



HEAVY METAL

EARTH'S MINERALS AND THE FUTURE OF SUSTAINABLE SOCIETIES

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in the conception and creation of the *Heavy Metal Suite* has come away with a new perspective about the foundational elements needed to support society's renewable energy transition. We hope that the work will open a broad global conversation, and inspire listeners to think differently about the future of Earth's mineral resources.

Diloo

T. Patrick Carrabré

I was born Ronald Joseph Nault. My other family names include Bruneau, Elémond, Racette, Landry and Lagimodière. These names all have deep roots in the unique Indigenous culture that developed in the Red River region, before it became Manitoba, a province in what is now known as Canada. My people have been known as *Otipemisiwak* (those who rule themselves), *Bois-Brûlé* (burnt wood) and, more recently, as Métis. I am a survivor of the Sixties Scoop, a mass removal of Indigenous children into the Canadian child welfare system. Along the way, I have been processed and refined through the colonial education system, studying the practices of Western art and music. But since being reclaimed by my community, I have embarked on a voyage of unlearning, trying to craft an identity that reflects the complexity of my personal truth.

I grew up near the waters of the Red River, which, along with the Assiniboine and the Winnipeg Rivers, helped define my relationship to the land. I'm now a guest in xwməθkwəy'əm (Musqueam) territory, where I can look out each day at the stal'əw' (the Fraser River) and the Salish Sea. Water means many things to Indigenous peoples. Not only is it a source of food and an avenue for transportation, it is also an integral component of many ceremonies.

Canada has more available fresh water than any other country on Earth, and Canadians are the second-highest consumers of freshwater after the United States.

Yet, access to water is not equal across the country. Like other natural resources, water has been commodified; it is bought and sold, bottled for drinking in plastic containers, harnessed for the generation of electric power, and used in manufacturing and mining. Water can produce great profits for some, while others lack basic access to this resource. Today, a significant number of First Nations communities in Canada cannot drink their tap water; they are deprived of a fundamental human right defined by the United Nations. Future generations will likely experience growing pressure on their fresh water supplies as a result of climate change and pollution.

In recent years, I have been drawn to a number of musical projects that connect to water, including my compositions *100,000 Lakes*, *Snewíyálh tl'a Stakw* (*Teachings of the Water*) and *Clear Lake*. In the *Heavy Metal Suite*, *Diloo*, which means water in our Michif language, opens and closes the larger musical work, setting the stage for the exploration of the future of minerals and mining. Water is critical for mineral resource extraction, and the impacts of mining on water, often on Indigenous lands, are among its most significant environmental harms. The catastrophic failure of the Mount Polley tailings dam in northern British Columbia provides a particularly vivid example of this.

In writing *Diloo*, I was inspired by the many forms that water can take, as well as its seemingly infinite flexibility. Water can be soft yet powerful. It can move slowly and quickly, flowing, rushing or falling, lightly or with incredible power. Since water can take so many different forms, I wanted to reflect a range of feelings within this short movement. There are some passages that try to capture the grandeur of nature, and others that push the music forward like a rushing stream. There is harmony and dissonance, comfort and disturbance—all the things that make a piece of music (and life) interesting. This is territory where I feel right at home, as my life has been defined by a similar binary. I was taken from my family and have now been reclaimed.

I chose to start with calm. Growing up near water, I have always felt the beauty of its seeming stillness, and I can feel myself relax looking out on a placid expanse of water. I also grew up playing the trombone (alongside piano and voice), and this has given me a very personal and physical connection to the sound of brass instruments.

Like the stillness of water, the flow of breath and sustained musical tones take me to a meditative space. *Diloo* begins with these long tones, building a tight pyramid that slowly expands, like flowing water, to fill the musical space. As the music unfolds, you may hear descending motion, a reflection of the gravitational flow of water down the Coast Mountains near my home in Vancouver. This water falls as snow in the mountains and flows towards the sea through our rivers. The cycle is an integral part of life in a temperate rainforest.

I was inspired by this project, and most of this music came out of me rather quickly. It wasn't until more than half of the piece was completed that I received Augusta Read Thomas's *conductivity* motif. I was truly amazed at how well it blended into the music that I had already created; not only her musical ideas, but even the pitch content. I was able to place the conductivity motif exactly as written into the unfolding water movement, and this turned my mind to other themes of the *Heavy Metal Suite*, including the legacies of colonialism, capitalism and consumption, and the importance of recycling and circular economies.

As I enter into the later, more 'mature' stages of my career, I find myself returning to musical ideas that appeared earlier in my compositional work. This form of musical reuse and repurposing runs contrary to my modernist training, which called for each new piece to be autonomous and self-referential, perhaps reflecting the colonial hunger (and thirst) for an ever-expanding world. As I work to unlearn certain components of my education, I try to embrace the value of multiple musical truths, reflecting perspectives that are historical, Indigenous, popular and, at times, uniquely personal. I hope to let the music flow from me, creating sounds that serve as a point of intersection for complex ideas, like humanity's evolving relationship with water. Water can take on an almost infinite variety of shapes, adapting to its surroundings and flowing around obstacles. By comparison, societies are less adaptable. But like the unexpected power of water, humanity has an amazing capacity for survival. I hope this work will help us re-imagine a future where we are in harmony with Earth and each other.