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Q&A with SRK

SRK's Christina James on water, risk and regulation

BY NORTHERN MINER STAFF

The Northern Miner's video host Devan Murugan spoke with Christina James, president of SRK Canada and principal water resources engineer, at SRK's Toronto office about water balances, regulation, independence and how the firm is approaching AI.

Devan Murugan: SRK has built a strong reputation in water management and modelling. For someone outside the technical side, what is a water balance and why does it matter?

Christina James: A water balance is an accounting of how water moves through and is stored at a mine site. It looks at where water comes from, whether from precipitation or groundwater and how the operation uses it.

At many sites, water supply and demand do not line up. There can be too much water at one point and too little at another, whether for processing or other uses. A water balance helps identify those gaps so operators can manage excess water safely and make sure they have enough supply when they need it.

DM: Mining companies are facing more scrutiny around water from regulators, investors and communities. How has that changed SRK's work?

CJ: The scrutiny is definitely rising and we see it in permitting timelines and in how communities view a project's potential effects. But it has not changed the core of our work. We have always taken mine water management seriously and done detailed studies.

What has changed is the context. Water is now part of a broader set of environmental concerns. Climate change, tailings dam safety and biodiversity are more closely tied to water management, so the pressure around water is part of a much wider set of expectations.

DM: When a mining company approaches SRK, what does that engagement usually look like?

CJ: It depends on what the client needs, but we spend a lot of time upfront defining the problem. Clients often come to us with complex, cross-disciplinary challenges that are not straightforward.

Sometimes the answer is a conventional study, such as a preliminary economic assessment or a prefeasibility study. Often it calls for a more tailored investigation or a custom design. We focus on matching the solution to the problem and in some cases that work reaches into research and development when the challenge is especially specific or technical.

DM: SRK works across Canada and internationally. How does regulation shape that work?

CJ: Regulation does not change the underlying risk at a project, but it does change what we have to show and how we show it. In British Columbia, where I do much of my work, the regulatory system is sophisticated and quantitative. Regulators have deep technical experience and expect a high level of detail.

Over time, that has pushed innovation inside both the regulatory system and the industry. It has forced better methods and stronger ways to show that a project can be managed responsibly.

DM: SRK often stresses its independence. Why does that matter?

CJ: Independence is central to how we work. Clients come to us for technical rigour, but also because we are independent. We are not tied to outside investors, particular technologies or preferred solutions. That lets us focus on what fits a project technically.

That independence has helped us build trust with clients and regulators. It does not happen overnight. It comes from applying the same standard consistently across many projects.

DM: You also work with governments and regulators, not just mining companies. What does that involve?

CJ: We do a significant amount of work for governments and regulators. That can mean serving as a technical adviser after a major incident or helping review permit amendments and other technical applications.

That work helps us too. It gives us a clearer view of what regulators need to make decisions and manage risk on behalf of the public. That perspective makes us better advisers to our industry clients because we understand both sides of the process.

DM: What kind of people are drawn to this work and to SRK more broadly?

CJ: The breadth of the work is a big draw. Consulting gives people exposure to a wide range of projects and multidisciplinary teams, so they keep learning



Christina James, president of SRK Canada and principal water resources engineer, speaks with The Northern Miner's video host Devan Murugan. THE NORTHERN MINER

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— CHRISTINA JAMES, PRESIDENT OF SRK CANADA AND PRINCIPAL WATER RESOURCES ENGINEER,

while still building depth in their own discipline.

SRK is employee-owned, which matters. It gives people a sense of ownership in the work and more freedom to shape their careers, whether that means choosing projects that interest them most or focusing on work they think has broader impact.

DM: The industry is changing, with rising environmental expectations, shifting regulation and now AI. From your perspective, what will matter most?

CJ: We are watching AI closely. We have already rolled out internal tools so our teams can test where the technology adds value. At the same time, we are careful about confidentiality, not just externally but between projects. We have systems to make sure data does not move in ways that could compromise that.

We also have quality controls to make sure our work meets our standards and the industry's. It has been interesting to see what people can do with these tools. In one sense it is new, but it also fits SRK's long-standing culture of learning and experimentation.

DM: When you look across the projects SRK works on globally, what water risks do mining companies still underestimate?

CJ: Mines usually do a reasonable job of identifying short- and medium-term water risks. The longer-term risks, especially those tied to closure, often get less attention. That is partly because there is more uncertainty the farther out you look, and because mine plans tend to change over time.

Still, there is real value in building a conceptual closure water management plan early, with a defined end land use and an overall strategy. It gives operators and regulators a clearer view of closure liabilities, when there is still flexibility to integrate water management into the broader mine plan. It can support progressive reclamation during operations and leave a site better prepared if an unplanned or early closure happens. Where we have helped clients develop those plans early in a mine's life, we have then refined them as the mine plan evolved.

DM: Environmental management and mine development are often framed as competing goals. Is the industry getting better at integrating them?

CJ: Yes, I think it is. Many mining companies understand that if they do not get the environmental side right, or as right as they can, they are unlikely to have a viable project. We are seeing environmental

and social considerations built into mine design much earlier, rather than added at the end.

The progress is not uniform, but the direction is clear. The industry is moving toward real integration instead of treating development and environmental performance as competing priorities. When we help clients develop mine plans, we use multidisciplinary teams and treat water, waste and closure risks as design constraints. That can change mine layouts, waste placement, waste design and overall water strategy, but it often leads to solutions that meet both mining and environmental goals.

DM: What key lessons from your career would you share with young professionals entering the mining sector?

CJ: I came into mining by luck. It was not on my radar when I was in school, and I am very glad I found it. The first lesson is to look for work you genuinely like doing. We spend a large part of our lives at work, and while no job is enjoyable every minute of every day, it is worth finding one that gives you both interest and purpose.

The second is to protect your focus. If your attention is split too many ways, it becomes much harder to achieve the bigger goals that matter most.

The third is to understand that stress and excitement often come together. Mining has been a very interesting and rewarding career for me, but the excitement has often come with pressure. It helps to see those two things as part of the same experience.

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