Patent Litigation in the Energy Sector: Insights and Strategies from the Last Decade^{*}

Canada is a resource-rich country with a long history of exploration and development. The oil and gas and mining sectors are among the most innovative industries in Canada, and generate significant economic and social benefits. With those innovations come patents, and with those patents come lawsuits.

Patent infringement lawsuits can have enormous stakes. As recently as 2022, the Supreme Court of Canada affirmed a decision requiring Nova Chemicals to pay its competitor Dow Chemical almost \$650 million dollars for infringing Dow Chemical's patent covering lightweight plastics.¹ In addition to significant financial remedies, successful litigants typically obtain injunctive relief to prevent further infringing acts for the life of the patent. Those further infringing acts may lie at the core of a company's business activities. Since patents have a 20-year life span,² an injunction can be an existential risk that devastates a business' operations.

The energy sector is not immune from patent infringement lawsuits. The Canadian Intellectual Property Office ("**CIPO**") has issued nearly two million patents in the history of Canada, and approximately

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¹ Nova Chemicals Corp. v. Dow Chemical Co., <u>2022 SCC 43</u>.

² Assessed from the Canadian filing date.

200,000 patents remain operative today. Some of those patents protect critical innovations in the energy sector, such as bitumen recovery,³ drilling machinery,⁴ and transportation mechanisms.⁵

CIPO releases yearly statistics on patents. In its most recent update, CIPO listed the top 10 Canadian patentees, which included Schlumberger (53 patents issued), Suncor (28 patents issued), Nova Chemicals (26 patents issued) and CNH (24 patents issued). Schlumberger also ranked as one of the top 10 Canadian applicants, filing the fourth most patent applications in Canada in 2022-2023 (67 patent applications).⁶

Innovations do not need to cover groundbreaking discoveries like the cure for cancer in order to qualify for patent protection. Patents may be granted in respect of new, useful and non-obvious advances on almost any subject-matter. For example, patents have been issued for new frisbees,⁷ paperclips,⁸ and dog toys.⁹ In the energy sector, innovations tend to be far more technical and often benefit from patent protection.

All of this creates both opportunities (for patentees) and risks (for businesses). Because patent infringement cases are typically brought in the Federal Courts, which have national reach, any case may implicate business activities from coast-to-coast.

Given the opportunities and risks posed by patents, it is important for companies in the energy sector to have a working understanding of how patents may impact their business, and to understand the lessons

³ Jason Swist v. MEG Energy Corp., <u>T-1069-14</u>; Mud Engineering Inc. v. Secure Energy Services Inc., <u>T-89-18</u>.

⁴ Reflex Instrument North America Limited v. Globaltech Corporation Pty Ltd., <u>T-410-23</u>; Impulse Downhole Solutions Ltd. v. Challenger Downhole Tools Inc., <u>T-2606-23</u>.

⁵ Delphi Energy Corp. v. 0645148 B.C. Ltd., <u>T-1411-16</u>; Aux Sable Liquid Products LP v. JL Energy Transportation Inc., <u>T-1612-16</u>.

⁶ <u>https://ised-isde.canada.ca/site/canadian-intellectual-property-office/en/canadian-intellectual-property-statistics/patent-statistics-2022-2023</u>

⁷ Canadian Patent No. 3,042,201 titled "Throw Toy".

⁸ Canadian Patent No. 2,826,509 titled "Device for Holding Together a Stack of Sheets".

⁹ Canadian Patent No. 2,991,640 titled "Chew Toy for Dogs".

from recent cases to best position companies in the energy sector to capitalize on these opportunities or defend against these risks.

This paper reviews the last decade of patent cases in the energy sector to understand these key lessons to help energy companies when managing or capitalizing on such risks from patents. This paper is divided into three sections:

- 1. What is a patent and why should I care?
- 2. Lessons from the past 10 years in patent litigation in the energy sector; and
- 3. Key strategies for energy companies based on recent history.

I. <u>What is a Patent and Why Should I Care?</u>

A patent is a time-limited right to exclude others from doing what the patent claims. Patents have inventors, who developed the invention, and an owner – often the company that employed the inventors. Patents are obtained by first filing a patent application with CIPO. Each patent application will be assessed by an examiner to determine if it should be issued as a patent. Once issued, the patent will expire 20 years after the patent application that gave rise to the patent was filed. Every patent is presumed to be valid in the absence of any evidence to the contrary.

Though patents can yield significant financial remedies from infringers, their greatest value lies in their ability to prevent competition from entering the market or removing competition already on the market. Accordingly, every business should care about patents for the strategic potential they offer to patentees and the risk they pose to infringers.

II. Lessons from the Past 10 Years in Patent Litigation in the Energy Sector

In this section we review the last 10 years of energy-related patent litigation. Our assessment focuses on Federal Court patent filings and analyzes:

- A. The volume of cases filed in the Federal Court;
- B. The subject-matter claimed in the patents at issue in those cases;
- C. The resolution of those cases, including possible settlements; and
- D. Dispute resolution procedures, including summary trials.

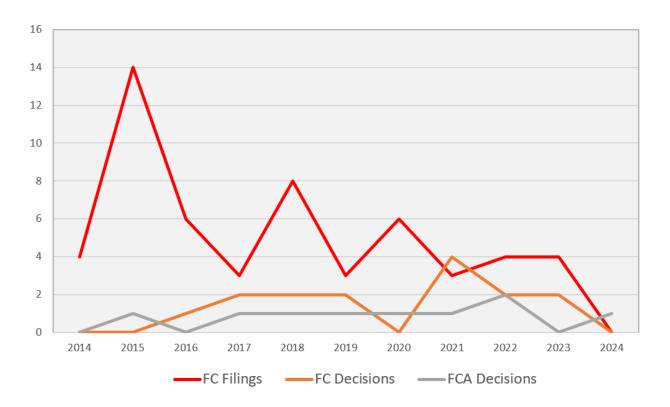
The data for this review was drawn from the Federal Court's dockets, published decisions, and the authors' insights from their patent litigation experience. The dockets were reviewed to identify every court case involving an energy company. The patents asserted in each of those cases were identified and divided into types of technology, and the detailed entries were reviewed to identify important or unusual procedural steps raised in the proceedings. The underlying data is collected in Appendix A.

This data analysis revealed the following trends.

1. The Volume of Cases Filed in the Federal Court

Approximately 439 patent cases have been filed in the Federal Court in the past decade. The vast majority of those cases are in the pharmaceutical industry; however, the energy sector is the next most common industry, with approximately 55 patent cases filed in the same time period. There is a notable absence of cases in the past decade between the largest players in the oil & gas industry and an almost complete absence of companies in the mining sector. This trend of fewer, smaller or midsize patent holders filing more cases suggests that they are trying to leverage their patents, including (in some cases) to eliminate their rivals, rather than following a broader or market-driven trend to focus on patent litigation in certain low (or high) market years.

While the Federal Court had a spike in filings in 2015, more recently there have been 3-8 filings per year, as illustrated in the graph below:



Oil & Gas Patent Federal Court Filings and Decisions (2014-2024)¹⁰

This review shows a spike in filings in 2015, which is likely a chance event that results from a limited number of plaintiffs bringing multiple actions at the same time:

 Specialized Desanders filed three patent infringement lawsuits asserting its patent covering a method and apparatus for desanding wellhead production;¹¹

¹⁰ This graph illustrates the oil & gas patent cases filed in the Federal Court between 2014 and 2024, and oil and gas patent infringement and/or impeachment decisions released by the Federal Court and the Federal Court of Appeal between 2014 and 2024. It does not include interlocutory decisions.

¹¹ Specialized Desanders Inc. v. Westfab Industries Inc., <u>T-547-15</u>; Specialized Desanders Inc. v. Venturion Oil Limited, <u>T-722-15</u>; Specialized Desanders Inc. v. Dynacorp Fabricators Inc. et.al., <u>T-598-15</u>.

- Packers Plus Energy Services asserted its patent covering a method and apparatus for wellbore fluid treatment in three separate courts files; ¹² and
- NCS Multistage filed the first of its many Federal Court proceedings about fracking tools involving Kobold Services.¹³

An increase in filings was also seen in 2018 and again characterized by repeat litigants. Secure Energy Services is party to two proceedings filed that year,¹⁴ and Maoz Betser-Zilevitch filed cases against CNRL and Petrochina Canada, and an appeal of a 2018 decision upholding a settlement agreement withNexen and CNOOC's Long Lake Oil Sands project partnership.¹⁵

The volume of decisions has stayed relatively consistent over the past decade with the Federal Court releasing one to four rulings per year. This suggests that, despite fewer filings in recent years, these cases tend to be more contentious and less likely to settle.

Patentees can also enforce their patents in Superior Courts. Those courts are typically used where the

infringing activities are concentrated in a province or where there are other contentious issues between

the parties within the jurisdiction of Superior Courts. For example, in JL Energy Transportation Inc. v.

Alliance Pipeline Limited Partnership, the Alberta King's Bench granted a summary judgment motion,

dismissing the plaintiffs' related claims of breach of a licensing agreement as well as patent

infringement.¹⁶ That decision followed an earlier decision of the Federal Court which invalidated one of

¹² Rapid Completions LLC et al. v. Baker Hughes Canada Company, T-1569-15; Packers Plus Energy Services Inc. v. Weatherford International PLC, T-1728-15; Packers Plus Energy Services Inc. v. Resource Well Completion Tech, T-2088-15.

¹³ NCS Multistage Inc. v. Kobold Services Inc., <u>T-1942-15</u>.

¹⁴ Mud Engineering Inc. v. Secure Energy Services Inc., <u>T-89-18</u>; Canadian Energy Services L.P. v. Secure Energy Services Inc., <u>T-209-18</u>.

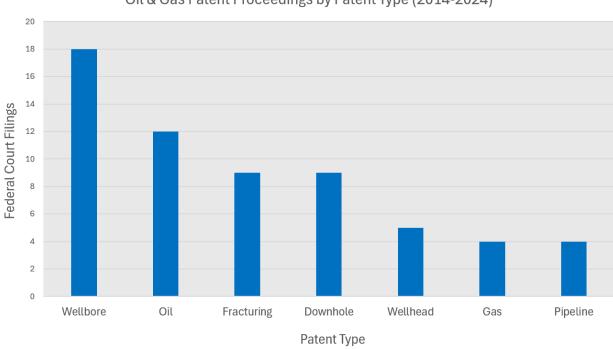
¹⁵ Maoz Betser-Zilevitch v. Canadian Natural Resources Ltd., <u>T-630-18</u>; Maoz Betser-Zilevitch v. Petrochina Canada Ltd., <u>T-1158-18</u>; *Maoz Betser-Zilevitch v. Nexen Inc.*, A-275-18 appealing <u>2018 FC 735</u>. The A-275-18 appeal filing is not included in the filings and decisions chart above, which only tracks Federal Court (not Federal Court of Appeal) filings. The 2018 FC 735 decision is not included because it did not decide issues of infringement or validity.

¹⁶ JL Energy Transportation Inc. v. Alliance Pipeline Limited Partnership, <u>2024 ABKB 72</u>; appeal pending.

two claim sets in JL Energy's patent.¹⁷ Both cases dealt generally with the transportation of natural gas via pipeline. However, Superior Courts have not issued many significant decisions in the energy patent space in the past ten years and their decisions tend to involve the same parties as the Federal Court files.¹⁸

2. Patent Litigation Involved Technology in Different Sectors

The subject matter of the patents at issue over the past decade was also assessed. As shown in the graph below,¹⁹ the technologies at issue covered a broad spectrum of sectors in the energy industry:



Oil & Gas Patent Proceedings by Patent Type (2014-2024)

¹⁷ Aux Sable Liquid Products LP v. JL Energy Transportation Inc., <u>2019 FC 581</u>.

¹⁸ See e.g. Canadian Energy Services Inc. v. Secure Energy Services Inc., <u>2020 ABQB 473</u>, rev'd <u>2022 ABCA 200</u>; JL Energy Transportation Inc. v. Alliance Pipeline Limited Partnership, <u>2024 ABKB 72</u>; NCS Multistage Inc. v. Kobold Corporation, <u>2018 ABQB 485</u>.

¹⁹ This graph shows the types of patents asserted in the oil & gas patent proceedings filed in the Federal Court between 2014 and 2024. Some patents are asserted in more than one filing.

The data shows a particular emphasis on wellbore technology, closely trailed by patents in the wider fields of oil extraction, fracking and downhole drilling. The patents were categorized as follows:

- Wellbore: Drilling and maintaining wellbores.
- Oil: Producing oil, such as by using steam-assisted gravity drainage technology and modifications thereto.
- Fracturing: All aspects of the fracturing process, including tools and methods.
- Downhole: Downhole drilling equipment and telemetry systems.
- Wellhead: Technology for sealing wellheads and methods for desanding wellhead equipment.
- Gas: Natural gas, its storage and its transportation.
- Pipeline: Transportation of oil and gas through pipelines, including the cleaning of pipelines, separating products in pipelines and flowlines.

Patents need not be groundbreaking to be valid. For example, on March 26, 2024, CIPO issued a patent for a "dual-ended stick mechanism", which is effectively packaging for cosmetic products such as lipstick.²⁰ In general, a patent may be obtained for any "new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter."²¹

Some examples of the patents at issue in energy-related patent litigation include:

 Intelligent Efficient Servo-Actuator With Sensor For A Downhole Pulser: a telemetry and measurement while drilling system which communicates information from the downhole to the surface with improved energy efficiency.²²

²⁰ Canadian Patent No. 3,196,242.

²¹ Harvard College v. Canada (Commissioner of Patents), <u>2002 SCC 76</u> at para. 41.

²² Canadian Patent No. 2,463,354.

- Flowline Restraint Method: method for securing flowline segments so that in the event of a failure of a flowline joint, the failed joint is held in place reducing risk of high pressure energy release.²³
- Using Synthetic Acid Compositions as Alternatives to Conventional Acids in the Oil and Gas
 Industry: compositions of acids used to stimulate production of an oil well.²⁴

Inventors are potentially able to patent any technology in the energy sector provided that it yields a non-obvious improvement over what was already known to the public.²⁵ Whether or not an improvement is "obvious" is assessed from the perspective of a person of ordinary skill in the art to which the patent pertains. That fictional person is deemed to have not a scintilla of inventiveness but is good at their job and keeps up to date with the literature.

3. Settlements

Given the volume of cases that are resolved prior to the release of a final decision, it appears that most cases filed in the Federal Court result in a settlement. Of 55 filings, about half (28) were discontinued or otherwise disposed of in a manner that suggests the parties settled their dispute. Filing a claim often conveys the seriousness of the allegations and the plaintiff's intention to pursue them, but does not always translate into a willingness to test those allegations before the Court in high stakes patent litigation. The below chart illustrating how filings over the last decade were ultimately resolved shows this trend holds true in energy-related patent litigation:²⁶

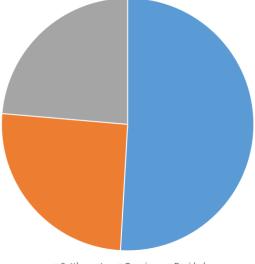
²³ Canadian Patent No. 2,957,167.

²⁴ Canadian Patent No. 2,892,876.

²⁵ Amazon.com, Inc. v. Canada (AG), <u>2011 FCA 328</u> at para. <u>38</u>.

²⁶ This graph shows the presumed outcomes of oil & gas patent cases filed in the Federal Court, including settlements (or other forms of discontinuances), infringement and/or invalidity decisions and ongoing cases.





Settlements Ongoing Decided

In addition to providing greater certainty about outcomes, settlements can significantly reduce the time spent waiting for a decision. Typically, patent-related proceedings are resolved by the Federal Court within 2 to 4 years.²⁷ Settlements are achieved more quickly than final decisions on the merits, often within 1 to 2 years of the filing and sometimes within months.²⁸ Absent settlement, proceedings can be prolonged – the longest lasting patent litigation in the energy space currently active in the Federal Court was filed by Alberta Innovates Technology Futures in 2015 and remains ongoing.²⁹

4. Summary Proceedings are Increasingly Common

In recent years, the use of summary trials and summary judgment motions to adjudicate patent disputes in the energy space has increased. This increase in the use of summary proceedings is correlated with the Supreme Court of Canada's call in *Hryniak* for a "culture shift" in favor of summary proceedings.³⁰

²⁷ Review of Federal Court dockets from 2014 to 2024.

²⁸ See e.g. Specialized Desanders Inc. v. Venturion Oil Limited, <u>T-722-15</u>; Fluid Energy Group Ltd. v. Mud Master Drilling Fluid Services Ltd., <u>T-885-16</u>.

 ²⁹ Alberta Innovates-Technology Futures v. Connacher Oil and Gas Ltd., <u>T-182-15</u>. AITF asserts Connacher Oil and Gas Ltd. infringes its steam-assisted gravity drainage (SAGD) process patent.
 ³⁰ Hryniak v. Mauldin, 2014 SCC 7 at para. 2.

The summary trial, in particular, became an option as of December 2009 when the *Federal Courts Rules* were amended to add this procedural mechanism. Litigators have increasingly sought to use it. The Federal Court had historically been wary of relying on summary proceedings in patent litigation given the inherent factual complexity and strong emphasis on expert testimony in these types of cases. Nevertheless, following *Hryniak*, the Federal Court and Federal Court of Appeal have endorsed summary proceedings even at very early, pre-discovery stages of litigation.³¹

Two types of summary proceedings are available in the Federal Court. The first, summary judgment motions, are a procedural tool that allows a court to dispose of a case without the need for a full trial. The evidence is developed out of Court and the Court will only receive affidavit and transcript evidence, not live witness testimony. Such motions are typically used when there is no genuine issue of material fact and the moving party is entitled to judgment as a matter of law. The second, summary trial motions, are a streamlined trial process that is used when the issues in dispute can be resolved on the basis of affidavit evidence, cross-examination and limited oral testimony.

The main advantage of pursuing summary trial or summary judgment motions is to minimize the time and expense associated with full trials. These procedures can provide a faster and more cost-effective way to resolve disputes, particularly in cases where the issues and any evidentiary disputes are relatively straightforward. Even where the summary proceeding does not bring an end to the action, it may nonetheless simplify what remains of the underlying action.³²

Parties have taken advantage of this culture shift by pursuing summary proceedings. Of the 55 filings referred to above that were resolved by the courts, two were resolved by either summary trial or summary judgment motion. For example, in *Mud Engineering Inc. v. Secure Energy (Drilling Services*

 ³¹ Canmar Foods Ltd. v. TA Foods Ltd., <u>2021 FCA 7</u>. See also Secure Energy Services Inc. v. Canadian Energy Services Inc., <u>2022 ABCA 200</u>; JL Energy Transportation Inc. v. Alliance Pipeline Limited Partnership, <u>2024 ABKB 72</u>.
 ³² Kobold v. NCS Multistage Inc., <u>2021 FC 1437</u> ["Kobold 2021"] at para. 55.

Inc.),³³ Mud Engineering sought to dismiss Secure Energy's claim that it owned the patents Mud Engineering was asserting against it. Although the Court agreed that a summary trial was appropriate, it ultimately held that neither party had met its burden to establish ownership of the disputed patents. In another case involving Secure Energy, the Court again found the issue of ownership could be determined by way of summary trial motion.³⁴ These decisions open an avenue for defendants to obtain early dismissals of the claims against them by demonstrating that the party asserting the patent does not, in fact, own that patent in the first place and cannot assert it.

Although it's more complex, and therefore more unusual, a patent infringement claim can also be determined at a summary trial. For example, in *Steelhead LNG (ASLNG) Ltd. v. ARC Resources Ltd.*,³⁵ ARC Resources was found not to infringe Steelhead's patent. Summary trial was found to be appropriate in that case for a few reasons: discovery (documentary and oral) was complete³⁶ and witnesses gave oral evidence at the hearing, which gave the motion judge a fulsome record to consider the infringement claim.³⁷ Perhaps most importantly, the asserted infringement was related to drawn-up plans that had not been built. Those plans to build a plant that fell within the scope of the claims was alleged to infringe.³⁸ Steelhead asserted ARC Resources presented a study to third parties that included a design which would be infringing if it were built.³⁹ Steelhead brought the action on the basis of the study and before the liquefied natural gas (LNG) plant that it described was built. Steelhead was unsuccessful on the basis that its action was premature, since the paper plans were not themselves acts of infringement.⁴⁰

³³Mud Engineering Inc. v. Secure Energy (Drilling Services Inc.), <u>2022 FC 943</u> ["Secure Energy 1"].

³⁴ Secure Energy (Drilling Services) Inc. v. Canadian Energy Services L.P., <u>2023 FC 906</u>.

³⁵ Steelhead LNG (ASLNG) Ltd. v. ARC Resources Ltd., <u>2022 FC 998</u> ["Steelhead 2022"], aff'd <u>2024 FCA 67</u>.

³⁶ Steelhead 2022 at para. 31.

³⁷ Steelhead 2022 at para. 30.

³⁸ *Steelhead* 2022 at para. 84.

³⁹ *Steelhead* 2022 at para. 11.

⁴⁰ *Steelhead* 2022 at para. 87.

The use of summary trial and summary judgment motions in patent litigation has not been without challenges. These procedures require the parties to carefully assess the strength of their case and the evidence available to support their position, and whether the cost-benefit analysis is worthwhile if their motion is ultimately unsuccessful. Additionally, the use of summary trial and summary judgment can limit the ability of the parties to fully present their case, as the procedures are typically more streamlined than a full trial.

One recent example of these challenges is the summary judgment motion brought by the Defendant NCS in a patent infringement and invalidity action.⁴¹ NCS brought a motion for summary judgment to address its defence of prior use. In NCS' submission, the fracking tools that Kobold alleged infringed its patents were already being used prior to Kobold's patents.⁴² The Court interpreted the statutory provision that grounds this defence, explained the test for whether the defence applies⁴³ and construed the patent claims at issue, but declined to make an infringement finding. Instead, the Court held there was "insufficient evidence before the Court to make a determination on infringement".⁴⁴ Despite requiring expert evidence and oral argument, the summary judgment motion did not ultimately resolve either infringement or whether NCS could rely on the prior use defence that it put forward for determination on the motion.

Despite these challenges, the use of summary trial and summary judgment in patent litigation is likely to continue to increase as parties seek faster and more cost-effective ways to resolve disputes. From a systemic perspective, the use of summary trial and summary judgment can help to reduce the backlog of cases in the Federal Court of Canada, allowing the Court to more efficiently manage its docket.

⁴¹ *Kobold* 2021.

⁴² *Kobold* 2021 at para. 83, interpreting *Patent Act*, s. 56(1).

⁴³ *Kobold* 2021 at paras. 113-115.

⁴⁴ *Kobold* 2021 at para. 130.

III. Key Strategies for Energy Companies based on Recent History

Part I of this paper reviewed energy-related patent infringement cases over the last decade to understand (i) the volume of cases filed in the Federal Court, (ii) the subject-matter of those energy patents, (iii) how those cases were resolved (e.g. by settlement), and (iv) what procedures were followed to resolve the case (e.g. summary trial or summary judgment motion, or full trial). Part II reviews the decisions rendered by the Federal Courts in these cases to understand what lessons can be learned. The decisions offer insight into the Courts' reasoning and into what evidence may prove critical in a case. Our analysis results in the following five recommendations:

- 1. Ownership agreements. Protecting against patent litigation filed by employees or contractors begins when they are hired or retained. Employment and contractor agreements with clear clauses that assign ownership of any inventions created on company time or with company resources from the outset of the relationship are essential. In addition to the defensive value of ensuring that employees and contractors do not own patents funded by the company, ownership clauses ensure that the company will properly have title to its patents if it chooses to assert them against others.
- 2. Detailed record-keeping. The relevant time period for a patent case is potentially very wide. Patents expire 20 years after the application for that patent is filed in Canada. That entire period of time may contain documents critical for the action. For that reason, employees and contractors should be required to keep detailed records on matters that may relate to a patent proceeding. Notebooks and other records can be key evidence in a patent trial, particularly as it relates to determining the ownership of a patent, the efforts required to develop the invention (which can suggest non-obviousness) and prior art relating to the invention. Financial documents may be relevant through to patent expiry. Ensuring that potential inventors are

keeping detailed records is an insurance policy that has proven crucial in recent Federal Court decisions.

- 3. **IP due diligence.** When you purchase a company, you purchase its patents (if any) and the risk that a patentee may sue. Due diligence can help determine the value of any patent portfolio and the risk that patents may be asserted by others against any newly acquired company.
- 4. **No easy settlements.** Sending signals that your company will not be shaken down for royalty payments on dubious patents may serve as insurance against future claims.
- 5. **Combine forces.** Joint defence agreements or less formal cooperation allows alleged infringers to leverage combined resources against patentees that pose a general risk.

Each of these five recommendations is expanded upon below.

1. Ownership Agreements With Employees and Contractors

The first important strategy for managing the risk of patent litigation is to ensure that patents developed because of the business are owned by the business. In many cases, a proper assignment is assumed and not contested. However, recent Federal Court decisions highlight that employment and contractor agreements are key⁴⁵ and including protections is the most important part of keeping rights intact.⁴⁶

One recent decision in particular highlights how crucial these clauses can be.⁴⁷ In *Secure Energy 1*, the purported inventor was employed by Secure Energy's predecessor company under an employment contract as well as a non-solicitation and confidentiality agreement which included a clause that dealt with the ownership of patents (and other IP).⁴⁸ His duties included work that led to the patent at issue

⁴⁵ Betser-Zilevitch v. Petrochina Canada Ltd., <u>2021 FC 85</u> ["Betser-Zilevitch v. Petrochina"], aff'd <u>2022 FCA 162</u>.

⁴⁶ See e.g. *Secure Energy 1* at paras. 142 and 143.

⁴⁷ Secure Energy 1 at paras. 142 and 143.

⁴⁸ Secure Energy 1 at paras. 45 and 142.

and he assigned the patent to the predecessor company.⁴⁹ However, he moved to a new company and refused to sign documents necessary to obtain related patent applications.⁵⁰ Instead, he filed new patent applications, parts of which were seemingly written to avoid Secure Energy's patent.⁵¹

Secure Energy argued the alleged inventor's employment agreement required him to assign inventions and that his interest in the patent at issue had been explicitly assigned.⁵² The Court did not agree. The decision quotes the clause that Secure Energy relied on: "[a]ny intellectual property developed by the Employee in the course of the discharge of the Employee's employment duties is the property of the Corporation".⁵³ The Court held: "[t]here is no dispute that [the alleged inventor] had contractual obligations to assign his invention, **assuming**, as the contract confirms, that **it was developed in the course of the discharge of his employment duties**".⁵⁴ The decision parses this wording and determines Secure Energy did not: "explain, nor establish that **working on the subject-matter of the Disputed Patents ... equates to 'the developing of an invention in the course of the discharge of his employment duties**"^{.55} Although other factors were considered by the Court when making its decision, the specific wording of the employment agreement was important to the Federal Court.

Based on the cases reviewed and the authors' professional experience, there are some important aspects of employment and contractor agreements to highlight. As the first – and most important – step when drafting employment or contractor agreements, the right and title of any and all discoveries, inventions, patent applications and patents that are developed, whether entirely or partially, during the period of employment or contractual engagement with the company should ideally be broadly assigned

⁴⁹ Secure Energy 1 at paras. 44-45.

⁵⁰ Secure Energy 1 at para. 57.

⁵¹ Secure Energy 1 at para. 59.

⁵² Secure Energy 1 at para. 114.

⁵³ Secure Energy 1 at paras. 142-143.

⁵⁴ Secure Energy 1 at para. 143 [emphasis added].

⁵⁵ Secure Energy 1 at para. 144 [emphasis added].

to the company. This ensures that patents generated by employees or contractors are unequivocally owned by the company, preventing future disputes over ownership and ex-employees or ex-contractors from seeking to monetize patents that rightfully belonged to the business in the first place. The assignment should ideally be comprehensive, encompassing all forms of intellectual property that the employee or contractor may create (including patents), and should remain in effect for the full duration of the employee's or contractor's tenure and beyond, where legally permissible,⁵⁶ to safeguard the company's interests in innovations that may have long-lasting implications and value.

Second, the agreement may ideally include a back-up clause ensuring that the IP rights assignment remains valid even if another provision of the contract is found to be void or unenforceable. This "failsafe" clause is designed to act as a buffer, preserving the company's ownership of IP and preventing the entire assignment from being invalidated due to potential legal flaws in other unrelated contractual terms. The inclusion of such a clause provides a layer of protection for companies, maintaining the continuity of IP rights assignments despite potential legal challenges to other aspects of the agreement.

Third, employees may be required to explicitly reaffirm their common law duties to the employer, one of which is the duty of loyalty.⁵⁷ This duty obliges employees to act in the best interests of their employer during their period of employment. This provision reinforces employers' expectations that employees will not engage in activities that could harm the company's interests, including those related to the creation and handling of IP, and provides a clear contractual basis for recourse (and leverage) should those duties be breached.

In drafting these clauses for employment agreements, it is essential to ensure that any patent assignments do not inadvertently redefine the term "cause" in a manner that increases the risk of

⁵⁶ Such provisions may be subject to provincial employment standards or common law obligations.

⁵⁷ Independent contractors' may owe a duty of loyalty in Ontario but typically not in the same way as an employee.

contravening minimum employment standards legislation. The definition of "cause" is a critical component in employment law, as it can determine the validity of a termination and any corresponding entitlement. Overreaching patent assignments might unintentionally alter this definition, potentially leading to legal consequences and undermining the enforceability of the assignments. Therefore, careful legal drafting is required to avoid this pitfall and to maintain compliance with employment standards while securing the company's patent rights.

A few key clauses included in employment and contractor agreements and releases, some more common than others, can help ensure that is the case:

- Include a proper present assignment covering all work product created by the employee as well as a waiver of moral rights.
- Include an obligation on the employee to disclose any patents that they have already invented (whether owned by themselves or by their prior employers) or that they invent while employed, even if separate from the business.
- Include a covenant not to incorporate inventions created separately from work or owned by any third parties (including prior employers) with any inventions developed with company resources or confidential / proprietary information of the company without prior approval by the company.
- Include general further assurance obligations, including an obligation to assist the employer with any documentation needed to confirm assignment of patents to the employer and waiver of moral rights.
- Consider whether a standalone non-disclosure agreement is appropriate at the time the employment contract is signed.

 While not common, consider a "future litigation" clause to ensure the cooperation of key witnesses post-employment.

As with the clauses discussed above, any provision limiting liability of the employer with respect to any patent-related claims should be drafted to ensure that such a limitation does not prevent an employee from pursuing their statutory entitlements. This is to ensure compliance with minimum employment standards in provincial legislation and help ensure that the agreements withstand scrutiny if challenged.

Finally, ideally employees and contractors will have ongoing obligations to assist the company in support of their inventions even if they depart the company. This can ensure that the company is able to prove ownership, if challenged, and can provide continued access to a key inventor who can support the patent regardless of their future employment or contractor status.

Patent litigation between companies and their ex-employees and contractors has occurred on a number of occasions in the last decade. Ensuring that employment and contractor agreements are properly drafted is a useful first step in preventing patent litigation and may also assist in enforcing patent rights should those employees or contractors develop inventions for the company.

2. Detailed Record-Keeping

Another best practice in avoiding patent infringement litigation brought by ex-employees and contractors is ensuring current employees and contractors maintain detailed records of work that may create patent rights. Detailed record-keeping is paramount to meet the increasingly common challenges to inventorship and ownership of a patent. Procedures to ensure proper documentation, disclosure and licensing of inventions and innovations are crucial.

If it exists, detailed documentation of the development process, including timelines, conception, experimentation and time and expense spent on the invention, can serve as important evidence in legal proceedings concerning patent ownership and, eventually, validity. Documentation can include notebooks, sketches, prototypes, test results and correspondence. The company should train and monitor its employees, and ensure contractor agreements oblige contractors to maintain proper records of their work and store them for 20 years (if possible).⁵⁸

For example, in the recent *Secure Energy 1* case reviewed above, the Court's decision regarding inventorship and patent ownership was based on the evidence about the work done to develop the invention claimed in the disputed patents. In this case, the Court relied on weaknesses in the alleged inventor's testimony, including the he was absent from key experiments and,⁵⁹ crucially, that his evidence was unsupported by any documentation, to hold that he was not in fact the inventor.⁶⁰ The alleged inventor's ex-employer failed in its responding ownership claim for similar reasons. Not only could the alleged inventor not prove that he came up with the invention after he left their employ given his lack of documentation, but his ex-employer could not establish the opposite – that he had come up with the invention while in their employ – because they also lacked evidence (that documentation could have filled in).⁶¹ Neither party was able to meet their burden to establish ownership of the patent.

Similar record-keeping issues arose in the second *Secure Energy* case.⁶² Secure Energy applied to "correct" the ownership and inventorship of a granted patent assigned to Canada Energy Services by the listed inventor Ewanek.⁶³ Per Secure Energy, their employee Levey was the true inventor and, this time, they had Levey's laboratory notebooks to rely on.⁶⁴ The Court ultimately accepted Levey's evidence for

⁵⁸ This date is selected because Canadian patents expire 20-years after the corresponding patent application was filed in Canada.

⁵⁹Secure Energy 1 at para 103.

⁶⁰ Secure Energy 1 at paras. 104-105.

⁶¹ Secure Energy 1 at para. 118.

⁶² Secure Energy (Drilling Services) Inc. v. Canadian Energy Services L.P., <u>2023 FC 906</u>. ["Secure Energy 2"]

⁶³ Secure Energy 2 at para. 4.

⁶⁴ Secure Energy 2 at para. 10.

two reasons: (1) his clear recollection of the invention process (no doubt aided by reviewing records from the time); and (2) his supporting documentation.⁶⁵

Both these cases speak to the importance of employees maintaining real-time, accurate and complete records of their inventive and innovative activities and achievements. By ensuring employees adhere to meticulous record-keeping practices, employers can effectively establish and defend their rights to inventions and the resulting patents, thereby avoiding protracted legal disputes over inventorship claims and bolstering the company's patent portfolio.

3. Patent Due Diligence

Another strategy for managing the risk of patent litigation is due diligence. Separate from due diligence at the acquisition stage, due diligence involves monitoring the patent landscape and the activities of competitors and potential infringers to anticipate and prevent patent disputes. Keeping abreast of the latest developments and trends in the relevant fields of technology and innovation allows for early identification and assessment of any opportunities or threats posed by existing or emerging competitors or potential infringers. Gathered information can be used offensively or defensively.

i. Monitoring the Patent Landscape

Competitors may monitor patents and applications so that they can design, or redesign, their products and methods to avoid liability for patent infringement.⁶⁶ Liability may be avoided, or minimized, by ensuring that a product or method does not fall within the claims of a concerning patent. Because of this ability to design around patents, and thus insulate entire products from the scope of a patent infringement action, one option is to monitor for potentially problematic patents and pro-actively design

⁶⁵ Secure Energy 2 at paras. 48-55.

⁶⁶ Steelhead LNG (ASLNG) Ltd. v. Arc Resources Ltd., 2024 FCA 67 at para. <u>83</u>.

around them. Since patent applications typically become public 18 months after filing, ongoing monitoring can identify potentially problematic patents long before they granted and become a concern – patent applications do not provide the same benefits as a patent. Most importantly, a patent application does not grant its owner (or anyone else) the right to sue for patent infringement. Specific businesses, inventors or technology can be targeted by patent applications given the large volume of applications filed each year (about 40,000 per year).⁶⁷

Due diligence can include:

- Determining the ownership, inventorship and licensing status of your patent assets and obligations.
- Identifying and mitigating any validity or unenforceability risks in your patents.
- Assessing the strength, scope and validity of third party patents and applications.

Awareness of existing patents and pending applications can help companies navigate around potential infringement allegations thereby reducing the risk of costly legal disputes. It can also guide the modification of products or processes to avoid even the appearance of infringing on others' patent property rights, uncover opportunities for licensing agreements or collaborations with other patent holders and identify potential conflicts early. If litigation is unavoidable, understanding the landscape can aid in preparing a more robust defense or prosecution strategy.

As well as being useful in avoiding prospective litigation, keeping an eye on patent filings has the added advantages of providing insight as to where research & development and marketing efforts are being focused within the industry, and as to shifts in competitors' strategic directions based on what technologies they are prioritizing for patent protection. Businesses can make more informed decisions

⁶⁷ <u>https://ised-isde.canada.ca/site/canadian-intellectual-property-office/en/canadian-intellectual-property-statistics/patent-statistics-2022-2023</u>

regarding their own research & development investments, marketing strategies and product development. Monitoring allows them to identify gaps in the market or areas where they can differentiate their products or services and reveals emerging technologies and areas of rapid innovation. These types of strategies are widespread in the pharmaceutical industry and may be a promising opportunity for companies in the energy space.

ii. Due Diligence at the Acquisition Stage

When conducting patent due diligence in an acquisition, different levels of diligence may be employed depending on the importance of the patent assets and the potential risk of third party infringement.

A base level diligence will involve chain-of-title diligence to verify ownership (i.e., whether the company obtained assignments from inventors or applicable third parties), confirmation of status of the patent applications and patents and an investigation as to whether the patent assets are encumbered by security interests. Part of the diligence process will also include investigation of whether the seller has been involved in any patent litigation.

Where patent assets have greater importance, a next level of diligence would involve identification of any deficiencies in the patent assets by more detailed analysis of each of the patent applications / patents to identify missed maintenance fees, missed priority dates, etc.

In situations where the patent assets constitute the majority of the value of a transaction, deeper analysis including full file wrapper reviews and independent review of prior art may be required. In certain circumstances, independent patentability or freedom-to-operate assessments may be conducted to assess the value of the patent assets or the risk of infringement of third party patent rights. Separate and apart from the patent due diligence, the transaction documents needs to have appropriate representations and warranties and indemnification provisions to adequately protect the acquirer (and to allow the acquirer to obtain correct information about the patent assets).

iii. Shaping the Patent Landscape: Offensive Positioning

Companies can strategically utilize their patents to fully benefit from the monopoly granted under the *Patent Act* by strategically filing patents to ensure they protect their technology and can assert their patent rights against competitors where necessary. There are two main offensive options open to companies assigned patents that cover their innovations:

- (1) Seek a competitive advantage (injunctive relief); and
- (2) Seek a commercial advantage (damages / accounting of profits).

Offensive positioning is particularly important in rapidly developing areas where many competitors are competing based on incremental innovations. Businesses that pre-emptively file patents to create strong portfolios can leverage those protections if they detect actual or potential infringement.

iv. Leveraging the Patent Landscape: Defensive Positioning

Conversely, defensive positioning is when a company employs strategies to prevent the enforcement of a competitor's patents rights against them, to limit a competitor's opportunities to obtain patents or to cross-licence patents to both benefit from shared technology and deter patent infringement actions. Defensive use of patent rights is also useful in at least three ways:

- (1) To deter patent infringement actions;
- (2) As leverage in business arrangements; and

(3) To create "prior art", i.e., public disclosures of the technology to demonstrate that an invention was not new at the relevant time and potentially to be used to invalidate other patents.

Defensive positioning is particularly important in areas where non-practicing entities ("patent trolls") are known to be active. Demand letters, preliminary injunctions or, ultimately, initiating litigation are all available options but only if the patents are filed before the competitors or trolls occupy the same space.

Having patents clearly defining what technology your company owns can also be useful in deterring claims whether or not you intend to ever assert those patents against an infringer. For example, in the MEG Energy case,⁶⁸ MEG Energy filed patents covering their proprietary eMSAGP and eMVAPEX methods many years before the plaintiff (Jason Swist) approached MEG Energy. MEG Energy was able to rely on its patents to argue that it was practicing its own patented method described in patent applications filed before its opponent's patent.⁶⁹ Filing patent applications before a demand letter is received may be powerful evidence in countering an allegation that business activities have copied a patent.

The *Patent Act* was recently amended in a way that facilitates a similar result: the amendment created a "prior use" defence to infringement: if someone committed or planned to commit what would be infringing acts prior to the patent's claim date, they cannot be found to infringe the patent.⁷⁰ Section 56 provides that it is not an infringement to carry out "the same act" after the claim date of the patent that was being carried out prior to the claim date of the patent. It reduces the incentive to pursue patents to create "prior art" because another defence to infringement claims exists. However, the courts have not

⁶⁸ Swist v. MEG Energy Corp., 2021 FC 10 ["MEG Energy"], aff'd 2022 FCA 118.

⁶⁹ *MEG Energy* at para. 10.

⁷⁰ Patent Act, <u>R.S.C, 1985, c. P-4, s. 56</u>. The Patent Act governs patents granted in Canada.

yet defined what it means to perform the "same act". Patent applications may still serve as evidence about what a company is doing and when it was doing it.

4. Send Signals that an Easy Settlement is not Forthcoming

When companies pay patentees to avoid litigation, they create the potential incentive for others to target that company for quick payoffs. Confidentiality agreements provide some protection, but not complete protection, against the chatter that a company would rather pay a patentee significant money than fight a lawsuit. Refusing to settle, and taking plaintiffs to trial, can send the signal to others that an easy settlement is not forthcoming. This can help the company to deter or discourage frivolous or opportunistic patent lawsuits, especially from patent trolls or non-practicing entities who may seek to extract quick and easy settlements from the company by threatening or filing claims.

As the Betser-Zilevitch trilogy of patent actions shows, a patentee may simultaneously file actions against multiple businesses it believes may infringe.⁷¹ Within one year, Betser-Zilevitch filed cases asserting the same patent against CNRL and Petrochina Canada, as well as an appeal from a 2018 Nexen Inc. settlement decision about that patent.⁷²

Sending signals that an easy settlement is not forthcoming can include:

- Publicly announcing the company's commitment to defend its patents and to challenge any unfounded or invalid claims.
- Demonstrating the company's financial and legal resources and readiness to engage in prolonged and costly litigation, including by retaining external legal counsel to manage the

⁷¹ Maoz Betser-Zilevitch v. Canadian Natural Resources Ltd., <u>T-630-18</u>; Maoz Betser-Zilevitch v. Petrochina Canada Ltd., <u>T-1158-18</u>; 45; Maoz Betser-Zilevitch v. Canadian Natural Resources Ltd., <u>T-919-21</u>; Maoz Betser-Zilevitch v. Nexen Inc. et al, <u>A-275-18</u>.

⁷² Betser-Zilevitch v. Nexen Inc., <u>2018 FC 735</u>, aff'd <u>2019 FCA 230</u>.

response to a demand letter and signal the early involvement of experienced IP counsel before the claim is filed.

- Avoid making any concessions or settling with other players in the industry.
- Seeking sanctions, costs or damages from the patent troll or non-practicing entity for their vexatious or frivolous litigation conduct.
- Counter-suing the patent troll or non-practicing entity for patent invalidity or abuse of process.
- Where settlements are advisable, ensure broad confidentiality provisions and consider a public statement denying liability.

Sending these signals against even one would-be patent assertion entity can pay dividends down the road. Patentee assertion entities can be more selective in who they sue particularly where they are relying on more recent patents. They can be incentivized to pursue the company whose defence they perceive to be the weakest first, to establish their patent is valid and how it can be infringed, then leverage that decision into settlements with other companies.

5. Combining Forces Across Companies

The final strategy to manage the risk of patent litigation is entering into joint defence agreements or common interest agreements with other similarly situated companies. This strategy builds on the need to respond to patent trolls in a coordinated manner and avoids allowing them to tactically divide companies which actually share interests in invalidating the asserted patents or at least in dismissing the infringement claims.

This best practice arises from studying the cases brought by Betser-Zilevitch against CNRL, Petrochina Canada, and Nexen Inc. and CNOOC's Long Lake partnership. Although the decisions do not discuss cooperation between the parties, Petrochina Canada was the only company that took the case to trial

and it relied on CNRL operations and related witnesses in doing so.⁷³ The other parties appeared to resolve their disputes earlier in their life cycle.

As Betser-Zilevitch illustrates, patent trolls often target multiple companies in the same industry alleging that their products or services infringe their patents. In some cases, the defendant companies may have a common interest or a shared defence against the patent trolls, such as by challenging the validity of the patents or asserting prior use or license rights. By entering into a joint defence agreement or a common interest agreement, these companies can agree to cooperate and share information, resources and strategies to defend against the patent trolls, while preserving the confidentiality and privilege of their communications. Key benefits include:

- Allowing co-defendants to benefit from shared information and costs; and
- Potentially preserving privilege over communications between co-defendants during discovery.

Joint defence agreements help but are not strictly necessary to benefit from other parties' insights about a patent being asserted against both of you. Public pleadings can reveal what arguments each defendant is making about the patent's validity and, most importantly, are required to list every document that is alleged to publicly disclose the invention before the patent application was ever filed. Pleadings can be obtained, usually very quickly, from the Court and counsel can assist with monitoring court dockets for any other useful documents which may be filed in the proceeding. Similarly, one party may wish to rely on its competitor's operations as having publicly disclosed the invention before the patent was even filed. Petrochina, for example, relied on Cenovus and CNRL well pads in attempting to invalidate Betser-Zilevitch's patent and hired a CNRL ex-employee to describe it.⁷⁴ Almost inevitably,

⁷³ Betser-Zilevitch v. Petrochina.

⁷⁴ Betser-Zilevitch v. Petrochina at paras. 27 and 40.

cooperating in a more formal way with other companies facing the same allegations will be the more efficient approach.

Joint defence agreements can help participants reduce the costs and burdens of litigation, avoid duplication or inconsistency of arguments or evidence between the participants, increase participants' bargaining power and leverage, and present a united and consistent front against patent trolls. At the end of the day, these scenarios bear out that often the enemy of your enemy can be your most useful friend.

IV. Conclusion

This analysis of the last 10 years of patent infringement actions identifies the risks (and rewards) in patent litigation and identifies strategies that may assist in responding to these risks (and rewards). Practical strategies that your company can implement today to minimize the risk of litigation include establishing clear ownership and assignment agreements with employees and contractors, maintaining detailed records, conducting thorough due diligence and reinforcing the company's position should disputes arise. This analysis also considered strategic implications of signaling a firm stance against easy settlements to deter frivolous or opportunistic litigation and, lastly, the potential benefits of joint defense agreements, which can offer a collaborative and cost-effective approach to defending against patent infringement claims. Each of these strategies, whether employed individually or in concert, can mitigate the risks associated with patent litigation, safeguard a company's innovations and ensure its continued success in the competitive market.

As the landscape of patent litigation continues to evolve, it is clear that companies operating in Canada must remain vigilant, adaptable and informed. By understanding historical trends and proactively employing comprehensive risk management strategies, businesses can not only navigate the complexities of patent litigation but also harness their patents to fuel growth and innovation. Thus, as

we look toward the future, it is the companies that adeptly manage their patent litigation risks that will likely emerge as leaders in their respective industries, setting the standard for others to follow.

Parties	Patent Type	Outcome
	2014	
1. Newsco Directional Support Services Inc. et al. v. QCD Technology Inc., <u>T-1036-14</u>	Patent Category: Downhole Intelligent Efficient Servo-Actuator With Sensor For A Downhole Pulser (2463354) Intelligent Efficient Servo-Actuator With Dynamic Seal For A Downhole Pulser (2603117) Intelligent Efficient Servo-Actuator For A Downhole Pulser (2603117) Intelligent Efficient Servo-Actuator For A Downhole Pulser With Novel Brake And Lock (2603138) Parties – Drilling and MWD Service Company and MWD Technology Development Company	Discontinued patent infringement action Length of Proceeding: Statement of Claim Filed: April 28, 2014 Discontinuance Filed: February 25, 2015
2. Jason Swist et Al v. Meg Energy Corp., <u>T-1069-14</u>	Patent Category: Oil Modified Steam And Gas Push With Additional Horizontal Production Wells To Enhance Heavy Oil/Bitumen Recovery Process (2776704) Pressure Assisted Oil Recovery (2800746)	 Patent infringement action – patent declared invalid and no finding of infringement Decisions and appeals: <u>2020 FC 759</u> - motion to submit expert reports in reply

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	Parties – Crude Solutions Limited (holding company for oil sands patents developed by Mr. Swift and his wife) and MEG Energy Corp (oil producer in Alberta)	 <u>2021 FC 10</u> – infringement action <u>2021 FC 198</u>, additional reasons to 2021 FC 10 on costs <u>2022 FCA 118</u>, affirming 2021 FC 10 Length of Proceeding: Statement of Claim Filed: April 29, 2014 Reasons Confidential Judgement and Reasons Filed: January 4, 2021 Dismissal of application for leave to file appeal to SCC: March 16, 2023
3. Bonavista Energy Corporation et al v. Specialized Desanders Inc., <u>T-1758-14</u>	Patent Category: WellheadMethod and Apparatus for Desanding Wellhead Production (2407554)System, Method and Apparatus for Desanding Wellhead Production (2535215)Desanding Apparatus and system (2433741)	Patent infringement action; patent declared valid on consent
	Parties: Oil producer and Desander Company	Length of Proceeding:

		Statement of Claim Filed: August 14, 2014 Consent Judgment: August 18, 2016
4. Frac Shack Inc. v. AFD	Patent Category: Fracturing	Patent infringement action
Petroleum Ltd., <u>T-2149-14</u>	Fuel Delivery System and Method (2693567)	 Decisions and appeals: <u>2017 FC 104</u> – decision on validity and infringement <u>2017 FC 274</u> - Additional reasons to 2017 FC 104 regarding remedies <u>2018 FCA 140</u>, reversing both 2017 FC 104 and 2017 FC 274 in part <u>2018 FC 1047</u> - redetermination ordered by FCA (appeal of this decision discontinued)
	Parties: Fuel Delivery System Company and Fuel, Lubricant and Bulk Tank Supplier	Length of Proceeding: Statement of Claim Filed: October 20, 2014 Appeal decision: July 20, 2018
2015		

5.	Resource Completion Systems Inc. v. Canuck Completions Ltd. et al, <u>T-52-15</u>	Patent Category: Fracturing Multi-Stage Well Isolation (<u>2837997</u>)	Discontinued patent infringement action
		Parties : Completion, well construction, multi-stage stimulation and well servicing products and systems company and Oil and Gas Field Equipment Manufacturing.	Length of Proceeding: Statement of Claim Filed: January 14, 2015 Discontinuance Filed: June 3, 2016 Notice of Discontinuance of Counterclaim: June 7, 2016
6.	Alberta Innovates- Technology Futures v. Connacher Oil and Gas Limited, <u>T-182-15</u>	Patent Category: Fracturing Hydrocarbon Production Process with Decreasing Steam and/or Water/Solvent Ratio (2391721) Process for Enhancing Hydrocarbon Mobility Using a Steam Additive (2323029) Parties: Company that provides non-commercial research offering industry funding, capacity building initiatives, clinexus and academic programs and exploration, development and production company	Patent infringement action, stayed Length of Proceeding: Ongoing. Statement of Claim Filed: February 16, 2015
7.	Zero Spill Systems (Int'l) Inc. et al v. Swift	Patent Category: Oil Method and Apparatus for Enclosing an Oil Drilling Rig (2360234)	Dismissed patent infringement action

	Environmental Ltd., <u>T-489-15</u>	Parties : Oil Drain Plug Manufacturer and Pumping Equipment and Services Company	Length of Proceeding: Statement of Claim Filed: April 1, 2015 Final decision: July 7, 2015
8.	Specialized Desanders Inc. v. Westfab Industries Inc., T-547-15	Patent Category: Wellhead Method and Apparatus for Desanding Wellhead Production (2407554)	Discontinued patent infringement action
		Parties: De-Sander Company and Steel Fabricator Company	Length of Proceeding: Statement of Claim: April 9, 2015 Discontinuance: September 2, 2016
9.	Mixer Technologies Inc et al v. Seller's Oil Field Service	Patent Category: Oil Tank Cleaning Apparatus (<u>2298920</u>)	Patent Infringement action and counterclaim dismissed on consent
	Ltd. et al, <u>T-568-</u> <u>15</u>	Parties: Inline jet mixer manufacturer and waste management services company	Length of Proceeding: Statement of Claim: April 13, 2015 Dismissal: May 18, 2017
10	Specialized Desanders Inc. v. Dynacorp Fabricators Inc. et al., <u>T-598-15</u>	Patent Category: Wellhead Method and Apparatus for Desanding Wellhead Production (2407554)	Ongoing patent infringement actionDecisions and appeals:•2018 FC 689 pleadings amendment motions

	Parties: Desander company and provider of specialized equipment for the oil and natural gas sector.	 <u>2018 FCA 215</u> – appeal of pleadings amendment motions Length of Proceeding: Statement of Claim: April 16, 2015
11. Specialized Desanders Inc. v. Venturion Oil Limited, <u>T-722-15</u>	Patent Category: Wellhead Method and Apparatus for Desanding Wellhead Production (2407554)	Discontinued patent infringement action
	Parties: Desander company and oil and gas company	Length of Proceeding: Statement of Claim: May 5, 2015 Discontinuance: July 23, 2015
12. Imperial Oil Resources Ltd. et al v. AGC, <u>T-</u> <u>623-15</u>	Patent Category: Oil Integrated Processes for Recovery of Hydrocarbon from Oil Sands (<u>2740481</u>)	 s. 52 application Decision: <u>2015 FC 1218</u> – decision on uncontested application to vary inventorship and ownership
	Parties : Oil and Gas Company and Attorney General of Canada	Length of Proceeding: Notice of Application: April 21, 2015

		Decision: October 28, 2015
13. Western Oilfield Equipment	Patent Category: Oil	Patent infringement action
Rentals Ltd. v. M-I L.L.C., T-	Shaker and degasser combination (2664173)	Decisions and appeals:
<u>1056-15</u>	Optimization of Vacuum Systems and Methods for Drying Drill Cuttings (2712774)	• <u>2019 FC 1606</u> - decision on infringement
	System and Method for Drying Drill Cuttings (2741955)	• <u>2020 FCA 3</u> – motion for an interim stay
		 <u>2021 FCA 24</u> – appeal of finding of infringement
	Parties: Oilfield machinery company and drilling fluid	Length of Proceeding:
	solutions company	Statement of Claim: June 24, 2015
		Final Appeal Judgement: November 17, 2021
14. Rapid Completions	Patent Category: Wellbore	Patent Infringement action
LLC et al. v. Baker Hughes Canada Company, <u>T-</u> <u>1569-15</u>	Method and Apparatus for Wellbore Fluid Treatment (<u>2412072</u>)	 Decisions and appeals: <u>2017 FC 1111</u> – decision on infringement (consolidated hearing of T- 1741-13, T-1569-15, T- 1728-15 and T-2088-15)

		 <u>2019 FCA 96</u> – appeal of infringement decision Leave to appeal to SCC denied <u>2020 FC 68</u> - costs <u>2021 FC 986</u> - challenge to elevated costs award
	Parties : Equipment supplier and energy company.	Length of Proceeding: Statement of Claim: September 17, 2015 Final decision: September 23, 2021
15. Packers Plus Energy Services Inc. et al v. Weatherford International Plc et al, <u>T-1728-15</u>	Patent Category: Wellbore Method and Apparatus for Wellbore Fluid Treatment (2412072)	 Patent Infringement action Decisions and appeals: <u>2017 FC 1111</u> – decision on infringement (consolidated hearing of T-1741-13, T-1569-15, T-1728-15 and T-2088-15) <u>2019 FCA 96</u> – appeal of infringement decision Leave to appeal to SCC denied <u>2020 FC 68</u> - costs

	Parties : Oil and gas service company and oilfield services company.	 <u>2021 FC 986</u> - challenge to elevated costs award Length of Proceeding: Statement of Claim: October 14, 2015 Final decision: September 23,
16. Packers Plus	Patent Category: Wellbore	2021 Patent Infringement action
Energy Services Inc. et al v. Resource Well Completion Tech., <u>T-2088-15</u>	Method and Apparatus for Wellbore Fluid Treatment (2412072)	 Decisions and appeals: <u>2017 FC 1111</u> – decision on infringement (consolidated hearing of T- 1741-13, T-1569-15, T- 1728-15 and T-2088-15) <u>2019 FCA 96</u> – appeal of infringement decision Leave to appeal to SCC denied <u>2020 FC 68</u> - costs
	Parties : Oil and gas service company and well products and systems company.	Length of Proceeding: Statement of Claim: December 11, 2015 Final decision: January 17, 2020

17. Douglas W Schepp v. GE Oil and Gas Pressure Control Canada Inc. and	Patent Category: Wellhead Split Casing Wellhead Seal (<u>2645515</u>)	Discontinued patent infringement action
Others, <u>T-1729-</u> <u>15</u>	Parties : Founder of energy company and gas pressure regulator company	Length of Proceeding: Statement of Claim: October 14, 2015 Discontinuance: January 18, 2017
18. NCS Multistage Inc. v. Kobold Services Inc., <u>T-</u> <u>1942-15</u>	Patent Category: WellboreTools and Methods for Use in Completion of a Wellbore(2738907)Downhole Tool Assembly with Debris Relief and Method for Using Same (2693676)	Dismissed patent infringement action
	Parties: Downhole tool systems technology companies	Length of Proceeding: Statement of Claim : November 18, 2015 Dismissal: January 14, 2016
	2016	
19. Fluid Energy Group Ltd. v. Mud Master Drilling Fluid Services Ltd., <u>T-</u>	Patent Category: Wellbore Using Synthetic Acid Compositions as Alternatives to Conventional Acids in the Oil and Gas Industry (<u>2892876</u>)	Discontinued patent infringement action
<u>885-16</u>	Parties : Developer and manufacture of chemical systems and drilling fluids company.	Length of Proceeding:

		Statement of Claim: June 3, 2016
		Discontinuance: August 30, 2016
20. Delphi Energy Corp. v. 0645148 B.C. Ltd et al, <u>T-</u> <u>1411-16</u>	Patent Category: FracturingScrew Press (263332)Transportable Pumping Unit And Method Of FracturingFormations (2546315)Multistage Separator Vessel For Capturing Propane(2762994)Mobile Storage Tank With Fluid Containment (2762244)Method And Apparatus For Disposing Of Water At Gas Wells(2079536)Oil-Fired Frac Water Heater (2671043)Mobile, Modular, Electrically Powered System For Use In Fracturing Underground Formations (2773843)Method And Apparatus For Stimulating A Subterranean Formation Using Liquefied Natural Gas (2499699)Water Heating Apparatus For Continuous Heated Water Flow And Method For Use In Hydraulic Fracturing (2754347)Method And Apparatus To Treat A Well With High Energy Density Fluid (2754347)	Discontinued patent infringement action

Method And Apparatus To Treat A Well With High Energy Density Fluid (2721488)	
Gas Box Heater (<u>2723639</u>)	
Ulti-Stage Separator For Propane Recapture Generator Waste (2728035)	
Apparatus, System, And Method For In-Situ Extraction Of Oil From Oil Shale (<u>2622539</u>)	
Steam Generation Apparatus And Method (2468012)	
Wellsite Surface Equipment Systems (2679812)	
Mobile Gas Separation Unit (2528304)	
Heated Separation System For Well Fluids (2570719)	

	Parties: Liquids-rich natural gas producer and fuel solutions company	Length of Proceeding: Statement of Claim: August 23, 2016 Discontinuance: February 22, 2017
21. AFD Petroleum Ltd. v. Frac Shack Inc., <u>T-</u> <u>1580-16</u>	Patent Category: Fracturing Fuel Delivery System and Method (2693567) Parties: Fuel, Lubricant and Bulk Tank Supplier and Fuel Delivery System Company	Discontinued patent infringement actionLength of Proceeding:Statement of Claim: September 21, 2016Discontinuance: October 16, 2020
22. Aux Sable Liquid Products LP et al. v. JL Energy Transportation Inc., <u>T-1612-16</u>	Patent Category: Pipeline Pipeline Transmission Method (2205670) Mixtures for Pipeline Transport of Gases (2235140)	Patent infringement actionDecisions:• 2019 FC 581 – decision on infringement• 2019 FC 788 – decision on costs

	Parties: Oil and natural gas company and technology company	Length of Proceeding: Statement of Claim: September 27, 2016 Final decision: June 6, 2019
23. Fluid Energy Group Ltd. v. Mud Master Drilling Fluid Services Ltd., <u>T-</u> <u>1642-16</u>	Patent Category: Wellbore Using Synthetic Acid Compositions as Alternatives to Conventional Acids in the Oil and Gas Industry (<u>2892876</u>)	 Patent infringement action Decisions: <u>2020 FC 229</u> – appeal of confidentiality designation <u>2020 FC 480</u> – appeal of above
	Parties : Developer and manufacture of chemical systems and drilling fluids company.	Length of Proceeding: Statement of Claim: September 29, 2016 Discontinuance: May 18, 2022
24. Mostar Directional Technologies Inc. v. Dril-Tek Corp. et al., <u>T-</u> <u>2060-16</u>	Patent Category: Downhole System and Method for Downhole Telemetry (2544457), (2666695), (2584671) Gap-Sub Assembly for Downhole Telemetry System (2634236)	Dismissed patent infringement action Decisions: • 2017 FC 575 – motion to strike and dismiss action granted
	Parties : Well drilling contractor and upstream oil and gas operations company.	Length of Proceeding:

		Statement of Claim: December 1, 2016
		Dismissal: June 12, 2017
	2017	
25. Preferred Sands Of Canada, ULC v. Trican Well Service Ltd., <u>T-</u> <u>668-17</u>	Patent Category: Wellbore Generation of User Equipment Identification Specific Scrambling Code for the High Speed Shared Control Channel (2484264) Glucans and Glucansucrases Derived from Lactic Acid Bacteria_(2454563) Glucans and Glucansucrases Derived from Lactic Acid Bacteria (2684966) Control of Particulate Entrainment By Fluids (1071076) Oil Well Consolidation Treating Process and Additive (1087833) Lightweight Particulate Materials and Uses Therefor (2423031) Asbestos Composition Having Organo-Silane Coating (1104804) Parties: Sand producer and technology company and oilfield services company.	Dismissed patent conflict

26. Sand Separators LLC v. Rheaume Engineering Inc.,	Patent Category: Gas Spherical Sand Separators (2706359)	Discontinued patent infringement action
<u>T-673-17</u>	Parties : Sand management technology company and engineering firm.	Length of Proceeding: Statement of Claim: May 5, 2017 Discontinuance: April 13, 2018
27. Mostar Directional Technoligies Inc. v. Drill-Tek Corporation et al., <u>T-1031-17</u>	Patent Category: Downhole System and Method for Downhole Telemetry (2544457), (2666695), (2584671) Parties: Well drilling contractor and upstream oil and gas operations company.	Ongoing patent infringement action, stayed until July 31, 2024. Length of Proceeding: Statement of Claim: July 13, 2017 Stay Order Extension: May 6, 2024
	2018	
28. Mud Engineering Inc. V. Secure Energy Services Inc. Et Al, <u>T-89-</u> <u>18</u>	Patent Category: Wellbore and OilDrilling Fluid And Methods of Use Thereof (2508339)Bitumen Anti-accretion Additive (2704101)Process for Disruption of Filter Cakes (2560939)Methods Of Consolidating Formations Or Forming Chemical Casing Or Both While Drilling (2487953)A System and Method for Creating, Executing and Maintaining Cross-Enterprise Processes (2275190)	 Patent Infringement action Decisions and appeals: <u>2020 FC 1049</u> – motion to determine jurisdiction to decide ownership of patents <u>2022 FC 943</u> – motion for summary trial to decide ownership of patents;

Mixed Surfactant And Hydrophobically-Modified Polymer Compositions (2235888)	appeal decision pending <u>A-</u> <u>177-22</u> and <u>A-136-22</u>
Silicate-Containing Additives for Well Bore Treatments and Associated Methods (2594208)	 <u>2023 FC 770</u> – decision on costs
Drilling Fluid Composition Comprising Hydrophobically Associating Polymers and Methods Of Use Thereof (<u>2635300</u>)	
Surfactant-Polymer Composition For Substantially Solid-Free Water Based Drilling, Drill-In, And Completion Fluids (<u>2470241</u>)	
Emulsified Polymer Drilling Fluid and Methods of Preparation and Use Thereof (2451585)	
Quaternary Nitrogen Containing Amphoteric Water Soluble Polymers and Their Use in Drilling Fluids (2268734)	
Well Bore Servicing Fluids Comprising Thermally Activated Viscosification Compounds And Methods Of Using The Same (2556367)	
Silicate Drilling Fluid Composition Containing Lubricating Agents and Uses Thereof (<u>2645943</u>)	
Water Based Wellbore Fluids (2377504)	
Wellbore Fluid (<u>2656294</u>)	
Water-Based Polymer Drilling Fluid And Method Of Use (2624834)	
Oil and Gas Production Optimization Using Dynamic Surface Tension Reducers (2397040)	

29. Canadian Energy Services L.P. v. Secure Energy Services Inc. et al, <u>T-209-18</u>	Compositions and Methods To Control Fluid Loss In Surfactant-Based Wellbore Service Fluids (2439364) Drilling Fluid Containing Microspheres and Use Thereof (2495841) Thickener for Aqueous Systems (2330971) Parties : Drilling fluid company and environmental and energy infrastructure company. Patent Category: Oil Water-Based Polymer Drilling Fluid and Method of Use (2624834)	Length of Proceeding: Statement of Claim: January 16, 2018 Appeal heard: June 20, 2023 Ongoing patent infringement action
	Parties : Drilling fluid service company and environmental and energy infrastructure company.	Length of Proceeding: Statement of Claim: February 5, 2018
30. Maoz Betser- Zilevitch v. Canadian Natural Resources Ltd.,	Patent Category: Oil System and Method for Steam-Assisted Gravity Drainage (Sagd)-Based Heavy Oil Well Production (2584627)	Discontinued patent infringement action
<u>T-630-18</u>	Parties: Individual non-practising entity and oil and natural gas company	Length of Proceeding: Statement of Claim: April 3, 2018

		Discontinuance: February 21, 2020
31. Renown Down Hole Solutions Inc. v. Wellfirst LP, <u>T-1091-18</u>	Patent Category: WellboreMethod and Apparatus for Installing a Liner and Bridge Plug(2886440)	Discontinued patent infringement action
	Parties : Down hole tools manufacturer and technical oilfield service company	Length of Proceeding: Statement of Claim: June 7, 2018 Discontinuance; July 12, 2019
32. Maoz Betser- Zilevitch v. Petrochina Canada Ltd., <u>T-</u> <u>1158-18</u>	Patent Category: Oil System and Method for Steam-Assisted Gravity Drainage (Sagd)-Based Heavy Oil Well Production (2584627)	Patent infringement action Decisions and appeals: • 2021 FC 85 – decision on infringement • 2021 FC 151 – decision on costs • 2021 FC 76 – security for costs • 2022 FCA 162 – appeal of both FC decisions
	Parties : Individual non-practising entity and Oil and Gas Company	Length of Proceeding: Statement of Claim: June 14, 2018

		Appeal Judgment: September 28, 2022
33. PCS Ferguson Canada Inc. v. T- Ram Canada Inc., <u>T-1164-18</u>	Patent Category: Gas Liquid Aeration Plunger (2546104)	Discontinued patent infringement action
	Parties: Plunger lift company and well master company	Length of Proceedings: Statement of Claim: Jun 15, 2018 Notice of Discontinuance: November 21, 2019
34. NCS Multistage Inc. v. Kobold Corporation, et al, <u>T-1420-18</u>	Patent Category: Downhole, Fracturing, WellboreDownhole Tool Assembly with Debris Relief, and Method for Using Same (2693676)Fracturing valve (2820704)Downhole Tool Assembly with Debris Relief, and Method for Using Same (2749636)Downhole Tool Assembly with Debris Relief, and Method for Using Same (2843619)Tools and Methods for Use in Completion of a Wellbore (2766026)Tools and Methods for Use in Completion of a Wellbore (2738907)Downhole Tool Assembly with Debris Relief, and Method for Using Same (2820652)Parties: Downhole tool systems technology companies	Ongoing patent infringement actionDecisions and appeals:•2021 FC 1395 – appeal of motion to amend pleadings and a motion to amend documents (appeal of this decision discontinued A- 353-21)•2023 FC 1486 – decision on infringement, appeal pending A-309-23•Heard with T-567-20

		Statement of Claim: July 24, 2018
35. NuWave Industries Inc. v.	Patent Category: Wellbore	Patent infringement action
Trennen Industries Ltd., <u>T-767-18</u>	Ultra High Pressure Hydraulic Sublevel Pipe Cutter (<u>2757675</u>)	 Decisions and appeals: <u>2020 FC 867</u> – motion for default judgment dismissed <u>2021 FC 250</u> – motion for default judgment granted
	Parties: Industrial hydro-cutting and cold-cutting companies	Length of Proceeding: Statement of Claim: April 25, 2018
	2019	
36. Renown Down Hole Solutions Inc. v. Tier 1 Energy Solutions, Inc.,	Patent Category: Wellbore Method and Apparatus for Installing a Liner and Bridge Plug (<u>2847780</u>)	Discontinued patent infringement action
<u>T-1439-19</u>	Parties : Down hole tools manufacturer and oil and gas service, technology, equipment and personnel provider for the Oil and Gas Industry	Length of Proceeding: Statement of Claim: August 30, 2019 Discontinuance: April 8, 2021
37. Fluid Energy Group Ltd. v. Exaltexx Inc. et al, <u>T-1645-19</u>	Patent Category: WellboreSynthetic Acid Compositions Alternatives to Conventional - Acids for Use in the Oil and Gas Industry (2961783)	Dismissed patent infringement action Decisions:
	Synthetic Acid Compositions and Uses Thereof (2892875)	

	Synthetic Acid Compositions Alternatives to Conventional Acids in the Oil and Gas Industry (2961792) Using Synthetic Acid Compositions as Alternatives to Conventional Acids in the Oil And Gas Industry (2892876) Synthetic Acid Compositions Alternatives to Conventional Acids in the Oil and Gas Industry (2961794) Novel Modified Acid Compositions as Alternatives to Conventional Acids in the Oil and Gas Industry (3006476) Using Synthetic Acid Compositions as Alternatives to Conventional Acids in the Oil and Gas Industry (2974757) Synthetic Acid Compositions Alternatives to Conventional Acids in the Oil and Gas Industry (2974757) Synthetic Acid Compositions Alternatives to Conventional Acids in the Oil and Gas Industry (2961777) Synthetic Acid Compositions Alternatives to Conventional Acids in the Oil and Gas Industry (2961787) Parties : Developer and manufacture off chemical systems and oilfield chemicals supplier and manufacturer	 <u>2020 FC 81</u> – motion for interlocutory injunction preventing the Plaintiff from sending further cease and desist letters <u>2020 FC 299</u> – decision on costs for motion Length of Proceeding: Statement of Claim: October 8, 2019 Dismissal: June 15, 2021
38. Fluid Energy Group Ltd. v. Iron Horse Chemicals Ltd., <u>T-1702-19</u>	Patent Category: WellboreSynthetic Acid Compositions Alternatives to Conventional Acids in the Oil and Gas Industry (2961787)Using Synthetic Acid Compositions Alternatives to Conventional Acids in the Oil and Gas Industry (2892876)	Dismissed patent infringement action

	Synthetic Acid Compositions Alternatives to Conventional Acids in the Oil and Gas Industry (2961777) Parties : Developer and manufacture off chemical systems and chemical company for oil and gas production	Length of Proceeding: Statement of Claim: October 17, 2019 Discontinuance: November 30, 2020
	2020	
39. Frac Shack Inc. et al. v. Kva Fuel Services Ltd., <u>T-</u> <u>415-20</u>	Patent Category: Fracturing Fuel Delivery System and Method (2693567)	Discontinued patent infringement action
	Parties : Fuel Delivery System Company and Fuel Distribution System Company	Length of Proceeding: Statement of Claim: March 24, 2020 Discontinuance: November 8, 2022
40. Kobold Corporation et	Patent Category: Wellbore	Ongoing patent infringement action

al. v. NCS Multistage Inc., <u>T-451-20</u>	Tension Release Packer for a Bottomhole Assembly (2919561)	 Decisions and appeals: 2021 FC 742 – motion to file reply evidence 2021 FC 1257 – costs on above motion 2021 FC 1437 – motion for summary judgment (granted in part) 2023 FC 11 - appeal of pleadings amendment motion 2024 FC 286 – appeal of motion to compel
	Parties : Downhole tool systems technology company and oilfield services company.	Length of Proceeding: Statement of Claim: April 6, 2020
41. NCS Multistage Inc. v. Promac Industries Ltd., <u>T-567-20</u>	Patent Category: Fracturing, Downhole, WellboreFracturing Valve (2820704)Downhole Tool Assembly with Debris Relief, and Method for Using Same (2749636)Downhole Tool Assembly with Debris Relief, and Method for Using Same (2843619)Downhole Tool Assembly with Debris Relief, and Method for Using Same (2820652)	Ongoing patent infringement actionDecisions and appeals:•2021 FC 1395 – appeal of motion to amend pleadings and a motion to amend documents (appeal of this decision discontinued A- 353-21)

	Tools and Methods for Use in Completion of a Wellbore (2766026) Downhole Tool Assembly with Debris Relief, and Method for Using Same (2693676) Tools and Methods for Use in Completion of a Wellbore (2738907)	 <u>2023 FC 1486</u> – decision on infringement, appeal pending A-309-23 Heard with T-1420-18
	Parties: Oilfield Services Company and Tool Manufacturer	Length of Proceeding: Statement of Claim: May 21, 2020
42. Frac Shack Inc. et al. v. Fas Fuel Automation Station Canada	Patent Category: Fracturing Fuel Delivery System and Method (<u>2693567</u>)	Discontinued patent infringement action
Limited, <u>T-1053-</u> <u>20</u>	Parties : Fuel Delivery System Company and Fluid Automation Company	Length of Proceeding: Statement of Claim: September 9, 2020
		Discontinuance: October 5, 2020
43. Steelhead LNG (ASLNG) Ltd et	Patent Category: Gas	Patent infringement action
al. v. Seven Gens Energy Ltd, Rockies LNG Et Al, <u>T-1488-20</u>	Liquefaction Apparatus, Methods, and Systems - (<u>3027085</u>)	 Decisions and appeals: <u>2022 FC 756</u> – motion to add defendant, filed an amended statement of
		claim and to compel production of a further and

		 better affidavit of documents <u>2022 FC 998</u> – motion for summary trial (granted) <u>2023 FC 1684</u> – counterclaim challenging the validity of the 085 patent, appeal pending A-361-23 <u>2024 FCA 67</u> – appeal affirming 2022 FC 998
	Parties : Liquified natural gas companies, low supply-cost energy producer;	Length of Proceeding: Statement of Claim: December 9, 2020
44. Secure Energy (Drilling Services) Inc. v. Canadian Energy Services L.P. et AI, <u>T-1534-20</u>	Patent Category: Wellbore Drilling Fluid And Methods of Use Thereof (2508339) Water-Based Polymer Drilling Fluid and Method of Use (2624834)	 s. 52 application Decisions: <u>2021 FC 1169</u> – application for declaration of inventorship <u>2023 FC 906</u> – application to correct inventorship and ownership

	Parties : Drilling fluid service company and environmental and energy infrastructure company.	Length of Proceeding: Notice of Application: December
		18, 2020
	2021	
45. Flowchem LLC v. Liquidpower	Patent Category: Oil	Ongoing patent impeachment action
Specialty Products Inc., <u>T-</u>	Drag Reduction of Asphaltenic Crude Oils (<u>2657755</u>)	
<u>786-21</u>	Parties: Both suppliers of Drag Reducing Agents.	Length of Proceeding:
		Statement of Claim: May 12, 2021
46. Maoz Betser- Zilevitch v. Canadian Natural Resources Ltd., T-919-21	Patent Category: Oil System and Method For Steam-Assisted Gravity Drainage (Sagd)-Based Heavy Oil Well Production (2584627)	Discontinued patent infringement action
	Parties: Individual non-practising entity and oil and natural gas company	Length of Proceeding: Statement of Claim: June 9, 2021
		Discontinuance: October 24, 2023
47. Liquidpower Specialty	Patent Category: Oil	Ongoing patent infringement action
Products Inc. v. Baker Hughes	Drag Reduction of Asphaltenic Crude Oils (<u>2657755</u>)	
Canada Company et al.,	Parties: Pipeline drag reduction company and energy technology company.	Length of Proceeding:
<u>T-1429-21</u>		Statement of Claim: September 20, 2021
	2022	

48. T-Rock Ct Serves Ltd. V. Xtreme Oilfield Technology Ltd., T-629-22	Patent Category: Downhole Mobile Cement Mixing And Delivery System for Downhole Wells (<u>3077905</u>)	Ongoing patent infringement action
	Parties: Delivery of Oil and Gas Services Company and Company that provides multiple trailer vac services to oilfields and sites	Length of Proceeding: Statement of Claim: March 22, 2022
49. Dean Schlosser v. Enbridge Pipelines Inc., <u>T-</u> <u>907-22</u>	Patent Category: Pipeline Method and Apparatus for Pushing a Dual Diameter Pig into a Pipeline (2516575)	Discontinued patent infringement action
	Parties: President of Welding Company and Pipeline and Energy Company	Length of Proceeding: Statement of Claim: April 27, 2022 Discontinuance: June 20, 2022
50. Dean Schlosser v. Enbridge Pipelines Inc., <u>T-</u> <u>1268-22</u>	Patent Category: Pipeline Method and Apparatus for Pushing a Dual Diameter Pig into a Pipeline (2516575)	Discontinued patent infringement action
	Parties: President of Welding Company and Pipeline and Energy Company	Length of Proceedings: Statement of Claim: June 15, 2022 Discontinuance: November 28, 2023

51. Canyon Rigging Inc. et Al. v. Northern Metalic Sales Ltd. et Al., <u>T-1973-22</u>	Patent Category: PipelineFlowline Restraint Method (2957167)System for Treating Uniform Objects and a Differential Gear for Such System (866606)	Discontinued patent infringement action
	Parties: Rigging Equipment Manufacturer and Industrial Supply Company	Length of Proceeding: Statement of Claim: September 27, 2022 Discontinuance: January 8, 2024
	2023	
52. Reflex Instrument North America Limited v. Globaltech Corporation Pty Ltd., <u>T-410-23</u>	Patent Category: DownholeCore Sample Orientation System, Device and Method(2806885)Lockable Core Barrel Head for Drilling System and SurveyInstrument Assembly Provided with a Connection Link for Arrangement in a Drilling System (2779932)	Discontinued patent impeachment action
	Parties: Sub-surface intelligence solutions company and manufacturer of tools and technologies for exploration drilling	Length of Proceeding: Statement of Claim: March 8, 2023 Discontinuance: February 20, 2024
53. Steelhead LNG (ASLNG) Ltd. et al. v. Cedar LNG	Patent Category: Gas Liquefaction Apparatus, Methods, and Systems (<u>3027085</u>)	Ongoing patent infringement action

Partnership LP et al., <u>T-1420-23</u>	Parties: Liquified Natural Gas Project Development Companies	Length of Proceeding: Statement of Claim: July 10, 2023
54. Globaltech Corporation Pty Ltd. v. Reflex Instrument North	Patent Category: Downhole Optional Device for Use with Downhole Equipment (2843191)	Ongoing patent infringement action
America Ltd. et al, <u>T-903-23</u>	Parties: Manufacturer of tools and technologies for exploration drilling and sub-surface intelligence solutions company	Length of Proceeding: Statement of Claim: April 28, 2023
55. Impulse Downhole Solutions Ltd. v. Challenger Downhole Tools Inc., <u>T-2606-23</u>	Patent Category: Downhole and WellboreFlow Controlling Downhole Tool (2872736)Lateral Drilling Method (2994473)	Ongoing patent infringement action
	Parties : Well Solutions Company and Downhill Drilling Supplier Company	Length of Proceeding: Ongoing. Statement of Claim: November 28, 2023

FEDERAL COURT PATENT INFRINGEMENT/VALIDITY DECISIONS [2014-May	21, 2024]
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- 1. Excalibre Oil Tools Ltd. V. Advantage Products Inc., 2016 FC 1279.
- 2. Frac Shack Inc. v. AFD Petroleum Ltd., 2017 FC 104.
- 3. Packers Plus Energy Services v. Resource Well Completion Technologies, 2017 FC 1111.
- 4. Frac Shack Inc. v. AFD Petroleum Ltd., 2018 FC 1047.
- 5. Grenke v. DNOW Canada ULC, 2018 FC 564.

6. Aux Sable Liquid Products LP v. JL Energy Transportation Inc., 2019 FC 581.

7. Western Oilfield Equipment Rentals Ltd., v. M-I LLC, 2019 FC 1606.

8. NuWave Industries Inc. v. Trennen Industries Ltd., 2021 FC 250.

9. Swist v. MEG Energy Corp., 2021 FC 10.

10. Betser-Zilevitch v. Petrochina Canada Ltd., 2021 FC 85.

11. Kobold v. NCS Multistage Inc., 2021 FC 1437.

12. Mud Engineering Inc. v. Secure Energy (Drilling Services) Inc., 2022 FC 943.

13. Steelhead LNG (ASLNG) Ltd. V. ARC Resources Ltd., 2022 FC 998.

14. Steelhead LNG (ASLNG) Ltd. v. ARC Resources Ltd., 2023 FC 1684.

15. NCS Multistage Inc. v. Kobold Corporation, 2023 FC 1486.

FEDERAL COURT OF APPEAL PATENT INFRINGEMENT/VALIDITY DECISIONS [2014- May 21, 2024]

- 1. Zero Spill Systems (Int'l) inc. v. Heide, 2015 FCA 115.
- 2. Ciba Specialty Chemicals Water Treatments Limited v. SNF Inc., 2017 FCA 225.

3. AFD Petroleum Ltd. v. Frac shack Inc. and Frac Shack International Inc., 2018 FCA 140.

4. Packers Plus Energy Services Inc. v. Essential Energy Services Ltd., 2019 FCA 96.

- 5. Dnow Canada ULC v. Estate Grenke, 2020 FCA 61.
- 6. Western Oilfield Equipment Rentals Ltd. v. M-I L.L.C., 2021 FCA 24.

7. Swist v. MEG Energy Corp., 2022 FCA 118.

8. Maoz Betser-Zilevitch v. Petrochina Canada Ltd., <u>2022 FCA 162</u>.

9. Steelhead LNG (ASLNG) Ltd. v. Arc Resources Ltd., 2024 FCA 67.