
The Global Gold Mining Industry, Junior Firms, and Civil Society Resistance in Guatemala

MICHAEL L. DOUGHERTY

University of Wisconsin-Madison, USA

Over the past two decades, the gold mining industry has increased its activity in Latin America. Growing contestation and conflict around gold mining projects have accompanied this shift. This article draws from the case of Guatemala, where metal exploration has grown by 1,000 per cent since 1998, to illustrate how the proliferation of small ‘junior’ firms – together with neoliberal investment policies and suitability of mineralisation – set the stage for fly-by-night gold mining and, therefore, intense resistance from host communities to mineral development.

Keywords: gold mining, Guatemala, junior firms, neoliberalism, resistance.

On 23 June 2010, Guatemalan President Álvaro Colom declared the suspension of the Marlin Mine, Guatemala’s first industrial-scale gold mine, which began operations in 2005. Although the mine continues to operate while the different stakeholders reach a procedural agreement for suspending operations, this declaration marked the culmination of a six-year campaign by a dense and massive transnational activist network spanning North, Central, and South America as well as Europe. Actors within this network range from large, international organisations such as Oxfam America to village-level groups of smallholder farmers in the mountainous highlands of western Guatemala. The activist network encompasses hundreds of thousands of people, including regional and local institutions within the Catholic Church and international, national, regional and local non-profit organisations and solidarity groups.

Although there were rumblings of discontent for two years prior, the anti-mining movement in Guatemala began to consolidate between December 2004 and January 2005 as construction on the Marlin Mine was just underway (Van de Sandt, 2009). In January of 2005, protestors clashed with Guatemalan security forces at Los Encuentros, the intersection of the Pan-American Highway and National Highway Fifteen. This section of the highway links Guatemala City to Chiapas, Mexico via the steep and volcanic indigenous highlands of western Guatemala. For more than 30 days a group of Mayan peasants took turns blocking a truck carrying a 102 tonne ball mill from proceeding to the Marlin mine site in the Department of San Marcos. Finally, on 11 January, President Oscar Berger, dispatched Guatemalan National Civil Police (PNC) and army forces to ‘establish the rule of law and protect our investors’ (Associated Press, 2005). Burning tyres blocked the road as security forces arrived. A confrontation

ensued between police and protestors leaving one peasant protestor dead and sixteen people injured (Yagenova, 2005).

This confrontation, and the massive anti-mining movement it engendered, are not unique. Gold mining conflicts have been on the rise in Latin America since the 1990s (Warnaars, 2008). This increased contestation has its origins in industrial structural transformations that have taken place in the global gold mining industry over the past two decades, including increasing investment in developing countries, a reduction in mid-tier firms and a proliferation of small, little-capitalised firms, known as 'juniors' in industry vernacular. The proliferation of junior firms has meant greater competition and a global quest to produce gold more cheaply, which, in turn, has crystallised resistance on the part of host communities across the developing world.

This article seeks to deepen our understanding of the growing contestation around mine sites in the developing world by exploring the connection between the industrial structure of gold mining (particularly the proliferation of junior firms) and host community resistance. In this article, I illustrate how competition between junior firms leads these companies to invest in countries both politically and geologically amenable to low-cost production. I draw empirically from the case of Guatemala, where, since the late 1990s, metal exploration by junior firms has grown by 1,000 per cent. Guatemala's mix of lenient policies and appropriate geology has made it a world epicentre of low-cost gold production, facilitating an anti-mining social movement of unprecedented mass.

In the first section, I locate this article within the current social science literature regarding gold mining and resistance in Latin America. The second section describes the industrial transformation in gold mining alluded to above, emphasising the changing role of junior firms and the implications of intensified competition between these companies. The third section illustrates Guatemala's conformity to the general industrial patterns mapped out in the second section. The fourth section draws from the Guatemalan case, looking primarily at the role of policy and secondarily at the role of geology in explaining the influx of junior investment in Guatemala. The final section summarises and concludes.

Bringing Industry into the Literature

A small but growing literature in the social sciences has emerged as changes in patterns and processes in gold mining over the past twenty years have brought this industry to the forefront of public debates about globalisation and development in Latin America. This literature is qualitatively different from the 'resource curse' literature of the 1980s and 1990s, which was macro-focused and economistic. In this current literature, resistance is set against a backdrop of neoliberalism and represents an unambiguous path out of exploitation towards social justice. Bebbington et al., (2008a) and Bebbington et al., (2008b) argue that resistance to gold mining offers an escape from the potential development problems associated with new gold mining. Rachel Sieder (2010) suggests that 'juridification', that is, the local appropriation of legal frameworks for redress, constitutes an important path of resistance for new mining host communities in Guatemala. Holden and Jacobson (2009) explore the role of the Catholic Church in fomenting resistance to neoliberalism. McGee (2009) and Imai et al., (2007) contend that indigeneity and non-Western cosmology explains intense mining resistance in places such as Peru and Guatemala, while Muradian et al., (2003) argue that the threat of environmental degradation is the main sponsor of resistance. Other recent studies more explicitly treat

the development impacts of new gold mining in Latin America. Jeffrey Bury (2005), for example, finds that the introduction of mineral projects in Peru has a deleterious effect on social capital in host communities, and Javier Arellano-Yanguas (2008) documents the way in which municipal governments in Peru are weakened by the inundation of royalty and tax revenue that results from mineral projects.

Although a few works have recognised the important connections between industrial structure and firm behaviour in theorising the social dynamics around resistance to gold mining in Latin America, the bulk of this literature around resistance to new mining focuses on local social dynamics at the expense of incorporating the mining industry into the analysis. This tendency to foreground local dynamics and gloss the mining industry means that the ‘figure of “the mining company” lurks monolithically and often menacingly in the background’ because scholars ‘have preferred to maintain their focus on the more familiar . . . addressing the position of local communities in the vicinity of mines in preference over the less familiar multinational mining corporations’ (Ballard and Banks, 2003: 290). Some research does, in fact, consider the structure of production and industrial transformation in their analyses (e.g. Bridge, 2004b; Bebbington et al., 2008a). But often this is background to studies that centre on local social dynamics. This results in an analysis of local dynamics that is disembodied from the larger context in which those local dynamics take place. How can one suggest that social movements ‘offer an escape’ without a fully formed sense of escape from what? This article contributes to the burgeoning research on new gold mining and resistance by developing the understanding of what is being resisted, rather than focusing solely on how resistance plays out.

To accomplish this I focus on the structural differentiation between junior, mid-tier and senior firms, and I integrate that discussion with a model for theorising the relationship between geology and mineral industrial structure, developed by Barham et al., (1994). I apply this set of ideas to the current context of gold mining in Guatemala, and I find that the empirical realities of the Guatemalan case confirm the general observations about the gold mining industry.

Guatemala is an ideal case through which to explore changes in gold extraction and their impact on host communities. Twenty-nine metal mining licences and 121 metal exploration licences mottled Guatemala’s surface in 2008. This represents a 1,000 per cent increase since 1998. Nine foreign firms own metal exploration or exploitation concessions in Guatemala. Eight of these are Canadian, and seven are Canadian juniors (Ministerio de Energía y Minas, 2008). The eighth Canadian firm, senior producer Goldcorp, dominates gold production in Guatemala, and currently operates two sites that were initially developed by junior firms. Finally, Guatemala has been the site of one of the most active and broadly based opposition movements from across the new geography of gold extraction. Since 2005, over 400,000 of 13 million Guatemalans in 42 of 333 municipalities have conducted municipal referenda opposing mining.

Industrial Transformation and the Role of Junior Firms

Changing patterns of mineral investment across the world over the last two decades have been accompanied by the rise of junior mining firms and the intensification of competition between these junior companies. These juniors, which play an increasingly discrete and important role in the mineral value chain, typically under-perform in terms

of social and environmental responsibility compared to larger mining companies. This affects the way that mining is perceived in host communities.

In the late 1980s and early 1990s, investment capital began moving out of traditional mineral investment targets in middle- and high-income countries (e.g. the United States, Canada, Australia, and South Africa) towards targeted hosts in the developing world (Bridge, 2004a; Donnelly and Ford, 2008). Latin America's share of global mineral investment increased by 300 per cent during the 1990s (Bebbington et al., 2008a). As a result of this boom, Latin America now has the largest share of exploration capital by region in the world (Dillon, 2007). A number of global patterns contribute to explaining this phenomenon. Technological innovation played an important role in allowing for ever more diffuse deposits of minerals to be profitably mined (Bunker and Ciccantell, 2005). Increased demand for industrial metals in the rapidly industrialising 'BRIC' countries (Brazil, Russia, India and China) was also a significant factor (Donnelly and Ford, 2008). Many developing countries adopted neoliberal policies in the 1980s and 1990s, which were designed to encourage foreign investment, and in many cases, specifically to encourage investment in extractive industries (Bridge, 2004a; Ferguson, 2006; Donnelly and Ford, 2008). In some instances, the World Bank pushed states to court extractive industries as a key vector of larger economic development plans (Holt-Gimenez, 2007; Bebbington et al., 2008a).

A proliferation of small exploration firms in new investment target countries accompanied this transition. Although the boundaries between the different classifications are somewhat ambiguous, there are essentially three types of metal mining companies: senior, mid-tier and junior firms. Numbers of properties, levels of capitalisation and sources of revenue characterise firms. Junior firms are largely exploration companies with no or very few production sites. Mid-tier firms typically begin life as juniors and go into production on one or more of their own discoveries, while senior producers possess many production sites over a number of world regions. The different types of firms are also distinguished by their sources of revenue. Senior firms typically derive their revenue from production and sale while a junior firm is 'essentially a venture capital company' (Cranstoun, 2010: 2). Mid-tier firms derive capital from a combination of equity financing, and production and sale.

Junior firms make up the considerable bulk of the metal mining companies worldwide, although they account for a diminutive amount of total global production. While the top 150 mining firms control 80 per cent of global mineral production, they account for only 4 per cent of companies. The approximately 1,000 mid-tier firms account for most of the remaining 20 per cent of global mineral production while the multiple thousands of juniors make up less than 1 per cent of global production (GHGm, 2008). Volatile commodity prices and mercurial regulatory climates have created an environment where mid-tier firms merge and consolidate into seniors or they disappear (Dobra, 2002; Everett and Gilboy, 2003). As mid-level producers disappear, however, junior firms flourish (Everett and Gilboy, 2003). Junior exploration budgets increased from 1.6 billion in 1998 to 5.3 billion in 2007 while senior and mid-tier exploration budgets combined only totalled 4.1 billion in 2007 (Dillon, 2007). In Latin America, exploration spending by juniors increased from less than 1 billion to nearly 2.5 billion dollars between 1998 and 2007 (Dillon, 2007).

Juniors play an increasingly essential role in the gold value chain. As mid-tier and senior producers focus exclusively on taking sites into production, the high-risk exploration node has largely become the purview of juniors. This creates interdependence between seniors and juniors, and in many cases, this interdependence is formalised

through strategic partnerships. 'These partnerships provide juniors with financial backing and captive customers for their promising finds while seniors can gain access to an independently developed stream of potentially bankable projects' (Everett and Gilboy, 2003: 9).

A variety of phenomena explains this rise of juniors. First, technological innovations in gold extraction, such as cyanidation, carbon-in-pulp and new forms of electrowinning, have made more diffuse and lower-grade gold deposits commercially viable. This opens up the playing field for a greater number of companies and reduces entry cost barriers for smaller, less capitalised firms. Second, the Canadian government, aware of the important role that juniors play in high-risk exploration, and the extent to which Canadian control over mineral value chains depends on its junior sector, encourages the financing of these companies through its 'flow through' policy. This policy makes 100 per cent of capital invested in domestic junior activity tax deductible for the investor.

Junior firms consistently under-perform in terms of environmental and social standards compared to senior producers. Junior producers, for example, regularly fail to implement the standard environmental safeguards in their production sites that seniors have done. Junior companies are often less 'motivated' than seniors to substantively engage host communities, plan adequately for environmental management and implement sustainable development practices (Bridge, 2004b; GHGm, 2008). Additionally, the Canadian government has lenient corporate oversight policies for mining firms relative to the US, which encourages Canadian firms to cut corners and firms that wish to cut corners to become Canadian (Matheson, 2003). Finally, because junior firms conduct most of the exploration in new investment targets in the developing world, this differential emphasis on standards of environmental and social responsibility shades the way in which mining is perceived in host countries. Therefore, senior producers that bring junior discoveries online increasingly inherit the controversies and conflicts that their junior colleagues provoke (Everett and Gilboy, 2003).

Intense competition between junior firms drives this under-performance in the social and environmental realms. In part, the geological properties of gold deposits themselves spur on this intense competition. The relative concentration of a mineral within the Earth's surface influences the number of firms involved in production while the relative scarcity of a mineral influences the intensity of competition around production (Barham et al., 1994). The more concentrated a mineral's occurrence, the more easily fewer and larger firms can consolidate ownership and control production. Conversely, the more diffusely a mineral is distributed, the more exploration and extraction nodes along the value chain can be accessed freely by a multiplicity of firms of varying sizes. Similarly, scarcer minerals, by virtue of their limited supply, possess higher value-to-volume ratios than more abundant minerals. Higher prices translate to proportionally higher economic rents. Therefore, scarcity creates struggles over control of access to scarce resources, attracting a 'complex web of participants into various levels of the industry operation' (Barham et al., 1994: 22). Gold is both a scarce and diffuse mineral (Cohn et al., 2004), which means its production is characterised by many, competitive firms.

The reduction of production costs – or the pursuit of resource rents – is a high-order competitive advantage for mining companies (Kaplinsky, 1998). The intensity of competition between junior firms drives firms to cut production costs wherever possible in order to distinguish themselves from their competition. Junior firms employ political, geological and geochemical investment strategies to reduce their production costs. Junior firms identify investment opportunities largely by the favourability of the policy

and institutional environment. Relevant policies include royalty rates, tax exemptions and other incentives, corporate oversight, labour and environmental regulations.

These firms also consider the geological character of the mineralisation. Generally speaking, surface mineralisation is more easily extracted with modern industrial mining technologies and processes than underground deposits, even though, ironically, underground deposits are generally of higher grade. This is the case because the labour-intensive tunnelling required for underground mines is replaced by simple, low-tech extraction techniques such as dynamiting for surface mineralisation. Finally, these firms consider geochemistry as well. The chemical composition of the ore determines how the ore is milled. The most cost-effective gold milling techniques involve the application of a cyanide solution to the ore, but this process only works with non-refractory ore. In primary or refractory ore, the gold is locked inside sulphide minerals, which are resistant to cyanidation, and in such deposits ore is usually milled by converting it into an oxidised form by roasting. This process adds steps to the production process and is more capital intensive. In non-refractory deposits, cyanidation techniques are applied directly, and thus milling is less expensive. Refractory ore is characteristic of underground deposits, which means that geological and geochemical strategies to reduce production costs typically complement one another. Open pit gold mining with cyanide leach processing is the most cost-effective way to produce gold, and firms that can license mineralisation that meets these criteria have a distinct advantage over their competitors.

These extraction techniques are not only the most cost-effective, but they are also the most environmentally risky. For this reason, small gold companies also seek out weak political institutional environments because they can operate below the radar and capitalise on the possibilities for state capture and limited capacity for effective oversight (Ferguson, 2006).

Junior Mining Firms in Guatemala

The Guatemalan case neatly reflects the characteristics of junior firms described above. Junior firms dominate metal exploration and mining in Guatemala. These juniors have made the key discoveries in Guatemala and then sold or merged with mid-tiers and seniors in order to bring production online. In certain instances, this has taken place through strategic partnerships between juniors working in Guatemala and behind-the-scenes senior producers. Finally, mineral firms in Guatemala have fallen far short of environmental and social responsibility.

As a function of Guatemala's push to recruit mineral investment since 1996, metal exploration has grown by 1,000 per cent since 1998, and mineral exports have grown, from 0.35 to 4.27 per cent of total merchandise exports between 1990 and 2008 (World Bank, 2009).

Of the nine foreign mining firms operating in Guatemala, seven are juniors. The Marlin Mine in the Western Highland Department of San Marcos and the Cerro Blanco project in the eastern lowland Department of Jutiapa are the two large-scale gold projects in Guatemala; both projects are owned by Canadian senior producer Goldcorp and operated by Guatemalan subsidiaries, Montana Exploradora and Entre Mares de Guatemala, respectively. Marlin has been in production since 2005, and Cerro Blanco is scheduled to come online shortly.

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Both sites were discovered by Canadian juniors in the late 1990s and decisively fit the industry model where juniors conduct the exploration, and seniors bring the deposit online. In 1997, Canadian junior Marwest crossed into eastern Guatemala from Honduras following an epithermal mineralisation pattern and discovered the Cerro Blanco deposit. The following year Glamis Gold, a Canadian junior with several production sites in North America, purchased Marwest. Similarly, diminutive British Columbia-based Montana Gold Corp formed its Guatemalan subsidiary Montana Exploradora in 1996. In 1997 Montana received a prospecting licence for part of the Department of San Marcos, and in 1998 discovered the site that is today the Marlin Mine. The following year Montana Received its exploration licence from the Guatemalan government (Van de Sandt, 2009). In 2000, Montana was purchased by the incrementally larger, but still diminutive Francisco Gold Corporation, another junior firm backed by Canadian venture capital. In 2002, nascent mid-tier Glamis Gold acquired Francisco Gold, thus consolidating both major Guatemalan gold sites, Cerro Blanco and Marlin, under the same parent company. Glamis received the exploitation licence for the Marlin site on 29 November 2003 (Ministerio de Energía y Minas, 2008). In November 2006, Glamis Gold merged with Canadian mid-tier Goldcorp, enabling Goldcorp to become the smallest of the world's senior gold producers.

Guatemala also fits the industry model in that junior firms often establish formal or informal strategic partnerships with senior firms. A high-ranking functionary in the Guatemalan Ministry of Energy and Mines (MEM), in a confidential interview, confirmed this:

The seniors do have a presence here, but not directly, not very visibly. For example CGN (Compania Guatemalteca de Níquel) belongs to [Canadian] junior Hudbay, but CGN still has an association with INCO (International Nickel Company) and with a company Called Vale Do Rio Doce in Brazil, a huge company ... The seniors are behind the juniors waiting.

In conformity with larger patterns in the industry, juniors and seniors operating in Guatemala have fallen short of standards for environmental and social responsibility. Social and environmental management at the Marlin Mine, in particular, is under par. Glamis Gold failed to adequately consult the indigenous host communities prior to project development. Further, there is strong evidence of heavy metal contamination in rivers near the mine, and Goldcorp has acquired multiple fines from the Ministry of the Environment and Natural Resources (MARN).

Perhaps the most resonant management shortcoming at the Marlin site was Glamis's failure to adequately consult host communities prior to the onset of mine construction, as required by the International Labour Organisation's (ILO) Convention 169 on the Rights of Indigenous Peoples, to which Guatemala is a signatory. With its acquisition of Glamis, Goldcorp inherited and compounded this problematic legacy (Van de Sandt, 2009). Glamis may have satisfied the letter, but not the spirit, of Convention 169, and Goldcorp has since been rebuked by the Constitutional Court of Guatemala, the ILO itself, and the Inter-American Commission on Human Rights, for its failure to consult host communities adequately.

Goldcorp has a poor environmental track record in Guatemala and elsewhere. Although the debate is not fully resolved, recent research suggests that there are elevated levels of heavy metals in the rivers near the mine site, which threaten ecosystem and human health in the vicinity (Basu and Hu, 2010). Of the 'big four' gold producers, Newmont, Barrick, Anglo Gold Ashanti and Goldcorp, Goldcorp has the lowest percentage

of mine sites certified under the International Cyanide Management Code. Sixty-four per cent of Newmont's sites, 55 per cent of Anglo Gold's and 54 per cent of Barrick's are certified. In contrast, only 20 per cent of Goldcorp's active projects are certified (ICMI, 2008–2010). Although some scientists suggest otherwise, at least one scientific evaluation of the Marlin Mine's environmental impact assessment found major deficiencies in the environmental design of the mine, including Glamis's failure to line the tailings impoundment pond with an impermeable liner (Moran, 2004). Tailings are the often toxic by-products of the milling process. Finally, Goldcorp has been fined a number of times by the Guatemalan Ministry of Environment and Natural Resources (MARN). MARN fined Goldcorp for a cyanide spill on the Pan-American Highway. Additionally, in 2009, MARN fined Goldcorp millions of dollars for not having the correct licence to import cyanide and temporarily prohibited it from importing cyanide until it paid the fine, a prohibition that Goldcorp flagrantly disobeyed. Refusing to be bullied, the MARN held Goldcorp's cyanide shipment in port until Goldcorp paid the fine (Ramírez, 2009).

In response to these and other concerns, the Jantzi Social Index, which lists social and environmentally responsible Canadian companies that trade on the Toronto Stock Exchange, removed Goldcorp from its index in 2008 citing the growing opposition to the project and the fact that Goldcorp has the highest total for environmental fines of any mineral firm listed on the Toronto Stock Exchange (Sustainalytics, 2010). The perceived environmental threats and threats to community territorial integrity have inspired considerable resistance to mining.

The anti-mining movement in Guatemala is populated principally by peasant farmers from rural areas of the Western Highlands of Guatemala. But while peasants comprise the bulk of the participants, representatives of the local and diocesan Catholic Church, along with indigenous intellectuals, urban elites and foreign non-governmental organization (NGO) workers make up the leadership of the movement. The resistance has pursued four key tracks of activism: the judicial track, in which they have used national and international courts to address grievances; the transnational activist track, in which foreign solidarity organisations arrange campaigns to shame the national state and the firms; the legislative track in which the movement advocates for new mining legislation; and, finally, sparse incidents of civil disobedience. There is a certain amount of dissonance between the goals of peasant participants and those of the leadership, whereas the leadership largely frames the movement as being about violations of indigenous rights on the part of the mining company, the majority is principally concerned about the impacts of mining operations on land tenure and water quality, the key inputs into their livelihoods. Despite the factionalised and decentralised nature of the resistance, however, perseverance over the last six years has chipped away at Goldcorp's impunity, leading to June 2010's tenuous victory.

In sum, the Guatemalan case is emblematic of the structure and behaviour of the gold mining industry in developing countries over the past twenty years. Junior firms have crowded Guatemala with exploration concessions. In two instances, Cerro Blanco and Marlin, these exploration sites were acquired by larger junior, Glamis. Eventually, mid-tier-turned-senior, Goldcorp, acquired Glamis and inherited, as well as exacerbated, controversies over bad management *vis-à-vis* host community rights and environmental safeguards at the mine.

Policy, Materiality, and Gold Mining in Guatemala

Guatemala has become a target for junior capital because it possesses the right mix of comfortable policies and amenable mineralisation to warrant robust investment. This confluence of conditions has enabled Guatemala to become one of the lowest-cost gold producers in Latin America, if not the world. In 2009, Marlin had cash costs of \$192 per gold ounce, the cheapest production costs of any of Goldcorp's thirteen producing mines. The average cash cost per ounce from across Goldcorp's properties in 2009 was \$416.78, more than twice Marlin's costs.

Both the historical and contemporary policy environments in Guatemala relative to the mineral sector help explain the proliferation of mining juniors operating in Guatemala and the extremely low production costs available to Guatemala's investors. In particular, the neoliberal policy regime emerging from the resolution of Guatemala's 36-year civil war in 1996, and the portentous end of the Multi-Fibre Arrangement for Guatemala's *maquila* sector, launched Guatemala's quest for mineral capital.

Although it has taken on a new intensity since the late 1990s, mining is not a new phenomenon in Guatemala. Beginning in the 1960s and 1970s, as development initiatives such as the Alliance for Progress and the Central American Common Market brought roads and bridges to previously inaccessible corners of Guatemala, the government and foreign capitalists sought to open up these regions to exploitation for timber, oil, nickel and tungsten (Jonas, 1991). The best-known mine from this era was the International Nickel Company's Exmibal nickel project in the Department of Izabal, development on which began in 1971. Metal mining was considered a key piece of Guatemala's larger development strategy in the 1960s and 1970s. The central bank advocated mining and mineral exportation as a way of diversifying industry mix (Banco de Guatemala, 1966), and the General Secretariat for Planning (SEGEPLAN) emphasised mineral sector development in its agenda (SEGEPLAN, 1981).

Industrial metal mining abandoned Guatemala during the early 1980s as the Latin American financial crisis and the intensification of Guatemala's civil war made it difficult to operate. Fifteen years later, in 1996, the Peace Accords brought an end to 36 years of armed conflict between leftist guerrilla groups and the Guatemalan military, bringing about Guatemala's overdue integration into the world market. One outcome of this neoliberalisation was a renewed commitment to attract foreign direct investment (FDI) in the mineral sector. As one business journal commented, 'Following the closure of Exmibal, the mining industry [in Guatemala] appeared dead. Today it has awakened and it seems that nothing and nobody will stop it' (Monzón, 2006).

In 1997, then President Álvaro Arzú (1996–2000) signed a new mining bill into law. This bill came as part of a much larger bundle of neoliberalising laws and policies including the privatisation of telecommunications, the railroad and the energy sector, and a new investment law. Army colonel *cum* Congressman Arturo de la Cruz introduced the bill, which was to replace the 1993 mining law. The bill was crafted with input from Guatemala's nascent mining industry and foreign interests (personal communication with confidential informant, 2009; Solano, 2005). One of Guatemala's pre-eminent mineral geologists commented, 'during that time Arzú issued a call to foreign investors with the condition that the mining law would change. That was one of the conditions [for them to start working in Guatemala]. "Ok, change the law, and we'll get them going", because the previous law did not lend itself to this type of work.' The new law streamlined the licensing process, making it simpler and cheaper for companies to acquire licences (MEM, 2005). The law also increased limits on the size of concessions,

combined the exploitation and exportation licence procedures, and began requiring environmental mitigation and impact studies for exploration and exploitation licences, respectively. Perhaps the most controversial and widely cited change introduced by the 1997 law was the reduction of the rate at which mining companies paid royalties to the state from 6 to 1 per cent of net profits (Joachin, 2007). Additionally, mining firms cite the General Electricity Law of 1996, which privatised the energy sector, as another major incentive for their investment (Monzón, 2006).

As the 1997 law was developing, President Arzú and the MEM began an international campaign to promote Guatemala as an investment destination for foreign mineral capital. Around 1995 representatives of the MEM began organising international mining congresses and visits to Canada and elsewhere to attract mineral investment (C. Cisneros, Mineral Geologist, Personal Communication with Author, 2008). As one functionary at the MEM told me, 'this mining law, we went to Canada to promote it. We began to hear interest, they [Canadian firms] began to come, but mineral exploration takes time.'

The end of the Multi-Fibre Arrangement (the World Trade Organisation's quota system for garment and textile exports) and its implications for Central American textiles and garments spurred a localised 'race to the bottom' between Guatemala, Honduras and El Salvador to outbid one another for FDI in mining. This was another key factor in establishing an amenable policy environment for footloose junior mining companies. In the late 1990s, the Central American republics understood the portent of the Uruguay Round and its implications for economic development. El Salvador expected a 42 per cent decrease, Guatemala a 37 per cent decrease and Honduras a 42.2 per cent decrease in garment and textile exports to the United States, European Union and Canada (Ernst et al., 2005). These countries therefore began strategising ways to make up the investment they would lose when their quotas expired, and they turned to seeking FDI in the mineral sector. This led to the passage of new mining laws in all three Central American states as each competed for mineral investment, which drove down royalty rates, giving the region among the lowest rates in the world.

In 1995, the President of El Salvador, through his Minister of Economy, Eduardo Zabla Touche, developed and submitted a proposal for a new mining law to the Legislative Assembly. The resulting legislation replaced the Mining Code of 1922, which had been reformed somewhat in the 1950s during a short burst of gold mining activity in the eastern departments of San Miguel and Morazán. The Salvadoran law established a royalty rate of 3 per cent of net profits following intense debate in the Salvadoran Legislative Assembly. In the official Legislative Assembly library file of this law, 'three' was crossed out and over it was written 'five'. Further, Article 69 establishes a fine of 0.5 per cent for infractions of the law itself, a figure that was also debated in the Legislative Assembly. In earlier versions of the bill this amount was 1 per cent rather than 0.5 per cent. The official Legislative Assembly file includes a letter from the Minister of the Economy to the President of the Legislative Commission for Economy and Agriculture, Orlando Arévalo. The letter, in full, reads as follows:

I am attaching a comparison of mining royalties in different countries. The only country of those that we researched that had a royalty rate greater than 3 per cent for metallic minerals is Honduras with 4 per cent, but we know from a good source that Honduras will reduce that amount in the near future. Because of these facts, we reiterate our position, expressed in the Mining Law bill, that the royalty rate be 3 per cent without any change that allows inferring the possibility of increasing it discretionally.

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This allows us to generate confidence in the investors and give a greater push to the sector. (E. Z. Touché H File No. 1861-11-95, Fo 84)

In 1997, Guatemala responded to El Salvador's initiative with its own new mineral legislation, replacing a law that was only four years old and, in the process, reducing royalty rates from 6 to 1 per cent. This move substantially undercut El Salvador's already low rate of 3 per cent. The claims of the Salvadoran Minister of Economy regarding the imminent adjustment of the royalty rate in Honduras were also accurate. In 1998, the year after Guatemala's new mining law was passed, Honduras also passed new mining legislation eliminating royalties altogether in favour of a 1 per cent 'tax' to be paid entirely to the local municipality. As a response to Guatemala's 1997 law and Honduras's 1998 law, El Salvador dramatically reformed its 1995 mining law in 2001. Again, the Legislative Assembly heatedly debated the issue of royalty rates. Early drafts of the reform reduced royalties from 3 to 1 per cent, on par with those of Guatemala. The reform also dramatically reduced the amount mining companies were obliged to pay to the state for infractions of the mining law. The favourable ruling from the Assembly's Commission of Economy and Agriculture prior to debate and passage in the General Assembly stated:

One of the fundamental elements of this reform is the reduction, from 3 to 1.5 per cent, of the royalties that licence holders are obliged to pay to the state for the exploitation of mineral resources. The Commission considers it convenient that this measure be decided in the general assembly since some members of the Commission consider it better that the percentage be reduced to 1 per cent, with which we could generate greater attraction for investment in the sector because the majority of Central American countries have their royalties between 1 and 2 per cent. (C. A. Borja Letona et al. File No. 1861-11-95-2)

In this letter the rate had been raised from 1 to 1.5 per cent, presumably under pressure from some members of the Commission. During debate in the General Assembly the royalty rate was raised to 2 per cent, which became the official figure in the final reform. The machinations of the Guatemalan, Honduran and Salvadoran Legislative Assemblies provide a clear picture of how competition between the Central American republics drove down the price of investment in the region creating a wider opportunity for fly-by-night junior firms.

Although the Arzú Administration oversaw the passage of the new law and conducted the initial promotion of Guatemala to the global mining industry, the drive to promote mining took on an unprecedented intensity during the presidency of Oscar Berger (2004–2008). Metal exploration licences tripled during Berger's tenure from three under Arzú to 26 under Alfonso Portillo (2000–2004) to 64 under Berger. Of the four industrial-scale metal extraction licences granted since the 1997 law, three were granted under Berger's watch. Berger placed intense direct pressure on all limbs of the state to conform to his mining-led development approach. Alfonso Morales (2007) relates an incident where the Mayor of Todos Santos Cuchumatán, a municipality in the Department of Huehuetenango, was personally phoned by the president and 'scolded' for allowing the organisation of anti-mining activity in his municipality. Similarly, a high-ranking functionary at the MARN told me that, during the Berger Administration, he was prohibited from rejecting environmental impact studies for mining projects. In contrast, the Álvaro Colom administration (2008–2012) gives him greater freedom to evaluate environmental impact studies on their scientific merit. The intensity of Berger's

commitment to mineral investment may, in part, have come from his family and friends' investment in the sector (Solano, 2005; Hernandez Pico, 2008).

Mineralisation in Guatemala favours surface mining and direct cyanidation milling. Deposits are comprised generally of volcanically produced pyroclastic deposits in the Western Highlands and epithermal deposits in the East, both of which are relatively superficial and amenable to surface mining techniques and cyanide leach milling processes. Goldcorp's Marlin Mine in the Guatemalan Department of San Marcos involves both surface and underground extraction, and employs vat leaching cyanidation to mill the ore. Its Cerro Blanco exploration project in the Department of Jutiapa is a superficial epithermal deposit that will employ cyanidation as well. Finally, Canadian junior Argonaut Gold also operates an open-pit gold mine in the Department of El Progreso, which employs heap leaching cyanidation to mill its ore. Across Guatemala, the mineralisation currently being explored and extracted lends itself to surface or shallow underground extraction and cyanidation milling.

Beyond the policy environment and active courtship on the part of the state, Guatemala possesses the right geology and geochemistry to interest junior firms. Surface mineralisation, though it is rarely the highest grade, is generally the least expensive to extract and the most environmentally problematic type of gold deposit. Non-silica ore, because of its amenability to direct cyanidation, is the most cost-effective ore type to mill. Therefore, host countries with the right mix of rock and policy attract fly-by-night junior firms seeking low-cost, environmentally risky extraction in policy environments with few constraints on firm behaviour.

Discussion

The proliferation and intense competition among junior gold mining firms, in part a function of the scarcity and diffusion that characterises the occurrence of gold in the Earth's crust, drives these firms to relentlessly seek lower production costs as a high-order means of distinction from other firms (cf. Kaplinsky, 1998). Both the political and material environment influence production cost structures and, therefore, are central criteria by which firms evaluate investment opportunities. The drive to lower costs through shortcuts in environmental and social management in particularly vulnerable natural and social settings, which characterises new gold mining in Latin America, has meant that junior firms, and by extension those seniors that develop junior properties, under-perform in terms of environmental and social standards. This has elicited intense resistance to mining projects across the region. The Guatemalan case embodies this set of observations.

The urgency and rent-seeking behaviours that result from the intense competition between gold mining firms squeezes host communities, thus eliciting pushback. In Guatemala, for example, Glamis Gold failed to adequately consult the communities around the Marlin Mine site prior to mine construction as was required by international and national law. In fact, the firm deliberately misrepresented itself in its initial outreach to community members (confidential informant, Ministry of Energy and Mines, 2009, personal communication with author). Glamis took pains to obscure the content of its environmental impact study while conforming to the letter of the law that the study be accessible. The entire, approximately 1,000-page document, was placed on a CD at the town hall, where community members were invited to consult it. Unsurprisingly, the mostly illiterate peasantry, also lacking in computer skills and the technical expertise to interpret the study, failed to register concerns within the allotted time

period, which the firm interpreted as consent. These duplicitous measures, a function of competition-driven urgency, cemented citizen suspicions and opposition to the project. Further, minimal environmental safeguards, such as the failure of the firm to line the tailings impoundment with an impermeable liner and to properly contain acid mine drainage, may have caused health problems in neighboring communities. Additionally, neighboring communities experienced water shortages, presumably a function of the drawing down of the water table by the mine. These effects created a heightened sense of desperation within neighboring communities, which, combined with the perception of deception and being refused a seat at the decision-making table, drove host community residents to fiercely resist the introduction of the Marlin Mine and spurred neighboring municipalities to take preventive action.

Guatemala, due to its appropriate policy bundle and the particular geological and geochemical qualities of its mineralisation, is an ideal investment environment for low-road gold firms looking to produce inexpensively. The relative production costs across Goldcorp's portfolio of production sites illustrate this fact distinctly. Goldcorp is, 'on both a by-product and co-product basis . . . the lowest cost, highest margin senior gold producer in the industry' (Goldcorp Inc., 2009: 2). Among those low-cost projects, Guatemala's Marlin Mine, along with Southern Mexico's El Sauzal, are the lowest-cost mines in Goldcorp's portfolio. This suggests that gold production cost structures in Guatemala represent some of the lowest in the world. It's no wonder, then, that this rent-seeking behaviour has inspired intense and widespread pushback from affected communities.

Debates over the appropriateness of a mining-led development trajectory have dominated public discourse in Guatemala over the past few years. For anti-mining activists gold mining is a gloss for the assault of neoliberal extraction on the third world's poor. Mining's supporters see the sector as a rising tide and are confused and angry about 'anti-development' sentiment, which they perceive as selfish and insincere. The national print and television media, the Congress, the president, the Catholic Church, the Constitutional Court, the ILO and the Organisation of American States have all played significant roles in the rich public debate over the future of mining in Guatemala. In host communities the issue is especially divisive. Anti-mining activists have attacked buses transporting mine workers and kidnapped high-ranking technicians while Montana Exploradora mobilises law enforcement and the courts to criminalise peaceful civil disobedience. Disagreements on the mining issue have divided families and communities. The mining controversy, playing out in the halls of Congress and the trenches of San Marcos, is a product of the perfect storm of permissive regulations and favourable policies, hungry and competitive junior firms, political institutions unwilling and incapable of defending civil society, and a geology that favours environmentally risky extraction.

This article has sought to extend the recent literature on resistance to gold mining in Latin America by integrating a discussion of firm differentiation and the role of junior firms with the growing attention to local social dynamics in new mining host communities. Understanding firm behaviour and decision-making clarifies some of the ways in which structural transformations in the gold mining industry have reconfigured relationships between firms, states and communities.

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