

Golden Opportunity in Ghana: A Negotiation Case Study and Analysis



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Precious Minerals in Africa: A History of Conflict

The story behind the economy of gold is a complex one, perhaps as full of conflict and coveting as it is of wealth and security. Especially in Africa, where the legacy of colonialism bears strong connections with the presence of large gold and diamond mining operations, there is a tendency for poverty-stricken communities to resent and distrust mining companies and the national governments who endorse their claims to land and resources¹. This situation is further complicated when local communities compete with mining companies over scarce resources like land and mining rights. This environment raises interesting Corporate Social Responsibility (CSR) challenges for a U.S. based company like Newmont, currently the world's largest corporate producer of gold, as it begins operations in Africa. It is not simple to make strategic decisions in the complex global system in which Newmont functions. The way that issues are framed in the midst of this complexity can have important implications for stakeholders and decision outcomes. This paper will examine one decision that has been brought to Newmont's attention, and how key stakeholders may be able to frame the issues of this decision to improve their bargaining power and solicit the company's participation in a negotiation.

Historically speaking, the federal mineral policies of African countries have tended to encourage the growth and operation of large-scale mining operations to boost royalties and tax revenues while either marginalizing or ignoring artisanal and small-scale mining operations (Walser 2006; Hilson 2006c). In some cases, these governments have seen artisanal and small-scale mining (ASM) as a threat to their resource bases and a nuisance to the large companies with which they wish to do business. Governments have sought to control ASM by instituting anti-smuggling programs and other security measures without directly addressing the poverty of most ASM miners. Especially in countries with stagnant progress in human development, it makes sense that rural communities have come to perceive their federal governments as allied with the interests of large mining companies and uninterested in the plight of community poverty. These perceptions have most likely lead to widespread distrust of government initiatives (Hilson and Potter 2003). In recent years, International Finance Institutions, multilateral and

¹ For an overview of this topic, refer to the new book that has just been published (Hilson 2006c).

bilateral aid agencies and peace-keeping organizations have developed the realization that ASM is fundamentally connected to the poverty-cycle in many mineral-rich developing countries². A paradigmatic shift has taken place with the perception of a connection between ASM and the road to achieving the Millenium Development Goals. However, a long history of distrust, together with a dearth of community-backed approaches are understandably a barrier to the germination of federal programs to improve livelihoods for those engaged in ASM (Hilson 2006a; Hilson and Potter 2003).

As a relative newcomer to Ghana, Newmont has a unique chance to seize certain opportunities to change the dynamic of interaction between multinational mining companies, the federal government and local artisanal and small-scale mining communities. Newmont has engaged with some NGOs in Ghana, but has the rare opportunity to engage directly with a group of illegal miners, a group that they could easily marginalize as other corporate mining companies in the region have already done. In fact, by engaging with certain NGOs like Conservation International, Newmont may already be marginalizing this important interest group to a degree³. This paper will dissect one such opportunity that has been presented to Newmont by a group of small-scale mining cooperatives with strong community roots. The chief of Noyem (who is both a local government leader and the head of the mining cooperative) is willing to negotiate with Newmont in order to gain legal, formalized access to oversee mining on one of the company's unoperational concessions (Hilson & Mohammed 2006; Hilson 2006a).

² "In May 1995, at the International Roundtable on Artisanal Mining hosted by the World Bank, a consensus was reached that artisanal mining was a poverty driven activity taken up by individuals with few, if any employment alternatives." (Hilson 2006c: p. 1).

³ "Although engaged in strategic alliances to increase their negotiating power with the mining industry and governments, the evidence shows that NGOs do not always have a united and unifying agenda, and coalitions can actually marginalize the interests of certain constituencies of civil society. The implication for corporations is that, by working with certain NGOs and coalitions of NGOs, they may atually marginalize other interest groups." (Ali 2000: p. 79)

Gold Mining in Ghana: Both Large and Small

Gold extraction in Ghana is booming. In 2005, The Chamber of Mines for Ghana reported that production was up 63% from 2004 and calculated export earnings of US \$900 million, up from US \$730 million in 2004 (CIA 2006; World Gold Council 2006). The Ghana News Agency reported that gold overtook cocoa as the country's leading export for the second year in a row in 2005⁴. The export figures do not account for Ghana's true full production since the majority of gold produced by ASM is not exported but rather retained by the government to boost foreign exchange reserves (Hilson 2006b). Nonetheless, changes made to the national minerals policy in the 80s are widely credited with revitalizing a gold mining economy that showed signs of lagging in the 70s and 80s (see Appendix I for more economic evidence of revitalization).

Policy changes initiated in 1983 under the auspices of an Economic Recovery Plan (ERP) were aimed mainly at changing the foreign investment climate to encourage more private investment in large scale gold mining and the ERP was augmented with important policy efforts in 1989 aimed at formalizing the small scale mining sector. Since the ERP was launched, substantial growth has been seen with as much as US \$4 billion in foreign investment between 1983 and 1989 for exploration and rehabilitation of new and existing gold mines (Hilson and Potter 2003: p. 244). Increase in gold output in both the large and small-scale sectors, as seen in Appendix I, can be attributed to the structural adjustments contained in the ERP (Hilson 2001: p. 61). The 1989 Small-Scale Gold Mining Law (PNDCL 218) established an official, legal permitting system for ASM, provided seven regional district support centres for ASM, and created the Precious Minerals and Marketing Corporation (PMMC) to buy ASM produced gold at close to market prices from permit holders. "The Law defines a 'small-scale gold mining operation' as that which engages in 'the mining of gold by any method not involving substantial expenditure by an individual or group of persons not exceeding nine in number or by a co-operative society made up of ten or more persons (Hilson and Potter 2003: p. 245).'" The permitting system is restricted to Ghanaian nationals and allows small-scale gold mining operations to hold land concessions of 25 acres or less and the

⁴ Refer to article published on the website of the World Gold Council (World Gold Council 2006).

mineral rights to these concessions for a period of several years provided that they sell all recovered gold to licensed PMMC buyers. The PMMC licenses 800 buyers who in turn employ a network of sub-buyers to purchase the gold from ASM producers and sell it to the PMMC for a small profit (Hilson 2006b). While the Ghanaian government deserves acknowledgement for taking steps to provide educational and technical support to widespread ASM operations, the legal structures of formalization have not been particularly effective at bringing miners into the formal support network (Hilson and Potter 2003). Informal, illegal gold mining operations (in Ghana called *galamsey*) are still the prevalent approach to ASM for a variety of reasons. The reason of most pertinence here is an overall scarcity of available land concessions in Ghana that are viable for small-scale gold mining. Miners have found that it is often more profitable to operate illegally on concessions to which large private companies hold the title than to go through the permitting system (Hilson and Potter 2003; Hilson 2006a). PMMC sub-buyers purchase gold from illegal operators all the time since it is just as easy to sell this gold to the PMMC as it is to sell them gold produced under the legal small-scale mining system⁵. For a conceptual diagram of Ghana's two small-scale gold production to market chains, see Appendix II.

In the larger historical context surrounding conflicts over land between *galamsey*, large-scale mining operators, and the government, it is important to remember that gold has traditionally been mined on a small scale in Ghana for thousands of years whereas the arrival of most large, private gold mining companies has only occurred very recently. Moreover, widespread unemployment and rural poverty have exacerbated the situation and have been implicated as causal factors in the unprecedented growth seen in illegal gold mining recently as well as a reason for the growth in gold output from the small-scale sector shown by statistics in Appendix I (Hilson and Potter 2003; Yakubu 2002). The need for access to mercury is fueling the cycle of poverty in some regions of the country, and signs of mercury poisoning among miners and community members are widespread (Hilson & Pardie 2006). The Noyem area, near New Abriem in the Eastern Region and only a few kilometers from one of Newmont's planned future mine sites; It is populated by approximately 30,000 people who are dependent on the underground ASM

economy, and mercury is a significant driver of debt, unfair pricing, and health problems here (Hilson & Pardie 2006; Hilson 2006a).

Newmont Ghana Limited- The Beginning of a “Golden Partnership”

The Ahafo mine of Newmont Ghana Gold Limited was inaugurated by Ghanaian President John Agyekum Kufuor on November 18th, 2006 with high expectations of the company for social responsibility to local stakeholders. President Kufuor expressed that Newmont’s plans to expand its operations at Ahafo while also exploring gold mining opportunities in other parts of the country are ”encouraging” and that the government’s policy of support for investment by companies like Newmont “Translates into a fair administrative and legal framework, including Alternative Dispute Resolution (ADR) mechanisms, public sector responsiveness to good corporate citizenship, a vigorous infrastructural development and improved social services delivery” (GNA 2006). The Ahafo mine is Newmont’s first operational gold mine in Africa. The company’s plans to develop a second mine at Akyem, a few kilometers from Noyem, near New Abriem have progressed much more slowly than at Ahafo due to concerns raised in 2005 by Ghana’s Environmental Protection Agency after the completion of the Environmental Impact Assessment (EIA) as well as International Finance Corporation restrictions on projects in forest reserves (Hilson 2006b). Nonetheless, production at Ahafo begins under the mutual hope of Newmont executives and Ghanaian Government officials for a partnership that will foster trust, confidence, and quality of life improvement for communities in the vicinity of Newmont projects as was evident from statements at the inauguration ceremony:

[Mr. Wayne Murdy, Chairman and Chief Executive of Newmont Mining Corporation] stressed that the company's commitment went beyond finding and producing ounces of gold, "For we recognise that the lives of communities within the vicinity of our projects and the nation at large must be improved by our presence."

"Our goal is to leave a legacy of increased prosperity by building sustainable capacities for the communities who are our neighbours so that even after the mine eventually closes their lives would continue in an improved state as a result of our project," Mr Murdy said.

The Newmont Chief Executive was optimistic that the company would continue to enjoy the confidence and trust of the Government and people of Ghana "And we would further consolidate our Golden Partnership."

Mr Bill Zisch, Vice President of Newmont, Africa Operations, gave the assurance that the company would continue to pursue opportunities to deepen its relationships with Ghanaians.

"Our goal is still to create value for all stakeholders with every ounce of gold and this could only happen through partnership," he added. (GNA 2006)

Newmont's claims of positive, engaged partnership are supported by the relationships they have been cultivating with a variety of stakeholders since they began prospecting in Ghana in the late '90s. According to Conservation International's Center for Environmental Leadership in Business, "Newmont Ghana Gold Ltd. (a subsidiary of Newmont Mining Corp.) is working with CI Ghana and local partners to ensure biodiversity issues and conservation opportunities are evaluated and managed at their Akyem and Ahafo project sites" (Conservation International 2006). Newmont Mining Corporation's main website also acknowledges the importance of environmental issues, including appropriate management of mercury and biodiversity, as part of their commitment to social responsibility. While there are no specific references to issues of mercury pollution in Ghana, there is a statement on how reforestation will contribute to biodiversity maintenance:

Managing biodiversity is particularly important in the planning and construction of our two new mines in Ghana. Deforestation has been a problem in Ghana for many decades. One of our main activities in the early stages of these projects before mining begins is to start growing trees in preparation for reforestation and ultimate reclamation when the mines close. We are committed to the reforestation of at least two acres for every acre used by our operations at Ahafo and Akyem in Ghana. We have established three nurseries, each over 50 acres. In addition to planting trees on site, we supply seedlings of native trees from our nurseries to reforestation projects run by the government and NGOs. Since 1998, we have donated 112,820 seedlings for reforestation in Ghana. (Newmont 2006a)

Newmont's efforts at reforestation in Ghana have been implemented on the local level through a partnership with the Nature Conservation Research Center (NCRC), a Ghanaian non-profit organization that works with volunteers from local communities and the US Peace Corps to "encourage protection of Ghana's natural, historic, and cultural diversity" through conservation initiatives (NCRC 2006). It is interesting to note that Newmont Ghana Gold Limited lists NCRC as a community partner on their website, but that NCRC does not include Newmont on their published list of partners or donor organizations. The NCRC website does not address the implications of mining at any scale for the health of natural, historic or cultural diversity.

The proposed site for Newmont's second mine in Ghana, Akyem, is located inside the boundaries of a protected national forest reserve in the Eastern Region: Ajenjua Bepo. Before the election of President Kufuor and the current New Patriotic Party (NPP) in 2000, the previous National Democratic Council (NDC) government granted Newmont and several other mining companies licenses to prospect in Ghana's forest reserves with the implication that licenses to operate there would be granted if viable gold reserves were found (Anane 2006). Now the NDC government has been replaced and major questions have arisen about the ethics and legality of allowing mining in the forest reserves at all (Anane 2003b; 2006; Hilson & Nyame 2006). Nonetheless, Newmont has already invested a sizable sum of money and time in assessing sites inside the Anjenjua Bepo forest reserve and completing an EIA. In 2003, the Minerals Commission (MC) indicated that their decision about a license would depend on the results of the EIA. Refusal by the government to consider a license for Newmont at Akyem now could seriously undermine the trust and relationship building process to which President Kufuor referred at the inauguration of Ahafo. Funding for the project further complicates the matter as the IFC has a natural habitat policy that prevents them from giving support to projects that will destroy critical natural habitat as defined by the World Conservation Union (IUCN). It is currently unresolved whether the site at Akyem constitutes critical natural habitat by IUCN standards (Hilson 2006b). Newmont depended on financing from the IFC to build and operate at Ahafo, so it is likely that they are counting on support for Akyem as well.

While the issue of illegal mining on concessions owned by large mining companies has largely been seen as a law and order problem by organized business (represented by the Chamber of Mines Ghana), the connections between illegal mining, extensive environmental damage due to mercury pollution, and extreme poverty have been made clear through academic research (Hilson & Pardie 2006). Newmont acknowledges the land rights conflict as tied to issues of security and development, but not to environmental integrity. In a statement issued on November 4, 2006 by Dr. Chris Anderson, Director of External Affairs and Group Executive of Social Responsibility for Newmont Ghana Gold Limited, the importance of engaging with stakeholders to address the development challenges faced by Ghana's illegal mining population was stressed.

Anderson's full statement is available in Appendix III. One pertinent statement that stood out ties directly to a recent business proposition that was made to Newmont and the Government by a local Chief in the area of Newmont's proposed Akyem mine: "We recognize that illegal mining provides livelihood opportunities for poor people. It thus must be approached as a development issue, not only a security problem" (Newmont 2006c).

A Business Proposition: ASM in Newmont's Noyem Concession

Newmont's plans to begin operations at Akyem in 2008 are behind schedule mainly because of concerns raised by Ghana's EPA. A concession held by Newmont at Noyem in the vicinity of Akyem, has been assessed to reveal that gold is present but not in quantities high enough to justify a capital-intensive mining operation. The population of about 30,000 *galamsey* who are actively mining in the region are doing so illegally on Newmont's concession. Newmont officials are aware that their Noyem concession is swarming with illegal mining activity and have been debating options on how best to respond (Hilson 2006a). Officially, it is the responsibility of the Ghanaian government to police the land and prevent illegal activities, but as the holder of land rights, Newmont has reason to be concerned for the safety of these miners and the legacy they will leave behind.

In August 2005, forty illegal miners were trapped underground when a tunnel on the Noyem concession collapsed; Newmont had no active operations in the area and accepted help from the safety team of rival Anglo Gold Ashanti to excavate the tunnel in hopes of saving the lives of these miners. The miners were never found and the team called off the search a week after the accident was purported to have happened. Even though Newmont was not legally responsible for this accident, the company faced a barrage of negative media attention and was compelled to address the issue in their 2005 Corporate Sustainability Report (Newmont 2005).

Dr. Gavin Hilson, a lecturer at the Institute for Development Policy and Management at the University of Manchester's School of Environment and Development, has worked as a consultant for Newmont on the issue of artisanal mining in Ghana. One of his main research goals is to identify policy interventions that can

improve the quality of life of impoverished ASM participants while at the same time improving the efficiency of their operations (Hilson 2006b). Dr. Hilson has conducted enough field research at Noyem to understand the self-imposed organization systems of the *galamsey* operating there. He has also been involved in mediating communications between Noyem's *galamsey*, Newmont officials, and government officials to some degree (Hilson & Mohammed 2006; Hilson 2006b). At Newmont Ghana Gold Ltd's Illegal Mining Workshop earlier this year, "Newmont officials tabled the following three ideas on the issue of "what to do" with the Noyem concession: 1) sell the prospecting license; 2) keep it and sweep (i.e. solicit the services of the army to remove illegal miners); and 3) 'engagement'" (Hilson 2006a). Working with Dr. Hilson, the Noyem chief and community representatives have approached government officials and Newmont personnel to make a case for relinquishing parts of the concession so that the legal title to operate can be transferred to the *galamsey* and allow them to become an organized, recognized, working cooperative. The case has been presented based on the following arguments (Hilson 2006a: p. 21):

- 1) With Newmont planning to begin mining in 2008 at neighbouring Akyem, it is believed that legalizing small-scale mining operations at Noyem would reduce the risk of possible encroachment on the mine site.
- 2) The program could help to alleviate or reduce health risks in the region. Legalization is the first step to launching comprehensive educational programs and extension.
- 3) Few attempts have been made to interact with illegal artisanal miners, let alone engage them. The move to relinquish the Noyem prospecting license would have an enormous impact reputationally, and could deliver significant economic benefits to a depressed local community.

Newmont is willing to consider relinquishing their prospecting license, and hence are in a strong position to negotiate with the *galamsey* over the terms of operation. The *galamsey* camps of Noyem are already operating under a system of by-laws that institute transparency, fair labor practices and careful accounting (Hilson 2006a; 2006b). However, without legal entitlement to operate in Noyem, these camps have been forced to sell the gold they produce at prices well below market value in order to gain access to needed credit and the mercury they use to amalgamate their gold (Hilson & Pardie 2006). Because the PMMC buyers have control over distribution of mercury and are the only consistent, available channel through which illegal miners can sell their gold without leaving Ghana, buyers who wish to can easily exploit the miners by requiring them to sell their gold for very low prices in exchange for mercury and loans to cover labor costs.

Legalized SSM operations have access to credit, mercury and other technologies through district centres.

The heads of each *galamsey* gang operating in the area are required to pay a registration fee and weekly rent to the Noyem chief as the “stool” or traditional holder of the land. These organized groups are desperate to get a license for the Chief so that they can take legitimate control of the situation and work to improve the quality and efficiency of their operations (Hilson & Mohammed 2006). Some of the PMMC buyers are willing to negotiate fairer prices and ally themselves with the Chief (Hilson 2006b). It is hoped that upon gaining the legal status of concession holder, the Chief could combine it with the trust and authority that the *galamsey* have bestowed in him to legitimately enforce some controls over the buyers, allowing only approved, trustworthy buyers to do business at the site. In addition, with access to the district centre, the Chief could require group leaders to partake of extension and education services that would improve health conditions, economic efficiency, social problems and environmental impacts in Noyem.

There is no system of transferable mineral titles in Ghana, so Newmont would have to relinquish their prospecting license to the government in order for a title to be made available to the Noyem Chief. If titles became available for small-scale mining at Noyem, the district centre is prepared to relocate to provide direct access to extension, education and other support services at the site itself (Hilson 2006b). Newmont is in a position to work with the district centre to improve its resources and strengthen its approaches. Newmont could provide direct financial support for the district centre, in-kind support through extension of trained personnel, or assistance in applying for financial support from international donor agencies.

At this time, the Noyem *galamsey* are waiting for a decision from Newmont executives in Denver on whether Newmont will relinquish parts of its concession and what terms they will require. However, since the negotiation was proposed, Newmont has faced some significant roadblocks in the process to obtain a license to operate at neighboring Akyem, where it hopes to open a large-scale mine in 2008. Until the disagreement between Newmont and Ghana’s EPA is resolved, it is unlikely that Newmont executives will take any action toward a decision at Noyem (Hilson 2006b). Given this unique situation wherein the *galamsey* have invested a certain amount of trust

in both the Newmont executives and the Ghanaian government, the issue of time is paramount to reaching the best possible agreement. As time passes, trust will begin to erode and eventually the opportunity to negotiate earnestly will be lost. The remainder of this paper analyzes options for moving forward with the negotiation. Recommendations will be presented to both the *galamsey* and to Newmont for enlarging the Zone of Possible Agreement (ZOPA) to achieve a win-win solution.

Negotiation Analysis⁶: What is the Way Forward?

The negotiation at Noyem as currently proposed would involve five parties: Newmont, the Noyem Chief, the Mineral Chamber, the University of Manchester, and the Precious Minerals Marketing Corporation. The concurrent linkage of this negotiation to the ongoing dispute between Newmont and the EPA should not be overlooked as it may provide opportunities to enlarge the pie and create value, but it could also become a toxic issue that poisons the potential for an agreement at Noyem. It is expected that Newmont will not turn its attention to going to the table with the Noyem Chief until there is a resolution to the situation at Akyem. It is possible that reframing the issues could change the perceptions of Newmont officials such that the Noyem proposal becomes delinked from Akyem. In order to figure out promising strategy and process options, we will examine the bargaining power held by each of the two main parties as well as ways that they may be able to increase this power to bend the process in favor of their the outcomes they want. Opportunities to harness science to catalyze consensus between the two main parties will also be weighed in the recommendations.

Looking at the Options from Newmont's Point of View

Newmont's main interest lies in the investments they have made with the hope of beginning operations at Akyem in 2008. Because the site is located inside the Anjenjua Bepo forest reserve, the company may not be granted a license to operate there after all despite what the previous government led them to believe. If they are given a license, they may not be able to count on funding from the IFC and thus the economic basis for operating at Akyem may change. The parties involved in the current dispute over

⁶ This analysis draws heavily on techniques used by Michael Watkins (2000).

licensing at Akyem include the Minerals Commission of Ghana (MC), the Chamber of Mines (a trade organization), the IFC, the Environmental Protection Agency (EPA) of Ghana, Newmont, and a coalition of thirteen NGOs and community groups who are trying to block mining in Ghana's forest reserves. As the case has been framed at Noyem, Newmont's main financial benefit for negotiating would be to protect its future operations at Akyem from infringement by illegal miners. If operations at Akyem are not likely to proceed, then Newmont's BATNA for the Noyem negotiation appears to become higher than the benefits that they could reap by reaching an agreement.

One productive way that Newmont could reframe the debate would be to use a strategy that forces the EPA to question which environmental harm is more important to resolve: widespread mercury pollution and environmental degradation from illegal artisanal miners, or open pit mining that will be remediated in the Anjenjua Bepo reserve. The EPA has publicly declared that the *galamsey* are the main contributors to environmental degradation in Ghana (News, The Mining 2005). Linking the Akyem negotiation to a commitment to relinquish their Noyem concession and support the mining cooperatives there to work toward more environmental responsibility through mercury abatement and other programs, Newmont could construct an argument that they are willing to protect the watersheds around the forest reserve from toxic mercury pollution. In addition, the argument could be made that once the *galamsey* exhaust the gold at Noyem they are likely to begin operations at other local sites that they know to be productive, such as those that have already been identified by Newmont inside the forest reserve. By expanding the pie to show that without Newmont the forest reserve may be mined illegally with no requirements for remediation, high levels of mercury exposure will continue, and local poverty will not be addressed, other parties may realize that forcing Newmont to walk away from the Eastern region altogether may not be the best alternative. Newmont could offer to work with the Noyem *galamsey*, IFC and other international development agencies to provide technological solutions, education, and funding for university research to monitor newly legalized mining at the Noyem site in order to eliminate the usage of mercury within an agreed time period.

A strategy of forcing a choice between proactive support of legalized, mercury-free small-scale mining and complete avoidance of large scale mining in forest reserves

could be complemented by expanding the land pie to include all of Ghana's forest reserves. Assuming that Newmont has not invested in exploration in any of the other forest reserves to date, they may be willing to agree that Akyem will be their only effort to secure mineral rights in a forest reserve and that all future operations will not infringe on protected forests in Ghana. Given that several other forest reserves are considered more biologically sensitive than Anjenjua Bepo, the appeal of this type of agreement is three-fold:

- 1) It would help to solidify a good relationship between Newmont and the government of Ghana
- 2) It would protect against future misunderstandings about forest reserves due to regime change and other complications
- 3) It could strengthen incentives for Newmont to work with the *galamsey* at Noyem on the basis of a common aversion of mercury amalgamation in the vicinity of sensitive, ecological reserves

An alternative strategy that Newmont could pursue would be to seek compensation from the Ghanaian government for the investments they have made at Akyem in exchange for agreeing not to mine there. It is not likely that the government will be able to compensate Newmont monetarily without the help of international finance institutions. It is possible that Newmont could be compensated with more mineral concessions and the relaxation of export taxes and fees for a certain amount of gold produced at Ahafo. Giving mineral concessions to Newmont is likely to exacerbate the problem of land scarcity leading to continued expansion of illegal mining.

Looking at the Options from the Noyem Galamseys' Point of View

The *galamseys'* main interest is focused on procuring legal entitlement to mine at Noyem. However the main principles driving this interest are the *galamseys'* needs to eliminate exploitation by corrupt PMMC buyers and to exercise more financial independence and control of marketing and production. Because reliance on the PMMC buyers is strongly related to the services they are able to provide to the *galamsey* (mainly credit and supply of mercury), much of the desperation for a license is driven by the privileges that come with it (mainly the legitimacy to police buyers and to access

government backed credit, extension services, equipment and supply channels). If an alternative arrangement could be made whereby the *galamsey* cooperatives were given access to reliable credit and workable equipment that would eliminate the need for mercury amalgamation (such as the cleangold sluice⁷), then their desire for legal title to the land might fade to a degree. Nonetheless, the policies of the Ghanaian government and Newmont stress the need for artisanal miners to register and go through legal channels, so any assistance given without requiring the *galamsey* at Noyem to pay for permits would contradict the long-term goals of official public and private interests.

By reframing the case for negotiating, the Noyem Chief and his community representatives could seek to appeal to Newmont's sense of environmental responsibility. Since plans for development at Akyem are currently mired in controversy, it may be wise for the Noyem Chief to use a strategy that delinks Akyem from the Noyem negotiation to some degree. The business case that has been presented relies on Newmont placing some value on the idea of reducing the risk of ASM infringement at Akyem. An alternative way to frame the value that Newmont will claim in this negotiation would be to keep the focus on a more neutral issue of definite environmental harm that is a common aversion for both parties now and in the future⁸. This strategy will require the use of science to facilitate an agreement at the negotiating table. It has been suggested that there is a fruitful role for science as a means of facilitation to spur discussion of what is possible in making progress in situations of environmental conflict (Ozawa 2006). In this case, the Noyem Chief might work with Dr. Gavin Hilson to solicit the aid of scientists from the Global Mercury Project⁹ or another scientific research organization that is not already allied with the Noyem *galamsey* to the degree of the University of Manchester. Scientists who are working to measure and eliminate the negative health and environmental effects of mercury pollution could serve as powerful advisors or facilitators in a discussion between the Noyem Chief, Newmont executives, Government officials and

⁷ This technology is not currently available in Ghana but it would be useful. For more information see Hilson & Pardie 2006.

⁸ The challenge of framing an environmental harm as a common aversion regardless of whether interests on other matters are divergent is discussed in detail by Saleem H. Ali (Ali 2003).

⁹ This global science consortium has published several studies concerning the use and problems of mercury in ASM in Ghana (Global Mercury Project 2003).

environmental NGOs about how best to collaborate on addressing this issue in the Noyem/Akyem region.

In order to improve upon the *galamseys'* bargaining power in this negotiation, the Noyem Chief may want to investigate the possibility of bringing new parties into the discussion by forming alliances with key players on the issue of mercury abatement. One possible alliance that could be worthwhile given that Newmont is a U.S. based company would be with the National Resource Defense Council (NRDC). NRDC, an environmental NGO based in Washington D.C., has launched an international campaign to promote policies that will reduce mercury pollution and recently sent a representative to a meeting of the Communities and Small-Scale Mining (CASM) network to investigate ways that NRDC could support phasing out the use of mercury in small-scale mining operations¹⁰. Newmont's website details the company's strong commitment to social responsibility and its' desire to support community development and protect human health and the environment in the regions where it operates. Commitment to sound environmental management (including mercury management) at every stage of the mining life cycle from exploration to reclamation is emphasized. However, Newmont's website summaries make no reference to mercury contamination of their exploration sites caused by illegal miners, despite strong evidence that this is occurring at Noyem (Hilson & Pardie 2006). The Noyem Chief could seek to increase bargaining power with Newmont by offering company executives the chance to be proactive about engaging with the Noyem *galamsey* on this issue but clarifying that the passage of too much time may force the *galamsey* to seek NGO alliances that will publicize Newmont's willingness to overlook the accumulation of mercury pollution at their Noyem concession. Now that citizens in the U.S. are becoming more attuned to the environmental and social harms caused by gold and diamond mining, and large jewelry retailers are engaging with gold suppliers like Newmont on these issues, the threat of a negative media campaign could be

¹⁰ I spoke with Susan Egan Keane of the Health & the Environment division on NRDC. She was attending the CASM Annual Meeting to learn more about how NRDC's campaign to halt mercury production would impact ASM. NRDC is working to strategize on how they can support ASM in transitioning away from the use of mercury (Keane 2006).

enough to pressure Newmont to relinquish the concession to avoid the PR liability that it could represent for them.

Analysis of Bargaining Power

Newmont has more power than the Noyem *Galamsey* in this negotiation by virtue of their legal entitlement to the concession, their strong financial resources and their high BATNA. However, the Noyem *galamsey* do have some important sources of power and may provide an excellent opportunity for Newmont to gain legitimacy with regards to CSR, community relationship building, and their role in Africa. Using the model of bargaining power developed by Fisher (1983) and employed by Ali (2001?) to analyze bargaining strategies used by indigenous groups in North American mining conflicts, I have developed the following table to conceptualize the negotiation in terms of power:

	Newmont	Noyem <i>Galamsey</i>
Power of Skill and Knowledge	Weak in ASM Matters; Strong with Regards to Legal Matters, Environmental Monitoring and awareness of CSR standards	Strong in ASM techniques and politics; Seek legal status to access SSM district centres
Power of a Good Relationship	Alliance with Government; Government wishes to maintain relationship for future. Newmont seeks to establish good community relations in Ghana.	Engagement and Trust Building underway with Newmont and Govt; Chief has a good relationship with <i>galamsey</i> ; History of Stealing and Violence
Power of a Good BATNA	Will suffer not suffer financial loss unless Noyem agreement can serve to advance licensing at Akyem; High BATNA	Low BATNA; will continue to mine illegally and inefficiently or seek new land that may not be worth mining
Power of and Elegant Solution	Mercury Abatement Program as a way to protect watersheds around Forest Reserve	Mercury Abatement Program as a way to promote fair prices and poverty alleviation
Power of Legitimacy	U.S. Company and therefore considered less legitimate than African companies; Legacy of Slave Trade; Newcomer to Africa; Values CSR Policies; no plans to mine concession	Long tradition of ASM in Ghana; <i>Galamsey</i> is culturally accepted without legalization; Protected by Chief and community members; Transparency and by-laws
Power of Commitment	Newcomer committed to a “golden partnership” with Ghana; Seeks to address illegal mining as a development issue	No good alternatives to mining; strongly committed to meeting terms to get a license
Power of Process	Willing to consider propositions made by the <i>galamsey</i> ; currently avoiding the negotiation because of complications at Akyem.	Took the Initiative to engage with Newmont and the Government to find a win-win solution

As currently framed, an elegant solution has yet to be proposed but I argue that the science of mercury pollution could serve as a powerful common aversion to catalyze consensus between the parties and devise an elegant solution that may alleviate tension with regards to the Akyem negotiation and establish a win-win solution for the Noyem negotiation.

Concluding Remarks

I have made a sincere effort to lay out significant barriers and opportunities to negotiating an agreement that would allow for peaceful, legal mining at Noyem. The parties, their interests, potential alliances, the issues on the table, potential linkages between these issues, and BATNAs have all been explored to some degree in the manner explored by Watkins (2000). The issue of time is important as the extremely unusual foundation of trust that the *galamsey* have laid out for the Ghanaian government and the Newmont executives will begin to fade and be replaced by the five F's of conflict, failure, frustration, fear, friction and fatigue, unless some positive progress can be made (Ali 2006). Two techniques condoned by Bazerman (1986) have been suggested here to keep the negotiation on track for a win-win solution: expanding the pie to make the negotiation more integrative, and reframing the negotiation in terms of gains in preventing development and environmental problems associated with mercury amalgamation. Scientists could potentially play a facilitative role in this process and should keep in mind the challenge of framing the game as one of common aversion to environmental damage and poverty associated with mining operations.