

The Price of Gold

Voices and Stories from mining
affected communities

The monetary price of Gold is at
\$ 864 per ounce (= 28.35 grams)

Take a look at the TRUE cost of Gold ...

**The more you know,
the less gold glows.**



**dirty
gold**

Here some **Facts**:

- Large-scale industrial gold-mining is one of the world's dirtiest industries.
- Around the world, mining for gold takes an enormous toll on the health of the environment and communities.
- Massive open-pit mines generate staggering quantities of waste: 76 tons for every ounce of gold, on average.
- In other words, the production of one single simple gold ring generates 20 tones of mainly toxic waste.
- In some places, such as the United States, metals mining is the leading contributor of toxic emissions to the environment .

More Facts.....

- Mining has been linked to human rights violations and displacement of communities from their homes and livelihoods in Chile, Ghana etc.
- Open-pit gold mines obliterate the landscape (opening up vast craters, flattening or even inverting mountaintops) producing 8 to 10 times more waste than underground mining.
- Cyanide is used to separate gold from ore. Cyanide pollution is a major concern. A rice-grain sized dose of cyanide can be fatal to humans; concentrations of 1 microgram (one-millionth of a gram) per liter of water can be fatal to fish.
- 120,000 tons of toxic cyanide-laced waste spilled from the Baia Mare gold mine in Romania in 2000, contaminating the drinking water of 2.5 million people and killing 1,200 tons of fish.
- Metals mining employs 0.09 percent of the global workforce but consumes as much as 10 percent of world energy.
- Between 1995 and 2015, approximately half the gold produced worldwide has or will come from indigenous peoples' lands.
- Metals mining is the number one toxic polluter in i.e. the United States, responsible for 89% of arsenic releases, 85% of mercury releases, and 84% of lead releases in 2004.
- In the case of gold, the end product of most of this mining activity is jewelry, which accounts for as much as 80 percent of gold consumption.

Case Study 1: Grasberg Mine

Location: West Papua, Indonesia

Company: Freeport McMoRan Copper and Gold – USA

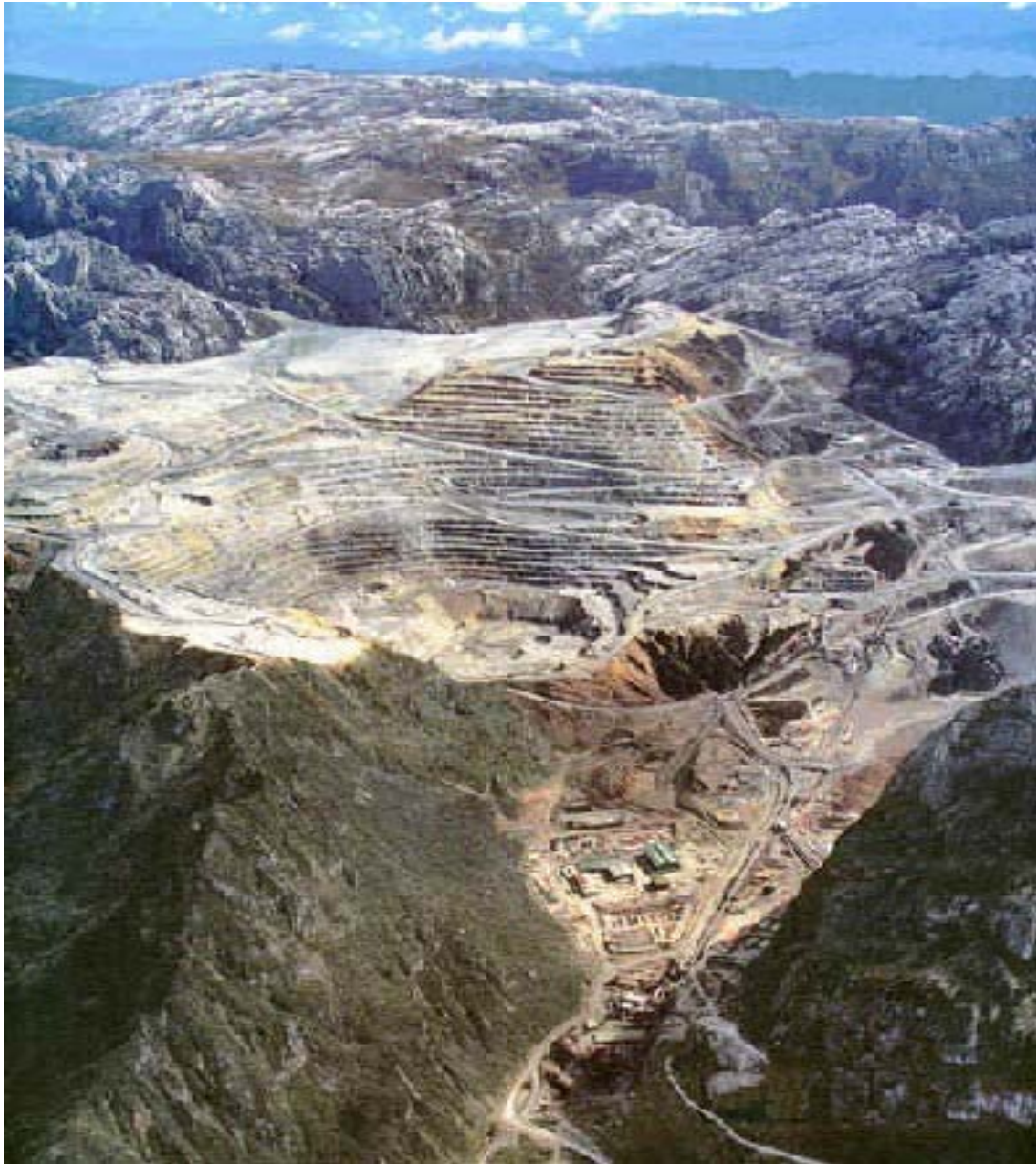


- The Grasberg Mine (which is jointly owned by Freeport McMoRan, the UK-based Rio Tinto and the Indonesian government) is the world's second largest gold-producing mining operation.
- The mine is set high in the Jayawijaya Mountains, in an area of great environmental and cultural sensitivity.
- The mining area is home to a number of indigenous groups, including the Amungme people on whose land the mine was built, and the Kamoro people whose land was appropriated for the lowlands tailings deposition area.
- The borders of the Lorentz National Park, a pristine rainforest that is a UN World Heritage Site and one of the most bio-diverse areas in the region, were moved to accommodate the mine.



Grasberg Mine – Satellite Image

- Grasberg has perhaps the worst human rights and environmental record in the modern mining industry.
- The mine generates a staggering amount of waste – 700,000 tons per day.
- The company has dumped an estimated one billion tons since the project began operation in the 1960s.
- It is estimated that the mine will produce 6 to 7 billion tons of waste in its lifetime. An Indonesian non-governmental organization called Indonesian Forum for Environment (Walhi) estimates that this could be the largest volume of waste produced by any single industrial activity in the world.
- The mine waste will destroy 90 square miles of wetlands downriver from the mine, and the tailings, which wash out of the river and into Arafura coastal waters, are affecting the estuaries of the Lorentz National Park.



Grasberg Mine

- Local indigenous communities have strongly protested the environmental degradation that has destroyed their traditional lands and livelihoods, for which they believe they have not been adequately compensated.
- To protect its operation, Freeport made payments to the Indonesian police and military (a reported \$20 million between 1998 and 2004), which both have a very poor human rights record.
- According to community records, 160 people were killed in the mine area and surroundings between 1975 and 1997.



- Freeport has consistently denied the severity of the human rights and environmental problems at Grasberg
- It has not complied with Indonesian environmental laws or heeded government orders to rectify legal breaches and reduce the impacts of the operation.
- Meanwhile, local anger and frustration has intensified, leading to violent protests in March 2006.



Image Source:<http://news.bbc.co.uk/2/hi/asia-pacific/4837360.stm>

Case Study 2: Yanacocha mine and Cortez mine

Locations: Northern Peru and Nevada, USA

Companies: Newmont and Barrick

- At Newmont's giant Yanacocha mine in northern Peru, local residents have staged massive protests against expansion of the mine (South America's largest goldmine) to Mount Quilish, a mountain that local communities believe is a significant source of water for the area and that also has cultural and historical significance.
 - The mountain had been declared a protected area by the local municipality in 2000.
 - In late 2004, thousands of local community members blockaded the main road leading to the mine, forcing the company to evacuate staff and suspend operations for a time.
 - Protests resumed in August 2006, when one activist was killed in a clash with police and continued in May 2007.
 - Ultimately, Newmont was forced to give up plans to expand to Cerro Quilish and issued a public statement saying it had not fully understood the degree of opposition to the expansion. The company's stock price fell by seven percent during the two-week period of protests.
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Yanacocha/ Peru

- In northern Nevada, Mount Tenabo has been the spiritual home of the Western Shoshone people for millennia.

- It also happens to be part of expansion plans for Barrick Gold's Cortez Goldmine.

- The Western Shoshone have pursued various legal means to protect the land from mining, including taking their case to international human rights bodies, which have called on the United States government to respect the full rights of this Native American community.

- These decisions are part of the growing realization that the most obvious environmental and economic costs of irresponsible mining on the lands of indigenous peoples may not be what hurt the communities most. Instead, the Western Shoshone and many other indigenous peoples believe that the desecration of sacred lands and sites is a deeper slight that threatens their continued cultural survival.

“In the past, our people experienced almost complete genocide, now we face the second half—a spiritual genocide from the destruction our lands and the sites that anchor our beliefs.” Carrie Dann, executive director of the Western Shoshone Defense Project

Case Study 4

Name: Akyem

Location: Ajenjua Bepo Forest Reserve, Ghana

Company: Newmont Mining.



- The Ajenjua Bepo Forest Reserve is one of Ghana last remaining forests.
- Newmont wants to blast an enormous open pit, measuring 1.65 miles long, a half mile across, and more than a quarter mile deep, inside the forest.
- If developed, Akyem would become the largest open-pit mine in the country.
- As a forest reserve, Ajenua Bepo has special status, and Ghana's leading environmental groups argue that these forest reserves should remain off-limits to mining.
- They point to the diversity of species that the reserve supports, in particular the 83 species of birds. A number of threatened and endangered species live in the reserve; including the Pohle's fruit bat, Zenkers's fruit bat, and Pel's flying squirrel.

- Communities living around the forest fear the mine will pollute their water sources.
- The controversy around Akyem is emblematic of the larger struggle to save Ghana's last remaining forests.
- Opponents of the mine point out that allowing Akyem to go forward could set the precedent for other mines to follow suit.
- Mining companies have identified at least five other forest reserves for mining development.

“For us here the forest reserve that Newmont wants to mine is far more important to us for its ecological values in the long term than for the short-term profit of this mining company,” says Akosua Nsia of the Yayaaso village.

Case Study 5

Name: Pasqua Lama Mine

Location: Northern Chile along the border with Argentina

Company: Barrick Gold Corporation



- Pasqua Lama Mine site is located in the arid, mountainous, northern Chilean region of Atacama along the Chile-Argentina border.
- It contains one of the largest untapped gold reserves in the world, with reserves of 17 million ounces of gold and 685 million ounces of silver.
- Reserves sit deep within the earth almost directly beneath three glaciers
- These serve as the water source for people living in the Huasco valley, a population of 70,000 of whom many are of the nationally-recognized Diaguita indigenous culture, which has existed there since around 4000 BC.
- Barrick Gold, the world's largest gold producer, originally planned to blast away the mountain and glaciers to create the vast open pit mine. In addition to disrupting the glacier water source, Barrick's use of cyanide will risk polluting the water that reaches the valley.

- Local communities depend on melt waters from those glaciers and the resulting streams and rivers in the otherwise arid climate.
- To mitigate damage to local community water sources, Barrick had planned to “relocate” the glaciers to a different slope. This plan, presented to the community without prior opportunities for input or presentation of an EIA, drew protest from local communities and environmental groups.
- The protest pushed the Chilean National Environment Commission (CONAMA) to re-assess the situation and re-approve a modified plan in February 2006, which stipulates “...the company shall only access the ore in a manner that does not remove, relocate, destroy or physically intervene the Toro 1, Toro 2, and Esperanza glaciers,” and the company must protect local flora and fauna and treat the waste it dumps.
- Barrick agreed to mine around the glaciers, sacrificing access 1.3 million ounces of gold.



- Barrick may have already damaged these glaciers. Barrick has built a road and several drill pads on top of the glaciers.

- In January, forty eight people, including seven foreigners, were arrested for their participation in a roadblock to prevent heavy trucks and mining machinery from traveling the road up to the mine. Upon their release, they returned to the roadblock. According to an update from OLCA, the peaceful roadblock will be maintained indefinitely.

- Yet the plans have been approved and Barrick is moving forward. According to Reuters, despite the roadblock and protests, Barrick intends to begin the expected three-year-long mine construction project in September of 2007.

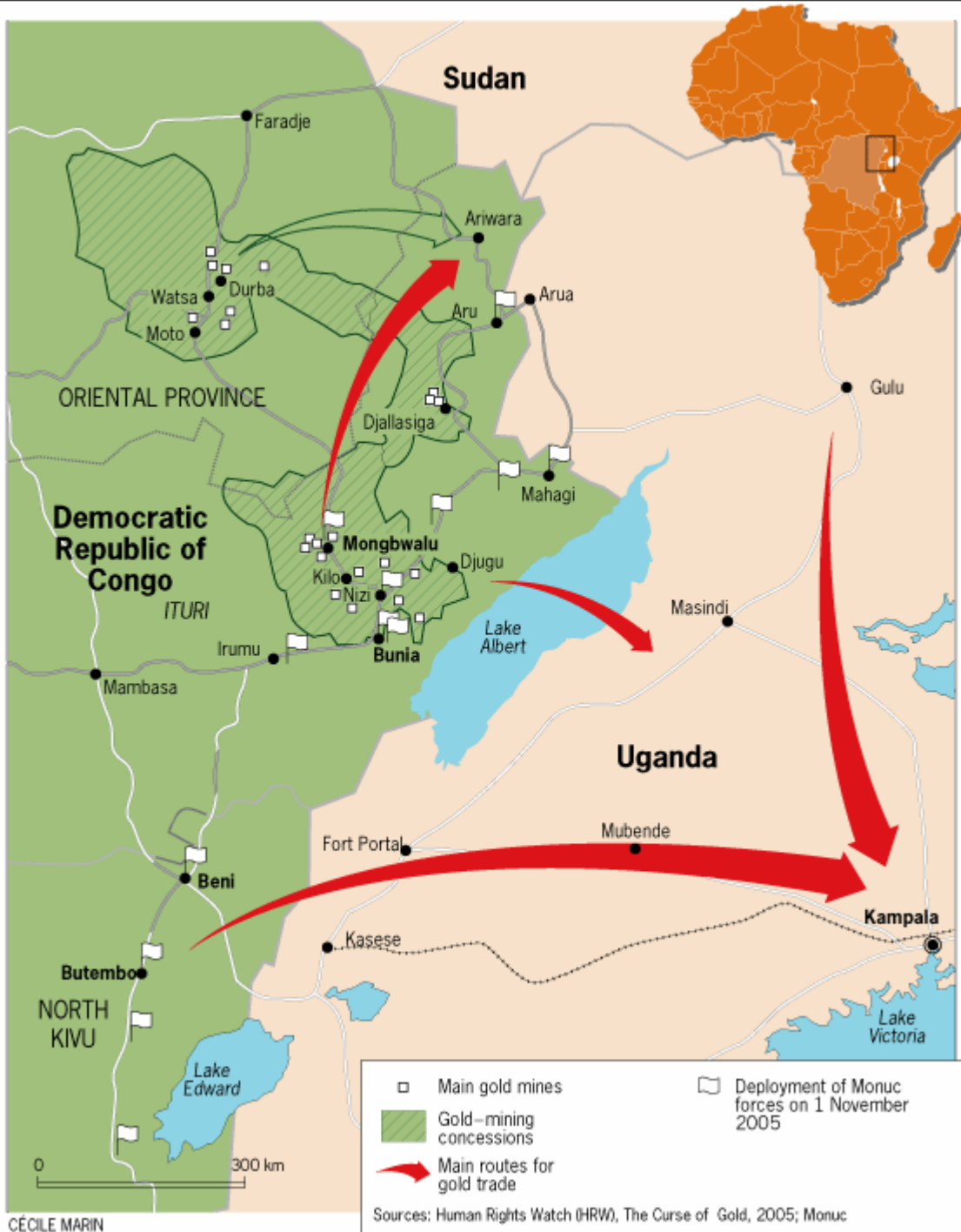
Case Study 6

Name: Mongbwalu Mine

Who: AngloGold Ashanti

Location: Ituri District, eastern Democratic Republic of the Congo

- The Mongbwalu Mine located in the Ituri district in the eastern Democratic Republic of the Congo (DRC), an area replete with diamond, gold and other mineral resources.
- Because of, the riches in the ground, the area has also been cursed by continuous war since the ousting of the dictator Mobutu in 1997. The area has been controlled by various rebel groups funded and driven by the area's rich resources. The diamonds and gold are typically smuggled over the border into Uganda where they are sold to finance the guerilla warfare.
- AngloGold Ashanti, a subsidiary of Anglo American, won the Mongbwalu concession in Ituri district in 1998, but large-scale, cross-border war waged in the DRC prevented the company from developing the project until 2003.
- Even after peace agreements - in 2003, the Nationalist and Integrationist Front (FNI) had *de facto* control over the community of Mongbwalu, which included AngloGold Ashanti's concession.



Source:
Le Monde Diplomatique

Title:
The pillage of former Zaire -
**Congo and Uganda: a
rush of gold**

December 2005

- In late 2003, AngloGold Ashanti began a relationship with the FNI that involved the exchange of financial and logistical support for access to its concession and the security of its staff. In fact, payments made to the FNI until October 2004, may have been a violation of U.N. Security Council resolution 1493, which ordered that “no direct or indirect assistance, especially military or financial assistance, [be] given to the movements and armed groups present in the DRC.”
- AngloGold Ashanti also made efforts to lobby United Nations staff on behalf of the FNI and to provide housing for group’s leader Flobribert Njabu, according to the Human Rights Watch report “The Curse of Gold”.
- Throughout the relationship with AngloGold Ashanti, the FNI was engaged in the “systematic extermination of people, civilians or otherwise, on the basis of their ethnic identity”, according to Amnesty International.
- At least 2000 civilians died in clashes between FNI and other armed groups as they struggled for control of Mongbwalu and its assets between June 2002 and September 2004.
- FNI brutality included campaigns of ethnic killing in and around Mongbwalu. Victims of FNI attacks were often left dead in the streets with their arms tied, body parts cut off, and with sticks in their rectums.
- Despite the violence inflicted by the FNI and other rebel groups and its detrimental impact, AngloGold Ashanti deemed the risk of operating in a conflict zone as “manageable”.

Case Study 7

Name: Porgera Gold Mine

Location: Enga Province, Papua New Guinea

Company: Barrick Gold Corporation



- Barrick Gold Corp's 5,600 acre open-pit complex called the Porgera gold mine, located in Enga, the highest and most rugged province in Papua New Guinea.
- Barrick Gold Corp's dumps all of its liquid mine waste into tributaries of the Strickland River.
- On its path to the Pacific Ocean, this river flows through some of the world's most biologically diverse areas, most pristine environments, and the homes of numerous indigenous groups, many of whom continue to practice traditional subsistence livelihoods, relying on water from the Strickland River.
- In 1999, the mine was dumping tailings from 15,400 tons of processed ore per day into the Strickland River system. The mine now removes over 210,000 tones of ore and waste per day from the mine.



Porgera Gold Mine in the Enga Province, Papua New Guinea.

Within a few years, tailings waste from the mine buried the alluvial mining beds that Ipili people had mined for the last 30 years. During the height of alluvial mining, over 50% of the male population in the Porgera valley was employed. With the end of alluvial mining, most of these men lost their sole source of cash income.

Image Source: www4.ncsu.edu/~ikiacka/hardliving.htm

- The mine dumps its waste rock onto designated “Erodible Dumps”, expected to wash gradually into the river by the heavy rains of the region.
- Between 10 and 15 million tons of this waste rock enters the system each year.
- Independent scientific studies have found that river dumping has had serious impacts on the river system and urged the company to review its waste disposal practices.
- Local people accuse the mine of human rights abuses, speaking specifically of shootings, killings, and other abuse by the mine’s security forces since the mine started operations.
- In 2005, Placer Dome, the mine’s former owner, acknowledged eight killings by security forces. The company contends that the killings are linked to illegal mining by villagers on mine property. Local community representatives dispute this.

Jethro Tulin, representative of a local landowner organization states: **“We have evidence of shootings and killings by the mine’s security guards, and we have evidence of rapes by security guards... . Many of these cases have nothing to do with so-called unauthorized mining; in some cases people are just taking their traditional path to their gardens.”**



The ore from the mine is crushed and processed in two stages -- flotation and cyanide leaching -- to remove most of the gold.

Case Study 8

Name: Summitville Mine

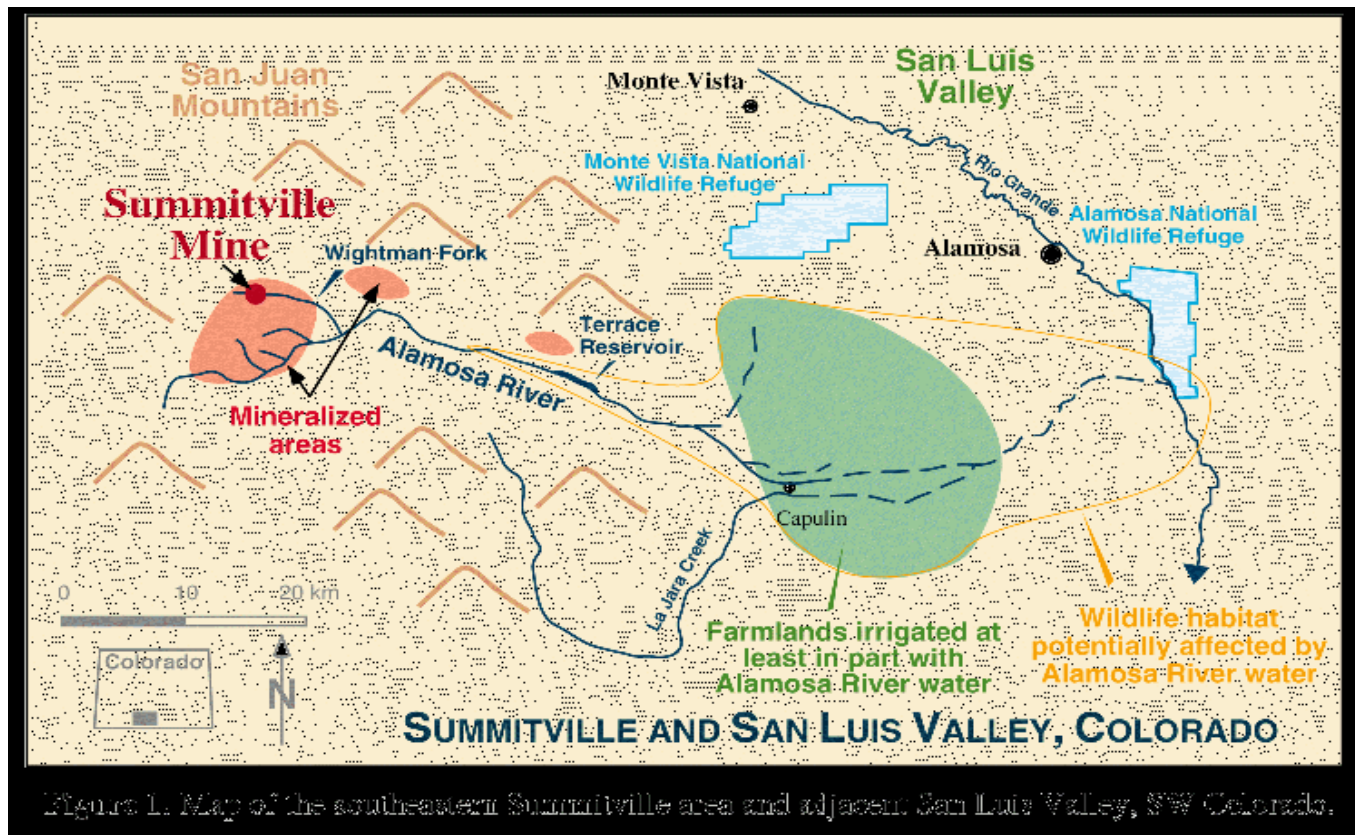
Location: Colorado, USA

Company: Galactic Resources

- Summitville mine, a 1,400-acre gold and silver mine located in the southern San Juan Mountains of Colorado, has been a disaster from the start.
- It has leaked and spilled cyanide for years, wrecking havoc on mountain ecosystems. Even now, years after its construction and abandonment, what is left of the mine site continues to damage the environment and cost taxpayers money.
- In 1984 the State of Colorado issued a permit to Canadian Galactic Resources, owned by Robert Friedland, to operate an open pit gold mine.
- The mine was to use cyanide heap leaching to remove the gold from the crushed ore material. This technology was not appropriate for a mine situated at approximately 3,500 meters (11,500 ft.) in altitude in an area that receives over 400 inches of snowfall annually and is prone to avalanches.
- Galactic did not address the runoff issue and the potential for leakage and the system began chronically leaking cyanide through the heap leach liners soon after mining began.



Figure 2. Oblique aerial photograph, looking south-southwest, of the Summitville Mine and vicinity. The mine is located just east of the continental divide at an elevation of 3800 meters (11,500 ft). Total yearly snowfall is approximately 7–11 meters (20–35 ft). Photo by IntraSearch, Inc.



- Acidic runoff is created when metals exposed in the mining process are oxidized by exposure to oxygenated water. The cyanide leakage and acid mine drainage essentially killed a 17 mile stretch of the Alamosa River, a river important to the lives and livelihoods of ecosystems and people downstream that use the river water, which eventually flows into the Rio Grande.

- In 1992 Galactic Resources declared bankruptcy, forcing the U.S. Environmental Protection Agency (EPA) and the State of Colorado to assume responsibility for cleanup of the now abandoned mine site.
- The EPA found six separate leak sites releasing 3,000 gallons/minute of potentially toxic fluids and the 127-foot-deep cyanide containment around the leach pad within 5 feet of overflowing.
- When Galactic Resources declared bankruptcy, the existing financial assurance required by the State of Colorado was only \$4.5 million.
- The first year's costs to manage the site alone exceeded the amount of available financial assurance.
- According to the EPA, up until 2005, about \$210 million, the majority of which were public funds, were spent on cleanup.
- As of 2005, the mine site continues to discharge contaminated water in the Alamosa River watershed – exceeding water standards on a regular basis.
- The Summitville mine bankruptcy demonstrates why regulators should require mining companies to post concrete financial assurances -- before mining operations begin. While Galactic Resources declared bankruptcy, Galactic's owner, Robert Friedland, is still making money in the mining industry. Galactic made costly mistakes without any repercussions, extensively damaging the environment and leaving the public to pay for cleanup.

Caste Study 9

Name: Bogoso/Prestea

Location: Prestea, Wassa district of western Ghana

Company: Golden Star Resources

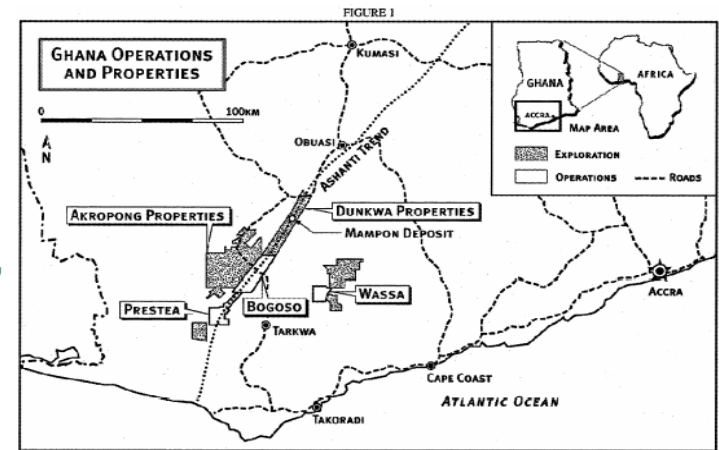
■ When blasting is taking place at Golden Star Resources' Bogoso/Prestea gold mining pits, residents in the nearby town of Prestea – located just 500 yards from the pits – literally feel their houses shake.

■ The hospital must turn its all of its sensitive machines off when they are about to blast.

■ Residents of Prestea and other neighboring towns, such as Himan and Dumase, say the current mine operation has made their communities virtually uninhabitable since it begin operations in 2001. The blasting is accompanied by excessive noise and dust.

■ Water pollution is a major concern. Indiscriminate dumping of waste rock has covered up natural springs and farm lands, and two cyanide spills in 2004 and 2006 contaminated local rivers and streams which are a source of drinking water and fish for the communities.

■ The community of Dumase, has been severely affected by the cyanide spills. In both instances, some villagers had already consumed water or fish from the river before being informed by the company of the cyanide spill. No independent health investigation has taken place despite community members reporting symptoms such as dizziness, headaches, stomach aches, and itching, nor has anyone received any compensation.





- The second cyanide spill occurred just three months after Golden Star signed the "International Cyanide Management Code " (Cyanide Code), an voluntary program for the safe management of cyanide-laden outputs from mining operations, particularly in countries where there are few regulations.
- Protests by affected residents have sometimes been met with violent suppression. On June 13th, 2005, security forces fired into a crowd of nearly 5,000 people who had gathered in Prestea for a demonstration. Seven people were injured, including a twelve-year old boy.
- In September of 2005 in response to protest and concerns raised, the Ghanaian Environmental Protection Agency (EPA) ordered mine to shut down. The mine was shut down for only one month, before it re-opened.
- In 2006, the mine generated US\$8.4 million in revenue from gold sales, yet made no effort to clean up its operation or compensate affected community members.

According to Nana Korkye II, the chief of Dumase, **“Is it a crime to sit on gold? Do we have to suffer such dehumanizing acts because of their profits?”** he asked.

Case Study 10

Name: Omai Mine

Location: Guyana

Company: Cambior Inc. and Golden Star Resources

■ In 1995, three days after the failure of a massive tailings dam at the Omai mine in western Guyana, the Guyanese President Cheddi Jagan declared 80 km of the Essequibo an environmental disaster zone.

■ The spill, caused by internal dam erosion, released around 120 million gallons of cyanide-bearing mill process solution into the Omai River.

■ The 11,232 acre Omai mine was constructed and began operating in 1993 in a remote area of Guyana next to the Omai River, a tributary of the nearby Essequibo River. The longest river in Guyana, the Essequibo passes through forest and savannah on its way to the Atlantic Ocean and supports Guyana's abundant biological diversity and agriculture. Local residents, including Amerindian populations, also use the rivers for fishing, bathing and drinking in addition to irrigation for their subsistence crops.

■ Early in 1995, the tailings dam at the Omai gold mine was near capacity, holding two years worth of untreated cyanide-containing effluent from the mining process. Omai mine operators offered continued reassurances that the dam was stable and that they were planning to build a second dam.



Arial Image of the 1995 Spill



Omai Mine



- In August 1995, the dam finally failed and a major crack opened up, resulting in a massive spill of cyanide-laced tailings. The crack was not immediately stopped, letting 120 million gallons of toxic tailings containing cyanide and copper spill into the Omai River and Essequibo River over a 5 day period.
- As the effluent that spilled into the Omai River flowed downstream into the Essequibo River on its way to the Atlantic Ocean, it killed aquatic life; caused nausea, skin rashes and lesions in children; and may have caused the hospitalization of three local people who had eaten fish and drank water from the river.
- The president of Guyana banned the sale and consumption of all fish from the river and use of the water for drinking, cooking and bathing.
- Initial government reports estimated the cyanide concentration in the Omai to be 28 parts per million, which is 140 times the level that the U.S. EPA considers lethal.
- The mine operators claimed the spill was insignificant and caused no damage to the ecosystem, and offered the local people who depend on the river \$150 Canadian for damages and uncontaminated water delivered for 10 days after the accident. The Omai mine reopened 6 months later without any changes in operation or additional safeguards in place
- The Omai open pit mine, which extracted 3.7 million ounces of gold over its life time, was closed in 2005.

Stories like these could go on for much longer.....



Esquel/ Argentina



BUT

\$ 864 per ounce of gold

What does this price mean to you now?



For more information visit www.nodirtygold.org