to the flow nipple:

> A There usually is a four to -- a four inch to a five inch small semicircle made -- you bend a piece of flat iron, weld it on there, and that fits on top of the drill nipple. It goes on the drill nipple, then when you bolt it together it makes a -- somewhat of a seal. You just put some silicone around there, a rag, sawdust, whatever will hold, and so the fluid don't leak between the drill nipple and run down on top of the BOPs.
>
> Q Okay. The quick release clamps you referred to do you know when those would have been put on?
>
> A Those were put on in later -- later years. I would say mid '80s to late '80s, they come out with these quick clamps where you didn't

> have to do bolts, have wrenched up there and work with wrenches because you're working at a sub height of anywhere from 15 to 20 feet.
>
> Q All right. So how was -- how was this -- how was this particular tray used on a rig?
>
> A How was it used?
>
> Q Yes, how was it --
>
> A Well, you just picked the halves up, put it on the drill nipple, bolted it there, and any fluid that leaked off, you know, around the rotary table, which is where the rig floor is, it would drip down inside these trays and then it would just -- the top of that tray would go right on the top of the drill nipple so all the fluid would run out of there into the down nipple down the flooring. [p 1397-1398]

[63] Mr. Sawyer testified that Nabors Drilling had done business with Katch Kan in the late 1990s by purchasing containment trays. Later on when Katch Kan only wanted to rent trays Nabors began to purchase trays from Lea-Der Coatings.

[64] Wayne Anderson is a welding foreman employed by Nabors Drilling. Starting in about 1980 Mr. Anderson worked on a contract basis for Nabors and for other drillers but nine years ago he was taken on by Nabors as an employee.

[65] Mr. Anderson testified that in about 1980 he build a fluid containment tray for Montgomery Drilling on its No. 49 rig. After that he continued to build similar trays from steel plate in a variety of shapes and sizes. Some of the trays were one piece and others were split and bolted together. Some were designed to fit inside a flow nipple and others were either welded or clamped to the flow

nipple or to a flow nipple flange. He also made lower trays that were drained into storage tanks. Mr. Anderson described the methods of tray attachment in the following exchange:

> Q How are the trays supported on the – the trays that you've made, how are they supported on a drilling rig, on a flow nipple or wherever?
>
> A Everybody did it a different way. Some people would have a little flange that they set them on, some people make them clamp tight on to the annular.
>
> Q How did you do it?
>
> A I've done it every different way. It's --
>
> Q Can you describe the ways?
>
> A I've clamped it onto the annular, I've built them so that they sat on top of the flow nipple, I've welded them to the top of the flow nipple, I've built rings on the top of the flow nipple to bolt them to, clamp them to.
>
> Q How do you -- what do you mean, you built rings? What do you -- what do you mean?
>
> A I've made rings on the -- that actually welded to the flow nipple so that you could actually clamp and seal your -- your tray to it.
>
> Q And you say that the ring is welded directly to the flow nipple?
>
> A Yes. [p 1439]

[66] Mr. Anderson also testified that he has employed a variety of methods to join split trays together including the use of abutting flanges and tongue and groove connections sealed with silicone or some other gasket material. When he was asked to view photographs that depicted a number of custom-built upper tray configurations, he said that they were similar to trays that he had built from as early as the 1980s. He continues to build trays of this type for Nabors from steel and

aluminium and he is aware of other drilling contractors who also make their own trays. None of this evidence was directly challenged on cross-examination.

[67] The above-referenced evidence establishes that early fluid containment systems were typically made from steel plate but later on aluminium began to be used. The trays were often constructed from two abutting halves that were gasket or silicone sealed at their abutting edges. Those edges could be mated with a tongue and groove seal or simply with the use of facing flanges that were sealed and bolted together. In the case of upper containment systems the tray collars could either be inserted into the flow nipple thereby achieving a funnel effect or they could be welded or bolted to the flow nipple or to a flange attached to the top of the flow nipple.

[68] Some of those early systems had several features in common with the 375 Patent including the use of split trays fixed to the top of a flow nipple to effectively trap and re-circulate drilling fluid. These systems employed containment trays that came in a variety of shapes and sizes. The early upper tray systems were attached to the flow nipple in an essentially static position but with a variety of attachment methods. One of those methods involved the simple insertion of the sections of the tray collar into the inner wall cavity of the flow nipple. This configuration acted essentially as a funnel. While this funnel design had the disadvantage of compromising the inner dimension of a flow nipple it was, nevertheless, one example of a prior use involving an upper fluid containment tray. Other attachment methods involved the welding or bolting of the tray collar directly to the top opening of the flow nipple or to a horizontal flange that was welded to the flow nipple. I find without hesitation that upper and lower tray containment systems were well known in the prior art

and that custom-built containment trays were used widely in the industry at least as early as the 1980s.

[69] At least one piece of prior art relied upon by the Defendants describes the use a moveable seal in an application similar to the 375 Patent. The Ward Patent from 1981 describes a type of funnel-like apparatus that captures drilling fluid flowing up from a well. Fluid that would otherwise spill over the top-side well opening (or flow nipple) is caught by an outer tubular member and diverted to a discharge outlet for recirculation. This system has some similarities to the 375 Patent upper tray most notably a telescopic seal that allows the outer tubular member to move axially relative to the inner pipe which it encircles. There are, however, at least two important differences. The Ward invention is not designed to capture drilling fluid spilling from above the rig floor and the telescopic seal is required to be inflated.

The 375 Patent – Construction

[70] Construction of the patent claims is the first step in a patent suit. It is the role of the Court to construe the claims through the eyes of the skilled reader and to identify the essential elements of the invention. Sorting out the essential from the non-essential is necessary because an infringement may be proven notwithstanding the omission or substitution of non-essential features. It is the substance of the invention that is important: see *Free World Trust v Électro Santé Inc.*, 2000 SCC 66, [2000] 2 SCR 1024 [*Free World Trust*], and *Western Electric Co. v Baldwin International Radio*, [1934] SCR 570 at paras 57-59, (available on CanLII).

[71] The language of the claims is to be interpreted in a purposive way and with the objective of achieving a fair result as between the patentee and the public: see *Whirlpool Corporation v Camco Inc.*, 2000 SCC 67 at para 49, [2000] 2 SCR 1067. The words used in the claims must be considered with reference to the entire specification but not with a view to enlarging or contracting the claims' language as written. In other words, limiting language in the claims has primacy over a more expansive description of the invention in the specification. Words are also to be construed in light of the common knowledge of the skilled and informed reader. These principles were summarized in *Free World Trust*, above, at para 51.

> 51 This point is addressed more particularly in Whirlpool Corp. v. Camco Inc., [2000] 2 S.C.R. 1067, 2000 SCC 67 and Whirlpool Corp. v. Maytag Corp., [2000] 2 S.C.R. 1116, 2000 SCC 68, released concurrently. The involvement in claims construction of the skilled addressee holds out to the patentee the comfort that the claims will be read in light of the knowledge provided to the court by expert evidence on the technical meaning of the terms and concepts used in the claims. The words chosen by the inventor will be read in the sense the inventor is presumed to have intended, and in a way that is sympathetic to accomplishment of the inventor's purpose expressed or implicit in the text of the claims. However, if the inventor has misspoken or otherwise created an unnecessary or troublesome limitation in the claims, it is a self-inflicted wound. The public is [page1054] entitled to rely on the words used provided the words used are interpreted fairly and knowledgeably.

[72] The claims of the 375 Patent must be construed as of May 23, 1996 being its publication date. They are to be read through the eyes of a person of ordinary skill in the art.

[73] There is no material disagreement among the parties about the essential qualifications of a person of skill. Such a person would have considerable field experience dealing with the supervision and operation of drilling rigs or she could be an engineer who has experience in the

operation or design of drilling rigs. I accept Mr. Thicke's description of the notional person of skill at paragraph 17 of his report (see exhibit D23) and note that it does not differ significantly from Mr. Wallace's view.

[74] The Plaintiffs allege the infringement by the Defendants of both of the claims of the 375 Patent. Claim 1 asserts a method for retrofitting an existing drilling rig with a catch pan, the design of which is directed at the capture and recirculation of drilling fluids that may spill from the wellhead during operation. Claim 2 covers the fluid containment apparatus. The claims as written state:

> 1. A method for retrofitting existing drilling rigs with a catch pan, comprising of the following steps:
>
> firstly, providing a pan-like body consisting of two portions, each portion including an interior edge having a semi-circular indentation with depending semi-cylindrical collar, the semi-cylindrical collars having interior surfaces, latching means being provided to secure the interior edges in abutting relation such that the semi-cylindrical collars mate to form a cylindrical collar with a cylindrical interior sealing surface; and
>
> secondly, providing an annular seal;
>
> thirdly, securing the annular seal to a flow nipple disposed below an opening in a drilling platform;
>
> fourthly, positioning the semi-circular indentations with depending semi-cylindrical collars on opposed sides of the flow nipple with the cylindrical interior sealing surface of the cylindrical collar engaging and being telescopically movable relative to the annular seal and using the latching means to secure the interior edges in abutting relation, such that drilling fluids from the drilling platform are caught in the pan-like body and directed into the flow nipple and as the drilling platform settles such settling is accommodated by movement of the cylindrical interior sealing surface of the cylindrical collar relative to the annular seal.
>
> 2. A catch pan for drilling rigs, comprising:

> a shallow pan-like body consisting of two portions, each portion including an interior edge having a semi-circular indentation with depending semi-cylindrical collar, such that upon the interior edges of the portions being abutted a generally circular opening with a depending cylindrical collar is formed, the cylindrical collar providing a cylindrical interior sealing surface;
>
> latching means to secure the interior edges in abutting relation.
>
> an annular seal having an interior attachment portion and an exterior wiper portion, the attachment portion being adapted for attachment to a flange of a flow nipple, the wiper portion engaging the interior sealing surface, the cylindrical interior sealing surface of the cylindrical collar being telescopically moveable relative to the annular seal, thereby accommodating movement of the pan-like body relative to the flow nipple when a downward force is exerted upon the pan-like body by a settling drilling platform.

[75] The parties, through their expert witnesses, disagree about the meaning and significance of several of the terms used in the claims. For the reasons that follow, it is unnecessary to address all of these points of interpretive controversy because there is one feature of the 375 Patent that the witnesses agree is essential and that is acknowledged to be determinative.

[76] It is not disputed that a core inventive concept of the 375 Patent concerns the capacity of the upper tray to move telescopically relative to a fixed annular seal (see evidence of Mr. Wallace at p 420 and Mr. Thicke at p 1543). Both of the claims of the 375 Patent refer to the capacity of the containment tray to self-adjust without the seal between the tray and the flow nipple flange being compromised. The term "telescopically" is used to describe this capacity for axial movement of the tray within the limits or stops of the sealing area of the tray collar. It is at least implicit in the claims that the reference to a seal involves an arrangement of parts that will not leak: see the evidence of Mr. Seale at p 1325, Mr. Thicke at p 1574 and Mr. Wallace at p 400. Indeed, the 375 Patent

describes a very specific sealing arrangement involving a flange fixed to the flow nipple with a receiving ring that holds a gasket. This structure is brought to bear against the inner receiving channel of the tray collar and is designed to slide within the defined limits of the collar. The patent claims do not purport to include within their scope all available moveable sealing arrangements for this application and it is not open to the Plaintiffs to advance an expanded construction based on the so-called "spirit of the invention": see *Free World Trust*, above, at para 31. The term "telescopically" is used to describe a capacity for anticipated and controlled axial movement of the tray within the limits or stops of the sealing area of the tray collar. What the term does not include is the idea of some minimal and unaccounted for movement of the tray at the onset of product failure. Furthermore, by choosing a particular means to accomplish the advantage of tray movement and to distinguish the invention from the prior art, it is not open to the Plaintiffs to stretch these claims to monopolize anything that may achieve the same result (see *Free World Trust*, above, at paras 32 and 73).

[77] The Plaintiffs did argue that another essential element of the 375 Patent concerns its redirection of drilling fluid into the flow nipple. That feature was, however, very common in the upper containment trays that were in prior use. It is only the presence of the described telescopic seal that is arguably inventive and distinguishes the 375 Patent claims from what was long before in widespread use.

[78] The issues that remain relative to this important feature of the 375 Patent are whether it was anticipated in the prior art or use, whether it would be obvious to a person of skill and, if the claims are valid, whether the Defendants' upper tray products infringe by incorporating a telescopic seal.

Validity – General Principles

[79] A leading authority concerning anticipation is *Apotex Inc. v Sanofi-Synthelabo Canada Inc.*, 2008 SCC 61, [2008] 3 SCR 265. There the Court identified two essential questions to be answered:

(a) Was the subject matter of the invention disclosed to the public by a single disclosure?

(b) If such a clear disclosure has been made, is the working of the invention enabled by that disclosure?

These questions were further clarified at paras 25 and 27:

> 25 …When considering the role of the person skilled in the art in respect of disclosure, the skilled person is "taken to be trying to understand what the author of the description [in the prior patent] meant" (para. 32). At this stage, there is no room for trial and error or experimentation by the skilled person. He is simply reading the prior patent for the purposes of understanding it.
>
> …
>
> 27 Once the subject matter of the invention is disclosed by the prior patent, the person skilled in the art is assumed to be willing to make trial and error experiments to get it to work. While trial and error experimentation is permitted at the enablement stage, it is not at the disclosure stage. For purposes of enablement, the question is no longer what the skilled person would think the disclosure of the prior patent meant, but whether he or she would be able to work the invention.

[80] Essentially anticipation means that where an invention has been previously and publicly described it cannot be later monopolized.

[81] The decision in *Apotex Inc. v Sanofi-Synthelabo Canada Inc.*, above, also addressed the test for obviousness and discussed the required approach at para 67 as follows:

> …
>
> (1) (a) Identify the notional "person skilled in the art";
> (b) Identify the relevant common general knowledge of that person;
>
> (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
>
> (3) Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed;
>
> (4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

[82] Obviousness means that even where a claimed invention has not been previously known, it cannot be monopolized because it is something that a person of skill could have come up with based on prior art or use. A very helpful outline of the principles that apply to an obviousness enquiry can be found in the decision of Justice Roger Hughes in *Janssen-Ortho Inc. v Novopharm Ltd.*, 2006 FC 1234 at paras 109-113, [2006] FCJ 1535. I am particularly mindful of the oft-repeated admonition that the assessment of obviousness not be aided by the application of hindsight.

The 375 Patent - Validity

[83] I am satisfied that the 375 Patent is not rendered invalid by anticipation or obviousness. It is noteworthy that Mr. Thicke acknowledged that he could find no anticipatory prior art or usage.

[84] Although the claimed invention duplicates many of the features that were either known in the art or in prior use, the same cannot be said for the inclusion of its particular telescopic sealing mechanism. I accept that the Ward Patent incorporated a telescopic seal in a similar application but the seal used by Ward was more complex and it required inflation. The seal described by the 375 Patent is simple and, as far as I can tell from the evidence, unique for this particular application. I do not believe that a person of skill would have been led by the prior art to the use of the telescopic seal described by the 375 Patent in conjunction with a fluid containment tray. Up to the publication of the 375 Patent, these trays had been built for static attachment to a flow nipple. Although telescopic seals were known in the prior art, that knowledge pertained to either different applications or to seals that were more complex in design. A person of skill would not be expected to look for inspiration much beyond the prior art that was relevant to the problem addressed by the patent in issue and certainly not to solutions from outside of the field: see *Wentzel Downhole Tools Ltd. v National-Oilwell Canada Ltd.*, 2011 FC 1323 at para 160, [2011] FCJ no 1700, aff'd 2012 FCA 333, [2012] FCJ no 1654.

[85] On the record before me the Defendant, 1284897 Alberta Ltd., has failed to establish on a balance of probabilities that the 375 Patent is invalid.

Do the Defendants' Upper Trays Infringe the 375 Patent?

[86] The Defendants' upper containment systems bear several close similarities to the features described by the 375 Patent. All of the trays are sectionally mounted to the top of the flow nipple of an operating drilling rig. They all capture drilling fluid that is directed through the well floor and divert the fluid back into the flow nipple, thereby facilitating its recirculation. All of the trays are

affixed in a fashion to the flow nipple by the use of a tray collar and a flange permanently welded to the flow nipple.

[87] There are, however, some important differences between the Defendants' upper containment systems and the 375 Patent containment system. The principal difference is that the 375 Patent upper tray is designed to be partly self-adjusting. If the drilling rig floor settles and comes to rest on the top of the tray, it will move downward without the seal being compromised. This is a design that permits the descending tray collar to move telescopically relative to the seal that is fixed to the flow nipple flange. The advantage of this feature is supposedly that the tray will not immediately fail if the drilling rig floor begins to bear down on it. This, in turn, provides an opportunity for the rig operator to readjust or re-level the rig to re-establish equilibrium before damage is done to the containment tray.

[88] The specific solution taught by the 375 Patent requires that a liquid tight seal be maintained at all times between the descending tray collar and the flow nipple flange. That seal is achieved by using a flexible gasket or rubber seal held securely in place within a channel in the flow nipple flange. Because the descending tray collar is deeper than the depth of the face of the sealing flange, the tray is free to move up or down relative to the seal. This movement is limited by the placement of horizontal stops at the top and bottom of the channel in the descending tray collar, but the design will permit the tray to move by a few inches.

[89] The method utilized by the Stealth system to fix the upper tray to a flow nipple involves the combined use of a flexible seal, a tray collar and a flange welded to the flow nipple. The flexible

seal incorporates a narrow groove. The seal is wrapped around the flow nipple flange with the leading edge of the flange being inserted into the seal groove. The two halves of the containment tray are then brought together around the flow nipple flange and sealed. The annular seal is sized to fit snugly in a receiving channel in the tray collar. In this system the tray is effectively mated to the flow nipple flange and will not move more than fractionally if the rig settles on the tray.
Mr. Kenworthy testified that if the weight of the drilling rig came to rest on the tray, the system would fail. This was also the evidence of Mr. Thicke. From my own assessment of the Defendants' products, I accept that testimony and I reject the evidence of Mr. Wallace to the extent that he attempted to suggest otherwise.

[90] The method of attaching the Stealth upper tray to the flow nipple is much closer in design to some of the examples of prior use described by the industry witnesses and in the prior art than to the method described by the 375 Patent. According to this evidence of prior use it was common to mount upper containment trays to the top of a flow nipple by using a sealed friction fit collar that, depending on its tightness, would also be theoretically capable of some movement. The same method of attachment is described in the Schuyler Patent. These arrangements would not fall within the scope of the 375 claims because they do not incorporate telescopic seals of any description let alone the arrangement of components described by the 375 Patent.

[91] The method employed to attach the Rat Plastic upper tray halves to the flow nipple is also very different than the method described by the 375 Patent. The Rat Plastic system does not incorporate a seal between the leading edge of the tray collar and the receiving collar of the flow nipple flange. Instead, the bottom edge of each half of the tray collar drops into a channel of a

receiving flange collar and rests there. The tray halves are then secured to one another by adjustable straps. In this arrangement there is no need to effect a liquid proof seal at the junction between the tray collar and the flange collar because any fluid caught in the tray is funnelled directly into the flow nipple through drain holes in the inner wall of the flange collar. Thus the Rat Plastic upper containment tray is not designed to achieve the telescopic advantage described in the 375 Patent nor does it incorporate a seal between the tray and the flow nipple flange.

[92] The Plaintiffs argue that both of the Defendants' upper containment trays can be used in ways that would permit some downward movement and thereby effectively infringe upon the telescopic feature of the 375 Patent.

[93] Mr. Wallace testified that some downward movement may occur if the seal used in the Stealth upper tray becomes compressed under the weight of a settling rig floor. While I accept that there is some potential for the seal in the Stealth system to marginally compress it would be less than an inch before the tray collar was compromised by the underlying flow nipple flange and either the tray or the seal would then fail. Certainly the Stealth upper tray system was not designed to be moveable or telescopic. Instead, it was designed to be rigidly attached to the flow nipple and it does not attempt to duplicate or imitate the telescopic seal claimed by the 375 Patent.

[94] Although the Lea-Der Coatings website does describe one advantage of the Stealth upper tray system as "not being compromised if there is any movement of the rig", this statement does not attribute the claimed advantage to a telescopic effect nor is such a feature described elsewhere in the

promotional material. It seems more likely to me that this claimed advantage, such as it is, is related to the ability of the tray or the seal to flex to a degree before the system fails.

[95] The Plaintiffs argue that the Rat Plastic upper tray is also capable of being fitted up to permit some downward movement. This could supposedly be achieved by positioning the descending tray collar in an elevated position within the flange collar. Any downward pressure on the tray would then push the tray collar more deeply into the flange collar at least until either the tray bottom or collar came to rest on the flange.

[96] The Plaintiffs rely on photographs that seemingly depict a gap between the bottom surface of a Rat Plastic upper tray and the top edge of the flange collar. These are said to show installations where the tray was not bottomed out on the top of the flange.

[97] The problem with these photos is that the installations in question are either irregular or they do not establish that the tray was not resting on the flange. According to Mr. Seale and Mr. Thicke the Rat Plastic tray was intended to be supported by the flange and there is no design feature that would maintain the tray in an elevated or hovering position. According to this evidence and my own assessment of the Rat Plastic system, the tray and the receiving flange are not configured to fit tightly together. Rather, the tray drops by its own weight until it comes to rest as intended on the supporting flange. A photo that shows some of the tray collar exposed above the top rim of the flange collar can be accounted for if the bottom of the tray collar is resting on the bottom of the flange collar. That point of potential contact is hidden from view.

[98] The Plaintiffs also argue that the one method of attaching the Rat Plastic upper tray to the receiving flow nipple flange collar would allow for a form of annular seal that is caught by that reference in the 375 claims. Mr. Wallace contended that a seal could be formed by sufficiently tightening the plastic tray collar such that it would bind against one of the upstanding walls of the flange collar and seal around the joint. When he was cross-examined on this point, he conceded that such a friction fit would not be preferred or effective as a sealing means and that no annular seal was incorporated in the Rat Plastic design (see p 534).

[99] Mr. Wallace's evidence that the Rat Plastic upper tray was capable of being used in an infringing way is highly dubious. The Rat Plastic method of attachment simply does not require a seal because it acts like a funnel. What the Plaintiffs and Mr. Wallace were attempting to illustrate was not the existence of a true seal between the upper tray and the flow nipple but, rather, a means by which the tray could be positioned so that it might be capable of downward movement. I do not accept that such a friction mount, even if it was employed in the manner suggested by Mr. Wallace, would constitute a telescopic seal. On this point the evidence of Mr. Thicke and Mr. Seale was persuasive. In particular, I accept Mr. Thicke's evidence in cross-examination at pp 1682-1683 that no one would attempt to use the Defendants' upper trays in the fashion suggested by Mr. Wallace to obtain a capacity for movement because it is unreliable:

> Q And here we go, the next one, "there's no annular seal or sealing surfaces." We had somewhat of a discussion on that, I don't think you had the complete information. The next one is "the two Rat Plastic trays rest on a collar and cannot move axially if a downward force were applied." And again I -- I guess I have to do this to you -- with you somewhat hypothetically. If this Rat tray is sitting by friction up in the collar, if axial force, this rig settles evenly, for your purposes, it could push down some distance in that collar, couldn't it, and overcome whatever frictional force we created either with the turn buckles or the outside collar?

A Or it could damage the tray, or it could do a lot of things.

Q Okay. Is mine possible?

A Is yours possible? It's one of a lot of possibilities that might happen.

Q Okay.

A And designers and, like, engineers and tradespeople would never want to rely on friction. It's one of the most unreliable things that you can have. It works against you in every which way. So, yes, but what is being suggested is a possibility. You can't make any sort of mass production work on that basis, on the basis of friction, because you can't repeat it well enough one -- one time after the next. So nobody would really sort of set out to do it like that.

[100] Both Mr. Seale and Mr. Thicke testified that neither of the Defendants' upper containment trays was designed to move telescopically. The Rat Plastic upper tray simply rests at the bottom of a channel on the inner side of the flow nipple flange and no seal is required to effectively funnel the fluid from the containment tray into the flow nipple. Mr. Thicke dismissed the suggestion by Mr. Wallace that a seal could be achieved by wedging the Rat Plastic tray collar firmly against one of the edges of the guide ring in the flow nipple flange. I accept Mr. Thicke's point that such a seal is unnecessary to the Rat Plastic design and no functional advantage would be obtained by such an approach. In short, the 375 Patent requires a liquid proof seal at the point of contact between the tray collar and the flow nipple flange and the Rat Plastic system does not. Although the Stealth upper tray does incorporate a seal between the tray collar and the flow nipple, the connection is fixed and not telescopic.

[101] I reject Mr. Wallace's contrary evidence. He frequently resorted to equivocal language to draw the necessary comparisons using words like "I see the possibility that [the Stealth] system would move" (see p 423), "I suspect" (see p 435), "it appears" (see p 437), "that suggests" (see p 436), "I imagine" (see p 435), "my gut feel" (see p 438), "it's a question of degree" (see p 439) and "it's not a distinct design for a wiper seal" (see p 444). This testimony was not persuasive and it reflected a lack of conviction on the part of Mr. Wallace.

[102] The Plaintiffs' construction of the 375 Patent claims seeks to monopolize methods for attaching upper containment trays to flow nipples that do not incorporate a telescopic seal and that bear a close if not identical resemblance to attachment methods that were already patented or in use. This asserted monopoly would extend to attachment systems that are designed to be fixed in place and that will only move haphazardly if they are installed in an unintended way. It is also of some interest that, despite the effort by the Plaintiffs to illustrate to witnesses how the Defendants' systems could be manipulated to loosely mimic the 375 Patent telescopic feature, no third-party evidence was presented to suggest that this feature actually solved an operational problem for rig operators. It strikes me that if this feature was able to solve a real problem for the industry the failure by the Defendants to match it would put them at a material disadvantage. I would also have expected to have some evidence from a witness other than Mr. Holtby who could have explained why the capacity of the 375 Patent telescopic seal to move in a range of about four inches was operationally useful and therefore commercially advantageous.[1] Unless the telescopic feature actually solved an operational problem, there would be no reason for the Defendants or for a rig operator to address it by installing the Defendants' systems in an unorthodox fashion.

[1] Mr. Wallace did say that the telescoping feature was "an integral part of the patent and designed to address a very specific problem" (see p 420) but he did not indicate that the problem was one that the industry was looking to solve.

[103] The 375 Patent claims as an essential part of the invention a novel telescopic seal that presumably addresses a problem created by a settling oil rig. To the extent that this problem is one that the drilling industry seeks to remedy, the 375 Patent system would be seen to be superior to the Defendants' fluid containment systems. But having claimed patent protection over that innovation as an essential feature of the 375 Patent, it is not later open to the Plaintiffs to claim an infringement by the sale of products that do not include that feature: see *Free World Trust*, above, at paras 31-32.

[104] I am satisfied that the Defendants' systems for mounting their upper trays to a flow nipple of a drilling rig are sufficiently different from the considerably more elegant 375 Patent design that they do not infringe either of claims 1 or 2.

The 064 Patent – Construction

[105] The 064 Patent generally describes a shallow, divisible containment tray that is affixed to a pipe at the centre of an oil well. The leading edges of the tray sections are mated and form a containment cavity. The containment cavity is further defined by the upstanding walls of an arcuate collar located at the centre of the tray. This collar is the means by which the tray is attached to a Christmas tree of a completed oil well. The tray contains at least one drainage aperture. The patent disclosure refers only to the earlier Holtby 265 Patent and states that the present invention represents an improvement in terms of its simplified installation. The Patent claims state:

> 1. An oilwell leak containment apparatus for a completed oilwell, comprising:
>
> a shallow tray-form body segmented into at least two segments, each of the at least two segments having a non-mating edge and a mating edge, the non-mating

edge having an upstanding containment wall, when the at least two segments are coupled together to form the body the upstanding containment wall extending around a peripheral edge of the body and defining a liquid containment cavity, the mating edge mates with an other of the at least two segments, each mating edge having an arcuate portion, when the at least two segments are coupled together to complete the body the arcuate portions forming a circular collar adapted to be positioned around a christmas tree;

at least one of the two segments having a drainage aperture; and

couplers for clamping the mating edges together.

2. The apparatus as defined in Claim 1, wherein the couplers positioned within the liquid containment cavity of the body include:

a first portion of at least one two part quick release coupler along the mating edge of the one of the at least two segments;

a second portion of the at least one two part quick release coupler along the mating edge of the other of the at least two segments, such that coupling of the first portion with the second portion secures the at least two segments together to form the body.

3. The apparatus as defined in Claim 1, wherein the mating edge of the one of the at least two segments has a projecting tongue and the mating edge of the other of the at least two segments has a tongue receiving groove.

4. The apparatus as defined in Claim 3, wherein a seal is positioned within the tongue receiving groove.

5. The apparatus as defined in Claim 1, wherein at least one catch tray underlies the drainage aperture.

6. The apparatus as defined in Claim 1, wherein a plurality of interconnected catch trays underlay the drainage aperture, the catch trays extending beyond the peripheral edge of the body.

7. The apparatus as defined in Claim 1, wherein a seal is positioned on the arcuate portions of the at least two segments.

8. The apparatus as defined in Claim 1, wherein each arcuate portion has a projecting flange, when the at least two segments are coupled to form the body, the projecting flanges forming a cylinder that depends from the circular collar.

9. An oilwell leak containment apparatus for a completed oilwell, comprising in combination:

an assemblage of components forming a christmas tree secured to a wellhead:

a body segmented into at least two segments, each of the at least two segments having a non-mating edge and a mating edge, the non-mating edge having an upstanding containment wall, when the at least two segments are coupled together to form the body the upstanding containment wall extending around a peripheral edge of the body and defining a liquid containment cavity, the mating edge mates with an other of the at least two segments, each mating edge having an arcuate portion, when the at least two segments are coupled together to complete the body the arcuate portions forming a circular collar around the christmas tree;

couplers for clamping the mating edges together;

the mating edge of the one of the at least two segments having a projecting tongue and the mating edge of the other of the at least two segments has a tongue receiving groove, with a seal positioned within the tongue receiving groove; and

at least one of the segments forming the liquid containment cavity having a drainage aperture.

10. The apparatus as defined in Claim 9, wherein a plurality of interconnected catch trays underlay the at least one drainage aperture, the catch trays extending beyond the peripheral edge of the body.

[106] It is sufficient for the purposes of this analysis to consider the meaning and scope of claims 1 and 9 of the 064 Patent because all of the remaining claims are dependant.

[107] The Plaintiffs argue that despite the 064 Patent description of a tray forming "a liquid containment cavity" capable of being drained by "at least one…drainage aperture", claims 1 and 9 should be broadly interpreted to include a design that incorporates two self-contained trays that do not seal at their abutting edges and that are separately drained. [Emphasis added]

[108] Mr. Wallace supported the Plaintiffs' expanded interpretation of claims 1 and 9 by saying that they effectively cover any divisible lower tray arrangement that is functionally equivalent to the 064 design. He also maintained that the reference to "mating edges" and "non-mating edges" in these claims includes methods of bringing two independent trays into an abutting, unsealed relationship.

[109] I do not agree with Mr. Wallace's interpretation of the claim language. While I accept that claim 1 of the 064 Patent does not claim the use of a tongue and groove connection at the mating edges of the containment tray, a person of skill would understand that the joint would have to form a liquid-tight seal. Such a seal would never be created by the simple abutment of one edge against the other. This is consistent with the use of the word "mating" which, in a mechanical setting, means a good and proper fit. A good and proper fit in the context of retaining a liquid is a leak-proof seal or in the words in claims 1 and 9, the formation of "a liquid containment cavity". How the connection joint is constructed and sealed is not an essential feature of claim 1.

[110] Claims 1 and 9 of the 064 Patent clearly describe a tray that is formed into one leak-proof containment cavity from two or more sections that are joined and coupled along their mated edges

and that is capable of being drained with one aperture. I do not agree with the Plaintiffs that the use of the indefinite article "a" in this context should be interpreted to mean "one, some or any". The drafter was careful to use the phrase "at least two" in several places to describe the segments of the tray and would be presumed to intend the singular in the absence of that or a similar phrase. This is a very different grammatical context than that considered in *Bell Express Vu Ltd. Partnership v Rex*, 2002 SCC 42 at para 34, [2002] 2 SCR 559. The verb "mate" in this context refers to any method of joinder that creates a leak-proof or sealed joint whether by tongue and groove or otherwise. The patentee claimed a divisible tray where the sections are sealed and come together to form a single containment cavity. That combination is an essential element of Claims 1 and 9.

[111] Mr. Wallace's initial opinion interpreted the 064 Patent as being specific for an intended use with a completed oil well. He referred to the tray being positioned "beneath the Christmas tree valves" with a capacity for quick installation "without disassembling the Christmas tree". It was only when he considered the opinions of Mr. Seale and Mr. Thicke that he offered an interpretation for these terms that included the use of the claimed invention on a drilling rig. His subsequent opinion is that these patent references should be effectively ignored because a tray that could be used on a completed oil well could be adapted for use on a drilling rig (see para 72 of his Reply Report). He also later relied on three drawings in the patent disclosure that depicted the containment tray in the presence of a BOP. Because BOPs are rarely used on completed oil wells Mr. Wallace testified that a person of skill would interpret the patent claims to include the use of the tray on a drilling rig.

[112] Here, too, I disagree with Mr. Wallace. There are numerous references throughout the 064 Patent to the use of the tray on a completed oil well including Claims 1 and 9. There are also several references to Christmas trees and to the capture of leaking oil. Mr. Wallace attempted to effectively read this limiting language out of the claims by relying on patent diagrams depicting the 064 apparatus in use within a BOP stack. He conceded that a classic Christmas tree would not be found on a drilling rig but that the presence of a BOP stack implied an expanded utilization. I do not agree that a person of skill would read down the clear language of the patent claims by relying only on part of an illustration that is entirely extraneous to the depiction of the invention. On this point I prefer the evidence of Mr. Thicke who was not prepared to ignore the clear language of the patent claims by relying on a minimalistic drawing (see p 1580).

The 064 Patent - Validity

[113] The 064 Patent describes a divisible fluid containment tray that is mechanically fitted and sealed to a Christmas tree where it passively collects fluids falling from above. The captured fluids are then drained away through a drainage aperture. Included in the claims are features such as quick release couplers, tongue and groove joints that can be sealed, cascading containment trays that may be interconnected and upstanding and descending collars with or without a seal.

[114] There is nothing innovative about a sectional fluid containment tray attached to the central stack of an oil well or drilling rig. The problem of containing fluid escaping from drilling platforms and oil wells had been solved long before the 064 Patent was filed. Sectional fluid containment trays that passively collected leaking fluids beneath a drilling rig floor or from a wellhead were known in the prior art and in actual use in the field. I do not accept Mr. Wallace's evidence that the

promise of the 064 Patent can be distinguished from what was already known. The differences he identified are not inventive. Changes in tray sizing or methods of tray joinder including the use of quick release couplers are the kinds of routine adaptations that a person of skill would readily recognize and adopt to suit the installation context. Indeed, many of these same features are clearly evident in the photographs of lower trays that long predate the 064 Patent. This would include the means by which the tray halves could be joined and sealed and adjustments of the tray configuration to fit the available space.

[115] Even Mr. Wallace conceded that these types of routine adjustments could be used by a person of skill and that other options could be employed (see p 399 re "latching means"; p 410 re "shape and size"; and p 446 re "tongue and groove").

[116] I readily accept Mr. Thicke's evidence on this issue and, in particular, the following answer at pp 1648-1649 of the transcript:

> A Oh, I'm sorry, the 064 patent is -- it's not resolving a problem even. It's only an assembly of prior art information into a tray that fits on a Christmas tree. So I think that's sort of obvious to take that prior art or it's the kind of thing that if I was the -- the engineer, say like I was in a power plant and there was some dripping -- some dripping water from a leaky valve stem, I would go, this is a -- this is a job for a maintenance man. Go and make a tray so it doesn't fall on everybody's head. That's all that I see 064 is, is have somebody go and do that. So that's point 63.

[117] In my view the 064 Patent was anticipated by both the Schuyler and Gayaut Patents. Both of those patents describe divisible fluid containment trays that are fixed to a wellhead pipe beneath a well floor with a sealed flange. Both trays are drained. The Plaintiffs' written argument that the

Schuyler Patent invention was primitive, cumbersome and completely unlike the 064 Patent invention does not answer the obvious fact that both patents achieve the same purpose by exactly the same means.

[118] The 064 Patent was also anticipated by the prior use of lower trays as described by the industry witnesses. These earlier trays came in many shapes and sizes and employed a variety of connection and sealing methods. Even if no exact replica of the 064 Patent apparatus was in prior use, I am satisfied that there is nothing about the design or fit up of the 064 Patent lower tray that would not have been obvious to a person of skill long before July 7, 2000. On this issue I also accept Mr. Thicke's evidence in preference to that of Mr. Wallace (see Mr. Thicke's evidence at pp 1632-1633).

The 064 Patent – Infringement

[119] The only claims asserted by the Plaintiffs against the Defendants in connection with the 064 Patent are claims 1, 3, 8, 9, 11 and 12. Claims 3 and 8 are dependant on claim 1. Claims 11 and 12 are dependant on claim 9. Claim 9 is a composite of claims 1, 3 and 5.

[120] Having regard to my construction of Claims 1 and 9, I do not accept that the Rat Plastic lower tray infringes. The Rat Plastic lower tray does not involve the mating of two abutting tray edges to form a single containment cavity. Instead it brings two separate trays into close proximity without the requirement of a leak-proof seal being formed between the two. The walls of the trays abut one another and any interspacial leakage is blocked by the use of an overlapping flashing. While Mr. Wallace is correct that the Rat Plastic system requires both trays to be in place, that point

does not displace the obvious fact that this system employs two separately drained containment trays that abut but do not mate. This is a material distinction. Indeed, it is arguable that by eliminating the seal at the interface of the tray sections the Rat Plastic design represented an improvement over the 064 design.

[121] The language of the 064 Patent claims is confined to the use of the apparatus on a developed oil well where the problem is one of leaking oil and not drilling fluids. It would not be an infringement of the 064 Patent claims for the Defendants to sell their containment products for use with an operating drilling or service rig. The uncontradicted evidence before me is that the Defendants have not offered their lower containment trays for use on completed oil wells and, apparently, neither have the Plaintiffs. Accordingly, there is no evidence of infringement by the Defendants with respect to the sale of these products.

The 793 Industrial Design - Line Pipe Trays

[122] The Plaintiffs allege that by making and marketing CAPP line pipe trays the Heide Defendants have infringed their exclusive right and privilege in the 793 Design and they have suffered damages in the result. They also allege that the Heide 346 Design is invalid because it was known by the Heide Defendants to be a copy of the Plaintiffs' 793 Design.

[123] The Plaintiffs' pleadings do not provide any particulars about the features that are protected by the 793 Design other than by noting that the CAPP line pipe tray consists of:

(a) rectangular inner four walls which define an interior cavity;

(b) a circumferential top ridge between the top of the inner four walls and the top of the corresponding outside four walls;

(c) wherein the outside four walls slope downwardly and outwardly from the top ridge; and

(d) wherein a spaced apart array of semi-circular depressions are formed in the top ridge so as to be spaced there around.

[124] The Heide Defendants plead that their competing product does not infringe the 793 Design because it does not "so closely resemble the 793 Design so to be confounded with it" and because it "differs substantially from the 793 Design".

[125] The evidence that was developed by the Plaintiffs concerning the alleged infringement of the 793 Design was not particularly helpful because it failed to address the legal distinction between design features that are visually appealing and those that are purely functional or utilitarian. The Plaintiffs were essentially content to point to the obvious similarities between the 793 Design and the CAPP line pipe tray and to Mr. Heide's admission that he used the Katch Kan line pipe tray as a model for his own.[2]

[126] There is no doubt that there are a number of similarities between the 793 Design and the CAPP line pipe tray and, of course, the Plaintiffs' benefit from the statutory presumption of validity

[2] Mr. Heide was a principled and truthful witness. He had forgotten some evidence concerning his design of the Rat Plastic Line Pipe Tray but when he was reminded of his discovery evidence he readily adopted it. My impression of him is that he was genuinely motivated to provide accurate evidence and willingly conceded points that were not necessarily helpful to his case. It was certainly not helpful to his cause that he has throughout acknowledged that the Katch Kan patents represented innovative approaches to the problem of fluid spillage from drilling rigs. His defence is only that he was careful not to copy the essential features of the Katch Kan patents.

set out in subsection 7(3) of the *Industrial Design Act*, RSC, 1985, c 1-9 (the Act). Nevertheless the Plaintiffs carry the burden of proving that the CAPP line pipe tray infringes the 793 Design.

[127] What was absent from the Paintiffs' case was evidence establishing that the CAPP line pipe tray had trenched on the visual features of the 793 Design. This is important because section 5.1 of the Act states that statutory protection does not extend to "features applied to a useful article that are dictated solely by a utilitarian function of the article". This provision was recently considered by Justice Richard Boivin in *Bodum USA, Inc. v Trudeau Corp.*, 2012 FC 1128, [2012] FCJ no 1310, where he said:

> 45 As previously specified, and the parties agree on this point, industrial designs protect visual features but not utilitarian function, that is, in this case, the space between the double walls (John S. McKeown, *Fox, Canadian Law of Copyright and Industrial Designs*, 4th ed, (Toronto: The Carswell Thomson Professional Building, 2009) at page 811, c 31-9).
>
> 46 The protection offered by industrial designs should also not be confused with the protection obtained for a product or a process through a patent. As admitted by the plaintiffs, industrial designs do not confer on them monopoly over double wall glasses in Canada (Plan of argumentation of Plaintiffs/Defendants by Counterclaim, page 6). Thus, as explained in *Sommer Allibert (UK) Limited and Another v Flair Plastics Limited*, [1987] 25 RPC 599 at page 625 (UK ChD, appeal) [*Sommer Allibert*], the similarities arising from the utilitarian function are not taken into account by the Court in its infringement analysis:
>
> > The court has to decide only whether the alleged infringement has the same shape or pattern, and must eliminate the question of the identity of function, as another design may have parts fulfilling the same functions without being an infringement. Similarly, in judging the question of infringement the court will ignore similarities or even identities between the registered design and the alleged infringement which arise from functional matters included within the design.

[Emphasis in original]

[128] Mr. Wallace did give evidence on behalf of the Plaintiffs noting the similarities between the 793 Design and the CAPP line pipe tray although in doing so he appears to have used the Katch Kan line pipe tray as the comparator and not the 793 Design. This led him to conclude that both were rectangular where in fact the 793 Design describes a square tray.

[129] There is, however, no doubt that the CAPP line pipe tray bears a close resemblance to the 793 Design. The issue, though, is not whether the CAPP line pipe tray bears a close resemblance to the 793 Design but, rather, whether there are features to the 793 Design that transcend the purely functional and move into the aesthetic or, as described in *Mainetti SPA v ERA Display Co. Ltd.* (1984) 80 CPR (2d) 206 at para 30, 2 CIPR 275 [*Mainetti*], involve a "marriage of function with ornamentation". Surprisingly Mr. Wallace had almost nothing to say on that question. His report refers only to the utility of the 793 Design to "catch drips from the pipe connections (the hammer unions) [and to] allow containment of fluid drainage from the lines when the connections are broken". His concluding statement was only that this "usage is the same as the Holtby pipeline tray" and that the CAPP products "are very similar to those developed by Mr. Holtby". Under direct examination he provided essentially the same analysis:

> Q Okay. And at the bottom of page 4 you describe the design features of the pipe tray. Can you tell us -- the Court what those are.
>
> A The design features are that it is a rectangular tray that is somewhat wider at the bottom than the top to provide stability. That it has a series of semicircular indentations let into the top so that the pipe can sit in there. And it has a ridged bottom to provide stability and strength.

> Q And I take it you were also asked to comment on a line pipe tray manufactured by a company called C.A.P.P.?
>
> A Yes, sir.
>
> Q And it's hidden, but is this blue tray over here what you were asked to comment on?
>
> A It would appear to be. I believe it is, yes.
>
> Q Okay. And use the seals here for a second. And you say that a visual inspection of these trays shows that they're very similar. This is the second paragraph under C.A.P.P. Pipe Line Tray. Why do you say that?
>
> A Not only are they designed to achieve the same function to lift the pipe connection off the ground and provide a catchment area for any potential leaks, they look the same, physically look the same. They are approximately the same dimensions in all areas. They have a single indentation on each of the shorter ends, two on each of the longer ends. They have a broader base on top to provide stability, and to me, they resemble nothing more than Figure 1 in the Industrial Design.
>
> [Emphasis added]

[130] Later, under cross-examination by Mr. Comba, Mr. Wallace was taken through each of the features of the 793 Design that were in common with the CAPP line pipe tray and for every feature he acknowledged the functional purpose that was being served (see pp 511-516). He was then asked about the significance of two features in the 793 Design that may have served both a decorative and a functional purpose. Those were the presence of ribbing on the bottom of the tray and the location and shape of a lifting handle. Mr. Wallace accepted that these features gave the industrial design a "distinctive look" but he also conceded that neither was copied by the CAPP line pipe tray (see p 525).

[131] Neither Mr. Wallace nor Mr. Holtby gave any evidence that described a duplicated feature of the 793 Design that would "appeal to and be judged solely by the eye". Mr. Heide testified that the design modifications he made to the CAPP line pipe tray were motivated by certain functional shortcomings reported to him about the Katch Kan line pipe tray that he had modelled.

[132] There is no evidence before me that the design features that are common to the Rat Plastic line pipe tray and the 793 Design are anything other than functional. As far as I can tell from the evidence the products fulfil a utilitarian purpose in an industrial setting. They are low to the ground and have a stable base to facilitate hammering. The tray saddles are designed to comfortably seat a string of drilling pipe. Additional saddles perpendicular to the pipe are available to facilitate the swing of a hammer. A pipe fitting is elevated above the leak-proof tray which captures fluid that spills out when the pipe fitting is hammered open. Handle openings are available to assist with lifting the trays and the shape of the tray is such that it can be stacked for ease of shipment or storage. The above evidence is not surprising inasmuch as a line pipe tray is used in a heavy industrial setting where appearance would not be expected to be a factor in the purchasing decision: see *Mainetti*, above, at para 59.

[133] While I accept the Plaintiffs' argument that Mr. Heide used the Katch Kan line pipe tray as a model, an attempt to imitate is not an infringement of an industrial design unless the imitator is trading on the aesthetic features of a competitor's design: see *Carr-Harris Products Ltd. v Reliance Products Ltd.* (1969) 58 CPR 62 at p 84, 58 CPR 62 [*Carr-Harris Products Ltd*].

[134] What I am left with on this record is evidence that the similarities of the CAPP line pipe tray to the 793 Design serve a solely functional purpose. To the extent that there are any appealing visual aspects to the 793 Design, those are not duplicated by the CAPP product. On the evidence before me I find that the Plaintiffs have failed to prove infringement on a balance of probabilities.

[135] Even if I am wrong in the above finding, I would not find an infringement. When an industrial design incorporates fundamentally functional features even small differences in ornamentation may be sufficient to take the second design out of the ambit of an earlier design registration: see *Carr-Harris Products Ltd*, above, at p 84. In my view the differences that exist between the 793 Design and the CAPP line pipe tray are sufficient to establish that the latter does not infringe on the former.

The 265 Patent – Construction

[136] There are no terms in the 265 Patent claims that are in dispute. The claims describe a fluid containment system incorporating a catchment pan attached to an annular ring and flange that is bolted to the central stack of a wellhead. The catchment pan includes a drain. The disclosure is essentially silent on the inventive concept and there are no references to any prior art. The problem addressed by the patent is simply the capture and containment of fluids leaking from a wellhead.

The 265 Patent – Validity

[137] In the Plaintiffs' post-trial submissions, it is asserted that one inventive feature of the 265 Patent is the capacity to detach the catchment pan without removing the annular ring from the wellhead. This argument was supported by Mr. Wallace. Mr. Wallace stated further that the 265

Patent was "unique" because the annular ring was designed with a full pressure rating. His evidence focused on this feature including testimony that "the claims of the 265 Patent are directed at allowing installation of [the] flange within the pressure system" (see p 505). Neither of these alleged advantages is mentioned anywhere in the patent. Indeed, it is not apparent in the disclosure that the containment pan, once in place, can be independently removed from the flange or why that feature would be useful. As for the issue of a suitable pressure rating, a person of skill would readily assume that any device inserted into the wellhead stack must be capable of working under the prevailing pressures.

[138] Mr. Wallace's attempt to read into the claims supposedly advantageous features that are not described or claimed is disingenuous. The 265 Patent claims only a simple method for collecting wellhead leaks – a method well-known in the prior art and use. The Plaintiffs' efforts to claim more than that are a reflection of the weakness of the Patent.

[139] Mr. Thicke reviewed the prior art and including the Norris Patent, the Hibdon Patent and the Wigington Patent and concluded that each would have rendered the 265 Patent obvious to a person of skill in 1997. Although the prior art methods of attaching a containment pan differed slightly from the method described in the 265 Patent, those differences involve routine adaptations and no inventive ingenuity. Mr. Thicke's evidence is consistent with the evidence of prior use provided by the industry witnesses and which confirmed that various attachment methods, including the use of attachment flanges, were well-known before 1997.

[140] For the foregoing reasons, I find without hesitation that the 265 Patent is invalid on the ground of obviousness.

Damages

[141] Although it is unnecessary to deal with the Plaintiffs' claim to damages, I will provisionally address some of the issues raised by the evidence before me.

[142] There are at least two significant problems with Mr. McNally's opinion concerning damages for lost profits. One of the problems concerns his assumption that every sale by the Defendants of a competing containment product represents a lost rental to the Plaintiffs. The second problem concerns the methodology he used to arrive at a utilization rate for the Katch Kan patented products that would, but for the alleged infringement, have been rented into the market. In his final report he opined that a utilization rate of about 60% was appropriate. In his trial testimony he reduced that figure by 10%.

[143] There is no reliable evidentiary support for the assumption that every tray sold by a Defendant represented a lost rental to the Plaintiffs. The evidence indicates that the Katch Kan containment system was not the only option available in the market. A significant number of rig operators were using custom-built systems and other suppliers were selling competing containment products to rig operators. For example, Mr. Sawyer testified that in his capacity as a Drilling Superintendent he had almost always custom built an upper fluid containment system in lieu of purchasing or renting the products that were otherwise available in the market. He made that choice because a custom built system better suited his specific requirements. Clearly these were viable

alternatives, particularly for a drilling operator looking to avoid the considerably higher costs and administrative burden associated with a rental. Other evidence indicated that 40% of the Defendants' customers had never rented products from Katch Kan. The goodwill of those customers towards the Plaintiffs would presumably be less than that of a customer already familiar with the Katch Kan system.

[144] Added to this is evidence that there has not been a strong correlation between the products sold by the Defendants and those that have been rented by the Plaintiffs. Approximately 90% of the Plaintiffs' business comes from the rental of sets of upper and lower containment trays and associated products. In comparison only 8.8% of the Defendants' sales involve sets of upper and lower containment trays. The rest of the Defendants' sales involve the provision of individual upper or lower trays. This suggests that a customer buying individual trays from the Defendants has different requirements than a typical Katch Kan customer who usually opts for the entire containment system.

[145] There is other evidence showing that the Defendants' sales activity is not a strong surrogate for estimating the corresponding rental activity of the Plaintiffs. The historical data indicates that when the sales activity of the Defendants dropped commensurate with reduced oil exploration activity the Katch Kan rental business held up. Mr. McNally opined that this may reflect a preference for renting over purchasing in a difficult financial market.

[146] Mr. McNally's modified assessment of an approximate 50% utilization rate for the Katch Kan patented containment products is also unreliable. His approach was to look at the

Katch Kan invoices for rentals during monthly intervals and to calculate the monthly utilization rate for those products for each month. He then averaged the monthly utilization rates to obtain annual rates. He also eliminated from his calculation any month where Katch Kan had no product out on rental. This approach had the effect of markedly inflating the utilization rate of Katch Kan products because it failed to account for product inventory that was available but not out on active rental. A far more reliable utilization analysis would take account of the periods that Katch Kan's patented inventory was not in use. That methodology would track the actual utilization of all of the patented containment products throughout the year to determine how often the available products were idle. Mr. McNally did not know how difficult this exercise would be but he acknowledged that the necessary data did exist within the Katch Kan accounting records. In a very effective cross-examination by Mr. Comba, Mr. MacNally conceded that a more accurate method for calculating utilization rates could have been used.

[147] I take from this evidence that the utilization tables produced by Mr. McNally show only that when Katch Kan had a patented product in the field it was actively utilized. What the data does not show or account for is how much of the time that same product was idle after it came off rental.

[148] The failure by Katch Kan to have Mr. McNally use the best available evidence to measure actual utilization of its patented products in the field or even to test the methodology that was used causes me to seriously doubt the reliability of the utilization data that was produced and relied upon by Mr. McNally. I am left with no reliable evidence which would permit me to arrive at an alternative utilization rate. Without that evidence it is impossible to assess damages in this case on the basis of the Plaintiffs' loss of profits.

[149] If it becomes necessary to revisit the issue of damages, I will hear from the parties again to consider alternative approaches to the Plaintiffs' recovery of damages.

Costs

[150] The parties requested the opportunity to address the issue of costs after the rendering of this decision. The Defendants will have ten days to provide me with their written arguments. The Plaintiffs will have seven days to respond. Neither submission is to exceed ten pages in length.

JUDGMENT

THIS COURT'S JUDGMENT is that the Plaintiffs' action against the Defendants is dismissed.

THIS COURT'S FURTHER JUDGMENT is that the Counterclaim by Defendant 1284897 Alberta Ltd. is allowed with respect to Canadian Letters Patent No. 2,166,265 and Canadian Letters Patent No. 2,258,064 and both the 2,166,265 Patent and the 2,258,064 Patent are declared invalid. The Counterclaim by the Defendant 1284897 Alberta Ltd. is dismissed with respect to Canadian Letters Patent No. 2,136,375, and the Court declares that Patent to be valid.

THIS COURT'S FURTHER JUDGMENT is that the issue of costs is reserved pending the receipt of further submissions from the parties.

"R.L. Barnes"

Judge

FEDERAL COURT

SOLICITORS OF RECORD

DOCKET:	T-279-07
STYLE OF CAUSE:	ZERO SPILL SYSTEMS (INT'L) INC., ET AL v 614248 ALBERTA LTD. ET AL
PLACE OF HEARING:	Edmonton, Alberta
DATE OF HEARING:	April 8 to 12, 2013 April 15 to 19, 2013 April 22 to 24, 2013 April 30 to May 1, 2013
REASONS FOR JUDGMENT:	BARNES J.
DATED:	July 18, 2013

APPEARANCES:

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