

# THE CASE OF RARE EARTH ELEMENTS



## ***Producers Group: You are an Assistant Manager of a Metal Mining Company in Brazil***

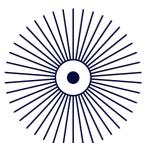
### **Your Background and Biography**

You're a 20-something member of one of the richest families in Brazil, hungry to prove yourself in the family business. In the 1950s your grandparents developed a niobium mine and a company to sell this obscure metal. Back then niobium was not used for much. Your family's company had to figure out how to produce niobium affordably and convince customers to buy it. Before long, metallurgical research—some conducted by the company itself—revealed that a pinch of niobium (just 0.05%) could make steel stronger and lighter while also raising its heat resistance. Niobium became important for building ships, pipelines, and offshore oil rigs during the 1980s. By reducing production costs and experimenting with new steel alloys that used greater proportions of niobium, your company quadrupled sales between 1990 and 2010.

Your family is proud of how the company has benefited the community of people living around its mine and metal production facilities. While pollution spills do occur, your firm is committed to following the best practices in the mining industry. For instance, the company achieved the ISO 14001 Environmental Management System Certification in 1997 and an OHSAS 18001 Health and Safety Management System Certification in 2002. In short, you are as good as it gets in the world when it comes to responsible mining.

Niobium is not itself a rare earth metal. But when rare earth prices spiked during the 2010 crisis, your company decided to start producing rare earths too. Your company has long known that there are rare earth elements present in the niobium ore. Instead of digging ore out of fresh ground, you could reprocess the tailings left over from niobium mining and turn waste into "gold" (well, at least valuable rare earth metals). Even as rare earth prices came down, you bet that some manufacturers would be willing to pay a premium for responsibly produced rare earths that did not come from China. After investing some \$450 million during 2012 and 2013, your company now produces some of the "greenest" rare earth metals in the world.

But all that work has not paid off. After the World Trade Organization invalidated China's efforts to control its exports in 2012 and rare earths supply once again ballooned, concerns about sustainability and national security were mostly forgotten. There is not



serious demand from manufacturers or enough clamor from consumers to really support a profitable market in responsibly produced rare earths.

So your family has sent you to this negotiation hoping to spark a new movement that might support responsible production. Just as your family had to do 60 years ago, you will have to convince customers to buy what you have to sell. In the negotiation you want manufacturers and activist groups to push consumers to request sustainably produced products. You also want to make sure the Sustainability Seal requires very high environmental and local health protections, which you already meet, so that less scrupulous producers cannot be certified without meeting truly high standards.

## Your Mission

Your goal at this hearing is to convince the Stewardship Council to include the Producers Group's recommendations in its final Sustainability Seal guiding values. To make this argument effectively, you must do the following:

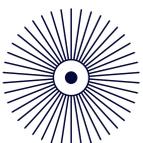
- Complete the assigned readings listed at the bottom of this page.
- Work closely with the other members of your group to develop clear answers to the Stewardship Council's questions.
- Use as much specific information as possible to develop strong arguments for your position that the price of sustainably certified rare earth metals needs to cover the true cost of production and environmental protection, and investment in innovative production methods should be promoted to reduce social and environmental harms.
- Read as much as you can about your position and the positions of the other groups.
- Complete written reflections on your character, interest group, and readings as assigned.

## Your Victory Objectives

- **You will receive 10 points** if the Stewards select your group's proposal as the final Sustainability Seal guiding values.
- The Stewards will rank the interest groups by how well their goals are represented in the final Sustainability Seal guiding values. **You will receive between 1 and 4 points** based on how the Producers Group is ranked and how well the Sustainability Seal guiding values reflect your goals.

## SOURCES

### Group Sources



- Producers Case Study: [“The Changing Geography of Rare Earth Element Production”](#)
- Ives, Mike. [“Boom in Mining Rare Earths Poses Mounting Toxic Risks.”](#) *Yale Environment 360*, January 28, 2013.

### Individual Sources

- de Freitas Paes, Caio. [“Niobium’s Silent Impact in Brazil.”](#) *Diálogo Chino*, April 5, 2019.
- Klinger, Julie Michelle. [Rare Earth Frontiers: From Terrestrial Subsoils to Lunar Landscapes](#). Ithaca, NY: Cornell University Press, 2017. (Read pp. 159–162, “Greener Rare Earths: Uncelebrated Breakthroughs in Brazil.”)
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### Suggested

- Abrahams, David S. *The Elements of Power: Gadgets, Guns, and the Struggle for a Sustainable Future in the Rare Metal Age*. New Haven, CT: Yale University Press, 2015. (Read pp. 38–46 on the Araxá Mine and CBMM.)

