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“Mining the Margins: Precious Metals Extraction and Forced Labor Regimes in the Audiencia of Quito, 1534-1821”

This book concerns the history of gold mining in what is now Ecuador and southern Colombia during the colonial period. Although this region was not as significant as Mexico or Upper Peru as an exporter of precious metals, there was continuous exploitation of widely scattered gold deposits throughout the period, and gold drove the regional economy for many years. Although it has not been studied in detail before now, the gold mining industry of early Quito was in fact so regionally important that it overshadowed all other economic activities for over a century, and was crucial to maintaining crown sovereignty in far-flung hinterlands even after gold production began to flag. This is a significant new finding, as the Audiencia of Quito’s colonial economic history has always focused on the later seventeenth-century textile industry and its links to the silver economy of Potosí (Bolivia).¹ A careful quantitative analysis of account summaries in Spain and Ecuador, along with local smeltry books, has revealed a sizeable gold bonanza between the years 1535 and 1640. This explosive period of production was followed by a period of sustained decadence lasting into the early nineteenth century, broken only by the periodic opening and subsequent development of new mining frontiers in the coastal jungles of the northern Pacific coast beginning in the mid-seventeenth century.

The book begins with an overview of mineral deposits exploited during colonial times in the Audiencia of Quito (with maps of each region) and a close examination of techniques used in mining, including little-known placer (stream gravel) mining techniques not treated in detail by other historians. The geographical and technical discussions are followed by a reconstruction of production statistics based on royal tax records and an in-depth treatment of the social conditions of mining regions with a particular focus on labor systems. This two-part discussion of labor systems (described

¹ The most recent example of this widespread tendency to overlook Quito’s mining heritage can be found in Kenneth Andrien, *The Kingdom of Quito, 1690-1830* (Cambridge, 1995), 21: “The first Spaniards to open cloth manufactories in the Kingdom of Quito were the region’s *encomenderos*, who sought viable sources of income after local placer deposits became exhausted by the 1560s.” My findings quite clearly demonstrate that gold production in Quito’s hinterland (in both placer and vein mines) was just beginning to flourish in the 1560s, reaching several hundred thousand pesos annually by the 1580s; and Quito’s *encomenderos* were prominent both in mining and in trading merchandise to the gold fields. Furthermore, most cloth manufactories in the region were not in fact established until after 1600. Andrien is simply echoing the prevailing historiography for this earlier period.

in greater detail below) is followed by a chapter on trade and its dependent links to mining zones. It seems that as in most gold boom regions the world over, Quito's early itinerant merchants were the surest beneficiaries of newfound mineral wealth; their complex and interdependent relationships with gold producers is examined in both social and economic terms. The trade chapter is followed by a concluding discussion of mining camp society, the "social milieu," as it were, of colonial Spanish American gold camps, characterized by profligate gambling, prostitution, and corruption, especially among elites. As might have been predicted by the great American sociologist Thorstein Veblen, whose models are adapted here, among workers an almost inverse image appears to have obtained, in general a will to freedom expressed not only in the forms of day-to-day resistance and *marronage*, but also in a deeply-rooted and possibly still-visible work ethic. This chapter explores various contrasts of this kind between the lives of the "hardly working" and those of the "working hard."

To expand briefly on the above-mentioned labor chapters, they focus on three coercive forms, namely: 1) the indigenous *encomienda*, a quasi-feudal, tributary arrangement used by the crown to reward conquistadors in all regions at one time or another, 2) rotational indigenous labor (the *mita*), used in Quito's mines until about 1700, and 3) African slavery, which displaced indigenous labor in some of the region's gold fields as early as 1600. As elsewhere in Spanish America, forced indigenous labor in gold mines was curbed by reforms, both affecting the *mita* and the *encomienda*, as early as the mid-sixteenth century. My research for the Quito backcountry, however, suggests that in marginal districts these reforms were observed largely in the breach, or were only implemented after mineral resources were exhausted. Similarly, although slavery in Spanish America has been characterized by some historians as comparatively benign, mine slaves' legal and basic human rights were constantly compromised in the name of increased production, especially in the northern placer districts of Popayán, a province subject to Quito's *audiencia*, or high court. In sum, the two labor chapters draw comparisons from among Quito's many and diverse mining regions, all of which illustrate the enormous gaps that developed between labor law and mining practice.

Overall, this book will fill a void in the historiography of both the economic and social histories of the little-studied Audiencia of Quito, thus adding geographical breadth to the growing field of Spanish American regional studies (books on colonial Mexico, for example, now number in the hundreds, while colonial Ecuador still counts only a half dozen or so titles in English, most of them concentrating on the demography of the central highlands). As a variant of widely-known examinations of silver mining and its social consequences in Mexico and Peru, this study offers many useful and challenging

comparisons in terms of both production techniques and labor systems. It also challenges several Andean historians' assertions that the Audiencia of Quito was little more than a textile-producing satellite of the southern silver districts throughout most of its more than two centuries of existence. Finally, this book serves as something of a cautionary tale, a true story of human and environmental exploitation and long-term economic underdevelopment, both clear consequences of short-sighted, mercantilist state policy and a nascent, theologically-based form of racism.

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This dissertation developed out of a long-standing personal interest in the social and economic history of mining in the Americas. Ever since I could remember, my family was entertained by my grandfather's tales of life in the mines and quarries of western Colorado, where he worked for many years after World War I. We made frequent visits to old, desolate gold towns like Alma, on the upper reaches of the South Platte River, and Marble, a stunningly beautiful but equally moribund quarry town on the Crystal. The stories and images of mining life which my older brother and I grew up with but did not always appreciate were always compounded by the often stunning experience of viewing the ravages wrought by mining on the natural environment, even after many decades of idleness. The landscape of Colorado, like many other mining regions in the world, remains deeply scarred by the processes of mineral extraction, a powerful testament against the ills of unrestrained capitalist enterprise. For my grandfather, mining was a job and a way of life, one of few ways of making a living available at the time. For better or worse, mining formed one of the contours of everyday life for my grandparents and subsequently for the rest of my family. Through my grandfather's stories I learned several fundamental lessons which have affected my approach to mining history in other regions. For one, I learned that there was no such thing as unskilled labor in the mines, and that resistance could take a thousand other forms besides unionization. In terms of method, my grandfather taught me the value of memory, and of listening to the witness, the person who lived through it all, before passing judgment or generalizing.

My parents and my brother, Ken Lane, have been supportive of my academic pursuits from the beginning, even when my studies took me far from home and kept me more or less *incomunicado* for very long periods of time. I hope that my having finished this preliminary piece of work will compensate some of the debts I owe them. My father, in particular, encouraged me to explore new fields of inquiry and to focus my not always steady energies on positive social change through education. A trip through Mexico by train in the summer of 1985 altered my consciousness of the foreign and familiar in ways that nothing else could have, and I must thank my father for this gift--given as all the good ones are, with no strings attached. Academically, my thanks must go first to Jack Perry, my highschool history teacher. Mr. Perry's seemingly endless fascination with the intricacies of Russian history and language were a constant inspiration, even though I chose to focus my own interests on another language and part of the world. Also, his extreme patience and constant nudging and correcting helped prepare me for college and the horrors of essay exams.

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Most of all, I owe all of the thanks in the world and more to my lovely wife, Pamela Johnson-Lane. She has stuck with me through thick and thin, and never stopped encouraging me although my work has forced us to be apart for painfully long periods of time. As I busied myself with learning about colonial history, together we learned more than we ever cared to about the nature of present-day race relations, both at home and abroad. What has been for me an incidental enlightenment has for her been a lifetime burden. Her strength and amazing propensity for forgiveness are truly inspirational. I can only hope that my work, when it regards questions of race and ethnicity, may benefit from these insights of everyday life. Perhaps we can now go on that long-promised, work-free honeymoon.

Introduction

"Mining, it seems, is considered there [in Peru] in the same light as here, as a lottery, in which the prizes do not compensate the blanks, though the greatness of some tempts many adventurers to throw away their fortunes in such unprosperous projects." Adam Smith, *The Wealth of Nations*.²

Smith's assessment of the mining industry circa 1776 would probably have been accepted by miners all over Spanish America throughout most of the colonial period. There were always more losers than winners, and among the latter, always lower returns than projected. Still, it would be hard to imagine the history of colonial Spanish America without precious metals mining. Even in hard times it was the lifeblood of many regional economies. No matter the ratio of winners to losers, an immense volume of gold and silver bullion was taken from the Americas, and the transfer of wealth lasted from the very beginning to the very end of this more than three-hundred year period. The Spanish, driven by mercantilist (some would even say "bullionist") conceptions of wealth, were clearly obsessed with the acquisition of precious metals, and this obsession, shared by Spain's European enemies, determined much of colonial economic policy. The crown, though more often an unshakable hindrance rather than an aid in local economic development, tried constantly to improve the lot of mine owners and developers in order to increase production. It lowered taxes, organized labor drafts, sent experts, subsidized necessary chemicals and explosives, and otherwise underwrote mining activity. Indeed, no other colonial Spanish American industry received such sustained official attention as precious metals mining. And no other colonial industry, except perhaps sugar production, brought more misery to so many millions of people.

Mining may well have been a "lottery" for investors, European-born and creole Spaniards, for the most part, who stood only to lose their "fortunes" if a mine failed to produce profits. For the several millions of Indians, Africans, and mixed people of color whom these mining entrepreneurs forcibly employed in their risky ventures, the price paid for success was no better than that for failure. Mine workers faced, and resisted daily, a world of cruel dislocation from family and community, incessant and tedious labor in dangerous pits, shafts, and rivers, malnutrition, hunger, and disease. Mining in the early modern period, both in Europe and in the Americas, was even considered among contemporary observers to be the most labor-intensive and unsavory occupation imaginable. Only service in the galleys was deemed comparable, and mine work was almost universally seen as a form of punishment. This fact was not lost on the Fuggers of Augsburg and other German banking families who administered Spain's mercury mines at Almadén--there they employed only slaves, criminals, and other socially undesirable persons.³ In the Americas, Indians, and later Africans, for a variety of cultural and religious-philosophical reasons, were at first deemed "natural" slaves, and hence "natural" mine laborers.

The first Spaniards to sift their hands through Caribbean soils quickly set about enslaving the indigenous peoples of the Antilles, forcing them to wash gold even as they themselves starved from failure to establish adequate means of food procurement. When, in response to these abuses and others like them, the crown outlawed Indian slavery between the 1510s and 1540s new sources of mine labor were sought out. While it remains unclear exactly how rigid racial views had become in Iberia by this time, Africans were quickly imported to fill the void, apparently with none of the self-reflection, guilt, and browbeating entailed by the so-called "Spanish struggle for justice." Theologians such as the Jesuit Alonso de Sandoval, who baptized thousands of newly-arrived Africans in Cartagena de Indias in the early seventeenth century, struggled only briefly with the notion that enslaving Africans and sending them to the goldfields might be as unjust as the enslavement of the Tainos of Hispaniola. Even the Indians had not won a decisive victory, as many were forced to work in gold diggings in spite of the New Laws of 1542-43. Even after the great debates of Sepúlveda and Las Casas the Indians won only a minor concession--they were to be treated legally as children and forced to work (as adults) in turns instead of as permanent chattels. From Mexico to Peru, and from conquest to independence, there always seemed to be enough precious metals mines in operation to create actual flows of millions of coerced, mostly African and Indian workers.

² Adam Smith, *The Wealth of Nations*, books I-III, Andrew Skinner, ed. (New York: Penguin Classics, 1986 [1776]), 275.

³ For a comparison of service in Almadén with other forms of punishment in the Spanish context, see Ruth Pike, *Penal Servitude in Early Modern Spain* (Madison: University of Wisconsin Press, 1983).

This, then, was the twin story of precious metals extraction in the Americas. On the one hand, it was a history defined by the massive removal of gold and silver bullion, most of it shipped from the Americas to Europe. On the other hand, it was a history of massive exploitation of human beings, usually in coercive, race- or culture-based forms. The Audiencia of Quito, in spite of being a marginal region in terms of gold and silver production over the long term, offers many useful insights regarding these two principal themes. First of all, Quito is interesting in that it fell from an early position as a primary Spanish American gold district to one almost unworthy of crown attention within a century after conquest. The causes and effects of this boom and bust will be treated in detail below, especially in chapter three. Chapters one and two will outline the main mining regions within the Audiencia of Quito and the techniques used in this activity, respectively. The gold cycle in Quito, aside from its economic effects, also led to unprecedented labor exploitation, especially of native Americans and imported Africans. This topic will be the focus of chapters four and five. A variety of forced labor regimes, including slavery, the *mita*, and the *encomienda*, will be compared and contrasted, with an eye on their short- and long-term social and economic consequences in the mining zones and in the audiencia at large.

The principal aim of this study is to provide the reader with a view of the long term social and economic consequences of gold mining in colonial Quito, but I also hope this study will serve to shed new light on this long-neglected north Andean region, and possibly stimulate new debate regarding its position as a regional economic pole. I have attempted here to sketch the size and shape of the regional economy based on production and flows of gold, and also to highlight the struggles of the many Africans and native Americans who were forced to remove this gold from the ground. Mining still matters, or at least the history of it does, in the case of Quito, because we still know too little about it. This key industry, which so often operated only at the margins of empire, was, I feel, largely responsible for the perceived and perhaps real economic decadence of the seventeenth and eighteenth centuries in the Quito region, as well as for the development of a multi-ethnic, multi-racial, but still deeply divided society. This argument applies not only to the modern nation of Ecuador, but also to southwestern Colombia and northernmost Peru, and should thus serve as a non-nationalistic cautionary tale regarding the long-term meaning of unbridled human and natural resource exploitation.

Gold mining was unusual in that it was among the most primitive industries to be found in the Americas in terms of technology, yet its product was easily the most valuable. An abundance of studies of colonial Spanish American silver mining, which was quite advanced technologically, and was clearly more important in terms of overall value produced, has long overshadowed the gold industry in Spanish America. These studies have even led to the perception that gold mining constituted a relatively unimportant sector of the overall colonial economy. While gold mining was quickly marginalized in much of New Spain and Peru, it was central to the economies of Quito and New Granada through most of the colonial period. Still, whereas the economies of the silver provinces developed around particular mine sites after the mid-sixteenth century, gold zones were on the whole far less permanent and thus unlikely to encourage macro-regional economic articulation. A gold camp was most often an ephemeral settlement, a temporary enclave staffed with non-native labor and located in hot, jungle lowlands far from central authorities. Gold mines were marginal, for the most part, and thus they presented the Spanish with particular problems of labor, taxation, and bureaucratic control. A silver district usually led to the establishment of long-term urban markets, even if they were distant from sources of labor or agricultural and other necessary produce. By contrast, a gold camp might not last for more than ten or fifteen years, so establishing rotational labor arrangements such as the *mita* of Potosí might simply have been a waste of time. Similarly, although ephemeral gold camps constituted important and often quite dependent markets, they never approached the stability of those associated with the silver districts. In this peculiar, shifting economy, mining the margins came to be defined by periodic flows of highland conquistadors, itinerant mine specialists, coerced and mobile African and Indian work gangs and ever-present Spanish merchants and their roving factors into increasingly hostile, frontier areas.

The Audiencia of Quito, a region substantially larger than the present-day Republic of Ecuador, was only briefly renowned for its mineral wealth. It has even been presented in twentieth-century (and earlier) historiography as a region dependent on the enormously wealthy silver mines of Potosí, in present-day Bolivia, for its mere survival.⁴ The Indian population, overwhelmingly concentrated in the cool

⁴ This suggestion began with the work of the Jesuit historian Juan de Velasco in his still popular *Historia del Reino de Quito en la América Meridional* (Caracas: Biblioteca Ayacucho, 1981 [1789]), and was

highlands, was engaged in a different kind of rotational labor from mining; by the late sixteenth century, most indigenous inhabitants not employed in agriculture worked in primitive textile factories, or *obrajes*. For this industry Quito was known, especially after about 1600, not for precious metals. But Quito in fact had a long tradition of mining, however overshadowed by richer regions or later developing industries. From the very beginning of Spanish settlement in the region, gold, and to a lesser extent, silver, had been extracted from virtually all corners of the region which came to be known, somewhat fancifully, as the Kingdom of Quito. From Buga, in south-central Colombia, to Jaén, in northernmost Peru, gold poured into the capital in substantial quantities until the early part of the seventeenth century. This was the heyday, the gold rush, one might say, of colonial Quito. After the 1620s the most accessible river placers and rich surface ores began to play out and precious metals extraction entered a long, sustained decadence before slightly recovering just before independence. The mining industry's late recovery was not so much based upon a revival of known gold deposits, but rather the expansion of new mining frontiers, mostly in the hinterland of the province of Popayán. For this reason, along with the general geographic isolation of Quito's principal mining districts in relation to the capital, the gold industry never moved beyond mining the margins.

Social and economic relations, as I will argue below, were distinct in such marginal regions as the Audiencia of Quito when compared with more central ones like Mexico and Peru. The Potosí mita, for example, was an immensely complicated but very well-defined means of supplying the Americas' richest silver mine with a constant supply of labor (or at worst a cash subsidy). The Cerro Rico of Potosí, once discovered, served as a fixed point of economic and political interest and was indeed such an established pole after the mid-sixteenth century that contemporary observers recognized it as both the actual and symbolic hub of the Andean economy. Partly due to the long shadow cast by Potosí, procuring labor for an ephemeral gold wash along a tributary of the upper Amazon River was a less studied problem. Given the enormous differences between these two types of mining, along with the complications of competitive labor demands in *obrajes* and on agricultural estates in the highlands, mining in Quito was always characterized by ad hoc solutions to local and often temporary labor needs. Thus one encounters, over the long term, every arrangement from chattel slavery to *encomienda* turn labor, from debt-peonage to convict labor to seasonal exploitation of family members. While Potosí's labor history has turned out to be more complex than previously imagined, the margins of empire also have much to colonial historians. At the very least, the gold mining industry of Quito, which had many facets, offers rich contrasts to the better-studied colonial silver centers.

Historians of the colonial Andes, such as Alvaro Jara and Carlos Sempat Assadourian, have attempted to place mining at the center of a general model of the early economy in this very large and very diverse region. Given the evidence at hand, these historians have focused most of their attention on the silver-mercury complex of Peru and Bolivia. They have argued, unsurprisingly, that the mines of Potosí, Oruro and Huancavelica, along with a series of smaller and less visible camps, were the productive poles of the colonial economy.⁵ Money, in the form of silver bullion, flowed out of Peru, while commerce flowed in. The hinterland was transformed in order to supply the mining centers with foodstuffs, timber, cloth, and hides. The infamous mita system of rotational Indian labor drew workers from an ever-expanding geographical net, further integrating the vast and diverse regions of the Andes. More distant regions, such as the Kingdom of Quito, fell outside the labor net of the southern mines, but were still firmly linked to these poles by trade. According to Assadourian's model, which has not yet been sufficiently challenged, Quito was a dependent satellite of the southern silver districts; its economy sustained by the export of low-grade wools, products of its substantial highland *obraje* complex.

The model of a mining-centered Andean regional economy presented by Assadourian and his colleagues is important in that it stresses the internal features of this system of circulation over its links with Europe and elsewhere. This inter- and intraregional colonial economy was, aside from the demand for Spanish iron, largely self-sufficient. In Ecuadorian historiography, Carlos Marchán has more or less attempted to second the Assadourian thesis, suggesting, in his introductory study to José María Vargas' *La economía política del Ecuador durante la Colonia* (1980 [1957]), that, "The study of the Quito region must

continued by Federico González Suárez, in his *Historia General de la República del Ecuador*, 12 vols. (Quito: Daniel Cadena, 1931).

⁵ Carlos Sempat Assadourian, et al, *Minería y espacio económico en los Andes, Siglos XVI-XX* (Lima: Instituto de Estudios Peruanos, 1980).

take into account its linkage with the mining center of Potosí.”⁶ Potosí was an important market for Quito's cheap textiles for much of the seventeenth century, at least, but was it the most important? Marchán includes Zaruma, the gold mining center of southern Quito, in his discussion, but stops short of suggesting that an alternative and equally important gold economy existed in this region at any time in the colonial era. Since the nature of gold mining differed markedly from that of silver, few scholars have suspected that gold production was substantial enough to have influenced the regional economy. In fact, as will be demonstrated below, Zaruma was only one of many gold producing areas to fall within Quito's sphere of administrative and commercial influence, and the importance of the gold mining industry only comes to light when all of these producing regions are analyzed in aggregate and the volume of their production--and consumption--assessed.

While I do not question the importance of Peruvian silver mining in the Andean economy--indeed the volume and value of Peruvian silver far outweighed all other production in Spanish South America--I challenge the assessment of Quito as a dependent satellite economy. Simply put, Quito, at least for a time, was a mining center itself. The first century after conquest, during the Potosí boom years, gold production in Quito was significant enough to have negated any hint of dependency on the silver districts for liquid capital. Even later on, I would argue, Quito's economy remained strongly linked to the several gold mining regions, if not centers, of New Granada. It is even possible that the obraje complex was as closely tied to Popayán and Antioquia as it was to Potosí. Although Assadourian's model of “internal circulation of mining capital” remains a useful analytical tool, he and his colleagues have simply not taken into account the importance of the gold mining economy of the northern Andes. The economy of Quito, which even in the best of times was never healthy, was caught betwixt and between. Its gold mining industry, unlike the permanently settled silver industry of Peru, was always in flux, always operating at the margins of official control. As I will argue below, these little-known features of Quito's colonial economy, its northern links and its unstable gold industry, challenge prevailing conceptions of the place of mining in the pan-Andean region of Spanish South America.

⁶ Marchán, in Vargas, *La economía política del Ecuador durante la colonia* (Quito: Banco Central, 1980 [1957]), 15. (“El estudio de la región de Quito debe poner de manifiesto su ensamblaje con el centro minero de Potosí.”)

Chapter One Mining Areas of the Audiencia of Quito

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Even before the arrival of the Spanish in the 1530s, gold mining in the region which came to be known as the Audiencia of Quito was an important activity. As Salomon and others have noted, pre-Columbian traders, known as *mindalaes*, brought gold beads and precious stones to market from the northern highlands and coastal lowlands.⁷ After conquest, the Spanish quickly set about extorting the traders and other Indians possessed of these items and then sought to locate their sources. The earliest *Libros de Cabildo*, or Town Council records of Quito mention Indians washing gold along nearby rivers, such as the Guayllabamba, shortly after the formal founding of the city in 1534. The first *libros de fundición*, or royal smeltry ledgers, begin with quintos paid by the conqueror, Sebastián de Benalcázar, in 1535. A portion of this first gold taxed in Quito was mined, but most of it was melted down ritual paraphernalia (*oro de huaca* or *chafalonia*), primarily gold-silver-copper alloy items stolen from the vanquished Andean chiefdoms. Spurred on by Pizarro's great fortunes at Cajamarca, some of Benalcázar's followers were certain that fabulous treasures had been hidden by Atahualpa's descendants. Rumor was that the source of Inca gold lay somewhere in the vicinity of Quito, and some even believed that a large hoard of golden treasure destined to ransom the unfortunate ruler had been secreted in a remote lake by the tenacious general of the north, Rumiñahui. While some Spanish settlers pursued such legends, others set about searching for the more mundane treasures which nature had deposited in the region's mountains and streams. Almost immediately, even before Spanish-style agriculture was established, mining activity was underway in the northern Andes, and the capital city of Quito was at the center of this activity.⁸

This chapter will list and briefly describe all of the pertinent mine districts that fell within Quito's jurisdiction, including the crucial mines of the Gobernación of Popayán, a vast territory which presently makes up the southern third of Colombia. As is common with gold mining zones the world over, many of the towns, cities, and *villas* described below were nothing more than temporary encampments, and their histories would be lost to us were it not for written records. These ghost towns, as they might be called, however small or ephemeral, were nevertheless important in shaping the social and economic history of Quito. Places now abandoned, or nearly so, were once the objects of much official attention; they fired Spanish hopes of easy riches, and in too many cases their mines became dungeons and deathtraps for thousands of Native Americans, Africans, and other coerced laborers. Part of the aim of this study is to revive the historical memory of the lost goldfields, to re-establish the social and economic importance of these now desolate places.

Interestingly, some of the most important colonial mining towns are not so desolate, and have survived to the present day, still dependent on gold production. As in the cases of Zaruma, Ecuador, and Barbacoas, Colombia, colonial patterns of resource exploitation have been surprisingly resilient; these two regions will thus receive more extensive treatment. A visit to the mines surrounding these towns today is in some ways akin to time travel, as very old technologies have managed to persist in spite of very profound structural changes and technical advances. The extraction of gold is still the central activity in these towns, and virtually all aspects of life are in some way related to the mining industry. In Zaruma and Barbacoas, the boom and bust nature of the gold economy is as evident in the architecture as it is in the attitudes of the residents. Both radiate at once hope and despair, extravagance and decadence. Whether money is flowing freely or not, "longue durée" mining towns such as these seem special places, peculiar enclave societies which never quite seem to stabilize, and yet they never quite die. Admittedly, to observe social and economic patterns in twentieth-century Ecuadorian and Colombian mines and mining towns is not to genuinely observe them in the distant past, but it is my feeling that seeing the work and lives of today's so-called "artisanal," or "informal" gold miners offers a window on the past, at the very least a means of stimulating the historical imagination.

Southern Goldfields

One of the first significant gold strikes in the Quito region occurred at a place called Santa Bárbara (or Santa Bárbola) by the Spaniards. To the native inhabitants of the region, the site, located upriver from

⁷ Frank Salomon, *Native Lords of Quito* (Cambridge: Cambridge University Press, 1986), 97-106.

⁸ For origins of the legend of Rumiñahui's treasure, see Juan de Velasco, *Historia del Reino de Quito* (Caracas: Biblioteca Ayacucho, 1981 [1789]), 142-45.

the modern towns of Gualaceo and Sigsig, was apparently known as Sangurima. The Sangurima placers were in the cool, wet sierra, some 75 km northeast of Cuenca, in the territory of the Cañaris, famous soldiers and sometime enemies of the Incas. The gold-bearing Santa Bárbara, Gualaceo, and Shío Rivers and the surrounding hills were probably first exploited by Spaniards in the 1530s, with large-scale production appearing by the mid-1540s. It is quite clear that these and other placers located further south, along the Inca Trail, were exploited in pre-colonial times. Cañar burial caches from the Gualaceo area included such items as gold and gold-copper alloy (*tumbaga*, or *guanín*) ornaments. The Spanish quickly learned of this region's mineral wealth, as the famous Ecuadorian historian José María Vargas, citing the Quito *Libros de Cabildo*, noted that gold placering was well under way at Sangurima, or Santa Bárbara, by January of 1538. By this time several encomenderos were engaging their Indian charges, as well as some African slaves, in mining operations. In June of 1540 the town council of Quito named an *alcalde de minas*, or mining magistrate, for the Santa Bárbara district. This official would solve disputes between mine claimants, hear and ideally investigate and punish Indian abuse charges, and, most importantly, oversee the proper collection of the crown severance tax, or *quinto real*.⁹

Although a probable exaggeration, the chronicler Cieza de León claimed that the mines of Santa Bárbara had produced some 800,000 gold pesos (of c. 4.2 g each) by 1544. Two officials of the royal treasury in Quito, in a relación of 1576, supported this claim to some extent, saying that in 1544 alone, eighteen to twenty Indian work gangs (*cuadrillas*) of fifty to eighty miners had washed over 300,000 pesos in gold dust.¹⁰ In response to the many problems which arose at the Santa Bárbara mines, the Quito cabildo (the audiencia was not created until 1563) issued the first mining ordinances in the region's history in 1549. These ordinances, which will be discussed further below, largely concerned the treatment of indigenous laborers. Indian workers, along with a few African slaves, were forced to labor in turns for Spanish overseers from Cuenca and Quito, and in the process, it was observed, many were overworked, underfed, forced to carry heavy burdens in addition to mine work, and cruelly punished for minor infractions. The cabildo, in its too-late response, mandated limited work hours, weight limits on loads to be carried by Indians, minimum shelter, food, and clothing to be provided by encomenderos, and limits for the size of work gangs.

That the cabildo should restrict work gangs, or *cuadrillas*, to eighty miners suggests that some were at that time, or had been in the past, substantially larger. Exactly why this limit was imposed is not clear, but it is possible that mine owners were drawing too much labor away from subsistence activities. Indeed, competition for Indian labor in the southern highlands would prove to be a chronic concern for Spanish miners and agriculturalists in the region for years to come.¹¹ Indigenous peoples immediately recognized the unattractive nature of mine work under the Spanish, and their first response to the rigors of Santa Bárbara's goldfields was to flee. Some authors interested in the peculiar demographic history of highland Quito have even suggested that the early mining economy of the south created substantial indigenous migrations, most of them toward the northern highlands. These migrations, or perhaps the relatively low resident populations at conquest, would have lasting consequences with regard to the mining economy of the Cuenca and Loja basins. Other competition for Indian labor came from encomenderos still attempting conquests and expeditions in the lowlands, such as the famed Orellana Amazon exploration of 1541.¹² With all these immediate and catastrophic disruptions, then, gold mining in Santa Bárbara set the tone for Spanish precious metals extraction in what would later become the Audiencia of Quito. Gold mining would everywhere be a baldly exploitative activity, undertaken with little or no regard for the well-being of laborers or the natural environment.

⁹ José María Vargas, *La economía política del Ecuador durante la Colonia* (Quito: Banco Central, 1980 [1957]), 187-94.

¹⁰ Pilar Ponce Leiva, ed., *Relaciones Histórico-Geográficas de la Audiencia de Quito (Siglos XVI-XIX)*, 2 vols. (hereafter *RHGQ* 1&2, Madrid: Consejo Superior, 1991), 1: 238. Note also that Quito's libros de fundición are missing for precisely these years, 1542-47, which also coincide with the Peruvian Civil War. The Italian merchant Girolamo Benzoni seems to have visited the mines of Santa Bárbara around 1547-50, but gave no details. See his *Historia del Nuevo Mundo* (Guayaquil: Banco Central, 1985), 123.

¹¹ Vargas, *La economía política*, lists these ordinances on pp.190-91.

¹² *Ibid.*, 188, Vargas cites Quito's *Libros de Cabildo* (8-iii-1541), in which miners were said to be already in debt for tools. Some Indian workers had been taken by Amazon expeditions, others had run away. In Santa Bárbara, mine work hours had been extended in order to pay debts.

Due to extreme exploitation of indigenous laborers in the washes of Santa Bárbara, Spanish *vecinos*, or permanent householders of the Cuenca basin found themselves in deep crisis by the early 1560s. In 1562 the cabildo declared null a crown concession of two hundred Indians to a merchant named Manuel de Modaya to work gold mines in the area, including the Santa Bárbara placers. The cabildo claimed that such a concession was absurd at this time since Indian numbers had declined so precipitously in recent years, partly due to disease (“casi todos al presente enfermos de *viruelas* [smallpox]”). Although a likely exaggeration, the cabildo said that Cuenca’s few Spanish citizens barely eked out a living by way of Indian gold mining, that only by the grace of local caciques did they have “a few Indians to collect a pittance of gold.” A more disingenuous reason given to deny the merchant outsider his concession as the claim that mining was too dangerous, especially when the master had no experience in the industry. As a greenhorn, he would no doubt subject his charges to great hazards, perhaps unwittingly. The mines of Santa Bárbara had been abandoned, the cabildo said, due to “the fear and terror that the natives (*naturales*) have of the danger that runs there.” Further, new mines had been discovered in the south, and they promised to yield much more--the experienced miners of Cuenca should be allowed to use what they regarded as their Indians in these works. The new mines, apparently the hardrock mines of Zaruma, would consume even more labor power, and as noted above labor demands, beginning with those created by the Santa Bárbara rush, would plague the new southern districts throughout the colonial period.¹³

The mines of Santa Bárbara produced gold sporadically and in diminishing amounts until the last decade of the sixteenth century. The placers were first said to be abandoned in an anonymous relación of 1573 due to an apparently region-specific prohibition of Indian mine labor.¹⁴ Since indigenous laborers were being exploited in other gold districts, the use of Indian draftees was later revived at Santa Bárbara, at least temporarily. A relación of Cuenca dated 1582 mentions small-scale placering at Sigsig, just upriver from Gualaceo.¹⁵ An oidor of the Quito audiencia, Licenciado Ortegón, tried to revive mining operations on the Santa Bárbara River again, sometime before 1592, when he was denounced for Indian abuses related to this and other mining enterprises. Ortegón had already been fined for his abuse of Indians in the Oriente during a visita of 1579. That visita had led to one of the most bloody and costly uprisings in Quito’s history, that of the Quijós Indians under the cacique Jumandy. Nevertheless, this notorious official, described as “the man most enamored of mines and their discovery that has existed in this audiencia,” apparently drafted more than 2,000 tributary and “vagabond” Indians to wash gold near Gualaceo, without pay and clearly against their will. The Indians were given some relief when, after four months of searching, the expedition failed to locate any profitable gold deposits.¹⁶ The mines of Santa Bárbara, now thought to be played out completely, passed on to the realm of legend, and by the turn of the seventeenth century were said to have been abandoned altogether.¹⁷

Curiously, in the late 1870s the geographer Theodor Wolf undertook a reconnaissance of the mineral deposits above Gualaceo and found Indians still washing gold from terraces along the Santa Bárbara River. The Indians refused to allow him to observe them at work, but apparently they used simple *bateas* (wooden gold pans) and hand tools, as in colonial times, to excavate and wash the sands and gravels. The placer benches, which Wolf described as fairly rich but dangerously prone to collapse due to the narrow course of the river, were situated in perpetually wet valleys at altitudes of over 2,500 m.¹⁸ Wolf located other important placers in the mountains east of Cuenca, including some very interesting abandoned ones on the upper course of the Shingata River. These deposits, possibly confused in colonial times with the mines of Santa Bárbara (or Sangurima), were made up of extensive auriferous terraces in the cold, wet *páramo* (or high-altitude grasslands of the northern Andes) above 3,000 m. They showed clear signs of extensive exploitation, probably dating to both early colonial and pre-colonial times. The latter supposition, as Wolf suggested, was reinforced by their location along the Inca Trail.¹⁹ That such mines

¹³ *Libros de Cabildo de Cuenca I* (10-vi-1562), 364-5.

¹⁴ Ponce Leiva, *RHGQ*, 1: 190.

¹⁵ *Ibid.*, 406.

¹⁶ *Ibid.*, 514.

¹⁷ *Ibid.*, 528; see also Archivo Nacional de Historia, Quito (hereafter ANHQ) Real Hacienda, caja 37, where gold from Santa Bárbara is registered in Quito as late as 1600.

¹⁸ Theodor Wolf, *Viajes Científicos por la Republica del Ecuador*, 3 vols. (Guayaquil: Imprenta del Comercio, 1879), 2: 21-26, 51-52.

¹⁹ *Ibid.*, 49-50. Wolf even hired peons to wash gold there during his stay, and he paid them “colonial” wages of 2 reales per day plus a food ration.

would have been abandoned by the Spanish in spite of continued promise suggests that they had faced overwhelming difficulties in securing a dependable labor force. The shortage of local conscripts, compounded by competition created by newer finds in more temperate regions, like Zaruma, seems to have led to the demise of the páramo placers of the eastern Corregimiento of Cuenca. That local indigenous groups continued to mine gold informally in the late nineteenth century in this region, however, suggests that they were not averse to the difficult and dangerous work involved as long as they, rather than outside parties, dictated the terms.

The Zamora Region

Shortly after the discovery of the mines of Santa Bárbara adventurous Spanish explorers came upon the goldfields of the Zamora River basin. These mines, probably the richest in the Audiencia of Quito, were located in some of the roughest, hottest, and most hostile terrain imaginable. This was the heart of the Jivaroan, or Shuar Indian territory and it would only be a matter of time before the indigenous groups of the area would decide that they had had enough of European fortune seekers. The first Spanish settlers, led by the Captains Alonso de Mercadillo and Hernando de Benavente, along with a small number of African and *mulato* slaves, apparently entered the region from Loja, some 80 km to the west, in 1549 (it should be noted that the term *mulato* in the sixteenth century could refer to both Afro-European and Afro-Indian offspring). Curiously, the name “Zamora” was not simply borrowed from the Spanish city of the same name (Mercadillo's home); rather, the natives of the region were also said to have called the place “Camora” or “Çamora.”²⁰ Given the extreme ruggedness of the terrain, the first Spanish and African miners most likely entered the Zamora lowlands with the aid of Indian guides, possibly recruited from among the nearby Saraguros or Paltas of the Loja area highlands. These explorers encountered significant placer gold in the Zamora River itself, and then began searching out the parent sources in the surrounding hills. By the early 1550s miners were at work in hardrock, underground mines at Nambija and Guaysimi, along with other, scattered vein deposits and multiple stream placers.

The mines of Zamora were incredibly rich, yielding up hundreds of pockets of easily milled, high-karat ore.²¹ The mines at Nambija, in particular, exploited an extremely rare geological phenomenon, a deep and concentrated hydrothermal vein deposit of almost pure gold.²² One contemporary observer compared Nambija's gold ores to the iron deposits of Vizcaya; both were “heavy” with metal (“estan lastradas de oro, como hierro en Vizcaya”).²³ A 1571 relación submitted by the governor of the extreme southern provinces of Quito, Juan de Salinas, claimed that early miners of Zamora had also encountered some of the largest gold nuggets (*puntas*) ever found in the Indies, one weighing over eighteen pounds (c. 8 kg). Others were routinely found to weigh from four to eight pounds (1.5-3.5 kg).²⁴ As mandated by *cédula*, the largest nuggets found in Zamora were not melted down, but rather bought by the Real Hacienda and sent to the crown as curiosities (where they were no doubt melted down).²⁵ An encomendero who had visited the mines in 1556 or 1557 claimed that “in the time of the Incas [these mines] were theirs, worked by them and for them, the source, it is said, of most of the gold they carried and possessed.” He went on to suggest that upon hearing of the Spanish and their gold lust at Cajamarca, the Indians had sealed up the mines (“las cegaron”).²⁶ Rich mines, as the Indians quickly discovered, were more curse than blessing in the post-conquest period.

The same encomendero noted that reaching Zamora was difficult, and that in forcing Indians to go over a high pass west of Loja and then immediately down into the jungle, many had died. Swift rivers and overwork in radically different climate zones took their toll, but disease was perhaps the greatest killer of Native American workers. Disease was mentioned by this early commentator, and his words were later

²⁰ Ponce Leiva, *RHGQ*, 1: 99, 104.

²¹ A relación of 1570 claimed that Zamora produced great quantities of 23 & 1/2k, or virtually pure gold, a claim backed by the *libros de fundición*, Ponce Leiva, *RHGQ*, 1: 98.

²² Nambija was apparently located on a skarn type deposit, see Anthony M. Evans, *Introduction to Ore Geology*, 2nd. ed. (Oxford: Blackwell Scientific Publications, 1987), 62, for a general description of these ore formations.

²³ Ponce Leiva, *RHGQ*, 1: 497.

²⁴ *Ibid.*, 101.

²⁵ See Archivo Municipal de Quito (hereafter AMQ) Miscelánea No.104, Minas de Zamora, ff.125v-126.

²⁶ Ponce Leiva, *RHGQ*, 1: 549 (1592 relación of encomendero González de Mendoza).

echoed by many others. All indigenous groups, whether highland or lowland in origin, suffered the effects of presumably Old World diseases such as smallpox and measles (*sarampión*). Malnutrition may have exacerbated problems of immunity, and forced concentration of Native American settlements (*reducciones*), as Newson and Alchon have noted, must have also contributed to the spread of infectious disease.²⁷ The Indians of the Zamora district, as will be seen below, experienced a catastrophic demographic decline between 1550 and 1600.

Governor Salinas claimed that most commerce in the Zamora lowlands, connecting mines and towns, was carried out in canoes. This riverine transport network was augmented in some river narrows by wooden bridges constructed for use by humans, cattle, and horses.²⁸ Salinas added that the new-rich Spaniards of the region not only lived off of Indian mine labor, but also subsisted on Indian maize fields, which were planted along river banks and yielded two harvests per year. Maize was in such great demand in the mines that it sold for three pesos a *fanega* (1.5 bushels, or c. 50 l), and a fanega of wheat flour from Loja sold for five pesos. These prices, about twice those prevailing in the highlands, provide a vague index of the kind of price inflation common in remote mining regions.²⁹ This price inflation usually resulted from the twin factors of high transport costs (*flete*) and a relative abundance of gold (as a type of cash) for exchange. Other food items found in Zamora included cucumbers, squash, and eggplant, along with hunted fowls, such as the guan (*paujil*, a native, turkey-like bird), and fish from the many tributaries of the Zamora River. Domestic animals included European sheep, goats, pigs, chickens, and cows and local animals such as llamas, Muscovy ducks, and the inevitable *cuy*, or guinea pig.³⁰ Some wild animals, such as deer and tapirs (*dantas*), were probably hunted, and in general the region was said to be well-provisioned with game. This abundance of game was soon depleted, however, and Spaniards complained of meat shortages by the mid-1560s. Cattle introduced into the region fared poorly due to a shortage of suitable pasture and probably also due to the new, lowland tropical disease environment.

In 1567, Zamora was said to have twenty-seven Spanish citizens (*vecinos*) who held some 8,000 Indians in encomienda.³¹ By 1572 a census showed some thirty-two Spanish vecinos, but complaints about Indian decline were on the rise.³² Census records describing a clear rate of Indian demographic collapse have not survived, but it was apparently rapid enough to elicit comment within a generation of conquest and settlement. Newson, in *Life and Death in Early Colonial Ecuador* (1995), has used the population estimates of Salinas and others to suggest that Zamora's indigenous peoples suffered the most dramatic demographic collapse in the Audiencia of Quito outside of Guayaquil, a decline of some 97% by 1600.³³ In spite of these difficulties, the mines of Zamora were very productive for a time, as evidenced by quinto records dating from the 1560s. Local and transient miners registered some 209,264 pesos (c. 875 kg) of high-karat gold in the five-and-a-half years between September 1561 and April 1567.³⁴ These early tax records, among the few of their kind to survive, are among our best sources for information regarding the extent of colonial mining activity in this region prior to the Shuar uprisings of the 1580s, 1590s and 1610s.³⁵

²⁷ See Suzanne Austin Alchon, *Native Society and Disease in Colonial Ecuador* (Cambridge: Cambridge University Press, 1991) and Linda Newson, *Life and Death in Early Colonial Ecuador* (Norman: University of Oklahoma Press, 1995), for detailed treatment of disease and its effects in colonial Quito.

²⁸ Ponce Leiva, *RHGQ*, 1: 102.

²⁹ *Ibid.*, 103. Prices in Quito and Cuenca at this time were c. one peso per fanega, or approximately a third of the going price in Zamora.

³⁰ *Ibid.*, 103-04. The presence of the llama is somewhat surprising in the hot lowlands; the indomitable Shuar or neighboring peoples must have traded with highland groups for these animals.

³¹ *Ibid.*, 57. Salinas (104) said that Zamora's Spanish vecinos had originally numbered thirty-five, but that the dearth of Indians available for encomienda service had caused a drop to "poco mas que veinte" (little more than twenty). The Indian population was still said to be about 8,000 in 1567 (108). Salinas also claimed that the Indians of Zamora used small copper hatchets (110); this suggests a trade with highland peoples such as the Cañar, to the northwest. See Salomon, *Native Lords of Quito*, 93, for a fuller discussion of these items in the highland context.

³² Ponce Leiva, *RHGQ*, 1: 115.

³³ Linda Newson, *Life and Death in Early Colonial Ecuador*, 296.

³⁴ Alfonso Anda Aguirre, *Zamora de Quito y el Oro de Nambija* (Loja: Casa de la Cultura, 1989), 53-60.

³⁵ The best general discussion of the various Jivaro uprisings in the first century after conquest is given in Anne Christine Taylor's "Estudio Introductorio" in A. C. Taylor and C. Landázuri, eds., *Conquista de la*

Although the precise number of mines working during the boom years of Zamora's several districts remains unknown, quinto records offer a sense of the scale of operations. In the 1560s, some 167 different parties, mostly Spanish individuals, but also including some Indians, paid taxes on varying amounts of gold. Of these parties, only one was a woman, Catalina Vergara, and eight were individual Indians or their representatives. The indigenous tax payers were mostly *yanaconas*, or non-village Indians, apparently working for wages (usually a portion of gold recovered for a Spanish claimant). Their registered produce was generally small, ranging from 29 to 364 gold pesos. Two Indian corporate groups also paid taxes on gold, one from Molleturo and the other from Cañar, suggesting a migration of over 400 km, most likely forced, from the highlands north of Cuenca to the hot lowlands of Zamora. Of the Spanish individuals, six were clerics. Whether or not these men, both friars and parish priests, were engaged in mining directly is uncertain, but two of them quinted over 1,500 pesos, strongly indicating serious mining or commercial activity. Most of the Spaniards quinted between 1,000 and 2,000 pesos, the largest amount by far being 17,170 pesos. The picture which emerges from the tax records is of small-scale mining operations scattered throughout the district and manned by forced Indian laborers, some from as far away as the extreme northwestern part of the Corregimiento of Cuenca.³⁶ Like many other mining districts in the backcountry of the Audiencia of Quito, Zamora was remote and prices were high, but the seemingly inexhaustible gold deposits were so attractive that merchants, miners, and others continued to flow into the region even as the indigenous labor force declined.

In the early 1570s Zamora counted at least eleven *reales de minas*, or mining camps. Some had Spanish names, such as La Magdalena, Santiago, and Calixta, while others apparently retained indigenous ones, such as Surinanga, Nanguirapa, and Chungata.³⁷ Contemporary chroniclers claimed that the most important mining site in the Nambija area was the Cerro or Minas del Pirú (or “Peru”), where the richest hardrock ores were found. Mine names in the Audiencia of Quito, as will be seen below, were just as often combinations of European religious and indigenous terms (e.g., San Francisco de Borja de Timbiquí). Unfortunately, we have few indications of the Native American meanings of these terms, especially those not related to the Andean *lingua franca*, called Quichua (*runa shimi*) in the north and Quechua in the south.

Although significant changes would soon come, Zamora's mines continued to produce handsomely for several decades, now with some help from African slaves. An anonymous relación of 1580 noted that mining continued on three or four hills (*cerros*), and Zamora residents made repeated requests--repeatedly denied by the king or the Council of the Indies--for African slaves to be sent to the region at prices subsidized by the crown.³⁸ The crown, unsurprisingly, preferred local solutions and private initiative to state subsidies. Had such a trade in Africans been recommended by the Council, the mines of Zamora might have had a very different history. As it turned out, the encomienda Indians actually did die in large numbers, mainly from unfamiliar diseases, measles (*sarampión*) being most often mentioned among them. Adding overwork and undernourishment to such plagues, along with frequent attacks from unconquered indigenous groups to the north and east, it is no surprise that Zamora's once-prosperous gold mines soon fell on hard times. As Newson has shown, the region's Indian population dropped from some 20,000 at conquest (c. 1549) to fewer than 500 by the turn of the seventeenth century.³⁹

A sizeable quantity of Zamora gold was still making its way to Quito around the turn of the seventeenth century, but by 1622 there was little memory of the earlier boom years.⁴⁰ The region's high-grade deposits were by no means exhausted, but indigenous demographic decline and rebel attacks

region Jivaro, 1550-1650 (Quito: Abya-Yala, 1994), 1-32. Taylor rejects the assertions of earlier writers, who, beginning with Padre Velasco, have described the many and scattered Jivaroan “rebellions” between c. 1565 and 1620 as a concerted effort to drive out Spanish miner-colonists. Instead, constant but uncoordinated “guerrilla-style” attacks on isolated Spanish *reales de minas* eventually destroyed the resolve of the settlers. This end was achieved by means of killing off the majority of resettled highland indigenous peoples who provided labor in these camps.

³⁶ Anda Aguirre, *Zamora de Quito*, 54-60.

³⁷ *Ibid.*, 71; the others were Nambija, Zumbieta, Chirpanama, Chupanama, and Tamorosa.

³⁸ In Ponce Leiva, *RHGQ*, 1: 488; an anonymous relación of c. 1580 mentions three or four cerros worked by “indios de la tasa que tienen para ello los encomenderos y con algunos negros.” Anda Aguirre, *Zamora*, 42, notes a request in 1564 for 400 Africans between 15 and 35 years of age, two-thirds to three-quarters males, at a very low (subsidized) price of 120 pesos each.

³⁹ Newson, *Life and Death in Early Colonial Ecuador*, 296.

⁴⁰ See ANHQ, Real Hacienda, caja 37.

continued unabated. In a district which had once claimed control over tens of thousands of Indians, only 140 could now be found, along with two “old mestizos” and a mulatto. The town vicar of Zamora now resided in Loja, illegally collecting a salary, and the church building in the nearly-abandoned *ciudad* of Zamora was said to be overgrown with weeds.⁴¹ Attacks from Shuar war parties were reported sporadically after 1582, when a cacique named Ayumbare led an uprising. Apparently the Shuar attacks had resulted in part from preexisting regional disputes between themselves and the native Zamorans, known as Aquiones. It is unclear what exactly these disputes entailed, but for Spanish mine owners in the region they translated into labor instability and general uncertainty. A Spanish *entrada*, or small-scale military expedition captured the Shuar cacique Ayumbare within a year of his uprising, but the problem did not die with him at his execution in 1583.

Having survived a second wave of Shuar attacks already, a few frantic Spanish residents in 1616 pleaded with the Audiencia of Quito for powder and arms. Another ten vecinos had been killed in backwoods skirmishes, and remaining settlements, mostly mining camps, were now dangerously exposed. Within a decade the Spanish in Zamora, apparently along with their allies, the Aquiones, were completely vanquished by the Shuar.⁴² Rare among frontier regions in the audiencia known to contain gold, Zamora would remain uncontrolled by Spanish authorities until the Republican period. Only the Jesuits, who maintained a series of missions in the Marañón River basin to the south and east, attempted again to convert the so-called Jibaros in the 1690s. They met with little success, and never relocated the original Zamora townsite or the surrounding mining camps.⁴³ The gold mines were so completely forgotten that even in the 1870s, when the geographer Theodor Wolf visited the Loja region he referred to the lower reaches of the Zamora River as “*tierra incógnita*.” His mining reconnaissance led him eastward only to a series of abandoned works above Loja, a scattering of open-topped, flooded mines, which, he speculated, had pre-Columbian origins.⁴⁴

Zaruma

Some time in the 1550s, gold was discovered in the southern highlands of the Audiencia of Quito at a site called Zaruma. We have no record of who discovered it or precisely when, but Zaruma gold was first registered at Quito's casa de fundición in July of 1557.⁴⁵ Still actively mined, Zaruma, located some 150 km northwest of Loja in the Cordillera Biscaya, is one of the oldest and longest-running gold camps in Spanish America. The once-prosperous Villa de San Antonio de Zaruma sits on a hill at the edge of what one geologist has dubbed the “Tumbes Amphitheatre,” a fitting name for the massively eroded and stunning landscape of the upper Tumbes River basin. Zaruma was and still is essentially a hardrock mining district characterized by plentiful but low-grade ores clustered in a compact set of hills ranging from 900 to 1,200 m above sea level. Early Spanish visitors compared the climate to summertime in southern Spain, but with less extreme heat.⁴⁶ Indeed, Zaruma's intermediate altitude (by contrast, the cities of Quito, Cuenca and Loja are all located above 2,200m) renders its climate very similar to that of Popayán or Cali, in the upper Cauca basin of southwestern Colombia. Partly for this reason, and also due to soil composition and climate, the finest coffee grown in Ecuador today comes from the Zaruma area. Certain valleys in the surrounding Tumbes Amphitheatre are suitable for sugar cultivation, and other, smaller plots provide bananas, *plátano* (plantain), maize, and pineapples. Trees are much more prevalent than in the desert mining zones of Peru, Bolivia, and Mexico, but forest cover in the immediate vicinity of Zaruma is generally sparse, likely the result of continued cutting for fuel, props, and building materials.

Gold in Zaruma occurs in highly weathered quartz and is associated with varying amounts of silver, lead, zinc, and copper, none of which have been traditionally extracted due to the expense of multiple-metal beneficiation. As with the even more remote gold deposits of Zamora, with which Zaruma

⁴¹ Anda Aguirre, *Zamora*, 132.

⁴² ANHQ Fondo Especial, caja 1, vol.1, #49. 30-i-1616.

⁴³ ANHQ Fondo Especial, caja 5, vol.13, #420.

⁴⁴ Wolf, *Viajes Científicos*, 1: 17, 20-21.

⁴⁵ ANHQ Real Hacienda, caja 37, f.163; C. Caillavet, in “Los mecanismos económicos de una sociedad minera: intercambios y crédito, Loja: 1550-1630,” *Revista Ecuatoriana de Historia Económica*, 2:3 (1988), 21, has also noted this earlier date. Previous authors had followed González Suárez, who gave the founding of Zaruma as 1560 (*Historia General*, 3: 437).

⁴⁶ Ponce Leiva, *RHQ*, 1: 495 (anonymous relación de Zaruma, 1592).

has often been confused, the possibility of pre-Columbian exploitation must not be discounted, though no hard evidence of such activity has been noted. The polymetallic, mostly sulphide deposits of Zaruma resulted from hydrothermal activity associated with a small igneous intrusion of uncertain age, and the extensive veins, which range from just over 0.5 m to c. 2 m in thickness, have primarily been found among bands of Tertiary volcanic rocks, especially green andesites. The gold-bearing deposits which link Zaruma and the modern mining town of Portovelo have been named after the latter location, a hotter, lower site on the banks of the Amarillo River. Due to the generally steep dip of the intrusives of the so-called Portovelo Formation (up to 70 degrees) colonial mine works, ignoring problems of drainage, rarely exceeded 20 m depth.⁴⁷ Thus, apparently, most colonial miners failed to penetrate beyond the surface oxidized zone and into the flood-prone but potentially lucrative zone of secondary enrichment (c. 20-70m beneath the surface).

Natural history aside, Zaruma's social and economic history has been a long and complex one, beginning with an initial boom period to about 1600, followed by a decline which lasted over a century-and-a-half. Throughout the colonial period, Spanish mine owners sought to exploit the region's gold deposits using all sort of forced labor regimes, ranging from African slavery to Indian draft labor to debt peonage. The mines were also important, as will be seen in the following chapter, because of the relatively complex technologies developed in order to dress, or crush, hardrock ores. These ores were described by a variety of visitors in the 1590s, most agreeing that although they yielded only low-karat gold, the deposits were very extensive. Fray Gerónimo de Escobar, former Bishop of Nicaragua, claimed that the Cerro de Zaruma, whose name was indigenous in origin, had many veins of gold mixed with silver (electrum), an annoyance that was mitigated by the fact that the silver-rich veins tended to be wider and more extensive than the gold-rich ones.⁴⁸ Another commentator, an encomendero based in Quito, said that Zaruma abounded in workable veins, as many as one could supply with day-workers (*jornaleros*) and mills. "The veins," he continued, "although not very rich on the surface, still produce much wealth; often they are more promising as they go deeper."⁴⁹ Another, anonymous observer gushed with boomtown enthusiasm about the promise of Zaruma, claiming that:

The site of these gold mines is one of the best and richest pieces of ground until one reaches Potosí, its veins are extremely rich in gold and they run four to six leagues, some more, some less, and they cross and crisscross one another, from which may be taken *for millions of years* immense riches in gold, and in each year for some time they have taken more than 200,000 pesos, and the value of Your Majesty's quintos alone has surpassed 40,000 pesos.⁵⁰

There was certainly room for hyperbole in the early relaciones, but the surprising endurance of Zaruma's mines, albeit at low levels of production, for almost four-and-a-half centuries, has shown some of these seemingly naïve predictions to be true. Clearly the deposits were extensive and apparently quite deep, but their profitable exploitation was always a matter of much debate. Gold production in a hardrock zone was inherently more expensive than stream placering, an activity which Indians engaged in from time to time along the banks of the nearby Calera and Amarillo Rivers. These *lavaderos*, as the placers were known, produced only small amounts of very fine gold dust, albeit of higher purity than that found in the lodes, and never did more than supplement the region's overall mining revenues. The technical details of Zaruma's gold industry will be treated in detail in the following chapter, but suffice to say here that vein mining was, and still is, the staple of the regional economy.

⁴⁷ See H. Putzer's summary of Zaruma district geology in Walther Sauer, *Geologie von Ecuador* (Berlin: Gebrüder Borntraeger, 1971), 272, Paul Billingsley, "Geology of the Zaruma Gold District of Ecuador," *Mining and Metallurgy* (Transactions of the American Institute of Mining and Metallurgical Engineers, Inc.) 6: 228 (Dec. 1925): 615-18, and Sheppard, *The Geology of South-Western Ecuador* (London: Thomas Murby, 1937), 195-97.

⁴⁸ Ponce Leiva, *RHGQ*, 1: 516 (1592). Billingsley, "Geology of the Zaruma Gold District," 618, found that some mines in the district ran two to three ounces of silver per ounce of gold.

⁴⁹ Encomendero Pedro González de Mendoza in Ponce Leiva, *RHGQ*, 1: 546-47, 1592, "Las vetas, aunque a la superficie no son muy ricas, suelen dar en mucha riqueza, y mientras mas se ahondan, prometen a veces mas riqueza." This suggestion seems to be supported by the reconnaissance of irregular, lense-shaped oreshoots undertaken by Billingsley, "Geology of the Zaruma Gold District," 617.

⁵⁰ *Ibid.*, 495, my emphasis.

However legendary its riches, Zaruma was definitely not another Potosí--few investors managed to make a fortune in mining there after the late sixteenth century. The early Spanish miners of Zaruma had been awarded *encomienda* and *mita* Indians (in temporary draft service, by mandate), and had even drawn support in the 1570s from the Viceroy Toledo, the most ambitious, pro-mining bureaucrat Peru had yet known, but as with most mining towns, decline was inevitable. Initially rich surface deposits played out, miners failed to invest in drainage technology, Indian laborers fled, migrated, or died from overwork and disease--really, everything from human ignorance and greed to nature's casual vindictiveness, or at least entropy conspired to shut down the gold mines. In terms of crown interest, the mines were almost forgotten by about 1625, but miners could always be found working in some part of the district until the 1820s.

The Ecuadorian economic historian Galo Ramón has outlined four main periods in Zaruma's colonial history. The first, dating from 1557-1579, was characterized by exploration and installation of capital equipment, namely stamp mills, but also canals and tunnels. The second phase, from 1579-1630, saw a general expansion of production by addition of crown-sponsored Indian laborers, mostly *mitayos* from Loja and Cuenca. The actual effectiveness of the *mita* in this period is not easily understood without quantitative evidence, a noticeable shortcoming of Ramón's work. This was nevertheless the boom period of production in Zaruma, which was followed by the third, "crisis" phase of 1630-1763. During this "long century," as Ramón notes, very little gold was produced, but mining never ceased. A key year was 1700, when the Zaruma mine *mita* was abolished by royal *cédula*. The action was not surprising at the time, and given the small number of mines in production, the economic repercussions of the decision were hardly felt outside the town of Zaruma itself. For the Indian workers of the greater Zaruma region, however, as we shall see below, this decision was a monumental social and economic victory. What Ramón calls the final phase of Zaruma's colonial trajectory (1763-1821), was one marked by attempts at reform and resurrection of a near-dead industry. Mine labor by this time had been completely transformed; by the late eighteenth century, most workers in Zaruma were poor Spaniards and mestizos, some receiving wages, and others engaging in a variety of share-cropping-type arrangements.⁵¹ Reforms, such as reduction of mining taxes to an all-time low of three percent in 1777, did little to stimulate investment in much needed drainage adits, and in marked contrast to contemporary developments in highland and lowland Popayán, no serious effort was made to meet labor demands by importing African slaves.

Decadence in Zaruma set in early, and local residents seem to have recognized most of the salient changes even as they were occurring. To judge from intermittent documentation filed throughout the seventeenth century, the town and its miners perceived their steady decline to have resulted primarily from labor shortages. None would admit to Indian abuse, failure to invest in permanent, slave labor, or irrational tunneling and beneficiation procedures. In the 1630s, Indians were still being conscripted to work in the mines as *mitayos*, but the decline in the indigenous population--from the usual culprits of disease, migration, and overwork--had long before made them unreliable as a source of labor. Attempts to form a Potosí-like *mita* catchment zone, or conscription net, reaching all the way to Pasto in the 1570s and again in the 1590s had failed miserably. These proposals had aimed to gather up several thousand *indios vagamundos* ("vagabond" Indians), supposedly living in the northern cities, but competition for their labor was already fierce. None of the powerful *encomenderos* of the northern highlands, especially those of Quito, was willing to risk losing valuable workers in other men's mines. Even the few so-called *vagabonds* and other non-village Indians the crown had managed to conscript could not be made to stay in Zaruma; work conditions were simply too severe.

Miners of substance tried to offset chronic labor shortages with imported African slaves, but even this failed in the long term since the number of *dueños de ingenios*, or mill owners with the means or will to risk investing in slaves was never substantial. As Ramón notes, the slave portion of Zaruma's workforce probably never exceeded twenty percent, a figure reached in 1609 when sixty Africans were mentioned among a total of three hundred laborers.⁵² Petitions for state-subsidized slaves, like those proposed by the miners of Zamora and Popayán, were met with cold indifference from the crown. As a result of these factors, along with a crisis-induced sell-off of mine slaves in 1611, no sizeable black population developed

⁵¹ Galo Ramón, "Loja y Zaruma: entre las minas y las mulas, 1557-1700," *Revista Ecuatoriana de Historia Económica* No.7 (1990): 111-143.

⁵² *Ibid.*, 116, the others were Indian *mitayos* from Palta (140) and Cañar (100), taken from AGI Quito 27, f.16.

in the area.⁵³ These early labor patterns in the southern mines provide a sharp contrast with Popayán's several gold districts by the mid-seventeenth century. There, without crown aid, African slaves were coming to outnumber Indians in most mining activities. Zaruma and Zamora shared a similar labor dilemma, and neither responded in ways seen elsewhere in the northern Andes.

Instead, the Zaruma mines, though never attacked by neighboring indigenous groups nor subjected to massive uprisings of local ones, continued to struggle along, constantly beset by labor shortages. Attempts to draw workers from the Cuenca and Loja regions, which were relatively close at hand, were not met with enthusiasm by elites based in those towns. In some instances Loja officials allotted Indians from northern Cuenca to Zaruma miners, creating local diplomatic scuffles and frequent appeals to the audiencia for resolution.⁵⁴ The elites of Cuenca and Loja, who fought to keep Indian dependents for themselves, controlled agricultural and stock raising operations, many of which were linked with and partially dependent upon the Zaruma market. The regional economy was in fact somewhat articulated by the trade in foodstuffs, clothing and other local goods to the miners of Zaruma in exchange for gold, but as Chantal Caillavet has shown, these same regional producers, especially those of Loja, were not willing to trade away their indigenous workforce, not even temporarily.⁵⁵ As a result of these probably wise decisions, the mines languished, and with them the entire economy of the southern highlands.

As it was, Zaruma's shafts flooded, no significant new discoveries were made, and the Indian population declined. In 1639 several citizens of Zaruma quarreled with priests over control of personal service by the few remaining Indian mitayos. The mine owners were most concerned with the fact that the clerics were engaged in trade with the Indians, and were demanding payment in gold, apparently gold taken from the vecinos' properties.⁵⁶ A further indication of decadence came in 1653, when the nave of the Merced church, Zaruma's principal place of worship, collapsed, and no local residents offered to underwrite its restoration.⁵⁷ The citizens and friars of the once-rich Villa were forced to petition the audiencia for aid, but aid never came. In 1705 a Zaruma citizen complained that there was not even a public scribe in town, and that this and many other offices had been vacant for years for lack of bidders.⁵⁸ Either no one had the money to purchase these normally sought-after public offices, or the incomes they promised to yield was too small to offset the cost of holding them. Through it all, however, gold mining continued. A few struggling entrepreneurs, if they can be called such, continued to produce a meager living in a half-dozen or so mines. Although they continued to abuse Indians just as in earlier times, their produce was so small that they barely supplied the local jewelry market. A visita dating to the turn of the eighteenth century found that most of Zaruma's important mining properties had by this time been abandoned. Only a handful of diehards continued to operate their run-down *ingenios*, and these could barely muster the gold needed to bribe visiting officials into overlooking labor abuses.

Given its early fame as a fabulously rich gold mining zone, one might imagine that the industry underwent some sort of renaissance during the Bourbon period. A revival did in fact occur, but only a very limited one. The crown, and with it the audiencia, had by the second half of the eighteenth century begun to show a great deal more interest in Quito's mineral wealth and its efficient extraction than in the previous century and a half. Mining reform was central to the crown's revenue enhancing project, as seen in Peru and Mexico, where new machinery, beneficiation processes and laws had been introduced in order to stimulate production. Quito, now a backwater in terms of precious metals production, nevertheless joined in this attempted modernization of the mining industry, and Zaruma, because of its initial richness and extensive unworked deposits, drew more attention from both foreign and local officials than any other district. All felt that there had to be some way of reviving the industry, but the only effective changes brought about by the Bourbon investigations were the lowering of the severance tax from five (really six-and-a-half) to three percent in 1777, a reduction in mercury prices (a crown monopoly supplied by mines at

⁵³ Ibid. Slaves were still present in Zaruma after 1625, as an incident of slave theft by a rival dueño is mentioned in ANHQ Fondo Especial, caja 1, #66.

⁵⁴ ANHQ Fondo Especial, caja 1, #24. 4-v-1609, Cuenca (letter from Martín del Campo of Cuenca questioning methods of Loja corregidor in taking Indians from Cañaribamba and Pacaibamba by force to work mines of Zaruma, "yndios de minas y no otras," not to work from December to March, the rainy season).

⁵⁵ C. Caillavet, "Los mecanismos económicos de una sociedad minera," 19-62.

⁵⁶ ANHQ Fondo Especial, caja 1, #125. 25-ii-1639.

⁵⁷ ANHQ Fondo Especial, caja 2, vol. vi, #211, 12-v-1653.

⁵⁸ ANHQ Fondo Especial, caja 12, #511.

Almadén, Spain, and Huancavelica, Peru), and the eventual installment of a miners' savings bank, or *fondo de habilitación*, not established until 1811.

The creation of a savings institution, aimed at advancing joint projects and the like, seems only to have exacerbated conflicts between neighboring mine and mill owners. The other function of the fondo, as Manuel Lucena has shown, was to relieve miners of debts to local merchants. This was a deep-seated problem in most mining centers, including Barbacoas, on the northern Pacific coast, and it would not be easily solved by late-coming state intervention.⁵⁹ The crown's supposedly beneficial reduction of mercury prices likewise did little to stimulate production among the debt-encumbered miners of Zaruma. The crown even tried, rather desperately, to track contraband gold by calculating mercury usage, but this "mercury mathematics" did not translate into better control or greater productivity. The already "discolored and pallid," and possibly half-mad citizens of Zaruma had not wanted for mercury since the early seventeenth century.⁶⁰ Besides, amalgamation was never as important in colonial gold beneficiation as it was in that of silver (i.e., the celebrated *patio* process). What Zaruma's miners needed more than cheap mercury was a concerted effort by the crown to promote rational exploitation, to introduce drainage techniques, and to improve gold recovery after milling by means other than amalgamation.

In the 1780s some 2,500 people "of all classes" were said to inhabit the highly excavated and contaminated town and its environs. Roughly eighty-five percent of the population was self-described as "white," about nine percent labeled "Indian," less than one percent "slave," and around five percent "free," apparently referring to free persons of color.⁶¹ Over the years, Zaruma had become much more self-sufficient agriculturally than in the boom years of the late sixteenth century. The slave and Indian populations, along with many of the *libres*, were engaged in subsistence agriculture and stock-raising by this time, the slaves being specifically relegated to nearby sugar plantings (none really qualified as plantations) and their cane presses, or *trapiches*. This meant that the only people left to work in the mines were the so-called whites (including, and more often referring to, mestizos). Lucena, having read the *visitas* of the late colonial period rather literally, has suggested that labor was now either of the free wage variety or based on the exploitation of family members. Evidence for the latter arrangement among the small scale operators is in fact abundant, but the former could more accurately be described as debt-peonage. Suits and bills of sale from the period reveal that *peones* were being bought and sold (for the value of their debts) along with mining properties well into the early nineteenth century.⁶²

Yaguarsongo and Santiago de las Montañas

The region known for a time as the Gobernación de Yaguarsongo (probably from the Quichua *yawarshungu*, or "blood heart") was a vast territory claimed by the conqueror Juan de Salinas, and initially extended from Macas, in the Oriente near Cuenca, to Zamora, Valladolid (south of Loja), Jaén de Bracamoros (in present-day northernmost Peru), and eastward some way down the Marañón River basin. The gold deposits of the region extending from Macas to Zamora have already been described, and since the province was later reduced to an area surrounding Jaén and the upper Marañón, I have chosen to focus this description on the southernmost mining camps. As is true today, the borders of this region were never firmly established in colonial times. Part of the reason for this was the Spanish practice of forcing local

⁵⁹ M. Lucena Salmoral, "La crisis minera de Zaruma (Ecuador), a fines de la Colonia: La visita de 1811," *European Review of Latin American and Caribbean Studies* 57 (December 1994): 53-68.

⁶⁰ The Jesuit historian Juan de Velasco, in his classic *Historia Moderna del Reino de Quito* (1789), described the citizens of Zaruma as "pallid" due to mercury contamination, and summed up the district as follows: "No obstante la liga de plomo y plata, son las únicas minas que se han trabajado con mayor constancia, desde la antigüedad, hasta el tiempo presente, en que se hallan ya muy decaídas y casi exhaustas. Aún la misma Villa esta sumamente deteriorada en lo material de sus edificios, porque estando fundadas sobre minerales, por cavar estos se han arruinado muchas casas y calles. *Sus habitantes son pálidos y descoloridos, por los malignos efluvios de los metales, especialmente de azogue vivo, que se encuentra donde quiera que se cava un poco.* Todos ellos son al presente 5 a 6 mil personas de todas clases, en que se conservan diversas familias de distinción y nobleza" (p.367, my emphasis). Only the final population estimate seems to have been wrong. For a good collection of Zaruma-related facts, see Alfonso Anda Aguirre, *Zaruma en la colonia* (Quito: Casa de la Cultura, 1960).

⁶¹ Lucena, "La crisis minera," 53.

⁶² ANHQ Minas, caja 4.

indigenous groups, such as the Paltas, Malacatos and other Jivaroans, to work in gold mines, a practice which inevitably led to bloody uprisings and thus unstable mining frontiers. The richness of Yaguarsongo was crucial to the early regional economy, especially that of the highland administrative and religious center of Loja, and its demise, like that of the mining economy of the north in relation to Quito, would deal a serious blow to the local economy.

In a relación of 1594 a Quito oidor, Licenciado Arias Pacheco, described the Yaguarsongo region as “a land of much gold, very mountainous, with good climates and beautiful waters.” He added, however, that the Indians were “not very tame, as seen in recent years when they rose up in many instances and killed many Spaniards.”⁶³ Arias Pacheco was describing here the Indians of the southern Oriente, although their uprisings did occasionally extend into thinly populated sierra towns like Valladolid, Loyola, and Jaén. Pacheco claimed that gold mining continued around Jaén, which he called “the last town in the district of Quito on the way to Lima.” The mines of Yaguarsongo, some of which were also located near the pueblo of Gayanca (probably on the Cangaza River), were worked by both African slaves and locally conscripted Indians, and were placers (*peladeros*, another term for *lavaderos*) “without lodes” (*no tiene nacimientos*).⁶⁴ The mines around Jaén proper were apparently located in the relatively hot and humid Chirinos River valley.⁶⁵

There is also record of mines being worked with *encomienda* Indians around Valladolid and Loyola (some 100 km south of Loja) shortly after the foundation of these towns in the late 1550s. Even in a period of rampant Indian abuse in mining regions, these southern fringes stood out for their excesses. Some of the earliest criminal complaints in Quito came from abused Indians in these settlements, a few of which still exist today in the form of very small and isolated villages. One sixteenth-century mine-owning *encomendero* was sent to the South Sea galleys for his crimes, which included torture, rape, and murder.⁶⁶ Indeed, Indian abuses were so severe that by 1592 an anonymous observer claimed that although the area from Valladolid to Santiago de las Montañas “was once all mines,” it was now nearly deserted. “The Indians are almost all gone,” he said, adding that, “nowhere in all of Peru have there been such cruelties committed against natives than in this gobernación.”⁶⁷ The “cities” of the region, the same visitor noted, were “all a joke, all four of them together having less than sixty Spaniards.”⁶⁸

A perhaps typical example of a Yaguarsongo mining camp was the relatively late-coming *real de minas* of Nuestra Señora de Copacabana, founded officially in 1600. The camp, which had been discovered by a citizen of Valladolid, was formally established by the local *alcalde de minas*, or mine magistrate, after it had proven productive over some unspecified period of time. The *alcalde* drove a large post into the ground, nailed a *cédula* to it, and then, kneeling at its base, delivered two blows to it with his sword, saying, “in the name of Your Majesty there shall be a washing of metals (*lava*) in this *real de minas*.” The *alcalde* then rose and took possession of the site, “peacefully and without contradiction,” as mandated by law. A *doctrinero* assigned to the Indians around Loyola added that a chapel had been constructed in honor of Our Lady of Copacabana, after whom the mines were named. He consecrated the site by saying mass, and administered sacraments to those present.⁶⁹ Apparently the indigenous inhabitants of the region, who had by now been reduced to gold-washing *cuadrillas*, had no chance to object to these rituals of possession.

The early decline of the Yaguarsongo mines should not mask the productive importance of the southern fringes, however. The remote mining region of Santiago de las Montañas, located well to the east in the Jesuit mission country of the Marañón, was an important gold district for some years. Arias Pacheco claimed that gold washing continued here into the late sixteenth century, and that the fathers had even been reprimanded for forcing too many of their Indian charges to work in the placers.⁷⁰ Most of the gold came from a mountainous district called Cangara (or Cangaza, again probably on the Cangaza River, a tributary of the lower Santiago), and as with Yaguarsongo, was worked by both slaves and Indians in certain cases. The oidor claimed that the slaves were used “to help the Indians break [ground] or *desmontar* [literally

⁶³ Ponce Leiva, *RHGQ*, 1: 529.

⁶⁴ *Ibid.*, 529.

⁶⁵ *Ibid.*, 503, anonymous relación de Zaruma, 1592.

⁶⁶ ANHQ Criminales, caja 1, 1589.

⁶⁷ Ponce Leiva, *RHGQ*, 1: 504. The total number of Indians “de todas edades” was estimated at 500 or less.

⁶⁸ *Ibid.*, 504.

⁶⁹ ANHQ Minas, caja 1, 13-v-1600, ff.4v-5.

⁷⁰ Ponce Leiva, *RHGQ*, 1: 529.

‘deforest,’ but in mining used to refer to terrace excavation], alleviating their labor, which in breaking the *monte* is very great.”⁷¹ Gold from Cangaza, as well as Santa María de Nieva, apparently located south of the Marañón on the Nieva River, was regularly registered in Quito in the sixteenth and early seventeenth centuries, suggesting that the Jesuits and other mine owners sent it overland, a distance of some 750-1,000 km.⁷² Mining activity in the remote upper Amazon was substantially upset in the early seventeenth century due to Indian uprisings, some related to the Shuar rebellions of the Zamora district to the north. Mining activity north of Jaén seems to have declined rapidly due to exhaustion of deposits and Indian demographic decline, and only a small number of encomienda Indians around Valladolid and Loyola were still said to pay tribute in gold dust by the late seventeenth century.

Cuenca Region and the Malal Silver Mines

The gold mines of Santa Bárbara and Shingata, probably Cuenca's most notable contributors to the royal fisc, have already been described, but the corregimiento had jurisdiction over other mineral deposits of some consequence. Most important of these were the silver mines of Malal. These mines, though never very productive, are significant in that they were practically the only silver mines to actually be brought into production in the entire Audiencia of Quito. Scores of silver claims were registered from Tulcan to Loja, but only Malal produced enough of the white metal to pay the quinto, or severance tax. The Malal mines, which were apparently discovered some time in the early 1570s, were located near Gualleturo, approximately 75 km northwest of Cuenca. As silver does not normally appear in its free state, unlike gold, these were exclusively hardrock deposits, apparently massive, low-grade sulphides. The precious metal was removed from its parent rock by a combination of milling, washing, roasting and mercury amalgamation. Some primitive smelting seems to have taken place as well, as miners described the presence of furnaces as late as the 1680s. These wind-driven furnaces, called *huayras* (from Quechua *wayra*, or “wind”) in the documents, may have been pre-Columbian, as they apparently reminded observers of those commonly seen around Potosí.

The supposition that the mines of Malal may have been worked in pre-Columbian times is backed by the fact that early miners mentioned a small canal “from the time of the Incas” running nearby. Whereas the indigenous inhabitants of the region had probably been using the diverted water for crop irrigation, the Spanish miners hoped to run water from this canal to their stamp mills. As Juan Chacón has shown, a number of prominent citizens of Cuenca were engaged in mining and milling projects at Malal after 1575. The *Libros de Cabildo* of Cuenca contain many references to disputes over claims, water rights, and labor. The site was eventually christened “Nuestra Señora del Rosario del Peñol de Lemos” (de Malal), and the individual mines were registered with names like Concepción, Trinidad, San Joseph and Nuestra Señora de la O. Only one mine, El Pucará, seems to have retained an indigenous place name.⁷³ An early observer remarked in 1580 that these mines had outshone the Spanish mines of Guadalcanal at first (an exaggeration akin to comparing Zaruma with Potosí), but that already they were in decline.⁷⁴

These mines were supplied with Indian encomienda laborers at first, and later with mitayos drawn from the surrounding countryside. In the 1620s a group of investors from Cuenca and Guayaquil introduced African slaves to their mine works in the San Josef and Encarnación veins. This case, like that of the high altitude mines of Santa Bárbara, illustrates the fact that Spanish mine owners often contradicted prevailing ideas about the unsuitability of African laborers in *tierra fría*. If Indian workers were too hard to come by, or their labor was too encumbered with legal restrictions, mine operators with the necessary capital invested in slaves. As will be seen, slave labor offered several advantages to mine owners in every climate zone, not least of which was the mobility and salability of the workforce. This particular silver operation, which was well-funded at the start, lasted six years and apparently produced profits.⁷⁵

The mines of Malal underwent a sustained decadence until 1681, when interest was renewed by a mining specialist from Santafé de Bogotá. This miner, Carlos de Acuña, managed to gain the financial

⁷¹ Ibid.

⁷² See Newson, *Life and Death in Early Colonial Ecuador*, 290, for possible locations of Santiago de las Montañas. The guesses vary so widely that calculating exact distances is impossible.

⁷³ Juan Chacón, “Historia de las minas de oro y plata de la antigua Provincia de Cuenca,” in *La sociedad Azuayo-Cañari: pasado y presente*, ed. Leonardo Espinoza (Quito: Editorial Conejo, 1989), 60.

⁷⁴ Ponce Leiva, *RHGQ*, 1: 489.

⁷⁵ Chacón, “Historia de las minas,” 61.

support of several Cuenca elites, and was also granted an astonishing two hundred Indian mita laborers. The operation nevertheless fell short of expectations. The ores were not easy to remove or refine, and the Indians constantly fled from their crown-mandated duties. Most importantly, however, Acuña's associates failed to produce their share of capital, whether in the form of foodstuffs, tools, or cash. Silver mining was riskier than gold mining because it required more technology, more labor, and a greater leap of faith on the part of investors. Instead of seeing gold grains for oneself in the gravels of a given stream, one had to trust the somewhat mysterious assays of a supposed expert like Acuña. The elites of Cuenca were apparently unwilling to take such risks, and after Acuña's failed experiment, the silver mines of Malal were never revived. As a postscript it should be noted that the Malal area was reconnoitered by Theodor Wolf in the 1870s, and although eminently experienced in economic geology, he found no evidence of profitable silver ores in the area.⁷⁶

The Cuenca region was also reputed to have mercury deposits. This valuable mineral, which was crucial in the beneficiation of gold and silver, was already produced by Spain in large quantities, both at the ancient mines of Almadén, in New Castile, and at the more recently-discovered mines of Huancavelica, in highland Peru. In the Audiencia of Quito, the mines which gave the modern town of Azogues its name were apparently discovered by Gil Ramírez de Avalos, the first Governor of the Quijós (a province in the Oriente). A 1580 relación noted that Ramírez de Avalos had abandoned the works after they began to fill with water, but it is just as likely that problems producing saleable mercury were the true cause.⁷⁷ Over the years, a half-dozen or so mining entrepreneurs attempted to reopen the Azogues mines and bring them into production, but none succeeded. All this money and effort was expended solely on the basis of rumor, apparently, as eighteenth-century Spanish visitors, trained in the mines of Almadén, found not even a hint of mercury-bearing ore after a series of detailed inspections and assays. Even the distinguished scientists Jorge Juan and Antonio Ulloa, who visited in the 1730s, were amazed that such extensive underground works, located next to a town named after the liquid metal, could have failed to produce even a drop of it. A contemporary search of archival materials from Cuenca, Loja, and Quito likewise yielded no evidence of actual mercury production at Azogues.⁷⁸

Other early mines which did yield profits, again, mostly of gold and silver, were the now-lost mines of Espíritu Santo, apparently located somewhere near the thermal springs, or Baños de Cuenca, just southwest of the city. Chacón suggests that these mines, which produced until the 1610s, were somewhere in the neighborhood of the Cerro Guishil.⁷⁹ Wolf found little evidence of profitable veins in the region during his late-nineteenth-century visits, but he did locate other "lost" mines in the region. Southwest of Cuenca, near the village of Chahuarurcu, he located unpromising silver-gold deposits around the Cerro de Shiric, which he claimed were the legendary mines of Cañaribamba. Silver registered in Quito in 1598 was said to be from the "newly discovered" mines of Cañaribamba, and Chacón has noted that these mines were worked by mining entrepreneurs from both Cuenca and Zaruma in the late sixteenth century.⁸⁰

More interesting, in Wolf's view, were abandoned silver mines located just north of Azogues, at a site call Pilzhun. Here he found flooded underground works, but strong assays; the only impediments to production were the extreme altitude (3,100-3,500 m) and poor transportation infrastructure, a common complaint throughout Ecuador, then and now.⁸¹ Chacón mentions silver claims staked in the mid-seventeenth century near Sayausí, just west of Cuenca on the trunk line to the coast. Though registered,

⁷⁶ Wolf, *Viajes Científicos*, 2: 70. Wolf examined ore samples from several abandoned mines and found only pyrite-rich quartzes more characteristic of gold deposits. Either the mines had been completely exhausted of silver-bearing ores or they were not the same ones exploited in colonial times. H. Putzer in W. Sauer, *Geologie von Ecuador*, 272, noted the existence of polymetallic sulphide ores similar to those of Macuchi at Molleturo, possibly the true site of the original Malal silver mines.

⁷⁷ Ponce Leiva, *RHGQ*, 1: 489.

⁷⁸ Wolf, in *Viajes Científicos*, 1: 61-2, visited the mines in the 1870s, and was impressed by the galleries. Like many who had come before him, he felt that there must have been something there to justify the substantial diggings, yet he found no cinnabar (HgS), the most likely form of mercury ore.

⁷⁹ Chacón, "Historia de las minas," 56.

⁸⁰ *Ibid.*, 56-59, ANHQ Real Hacienda, caja 37, f.172 (25-ix-1598). This silver, eight *piñas* worth some 236 marks (or 562,572 maravedis), was charged only the *diezmo*, or tithe, because of the newness of the mines. According to the Toledo Ordinances, however, this tax rate was not justified due to the relatively low grade of the ores.

⁸¹ Wolf, *Viajes Científicos*, 17, 68-9.

these mines were apparently never brought into full production.⁸² Another wave of small-scale claim-staking occurred in the hills west and south of Cuenca toward the end of the eighteenth century, all with little productive effect but much legal wrangling.⁸³ Other minable resources around Cuenca included nitrates (*salitre*), sulfur (*azufre*), lime (*cal, yeso*), and various building stones, among them a beautiful pink travertine of which the present cathedral is made.⁸⁴ In sum, the Cuenca region abounded in mineral deposits, but none proved sustainable as anchors for the local economy over the long term. The pattern of exploitation of precious metals here was one of early, brief booms and quick busts. Only gold washing in the remote placers of the Santa Bárbara district seems to have continued, only on a much-reduced scale.

The Central Highlands

The mines of the central highlands of the former Audiencia of Quito are among the most mysterious and difficult to locate today. This is because none reached significant levels of production in colonial times and because none are under exploitation today. Most of the sites mentioned in colonial documents were silver claims, if not producing mines, and they were scattered from the mountains surrounding Riobamba to the slopes of Quito's own Volcán Pichincha. There were also a small number of gold placers, most of which were apparently exhausted within a generation or two of conquest. In either case, these scattered and ephemeral mines deserve some attention, especially considering their tendency to draw requests for Indian labor and other official favors in hopes of stimulating precious metals production in an otherwise mineral-poor region.

As early as 1541, in Quito's first *Libros de Cabildo*, mention is made of silver mines located in the vicinity of Tungurahua, an active volcano located some 100 km southeast of Quito, near the town of Baños. These mines may have had pre-colonial origins, as several Indian gold- and silversmiths from the region were brought in to smelt ore samples for the members of the council. The results of the demonstration were promising, and the cabildo partitioned the claims, located on the flanks of Tungurahua itself and on the nearby hill of Patate, among Spanish notables. One of these notables was Gonzalo Pizarro, soon-to-be rebel leader. Indeed, Vargas has suggested that the Tungurahua mines, of which we find no later mention, were probably abandoned due to the disturbances of the 1540s. It is also possible that the abundance of new and richer gold finds during this period drew greater attention from among Quito's small elite population.⁸⁵

Other small and short-lived precious metals claims in the central highlands included the Cerro de Pu, a site presumably near the village of the same name, some 10 km northeast of Guaca and 15 km southeast of Tulcan. The Pu mines were said to contain substantial gold, and a relación of 1580 claimed that they were discovered by an individual named Alonso Vilanova de Cayas.⁸⁶ It remains unclear exactly where these mines were located, or if they were placer or vein-based, but gold brought to Quito by "Los Yndios de Pu" was registered and quinted as early as August of 1570.⁸⁷

In the late seventeenth century a small gold-silver claim was staked on the flanks of Quito's own Volcán Pichincha, above the village of Lloa, but no metals seem to have been produced.⁸⁸ North of Quito,

⁸² Chacón, "Historia de las minas," 66.

⁸³ See ANHQ Minas, caja 3, 4-i-1787. Here a man from Cuenca petitioned for legal rights to a gold deposit he was already working with ten laborers, some hired peones and some his own children. The audiencia granted him temporary rights only when he produced a sample of gold and provided the hacienda officials with a precise location. The mine appears to have been a placer located at a site called Pillachiqui, just southeast of Cuenca on the Quinjeo River.

⁸⁴ See ANHQ Minas, caja 4, 9-iv-1791. The salitre deposit of Cauzhin seriously interested crown officials, who hoped to supply the royal gunpowder factory in Latacunga, but the mineral proved too impure to be useful. Another option investigated at the time was distilling nitrates from mineral hot springs near the Baños de Cuenca.

⁸⁵ See Vargas, *La economía política*, 188-9.

⁸⁶ Ponce Leiva, *RHGQ*, 1: 489 (anon.): "...en la misma provincia de Quito, se tiene noticia de una jornada y descubrimiento de minas de oro de grandissima riqueza que ahora ha hecho por comision de aquella Audiencia Alonso de Vilanova de Cayas, que llaman de Pu, de las cuales ha muchos años que se tienen noticia."

⁸⁷ ANHQ Real Hacienda, caja 35, vol.2, f.43.

⁸⁸ ANHQ Minas caja 1, 14-x-1665.

in the upper tributaries of the Chota-Mira River system, Indians were washing gold by at least the 1570s. At one site, a *quebrada*, or streambed called “El Quique,” was worked by indigenous miners who had migrated from Almaguer, a hardrock gold camp north of Pasto. This placer gold district may have been one of the main supply regions for the caciques of Otavalo, who paid enormous tributes in gold from the late 1540s to the 1580s. The Indians of Pimampiro, on the upper Chota, supplemented the usual tribute items of maize, swine, fowls, and cotton cloth with over 900 pesos (19.5 k purity) of gold per year. Their encomendero in the late 1570s, Diego Méndez de los Rios, followed the apparently established custom of demanding that the Indians bring the gold to him with taxes (quintos) already paid.⁸⁹ Because of this practice of shifting the tax burden onto the Indians, Spanish *mineros* often ended up yielding only a small portion of their mined income to the crown.

South of Quito, especially in the rugged mountainous region west of Latacunga, a number of mines were at least provisionally exploited. The Spanish had believed that mines existed in the region from conquest times (the 1530s) since the caciques of Sigchos and Angamarca had initially paid tributes with gold and silver ritual items, presumably fashioned from metals produced nearby. These items, as an anonymous relación of 1569 confirms, had instead been introduced to the highlands by traders going among coastal groups near Puerto Viejo to trade salt and other necessities. The gold and silver pieces most likely originated in ancient burial caches, known loosely as huacas.⁹⁰ Even though the traded metal items could not be traced to highland mineral sources, some reconnaissance of the area between Sigchos and Angamarca discovered polymetallic deposits at Macuchi, Nanegal, La Plata, Talagua, and Pilaló. Most of these deposits were massive sulphides (pyrites and chalcopyrites, especially), and contained very small amounts of gold and silver.⁹¹ Elites from Quito and Latacunga poured capital and labor into these mines throughout the colonial period, but little gold or silver seems to have been produced.

The only evidence of pre-Columbian mining in this area comes from a site called Quinguopana (or Vingopana) near Saquisilí. In 1666 a Latacunga entrepreneur requested a grant of thirty Indian mitayos to work the silver claim, which boasted “an adit (*socavón*) from the time of the Inca.”⁹² No word of success seems to have reached Quito, suggesting that the mine was in fact barren. The nearby Cerro Macuchi mines received a great deal of official attention in the last decade of the eighteenth century, when the Marquesa of Selva Alegre, among other notables, male and female, invested heavily in tunneling and drainage. This seems to have been one of the first mines in the Audiencia of Quito to have been operated in a capital-intensive, rational manner. The principal mine, called Nuestra Señora de las Mercedes, was to be drained by an adit, an expensive but necessary endeavor. In another apparent first, blasting was introduced to the excavation process, and, under license from the Real Hacienda in Quito, the nearby gunpowder factory at Latacunga would supply the miners as needed, at cost.⁹³ The ores were then to be apparently crushed by water- or animal-driven stamp mills and refined with mercury purchased from the crown. That the enthusiastic members of the company could not even produce a sample (*pella*) of silver to legalize the claim after over a year of work suggests that the mine was never productive. Another claim on the same hill may have yielded some silver, but if so its produce was not registered in the quinto ledgers of Quito.⁹⁴

Further south, there is record of small-scale gold placering around Guaranda in the late eighteenth century, and of similar operations below Alausi. East of Riobamba there were claims of silver mines near the village of Alao, but again no metal was registered in Quito.⁹⁵ One silver deposit which was discussed at length but never successfully exploited was the site of Condorasto, located high in the mountains of the Altar massif, also east of Riobamba. Condorasto was only seriously explored during the second half of the eighteenth century, and although reports of its ore bodies were promising, no sustained mining ever seems

⁸⁹ Ponce Leiva, *RHGQ*, 1: 482, relación of Antonio de Borja.

⁹⁰ Ponce Leiva, *RHGQ*, 1: 68 (relación de Esmeraldas) The highland Indians were apparently also trading for salt. The Italian trader Girolamo Benzoni, who visited Puerto Viejo in the late 1540s, said that already gold and silver were hard to come by in the area (Benzoni, *Historia del Nuevo Mundo*, 109).

⁹¹ H. Putzer, in W. Sauer, *Geologie von Ecuador*, 272, confirms the existence of these polymetallic deposits near Macuchi (west slope of Cordillera Occidental), Nanegal (Rio Alambi), La Plata, Talagua and Sigchos.

⁹² ANHQ Minas, caja 1, 22-xii-1666.

⁹³ ANHQ Minas, caja 4, 26-ii-1795.

⁹⁴ ANHQ Minas caja 4, 14-vii-1795.

⁹⁵ ANHQ Minas, caja 3, 27-iii-1779.

to have taken place.⁹⁶ The mines were located near the snow line of the massive extinct volcano known as El Altar (5,516 m), and hence were not easily accessible, even on foot. In spite of the horrendous working conditions that the opening of these deposits entailed, the audiencia approved a request for Indian rotational labor. Other scattered claims in the Riobamba-Ambato highlands appeared and disappeared over the years, but none produced enough precious metals to offset costs.

The Northern Oriente

Francisco de Orellana's famed expedition from Quito to the mouth of the Amazon in 1541 must be regarded as one of the great exploratory feats of all time. This journey, which had been carried out at Gonzalo Pizarro's request, was initially intended as a search for El Dorado, the legendary gilded cacique. Little gold was found in the many rivers that led to the Atlantic, much less a golden kingdom, but a handful of survivors, spared by chance or pity from Indian darts, eventually made their way to Venezuela to tell their tale. The legend of El Dorado remained just that, but the beginnings of a Spanish pathway into the Oriente, or upper Amazon Basin, had been cleared. In addition, a bit of gold had actually been found, just enough to excite the imaginations of a few Quito elites. Gold-bearing sands were located along the upper Río Napo, in particular, and a search for their source ensued. Early encomienda Indians were forced to wash gold, to harvest and spin cotton, to collect and process rope fiber (*pita*) and to gather food for the Spanish first settlers. Indian abuses became intolerable and a 1579 visita from a Quito *oidor*, or audiencia judge, sparked an uprising. The local Quichua-speakers, led by a cacique named Jumandy, laid waste to the settlements of Ávila, Archidona, and Sevilla del Oro, successfully driving out the Spanish. Armed forces were sent in from Quito to put down the revolt, a task which they accomplished, at least tentatively, and the Indian leaders, including Jumandy, were brought to the capital and executed.⁹⁷

The Spanish started over in the Oriente, and likewise revived their habit of extorting gold from the native inhabitants of the Napo and Pastaza drainages. In the following centuries a number of encomenderos and entrepreneurs from the highlands, most of whom preferred to hire resident overseers rather than live in the jungle themselves, would attempt to turn a profit from an assortment of placer deposits. Other explorers in search of El Dorado found gold along several river basins to the north of the Napo, including the San Miguel, Sucumbios, and the Mocoa regions of the upper Caquetá. These remote gold districts never produced on a large scale, but they did continue to pique Spanish interest throughout the colonial period. By far the richest of these northeastern mining camps was Mocoa, located just east of Pasto (see the Popayán section below). As with nearly all the short-lived mining camps of the Oriente, Mocoa would eventually be destroyed by Indian uprisings.

The placers of the upper Napo River basin, which are still informally exploited today by the lowland Quichua, yielded a fair income to the few Spaniards who had access to skilled Indian mine laborers (*curicamayos*, or *kurikamayuj*, Quichua for “gold specialists”). The gold of the Napo, like most river gold, was of high karat, but it was extremely hard to come by. Depending on the site, it could take up to a week of full-time sifting to wash a peso's worth of gold (about 4.2 g) from the gravels. The source of the river's gold was apparently never discovered, and probably lay buried beneath many layers of volcanic ash somewhere in the foothills of the eastern cordillera of the Ecuadorian Andes. Some reports of terrace mining (*desmonte*) in the seventeenth century on the upper Punino and Yuchupino Rivers suggest that Napo gold, like that of the Pacific lowlands, had its origin in older, Quaternary terraces. Still, in spite of the economic obstacles presented by the Napo, gold mining commenced almost immediately after Spanish settlement. As elsewhere in the audiencia, encomienda Indians, namely the Quijós Quichua, were put to work with wooden bateas. The work gangs, or cuadrillas, were usually headed by an Indian overseer, called a *capitán de cuadrilla* (the same terminology used for African slave leaders). The other workers, probably comprised of whole families, followed the captain's orders, willingly or unwillingly. Indigenous miners languished under harsh conditions, and many fled without ever paying their required tribute of three pesos each (about 12.6 g) per month in gold dust. Some encomenderos brought Indians into the region from elsewhere, and later mining entrepreneurs brought in African slaves to work the beaches and benches

⁹⁶ ANHQ Minas, caja 2, 7-viii-1766. In this document a Peruvian mining specialist, accompanied by two workers (*barreteros*), recounts his detailed reconnaissance of the remote Condorasto veins.

⁹⁷ For a full discussion of these events, see J.L. Phelan, *The Kingdom of Quito in the Seventeenth Century* (Madison: University of Wisconsin Press, 1967), 24-26.

of the Napo. Almost all of these enterprises failed miserably. In most cases, a few thousand pesos of gold would be produced and taken to Quito, but soon the abused laborers would rise up or run away, and mining operations would cease. One such site active in the later seventeenth century was called Talapo, on the upper Yuchupino (c. 15 km southwest of the modern town of Tena), with claims covering terraces along the quebradas Callamba, Curiyacu (Quichua for “gold creek”) and San Miguel.⁹⁸ Labor insubordination and disputes with local officials and encomenderos drove this operation out of business within a year.

Another briefly productive gold region of the northern Oriente was the Punino-Payamino confluence. These two rivers, tributaries of the Napo located some 100 km northeast of Tena, were probably explored and possibly settled some time in the late sixteenth century. The first official register of mines in the region does not appear until 1692, however, a strong indication of early Indian revolt in the area and subsequent abandonment. Given the mines' proximity to Puerto Orellana (modern-day Coca) it is unlikely that gold had not been found in the area prior to this date. In any case, control of the mines, and the Indians that were to work in them, were in dispute in the late seventeenth century, and gold was making its way to Quito to be taxed. One claimant charged that his local Indian workers, drawn from the villages of Payamino, Guambuno, Becain, and Mango (or Manzo), were being attacked by invading Indians from the Sucumbios-Mocoa region, some 75-100 km further north. Punino was within the jurisdiction of the mission town of Ávila, and hence well within the boundaries of the Audiencia of Quito, whereas the Sucumbios River marked the boundary with the Gobernación of Popayán, also technically subject to Quito, but in many ways an independent jurisdiction.

The problem of Spanish encomenderos and their indigenous subjects crossing boundaries to raid mining camps seems to have been particularly common in the northern Oriente. Disputes between citizens of Écija and other towns on the Popayán side of the Sucumbios and citizens of San Miguel and other Quijós-side towns were common from the establishment of the boundary in the mid-sixteenth century. The problem became so pervasive in the seventeenth century that it affected gold camps as far south as the upper Napo. The Punino mines were of interest to the royal fisc, especially in a period of very low gold receipts, so the Quito audiencia sent a magistrate to investigate the frequent charges of claim-jumping. After speaking with many Spanish and Indian residents of the area, the investigator discovered that several encomenderos from the other side of the border were sending raiding parties south under the pretext of hunting for runaway Indians (*indios cimarrones*).⁹⁹ In the end, the Punino placers, which had also been wiped out by floods some time in the mid-seventeenth century, were essentially crippled by labor disputes in the 1690s.

In spite of these difficulties, sporadic mining continued in the upper Napo region into the nineteenth century. In 1812 a native of Spain claimed a site called Nuestra Señora del Carmen, apparently located along one of the tributary quebradas of the Yuchupino. This operation was plagued not with Indian problems but with rebellious actions by a cuadrilla of African slaves. The owner and claimant, Manuel Martínez, complained to the audiencia that two of his slaves had run away from the mines, going all the way to Quito to complain of abuses. Other members of the mining gang had retired to the hills, apparently aided by Indians with blowguns and poisoned arrows. Only a few of his house slaves, along with the captain of the cuadrilla, had chosen to remain loyal, at least for the time being; the others, Martínez claimed, were threatening to murder him and his family. No record of the runaways' testimonies in Quito has been found, but the Carmen mining operation seems to have been abandoned due to labor problems, and without intervention from the audiencia.¹⁰⁰ As an interesting postscript, the Yuchupino mines were again revived in the early republican period, apparently with paid wage laborers drawn from the local Indian population.¹⁰¹

As noted above, Archidona, Ávila and the other mission towns of the upper Río Napo competed with another gold district in the northern Oriente, particularly the encomiendas of the Sucumbios and San Miguel Rivers. This border region was home to the Cofán, Coronado, and Omagua Indians, among others, and like the upper Napo, the district was inhabited by a small number of Spaniards and mestizos, mostly

⁹⁸ ANHQ Minas, caja 1, 31-x-1680. These mines were operated by Agustín de Chaves, a Quito-based entrepreneur, using a mix of indigenous laborers and a dozen or so slaves and free people of color (*peones concertados*).

⁹⁹ ANHQ Minas, caja 2, 9-vi-1692.

¹⁰⁰ ANHQ Minas, caja 5, 22-ii-1812.

¹⁰¹ ANHQ Minas, caja 5, 1846. These mines were located along the Ríos or quebradas Chulo de Apangora and Ansupi.

encomenderos or their resident administrators and priests. Likewise, most of the region's disputes centered on control of Indians, who were mercilessly forced to wash gold whenever possible. Early settlers were based at the towns of Écija and San Miguel, and gold from this region appeared in Quito by the turn of the seventeenth century. Disputes over Indian labor began almost immediately after settlement. These disputes would last until the end of the colonial period, but with varying intensity. Many abused Indians from the region fled to the upper Napo area, where they presumably received better treatment. Some sought refuge among the Jesuits at San Pedro de los Cofanes or San Juan de los Omaguas, or with the Franciscans at Archidona, while others disappeared into unsettled areas beyond Spanish control.¹⁰² In 1619 a dispute arose between encomienda holders in Écija and San Pedro del Río Dorado. Both parties charged one another with “stealing” Coronado and Cofán Indians and moving them to different climate zones (*temples*), a basic breach of encomienda law. Some captive Cofanes, guarded by a Spaniard, were said to be working on the San Miguel River, some cultivating small tobacco plots (*chagras de tabaco*) and others apparently panning gold.¹⁰³

The Gobernación of Popayán

From the beginning, Quito was dependent on Popayán gold. The mines of Popayán, a region nearly as large and vaguely defined as the Audiencia of Quito, were widely scattered and varied greatly in type and productivity. Nearly all produced gold, however, and over the years it added up to tens of millions of pesos. Because of early established trade and administrative structures in the northern Andes, much of Popayán's gold made its way to Quito, either as taxes or as payment for merchandise. Over time this flow of bullion would bind the two regions, and their capital cities, inextricably together. These connections would only begin to change significantly in the early eighteenth century, when Santafé de Bogotá rose to prominence as the capital of the new Viceroyalty of New Granada (1739). With the post-independence breakup of Gran Colombia in 1830, the southern reaches of the old Gobernación of Popayán, including Pasto and Barbacoas, would only reluctantly break away from the established bureaucratic and commercial pole of Quito.

Some of the earliest gold mines of the Gobernación of Popayán were located approximately 350 km north of Popayán proper. The mining centers of Arma, Cartago, Caramanta, and Anserma date from at least the 1540s. In the sixteenth century, these widely scattered mines produced handsomely, and the crown even established *casas de fundición*, or royal smeltries, in Arma, Anserma, and Cartago. By the 1580s, when placers had been largely depleted and mining went underground, gold from this region flowed to the *casa de fundición* at Cali, a ranching and administrative center which lay just 100 km down river on the Cauca from Popayán. A small portion of this northern Popayán gold even made its way to Quito to be registered and taxed, a journey of over 750 km. The royal smeltries of Anserma, Arma, and Cartago were closed around the turn of the seventeenth century, and the *casa de fundición* of Cali was moved to Popayán in 1643.

As West has shown, most of the early mines of the Anserma-Cartago district were placers located along Cauca River tributaries. Grave-looting, or *huaquería*, was also a minor industry in this region, former home of the Quimbaya goldsmiths. Later hardrock mines were opened in several hills of schistose rock near Anserma at Supía, Marmato, and Quiebralomo.¹⁰⁴ The ores, which consisted of bands of pyritic quartz, were apparently crushed manually and the gold separated by panning in nearby streams. A Quito encomendero who had visited the Anserma-district mines of Quiebralomo, Mapura, and Loaysa some time before 1592 described the mines as follows: “most gold there is taken from veins which they call sources (*nacimientos*), and the gold they recover is sour (*agrijo*) and calcined (*amicalado*), such that a bar of it is easily broken. In other mines, called Loaysa, fine gold is found, mixed with silver (*sobre plata*); it is only

¹⁰² See ANHQ Popayán, caja 8, 1684. In this case the Quito audiencia granted encomenderos from Ecija de los Sucumbios license to search out and retrieve “runaway” Indians. For the establishment of missions in this region, see Newson, *Life and Death in Early Colonial Ecuador*, 325-330.

¹⁰³ ANHQ Criminales, caja 1, 17-xii-1619, ff.2v-3.

¹⁰⁴ Robert C. West, *Colonial Placer Mining in Colombia* (Baton Rouge: Louisiana State University Press, 1952), 9-11.

half gold in purity.”¹⁰⁵ Based on these descriptions, the hardrock gold mines of northern Popayán appear to have been chemically similar to those of Zaruma, in the southern Quito highlands; they were extensive and fruitful, but their mineral product was low in quality.

Initially, Spanish investors forced gangs of hundreds of Indians to work in these diggings, some of which were sunk to a depth of 50 m.¹⁰⁶ With the ensuing demographic decline of the native population, however, African slaves were soon imported via Cartagena as replacements. Even with these new labor inputs, however, the richest and most easily beneficiated surface ores were depleted by the first quarter of the seventeenth century, and the mines' output declined to near insignificance by the mid-seventeenth century. As the importance of these mines declined, Spanish mining entrepreneurs shifted their African work forces to newly opened gold mining frontiers, such as the Chocó, to the west, and to other economic activities, such as sugar manufacture, tobacco farming, and cattle ranching. What little gold that continued to be produced in the Anserma-Cartago district after the turn of the seventeenth century was either registered in Cali, Popayán, or Santafé de Bogotá; in marked contrast to the 1570s and 1580s, it was only rarely transported all the way to Quito after 1600.¹⁰⁷

A large number of significant goldfields were exploited within a day's journey of the city of Popayán, most of them placers along the Cauca River to the north and its nearby tributaries, and the upper Patía River, which drains into the Pacific near Barbaçoas, to the south. These deposits, mostly gravels of Tertiary age, were apparently eroded from earlier uplifts, such as the Huila Batholith of the Central Cordillera. As West notes, the choice of Popayán as regional center for Spanish population and administration was probably based on the presence of nearby gold deposits and a relatively dense native population already skilled in working them.¹⁰⁸ The Popayán placers were also among the first settled mining camps in the Audiencia of Quito to employ significant numbers of African slaves. Skilled black miners from this area would later be transferred to virtually every new gold district in the audiencia, most importantly the rich lowland placers of the Pacific coast.

Other significant placers, called the *minas de adentro*, or “mines of the interior,” were worked in the second half of the sixteenth century along the Jelima, Teta, and Ovejos Rivers. There is mention of encomienda Indian labor in the La Teta mines in the 1620s, but the Indians, some of them captured and resettled Paeces and Pijaos, were said to be difficult to control.¹⁰⁹ Indeed, indigenous groups living in the highlands separating the Cauca and Magdalena basins effectively stymied attempts to permanently connect Popayán and Santafé de Bogotá with a Camino Real well into the seventeenth century. As a result, much of the gold dust recovered north of Popayán was sent to the casa de fundición at Cali, established in 1551, with the Jelima-Teta district alone averaging some 75,000 pesos a year between 1564 and 1597.¹¹⁰ Also as a result of the disconnectedness of Popayán and Bogotá, however, gold from this region regularly made its way to the casa de fundición in Quito, some 750 km distant. This trend was strongest between 1569 and 1600, when Quito offered a lower rate of taxation on mined gold specifically originating in the Gobernación of Popayán. Differential taxation appears to have stimulated long-distance trade, but Indian demographic decline and continued resistance to Spanish domination threatened to snuff out the gold mining industry in the north. Popayán's mine owners began to call for increased slave imports in order to continue their operations, and the Cartagena market responded. As elsewhere in the northern districts, African slaves soon outnumbered Indians in the “interior” mines, most of which were administered by Spanish elites and ecclesiastical organizations based in Popayán.

The important mines of Caloto, located just east of the Jelima-Teta district, were brought into production in the last quarter of the sixteenth century, and gold output was again largely dependent on African slave labor. These mines, mostly placer deposits originating from highly weathered Santander Dike outcrops, produced handsomely until the early seventeenth century, when most of the easily

¹⁰⁵ Ponce Leiva, *RHGQ*, 1: 550, Relación de Zaruma of Pedro González de Mendoza. González also mentions mining operations at a site called Cerro Velázquez, near Arma, where “free” gold (*oro suelto*) was found.

¹⁰⁶ West, *Colonial Placer Mining*, 10.

¹⁰⁷ See Zamira Díaz, *Oro, sociedad y economía: el sistema colonial en la Gobernación de Popayán: 1533-1733* (Bogotá: Banco de la República, 1994), 94-123, for an analysis of the various libros de fundición of northern Popayán.

¹⁰⁸ West, *Colonial Placer Mining*, 11.

¹⁰⁹ ANHQ Popayán, caja 3, 1663 [1628] f.48.

¹¹⁰ West, *Colonial Placer Mining*, 13.

accessible and washable gravels became depleted. Marzahl has noted that only thirty-one Spanish citizens resided near the town of Caloto in the 1630s.¹¹¹ The district underwent a substantial revival beginning in the early eighteenth century, however, when Popayán's elites poured their resources into the construction of extensive canals, the only means of working high and dry deposits profitably. As West has shown, colonial mining activity in this area was so intensive by the late eighteenth century that the deeply scarred landscape has still not recovered.¹¹²

Of the hardrock mines located near the city of Popayán, probably the most important were those of the crown-administered district of Chisquío. This concentrated deposit, located just 25 km west of Popayán, consisted of gold-bearing quartzes embedded in a weathered outcrop of granite, part of an old uplift of the Western Cordillera. Below this outcrop a few short-lived placers were also exploited, and based on the fact that tributes were gathered in gold from Indians living near Chisquío, West has suggested that the works were active in pre-conquest times.¹¹³ Be that as it may, the mines of Chisquío were never terribly productive in any period. Part of the problem was the low quality of the ores, which averaged about 16-karat, or two-thirds fineness. This was roughly comparable to the ores of Zaruma, in the southern highlands of Quito, but the Chisquío zone was not as extensively mineralized. Ore quality and quantity notwithstanding, the Chisquío mines were worked with surprising consistency for over a century. Gold from this district periodically appeared in the casa de fundición in Quito until the early seventeenth century, and Marzahl suggests that the mines were not abandoned until about 1690.¹¹⁴

Aside from its geology and longevity, the Chisquío district was also notable for its predominantly Indian labor force, mostly drawn from crown-held encomiendas. Again, we may be reminded of the mines of Zaruma, in which Indian labor prevailed until at least the turn of the eighteenth century, but the fact of crown administration and the lack of a mita arrangement made Chisquío different. This special arrangement left an extensive paper trail, detailed studies of at least some of this district's mines have been undertaken. The Colombian economic historian Guido Barona, in particular, has made use of a wide variety of labor records and other materials to demonstrate the difficulties faced by Indian gold miners in Chisquío in the sixteenth and seventeenth centuries.¹¹⁵ The case is somewhat atypical since the mines were operated as a state-controlled enterprise, but many labor patterns identified at Chisquío could be found elsewhere.

Other minor gold finds were located west of Chisquío in the region of Cerro Munchique, near the trail to the Pacific mines of the Micay River, with sporadic mining occurring into the eighteenth century at the sites of Las Abejas, Altos del Cascabel, Las Botas, El Tibio, and the Río Mondomo. Some of these mines were worked with mobile slave gangs and others with free, paid peons.¹¹⁶ None seems to have been spectacularly productive or long-lived. Other placers were intermittently exploited along the upper Patia River and its many tributaries, such as the Ríos Quilcasé, Esmita and Guachicono, in the hot country just south of Popayán. Most of these operations, given the region's reputation as the disease-pot (and even the hatching ground for plagues of locusts) of Popayán, were temporary and mostly African slave- rather than Indian-based.

While the mines of the northern Gobernación of Popayán were only tentatively linked to Quito, those of Popayán proper, in particular the mines south of Cali, were much more firmly bound to the regional capital. Unlike Anserma, Arma and Cartago, their produce went south at least as often as north until the mid-seventeenth century. As an extension of this geographical trend, the mines of the extreme southern gobernación, such as Almaguer, Mocoa, and Pasto, were almost exclusively linked to the powerful administrative and financial center of Quito. These mines, which were not as extensive as those of Popayán north, were nevertheless very productive in their time. In fact, they would prove at least as important to Quito's economy as the mines of Zamora and Zaruma. Some of these mines were located in hardrock deposits, such as Almaguer, and others were largely placers, such as those of Pasto, Mocoa and Sibundoy. In either case, the mines experienced a boom lasting from about 1550 to 1600, after which most

¹¹¹ Peter Marzahl, *Town in the Empire*, 25.

¹¹² West, *Colonial Placer Mining*, 13, plate II.

¹¹³ Ibid.

¹¹⁴ Marzahl, *Town in the Empire*, 24.

¹¹⁵ G. Barona, "Estructura de la producción de oro en las minas de la Real Corona: Chisquío (Cauca) en el Siglo XVII," *Anuario Colombiano de Historia Social y de la Cultura (ACHSC)* No.11 (1983): 5-42.

¹¹⁶ ACC Sigs. 2990, 3069, 3093, 1722. The Río Mondomo mines were said to have once been worked by the Belalcázar family (Sig. 3143). El Tibio was worked with "peones libres pagados."

of them never recovered. This decline would be only partially offset by the opening of a new mining frontier in the Barbacoas lowlands of the Pacific littoral in the early seventeenth century.

The hardrock mines of Almaguer, located in the cool highlands approximately 250 km south of Popayán, were discovered some time in 1551. As West notes, one mining camp near Almaguer, La Concepción, produced some 30,000 pesos of gold annually and employed over 2,000 African and Indian laborers.¹¹⁷ Gold from La Concepción was registered in Quito as late as 1601.¹¹⁸ Whatever its exact production figures, the fundición receipts of Quito reveal that the gold of Almaguer was of very low karat, averaging between one-half and two-thirds pure (12-16 k). This factor, added to the remoteness of the mines, depletion of oxidized surface ores, and the decline in Indian numbers rendered the Almaguer district unprofitable within two generations of its opening. By the early years of the seventeenth century, Almaguer was reduced to little more than a ghost town. Crown visits to the area in the 1640s discovered that no mines were in operation and that most property holders had retired to Pasto or Popayán. In 1694 the Audiencia of Quito tried to collect an emergency land tax, or *composición de tierras*, but the few remaining citizens of Almaguer resisted, all claiming that nothing of value was now produced in the region.¹¹⁹ This decline was in marked contrast to the boom years of the 1550s and 1560s, when the town counted twenty-three encomenderos and 3,520 Indians, 634 of whom were engaged in gold mining.¹²⁰

Besides Almaguer, the other significant gold district of southern Popayán was Mocoa, located in the hot foothills of the Eastern Cordillera, just 50km east of Pasto. The Mocoa mines, mostly rich placers of the upper Caquetá and Putumayo River basins, were worked as early as the 1550s. Most gold taken from the various camps of Sibundoy, Mocoa and Yscancé, unlike that of Almaguer, was of very high karat, among the highest found in the entire Audiencia of Quito. Registers at the casa de fundición in Quito routinely mention *oro en polvo* from Mocoa assayed at 23 & 1/2 karats--like the virtually pure gold found at Nambija, in the Zamora district east of Loja. Considering the crown's high taxes and its somewhat questionable assaying methods, the unquestionable purity of the region's gold was a strong incentive to keep this district open. The mines were mostly worked using forced encomienda Indian labor, but, as with similar mines in southern Quito, some Africans were introduced to the zone as well. In a series of indigenous uprisings which bore a strong resemblance to the Shuar revolts of the late sixteenth and early seventeenth centuries in Zamora, described briefly above, the mining camps of Mocoa were wiped out almost to a person by the 1610s.

Several attempts were made to revive the region in the seventeenth century, but with little success. In 1658 a settler named José Suárez de Bolaños petitioned the Audiencia of Quito for aid in re-establishing a settlement. Suárez, in a bizarrely-worded and lengthy statement, claimed that a *presidio*, or fort, was needed in Mocoa in order to defend Spanish settlers and bring Indian converts to Christianity. His petition alluded to the past wealth of the district but did not directly propose the re-establishment of gold mines based on forced Indian labor; instead he planned to introduce African slaves, some of whom accompanied him on a failed entrada. The Bolaños family, based in Pasto, was well established in the northern Oriente, and some later generations of encomenderos from this family worked the placers of the Sucumbios using captive Omagua, Coronado and Cofán Indians. Suárez, in his petition, claimed that the royal fisc had much to gain by supporting a *reducción* of the Mocoa Indians, especially since they seemed to be flush with gold, a substance they hardly valued. He claimed that certain neighboring indigenous groups of the Mocoas stored up great amounts of gold dust, and, 'having no trade among them', were said to offer up to two pounds of it in exchange for only ten fish. Their wealth in this esteemed metal was further demonstrated, Suárez claimed, by the multitude of pins (*agujeros*) with which they ornamented their lips, noses and ears, and by the large medallions (*patenas*) they strung across their chests.¹²¹

The Bolaños scheme failed to materialize and it was almost a century before interest in re-opening the Mocoa gold mines surged again. In 1740 a wealthy Popayán miner named Pedro de Valencia proposed a relocation of his substantial cuadrilla of African slaves, which had been 'underemployed' (*desacomodados*) in the mines of Raposo, on the Pacific coast, to Mocoa. Valencia proposed to 'penetrate' the mountains of Mocoa, Sibundoy and Yscancé and revive the mines of the region which, he claimed, had

¹¹⁷ West, *Colonial Placer Mining*, 14.

¹¹⁸ ANHQ Real Hacienda, caja 1, 11-ii-1601, f.12v.

¹¹⁹ ANHQ Popayán, caja 14, 26-iv-1694.

¹²⁰ Ponce Leiva, *RHGQ*, 1: 26-29 (1559 numeración).

¹²¹ ANHQ Popayán, caja 2, 1658.

'once supplied this Kingdom'.¹²² He promised not to use any Indians in these labors, noting that it was due to 'the rigor with which they were treated that they rose up and extinguished the rich city of Mocoa and its inhabitants'. The original Spanish colonizers of Mocoa had been vecinos of Pasto, a fact not lost on this late-coming mining entrepreneur, and many retained hard feelings about the Indians' rebellious acts, even with the passing of time. Valencia claimed that in spite of the 'rigor and tyranny which led to the tragic loss of so many souls, the uprising remains fresh in the memories [of the people of Pasto]'.¹²³ Ill will aside, this operation apparently produced no gold for the crown.

Other gold districts in the Pasto area included the mines of the Abades district, located to the northwest in a series of hills above the Guaitara River, a tributary of the Patia. These mines, described by Ramírez de Jara, were relatively short-lived for a number of reasons. First of all, the Indian laborers, some native to the region and others forced migrants from the Patia, soon died from the usual combination of epidemic diseases, undernourishment and overwork. Secondly, the mines, mostly placers located along the Río Pacual, were not terribly rich.¹²⁴ Much more important to the long-term regional economy, as will be seen below, were the mines of the Pacific coast, like the Mocoa district a region largely conquered and settled by elites from Pasto, and, to a lesser extent, from Popayán. As gold mines in the northern highlands and eastern lowlands contracted due to Indian demographic decline and concerted rebellion the Spanish sought to open new gold districts along the Pacific coast. In contrast to the mines of the eastern lowlands, in particular, these new mines would be largely 'populated' with African slaves purchased through official trade channels at Cartagena.

Indeed, the last "mining frontier" in the Gobernación of Popayán comprised the entire wet Pacific littoral, a vast region filled with mountainous jungles, determinedly unsubmitive indigenous inhabitants and gold-bearing rivers stretching from Panamá to Esmeraldas, in the northwestern Corregimiento of Quito. This area, much of which remained unsettled by Spaniards well into the nineteenth century, was made up of four loosely-defined provinces: 1) the Chocó, which covered all terrain west of the Western Cordillera north of the San Juan River, 2) Raposo, a small area surrounding the Bay of Buenaventura, including the mining districts of the Dagua and Raposo Rivers, 3) Barbacoas, which encompassed everything west of the Cordillera Occidental and south of the Naya River, officially terminating at the mouth of the Mira, near Tumaco, and, 4) Esmeraldas, which continued south to near Puerto Viejo. Elites from Popayán, Cali and Pasto, and to a lesser extent Ibarra, Quito, and Guayaquil would be key instigators of the conquest and settlement of all four regions, and they would also be the first to reap their mineral wealth.

The region referred to here as the wet Pacific littoral was to become the most productive gold district in Spanish America, at least for a time.¹²⁵ The Spanish soon discovered that the many rivers which flowed down from the high Cordillera Occidental carried gold in substantial quantities. To their chagrin, these streams also carried a large proportion of platinum, a silvery metal so difficult to melt that the Spanish had no use for it (Pt has an atomic weight of 195.08 and melts at 1770°C and Au a weight of 196.97 and melting point of 1065°C). The river placers, due to the curious geology of the district, did not lead prospectors to significant hardrock deposits upstream. Instead, the river gold derived from ancient gravel terraces, of late Pliocene or Pleistocene age, which are present from Darien to Esmeraldas.¹²⁶ The Spanish quickly established mining camps at sites where modern rivers had cut through these terraces, revealing rich bands of clayey, gold bearing gravels. Later, in order to exploit more isolated gravel beds of economic importance, the Spanish would force Indian and African laborers to cut lengthy canals and holding pools, sometimes in hardpan, or even solid bedrock. In short, the geology and geography of the wet littoral made for the most labor-intensive kind of placer mining imaginable.

¹²² ACC Sig. 3972, 1740, f.1.

¹²³ Ibid.

¹²⁴ See Maria Clemencia Ramírez de Jara, "Processes in the Advance and Retreat of the Mining Frontier in Southwestern Colombia during the Colonial Period", in *In Quest of Mineral Wealth: Aboriginal and Colonial Mining and Metallurgy in Spanish America*, eds. A. Craig and R. West (Baton Rouge: Louisiana State University Press, 1994), 253-270.

¹²⁵ The best geographical and cultural descriptions of this bioregion to date are Robert C. West, *The Pacific Lowlands of Colombia* (Baton Rouge: Louisiana State University Press, 1954), and Norman Whitten, *Black Frontiersmen: Afro-Hispanic Culture of Ecuador and Colombia* (Prospect Heights, IL: Waveland Press, 1986 [1974]).

¹²⁶ West, *Colonial Placer Mining*, 14.

The Chocó, which West has described in detail, consists of a depression bounded on the east by the Cordillera Occidental and on the west by the coastal Serranía de Baudó.¹²⁷ Its principal goldfields were located on the western versant of the Western Cordillera and on the upper reaches of its two main rivers, the Atrato and the San Juan. The Spanish had established an early presence in the Chocó, and the region's potential as a major gold district was noticed immediately.¹²⁸ Several early *reales de minas* were established in the 1560s and 1570s by prospectors from Cali and the inland gold district of Anserma, and the region was officially recognized as a 'province' in 1583.¹²⁹ These early gold camps were promising at first, but abusive treatment of Indian *encomienda* laborers led to serious uprisings by the late 1580s. Virtually all Spanish settlements in the region were destroyed or abandoned by 1590, and the important trail connecting Cali and Buenaventura was forcibly closed by Indian attacks in 1594. The Chocó, now technically incorporated into the Gobernación of Popayán, would remain an indigenous-controlled enclave for another hundred years.

In the interim, a series of missions were established among the Noanamaes of the upper San Juan by the Jesuit order. Entering the region from Antioquia, Franciscan missionaries soon followed, establishing a foothold among the Zitarares of the upper Atrato.¹³⁰ The Franciscans were less well received than the Jesuits, and those not 'martyred' were forced to flee the region by 1670. It is not clear whether either order engaged in gold mining, but both the Franciscans and Jesuits could not have helped but notice the presence of precious metals in the region. Perhaps due to the friars' tales, a handful of adventurous Spaniards again began to enter the Chocó in the later seventeenth century, once again looking for gold. Most of these new settlers brought with them African slaves trained in gold mining at places like Caloto, Cartago and Anserma. Nevertheless, miners working along several of the eastern tributaries of the Atrato soon began extracting labor and tribute from nearby Indians, sparking a new series of revolts in the mid-1680s. The late seventeenth-century uprisings were significant in that they included combined forces of African runaways and local Indians. Realizing the worst fears of the outnumbered Spanish these two groups of oppressed peoples acted in concert to drive out the mine owners.

Word of these uprisings reached as far as Quito, and an effort was made to raise an army of volunteers to help reconquer the lost mining camps. The vengeful mine-owners of Popayán, Cali and Antioquia were able to retake much of the lost territory on their own, however, and they meted out punishment, especially to the rebellious Africans, but also to some Indians, with alarming cruelty. Several of the 'reconquest' leaders were even prosecuted some years later in Santafé de Bogotá for having ordered on-the-spot executions of rebel Indian caciques, a clear violation of the laws of reduction. Having executed most of the rebel slaves, and since many of the Indians who partook in the uprising had managed to run away into the deep forest when the Spanish returned, the miners were forced to start from scratch. They did so by introducing more slaves, both from the highlands and from the coast. The Spanish were once again in more or less complete control of the region by 1690, and gold receipts began to climb in direct proportion to the expansion of African gang slavery. From this point on, the Indians would play only a peripheral role in the political economy of the Spanish-dominated Chocó.

At about the same time, the mining industry was revived along the Cali-Buenaventura trail, specifically on the Dagua and Raposo Rivers, but including many upland quebradas in a region referred to loosely as '*la montaña*'. The mines, which had not been worked with any consistency since the 1590s, were reopened at a time of expanded agricultural production along the trunk line. A case dating from 1672 suggests that the upper reaches of the trail were now filled with cattle, while lower flats were planted with plantains and sugar cane, mostly to provide mine slaves with sustenance. There is even mention of small plantings of cacao in the area (*cacaguales*) by this time.¹³¹ By the early eighteenth century several *cuadrillas* of African slaves, ranging in size from five to twenty members, populated the river terraces of the Dagua and Raposo drainages. In 1739 approximately twelve mines were said to be operating on these rivers with an annual registered produce of just over 10,000 castellanos (20,000 silver pesos). As in other

¹²⁷ Ibid, 14-18, and *Pacific Lowlands of Colombia*, throughout.

¹²⁸ The Chocó was originally described as being part of Barbacoas; see the 1545 *relación* of Jorge Robledo (Ponce Leiva, *RHGQ*, 1: 2) "Barbacoas" was a Caribbean term used to describe both wooden cooking grills (barbecues, p.5) and stilt-houses (p.15).

¹²⁹ West, *Colonial Placer Mining*, 16.

¹³⁰ William F. Sharp, *Slavery on the Spanish Frontier: The Colombian Chocó, 1680-1810* (Norman: University of Oklahoma Press, 1976), 26-27.

¹³¹ ANHQ Popayán, caja 5, 1672.

districts, these mines were usually given saints names such as 'San Ciprián', 'San Agustín', and 'San José'.¹³² Some of the Raposo district miners explored rivers as far south as the Micay, but none seem to have seriously exploited these more distant and attack-prone districts. Indeed, the strongest disincentive for southward exploration was that the region was apparently home to refugee Noanamaes from the Chocó. These Indians were not at all interested in further *reducciones*, and in some cases they even turned over runaway slaves to the Spanish miners of Raposo in exchange for promises of non-aggression.¹³³

The Chocó and Raposo districts had been settled and developed largely by elites and capital from Popayán, but these were not the only regions of the wet Pacific littoral which drew their attention. For almost a century, wealthy highlanders from Popayán, Pasto and Quito had been attempting to establish gold mining centers in the so-called Province of the Barbacoas, a section of the littoral stretching from Buenaventura to Tumaco. Again, Indian defensive resolve proved to be the most significant obstacle to these efforts. The Barbacoas “tribes,” really language groups, such as the Nulpes, Boyas, Guapíes, Coaiqueres, Chupas and Sindaguas, refused to submit to Spanish authority, religious or civil.¹³⁴ Entradas were destroyed by Indian attacks from the 1590s to the 1620s, when at last the Spanish established a shaky outpost at Santa Maria del Puerto on the Telembí River (the modern-day town of Barbacoas, Colombia). Rich gold deposits were scattered all around this town, on the Río Maguí, the Guelmambí, the Telpí, and other Patia tributaries. Still, the region was only tentatively held due to a combination of Indian raids, low food supplies and nearly impassable terrain.

With low mangroves below and hilly jungle above, Barbacoas was indeed quite a challenging environment. When Pizarro landed offshore on the Isla Gorgona in 1524, the coastal lowlands appeared just as they do today--frighteningly dark, wooded, and rainy. Any attempt to land here entailed a dangerous canoe trip up a winding river, with jaguars, snakes, darts and arrows waiting for the intruders at every turn, or so they imagined. Pizarro wisely sailed southward to find footing for his horses. The Milanese trader Girolamo Benzoni, on his way to Quito in 1547, also stopped at Gorgona. Looking eastward toward the coast, the ship's pilot informed him that this was “the land of the Devil” both because its sandbars were impossible to navigate and since it never stopped raining. Benzoni refused to believe that the rain never ceased but he conceded that when it did rain, one felt that “the elements are engaged in combat against one another.” He was told that the Indians of this jungle coast were possessed of much gold, and lived in houses constructed in the tops of trees. The Spanish, he claimed, had never managed to conquer these people due to the swampiness of the land and the “impossibility of penetrating it with horses.”¹³⁵

As Benzoni's account suggests, the Spanish were very much intrigued by the Province of Barbacoas; it promised great wealth, though perhaps at a great price. Renewed entradas in the 1620s gained control of all indigenous groups in the region save the recalcitrant Sindaguas. Thirty-two Barbacoas caciques were taken into custody and made to swear allegiance to their Spanish captors. A map of 1635 shows their territory, including many stilt-house settlements scattered along rivers reputed to contain mineable deposits of gold. The motives for the conquest were clear enough; even stands of exploitable timber were marked on the map, along with potential pearl fisheries and tar pits. Excepting the Sindaguas, the native tributary inhabitants were counted at just over nine hundred, all distributed in *encomienda* among the leading half-dozen or so conquistadors. The Sindaguas were said, clearly not without some exaggeration, to have captured and eaten some three hundred Spaniards and their assistants of all colors, including highland Indians. They had also sacked and burned ten Spanish pueblos as recently as 1634. The damage was significant considering that only one Sindagua cacique continued to fight with a small following of warriors. Several of the early Spanish entrada leaders were later killed in skirmishes with the Sindaguas, but their *encomiendas* were dutifully passed on to male offspring, and mining activity was barely affected. Disputes over control of mines and Indian laborers quickly became the order of the day. Motivated by the promise of wealth, as well as status, the Spanish quickly established themselves as the new lords of the coastal jungles. One commentator even suggested that status concerns outweighed

¹³² ACC Sigs. 3145, 3617, 3786.

¹³³ See ANHQ Popayán, caja 32, 17-viii-1706.

¹³⁴ For a detailed anthropological study of the only apparent remnants of these cultures, see Benhur Cerón Solarte, *Los Awa-Kwaiker: un grupo indígena de la selva pluvial del Pacífico Nariñense y el Nor-Occidente Ecuatoriano* (Quito: Abya-Yala, 1986).

¹³⁵ Benzoni, *La Historia del Nuevo Mundo*, 107.

material ones, saying that, “in these parts they want the vanity of these titles more than all the possessions in the world.”¹³⁶

Status concerns notwithstanding, the early Barbacoas elites fought viciously over their newly-acquired material interests. Some such disputes involved religious regulars, supposedly in the area to proselytize the Indians of Barbacoas. In the 1630s two Jesuit missionaries, including the Italian Francisco Rugi, began to preach among the Guapí Indians near Santa Bárbara de la Isla del Gallo, at the mouth of the Patia River. These friars seem to have been somewhat successful, but the temptation of the mines was apparently too much for them. Rugi soon set about collecting tithes from his charges in gold dust taken from the Timbiquí and Naya Rivers, located about midway between the mouth of the Patia and Buenaventura. He was denounced for this activity by lay settlers of the region who envied his Indian workers.¹³⁷ Encomienda Indians, as in the Chocó, were hard to come by in Barbacoas, and were thus exceptionally valuable. Captured Indians would play a significant role in the Spanish development of the region, first as gold miners, and later as carriers, farmers, and fishermen. Still, it was only with the introduction of African slaves in the 1630s and 1640s that profitable mining camps were effectively established. These skilled African miners, again brought mostly from the highland mines of Popayán, would eventually replace the native inhabitants as the principal population group of the province of Barbacoas, a position their descendants hold today.

As the demographic transformation of the province advanced, production expanded. By the 1680s, if not before, Barbacoas's mines were producing upwards of 20,000 gold pesos per year. By this time at least twenty-eight camps were working, with both slave and encomienda Indian labor, and several elite families had become firmly rooted in the province's few small towns. Santa María del Puerto, by far the largest of these and the nominal capital, boasted a *cabildo*, or town council, a smeltry, and a jail. In smaller towns like Santa Bárbara de la Isla del Gallo, *cabildo* meetings were held in elite individuals' houses, which, like those of the Indians, were built on stilts to avoid floods and tidal surges.¹³⁸ Politics were controlled by a handful of powerful military officers, most of them descendants of the first families, who jockeyed for favors from the governors of Popayán and from the Audiencia of Quito. The repeated excesses and abuses committed by these local officials led to constant quarreling and litigation, a process which generated most of the documentary evidence used in this study.

Socially, life in both town and country was very much affected by the Spanish-induced ethnic diversity of the region. Most indigenous peoples and some African slaves lived in scattered dwellings along the Telembí, Guelmambí, Magüí, Timbiquí, Patia and assorted other rivers. Those who fancied themselves Spanish *vecinos* lived in the established townsites, accompanied by African and Native American domestic servants. Only a few elite Spanish women chose to make their homes in Barbacoas, a factor which led some male *encomenderos* to reside with and in at least one case to marry female slaves and other women of color. Officially-sanctioned unions between Spanish or mestizo *encomenderos* and local indigenous women seem to have been rare, but Indian concubinage, or something like it, was apparently common. Elite women in Barbacoas, some of mixed heritage themselves, did become much more important in later generations, as many were left to maintain mining operations as widows by the early eighteenth century. A 1742 mining investigation found almost a fourth of the province's mine operators to be women.

While its production never equalled that of the more famous Chocó, gold mining grew steadily in the Barbacoas district. Since the region was pacified earlier and its location was nearer to Quito, Barbacoas became more significant in the regional economy than would the more distant Chocó. From the beginning, Quito merchants expressed interest in Barbacoas gold and in expanding markets for their cheap woolsens

¹³⁶ Ponce Leiva, *RHGQ*, 2: 203-206 (relación of Lorenzo de Villaquirán, 1635). Material concerns were not forgotten, of course, as evidenced by requests for agricultural land in the mild highlands in exchange for military service in the hot lowlands. See, for example, the petition of Juan de Velasco, who as early as the 1610s asked Popayán's governor for land to grow “wheat, barley, and other vegetables,” apparently in the Sabana de Túquerres, in exchange for his and his sons' service in Barbacoas (“estaban sirviendo en la jornada de Barbacoas, en la conquista y pacificación,” AMQ Miscelánea #97, Tierras de Pasto, 21-iii-1616, f.510).

¹³⁷ ANHQ Popayán, caja 14, 1695 (“No.36”). This long case concerns the issue of Indian personal service for Barbacoas *doctrineros* in the late seventeenth century, but includes copies of valuable material regarding Rugi in the 1630s.

¹³⁸ ANHQ Popayán, caja 8, 4-vii-1684.

(for bedding and packcloth, apparently, given the heat), cottons, grains and other goods. A series of *tambos*, or travelers' inns, was established between Ipiales and Barbacoas, linking the highland capital and its gold-producing satellite via the Camino Real. Since many of the first settlers had stronger familial links with Pasto and Popayán, the region would always end up in the middle of an administrative tug-of-war. This occurred because Barbacoas fell within the jurisdiction of the Gobernación of Popayán, which was technically a province of Quito, but increasingly pulled by forces located in Santafé de Bogotá, seat of the Viceroyalty of New Granada after 1739. Royal mining taxes from Popayán were supposedly overseen by the Tribunal de Cuentas in the new northern capital, but miners in Barbacoas preferred to deal with Quito whenever possible, as their gold fetched a higher price (in silver) there. Jurisdictional matters were further complicated by the fact that Barbacoas fell within the Bishopric of Pasto, and hence the Archbishopric of Quito. Doctrineros, or priests for the Barbacoas Indians, for example, were paid out of Quito's *caja real*. Because of this long-standing colonial tangle, disputes over tax collection, Indian protection, political appointees and various other matters in the Barbacoas district would continue into the Republican period.¹³⁹

Immediately south of the Province of Barbacoas lay the Province of Esmeraldas. This region, which was quite similar geographically and geologically to the Pacific littoral of Popayán, fell within Quito's direct jurisdiction, although, like Barbacoas, it was never fully brought under Spanish imperial control. As the name suggests, Esmeraldas was initially deemed a source area for emeralds, but as with the highland town of Azogues, the belief was never substantiated. The name had been given to the principal river of the region by the ever-optimistic Pizarro when he and his followers passed by its mouth in 1524. The indigenous name for this river has remained a mystery, although Wolf claimed that an Indian cacique knew it as the Río Chinto in the 1870s.¹⁴⁰ Apparently in Pizarro's time the native inhabitants of the area which came to be known, however erroneously, as the Province of Esmeraldas adorned themselves with beaten gold ornaments, some encrusted with genuine emeralds. While the gold was almost certainly mined nearby, the true source of the emeralds has been a subject of some debate among Ecuadorian scholars-- Wolf himself went to great lengths to disprove the local origin theory--but most historians and geologists now agree that they must have been traded southward from the central highlands of Colombia, specifically the renowned mines of Muzo.¹⁴¹ Whatever the accepted truth today, Spanish elites in the colonial period continually entertained thoughts about emerald mines in the hills of Esmeraldas; some even tortured Indian caciques around Puerto Viejo in hopes of a confession as to their location. Although actual mining was rare, searching for huacas, or burial caches, was a common activity in the southern fringe areas of Esmeraldas in the late sixteenth and early seventeenth centuries.¹⁴²

Entradas into the more forested region stretching from the upper Quinindé River to the Río Mataje on the coast were consistently stymied by rough terrain, indigenous defensive resolve, and, after about 1560, by runaway slaves and their descendants. Apparently, according to both early chroniclers, such as Cabello Balboa, and local oral traditions, a group of West African slaves bound for Lima from Panamá had survived a shipwreck south of Atacames some time in the 1550s. These Africans, led by a Cape Verdean *ladino*, or Spanish-speaking slave named Alonso de Yllescas, quickly established a kind of colony in the Bahía San Mateo area, marrying into local indigenous families and aiding their new allies in attacks against rival groups. The Yllescas clan, or 'neo-tribe' was apparently only one of two or three maroon communities living in the area, as another, led by Francisco Arobe, was said to have established itself in the hills east of Cabo San Francisco at about the same time. These non-submissive Afro-Indian maroons, joined at times by 'runaway' Spaniards, whom the crown referred to as apostates for shirking their European culture and

¹³⁹ For a discussion of Barbacoas in the late colonial and early republican eras, see Jean-Pierre Minaudier, "Une région minière de la colonie à l'indépendance: Barbacoas 1750-1830 (économie, société, vie politique locale)," *Bull. Inst. Fr. Et. And.* XVII, no.2 (1988): 81-104.

¹⁴⁰ Wolf, *Viajes Científicos*, 3: 79.

¹⁴¹ See, for example, Luis Andrade Reimers, *Las esmeraldas de Esmeraldas durante el Siglo XVI* (Quito: Casa de Cultura, 1978). Andrade Reimers does not quite discount the possibility of local origin, but notes the greater likelihood of Colombian imports.

¹⁴² See Ponce Leiva, *RHGQ*, 1: 40 (1604 relación of Guayaquil). One coastal legend involved a cacique who was said to have held court from a golden throne (pp.31-32). Other emerald-related notes include an anonymous relación of 1569 (*Ibid.*, 68) in which Indians were said to have claimed that emerald mines in the area were protected by spirits. In the early 1590s a Francisco Arias de Herrera was said to have gone to establish a settlement at Bahía San Mateo 'as much for the aid of lost Spaniards (shipwreck victims) as for the wealth (*grosedad*) of gold and stones' (*Ibid.*, 530-1).

Christianity, created problems for the Quito administration well into the eighteenth century. Their resistance was particularly resented by highland elites interested in searching for gold and emeralds in the remote interior.¹⁴³

Repeated *entradas* from Puerto Viejo, Quito and Ibarra in the sixteenth century failed to penetrate the region and dominate its inhabitants. These inhabitants included not only the maroons, but also the indigenous Cayapas, Malabas and other groups, who likewise defended their territory effectively, harrying Spanish intruders with lances, arrows and poisoned darts. When the English corsairs Drake and Hawkins appeared in Pacific waters in the last decades of the century, the *audiencia* decided to attempt peace negotiations with the multi-ethnic Esmeraldeños. A senior *oidor* in Quito, Dr. Juan del Barrio Sepúlveda, carefully planned a new strategy, one which met with no small amount of resistance from more conservative, conquest-oriented highland elites. Barrio Sepúlveda's compromise entailed inviting the *caciques* of Esmeraldas, including Alonso de Yllescas, along with headmen from the Cayapas, Malabas, and even Barbacoas groups. These leaders would be feasted, clothed and given gifts in Quito in exchange for promising not to ally with foreign interlopers. Wisely suspicious of such gestures, Yllescas sent a message with neighboring representatives, Don Francisco Arobe and his two sons. In the end, all parties were satisfied, and in exchange for knives, hatchets and sewing needles, the coastal 'tribes' were granted the autonomy they already effectively possessed. The Spanish promised an end to the *entradas*, and the Esmeraldeños pledged safe passage for all Spanish shipwreck victims along the coast and agreed to allow a few Mercedarian *doctrineros* to live among them. The earliest oil painting to reach Spain from South America was of the majestic 'zambo' ambassadors of Esmeraldas, Arobe and his sons clad in silks and damasks, adorned with gold pendants and armed with native lances.¹⁴⁴

The peace negotiations of 1597-1600 were a hollow victory, however, as the Spanish revived the *entradas* in the early seventeenth century. The new President of the *audiencia*, Dr Antonio de Morga, sought to conquer Esmeraldas and Barbacoas, with an eye on both trade routes and natural resources. Barbacoas, as we have seen, was brought under crown control by the end of Morga's tenure (1636), but Esmeraldas would remain semi-autonomous into the late eighteenth century. Little by little, the combined effects of Spanish pressure from the north, south and east, along with the influence of the Mercedarian missionaries, made independence ever more difficult. Still, amazingly, the Afro-Indians, the Cayapas and Malabas all managed to maintain holdouts in certain rugged areas. These two latter groups, along with other, less-well-known Indian bands, migrated internally to avoid Spanish raiding parties. For their part, the Afro-Indians of the coast simply held their ground. Sebastián Yllescas, the son of Alonso Yllescas and perhaps the shrewdest of the coastal *caciques*, set the tone for his followers and descendants when, on his deathbed in 1607, he declined to confess his sins.¹⁴⁵

Throughout the seventeenth century, Spanish officials attempted to subjugate the Esmeraldeños, but to little avail. A renewed pirate threat in the 1680s and 1690s opened up new room for negotiation. The Cayapas and Afro-Indians of Bahia San Mateo, in particular, pledged to protect the coast and act as sentinals in exchange for renewed autonomy. The Malabas, whose attacks had already made travel along the trail linking Ibarra and the north coast impossible, refused to negotiate.¹⁴⁶ The *audiencia*, again facing stiff opposition from local elites, chose to side with the native Esmeraldeños. Only in the early eighteenth century, when pirate raids faded to contraband trading, do we find mention of mines being worked along the jungle rivers of the green province. In 1711 a mine was registered along the Río Bogotá, just upstream from present-day San Lorenzo--there had been a Spanish settlement in this area before, but the Malabas

¹⁴³ See Linda Newson, *Life and Death in Early Colonial Ecuador*, pp.262-67, for a brief discussion of demographic trends in sixteenth-century Esmeraldas. Newson suggests that the province's Indian and mixed population had dropped some 71% since conquest, to ca. 20,000 (p.267). Newson admits the difficulty of such estimates for this poorly documented region, noting also that the introduction of Africans in the 1550s may have strengthened the immunity of some indigenous groups.

¹⁴⁴ For a discussion of the painting, executed by an indigenous artist named Andrés Sánchez Galque, see Adam Szászdi, "El Trasfondo de un cuadro: 'Los Mulatos de Esmeraldas' de Andrés Sánchez Galque," *Cuadernos Prehispánicos* (Valladolid, Spain) 12 (1986-87): 93-142.

¹⁴⁵ ANHQ Fondo Especial, caja 1, vol 1, #15, testimony of Fr. Fernando Hincapie, the Mercedarian sent to live among the Yllescas and Arobe clans. Hincapie claimed that Yllescas had been very ill, but still "rebellious and obstinate."

¹⁴⁶ See J.L. Phelan, *The Kingdom of Quito in the Seventeenth Century*, 3-22, for a general discussion of the *audiencia*'s failure to conquer this region.

extinguished it in 1619.¹⁴⁷ Now, over a century later, taxes were paid in Quito on the first gold mined there.¹⁴⁸ To the second wave of Spanish settlers' dismay, there were no emeralds in Esmeraldas, but the region, like Barbacoas, was fairly blessed with placer gold--and likewise cursed by useless platinum. Due to inconstant water supplies, disease and other problems, the earliest miners did not fare well. Some camps suffered renewed raids from the Cayapas and Malabas, while others saw mass desertion by their newly-introduced African labor forces.

In the mid-eighteenth century, in response to concerns raised by the scientific and political-economic investigators, Jorge Juan and Antonio Ulloa, among others, the definitive conquest and settlement of Esmeraldas was again proposed in earnest. The titular governor of the province, Pedro Vicente Maldonado, undertook to build a road (really a mule track) from Quito to the mouth of the Esmeraldas River in the late 1730s. The twin objectives of the project were to open the secluded highlands to trade and to establish imperial hegemony in the jungle.¹⁴⁹ The new trail, as it turned out, was never finished, but a newly-expanded older one, provisionally linking Ibarra and the San Lorenzo estuary, further north, allowed for easier access to highland trade goods than in the past. These improvements in infrastructure, however half-hearted, proved a great aid in the development of placer gold mining in the region. Other factors were also at play, however. The late eighteenth century was a boom period for miners all along the wet Pacific littoral, spurred further along by the crown's reduction of the severance tax from an effective rate of 6 & 1/2% to a very modern 3% (still effective in Ecuador today) in 1778. As a result of this and other incentives, many mine-owners had expanded the size of their slave gangs to such an extent that they were searching for new territory to exploit. Some of these mining entrepreneurs, mostly from Barbacoas and the Chocó, began to stake new claims among the interior river benches of Esmeraldas.

In 1792 a dispute arose between two parties with claims along the upper Río Bogotá, just below Altotambo (a waystation on the *camino real* to Ibarra). Here a female mine owner, or *señora y dueña de minas*, employed a small cuadrilla of twelve slaves, men and women of varying ages, in a placer operation called Nuestra Señora de la Consolación. Following a pattern repeatedly seen throughout the Pacific littoral, and in the mines of the upper Amazon as well, the owner's son acted as the administrator and chief overseer of the mine. The son had used his mother's capital to purchase the slaves, already experienced miners, in the Chocó. Locating and bringing a new mine into production, even with such help, proved a difficult business. An initial attempt to work terraces on the Quimbí (Uimbí?) River had been thwarted by water shortages. This misstep may be attributed to the fact that Esmeraldas, though wet, receives a good deal less rain on average than the Chocó. The new site, located between the mouths of the Tululbí and Cachabí Rivers, had entailed much hard labor in clearing forest and other 'dead works', and several slaves had fallen ill and died from fevers and other unnamed illnesses. In spite of these difficulties a small amount of gold was produced and the claim was registered in the nearby port-town of Tumaco. The rival claimant, it was said, had tried to take advantage of the new mine by offering his own slaves as a labor supplement, in a kind of partnership arrangement. The dueña rejected the offer, complaining that the slaves would be useless to her, as they were "of the *sábana*, made to work (*hechos para*) in trapiches."¹⁵⁰ It was understood that only experienced mine slaves were wanted in such operations, so true in fact that those not trained in this work were seen as liabilities rather than assets. The rival claimant failed to dislodge the dueña from her mine in spite of his insistence that her labor force was illegally small (only five of her twelve slaves actually worked in the mine) and that her title had been illegally obtained outside Esmeraldas proper.

Mine operators from Barbacoas and the Chocó continued to trickle, if not flow into the region, bringing with them many skilled cuadrillas to work the rich and relatively untouched gravels of Esmeraldas. In the case above, passing mention was made of a mine administrator and slaveholder from Cali, who was busily exploiting terraces along the lower Bogotá by the early 1790s. In the 1810s a dueña de minas from Barbacoas, Magdalena Cortés, sought special title, as *descubridora*, or first finder, of a mine on the upper Río Blanco, a major tributary of the Esmeraldas River. Here, somewhere in the vicinity of the

¹⁴⁷ Newson, *Life and Death in Early Colonial Ecuador*, 264.

¹⁴⁸ ANHQ Real Hacienda, caja 45, 1711 *tanteo*. The mine was said to be located outside the pueblo of Lachas, and was registered by General Simón de Ontañón (quintos, now reduced to 5%, were paid in Quito on 111 castellanos, or gold pesos).

¹⁴⁹ Primary documents related to the Maldonado project may be found in Jorge Garcés G., *Plan del Camino de Quito al Río Esmeraldas* (Quito: Archivo Municipal, 1942).

¹⁵⁰ ANHQ Minas, caja 4, 25-vi-1792, f.14v.

Toachi drainage, she had established her cuadrilla of slaves, who were described as “intelligent in this labor.”¹⁵¹ Several immigrant mine owners continued to operate in the region well after independence had been achieved, though not without difficulty. The coastal gold provinces played a crucial role in the independence struggles, and many slaves were promised freedom in exchange for their participation in military actions on both the republican and royalist sides. When the political situation cooled, slave owners were less enthusiastic about manumission, sparking small-scale rebellions in some Esmeraldas mining districts. In 1826 a cuadrilla uprising was blamed for the collapse of an enterprise at Playa de Oro, a mine that had been running for at least sixteen years.¹⁵²

At about the same time, an Anglo-Irish secretary to a Quito official, William B. Stevenson, toured the interior of Esmeraldas and described its peoples and their customs. The visitor found the Afro-Esmeraldeños of the coast quite affable, but claimed they lacked industry. What few gold mines he visited in the interior he found to be small and struggling, but it is unclear upon what sort of scale he was weighing them. Stevenson's most interesting remarks were reserved for the Malabas Indians, whom he found to be very friendly and gracious in spite of many warnings to the contrary. Apparently their early reputation as uncompromising warriors had survived the many deep political changes of the last two-and-a-half centuries. Certainly no Spanish residents of the region, and few blacks or Cayapas engaged in any type of commerce with them. They seemed instead to live well and prosper on their own, according to Stevenson; their immediate physical environment offered them all they needed to survive. While the 'governor's' remarks were likely tainted with romanticism, we may imagine that the Malabas he described in some ways resembled the indigenous Barbacons whose future had disappeared forever almost a century earlier because of the gold beneath their feet.¹⁵³

The inevitable Theodor Wolf, who visited and mapped the Province of Esmeraldas in the 1870s, found many descendants of earlier mine slaves still eking out a living as *playadores*, or beach panners. This activity, less intensive but no less dangerous than cutting canals and pits, was largely done, he claimed, by women and children. Interestingly, according to Wolf, only the poorest, most marginalized Africans in the region still engaged in mining as a principal source of income; everyone else eschewed the activity entirely. In his extensive reconnaissance of the interior, Wolf found the most promising streams to lie within the district inhabited by the Cayapas Indians. These rivers, such as the Sapayo, Sapayito and Mafa, contained quite a lot of gold, but also a high proportion of platinum (up to 25%, he believed). Since the market for this metal was still very limited, the Afro-Ecuadorian miners discarded the platinum whenever possible, calling it *oro prieto*, or “dark gold” (*ouro preto* had a different meaning in Brazil). The Cayapas had no interest in mining gold or platinum, and they treated Wolf with such suspicion that he was forced to carry out his assays in secret. By this time no doubt they had had enough of feverish European prospectors and had seen the consequences of similar scientific missions. Typical of his times, Wolf recommended the introduction of California-style, high-pressure hydraulicking machinery at the first possible convenience.¹⁵⁴

¹⁵¹ ANHQ Minas, caja 5, 9-ix-1818, f.1, and 10-ii-1818. The site was either on the Canique River or the Quebrada Las Piedras.

¹⁵² ANHQ Minas, caja 5, 29-xi-1826.

¹⁵³ Stevenson was actually named Governor of Esmeraldas, but he did little in the way of administrative duties. See his *Historical and Descriptive Narrative of Twenty Years' Residence in South America*, 3 vols. (London: Longman, Rees, et al, 1829).

¹⁵⁴ Wolf, *Viajes Científicos* 3: 71-81.

Chapter Two Mining and Refining Techniques

This chapter treats the methods and technologies employed by the Spanish in precious metals extraction in the colonial Audiencia of Quito. Mining and refining technologies, as will be seen, varied a great deal depending on such factors as geology, water and timber supplies, access to credit, and control of labor. In general, miners in this large and varied region preferred traditional methods to innovative ones, and with the exception of a handful of entrepreneurs they avoided any cost that did not yield an immediate benefit. This static approach to mining was at least partly responsible for the stagnation and decline of gold production experienced in the seventeenth and early eighteenth centuries, though some efforts were made later, during the middle Bourbon period, to reform mining laws and to introduce new techniques. From a technical point of view, the gold mining industry in colonial Quito is of particular interest in that virtually all methods of mining and refining found in other parts of colonial Spanish America made an appearance at one site or another. Some indigenous techniques survived as well, and a brief review of relevant pre-Columbian mining and metallurgical practices in the northern Andes and Pacific lowlands should serve as an appropriate starting point.

Pre-Columbian Mining and Metallurgy

As is well known, metallurgy in the Andes was the most advanced in the Americas at the time of European contact. The Incas, in particular, had perfected bronze and other utilitarian alloys along with silver-gold-copper alloys for ritual and decorative purposes. The Incas were not the inventors of these processes, but rather inheritors and diffusers. In fact, Andean metallurgy dates back over 3,000 years, with primary centers of development being the north coast of Peru, the greater Bolivian Altiplano, and the Cauca-Magdalena River basins of northern Colombia. With some exceptions, gold-copper metallurgy was most advanced in Colombia and northern Peru, while arsenical copper and bronze work were pioneered in the Altiplano.¹⁵⁵ Other pre-Columbian culture centers, such as the north coast of Ecuador, to be discussed below, developed highly complex and distinctly local metallurgical techniques, only a few of which may have traveled elsewhere.¹⁵⁶

One of the most enigmatic societies of early Ecuador, known today as the La Tolita-Tumaco culture, flourished near present-day San Lorenzo, in the Province of Esmeraldas. This culture, which inhabited the wet Pacific coast from the Esmeraldas River to at least the Patia Delta of southwestern Colombia, appears to have been most expansive between 200 BCE and 350 CE. These dates have been established by association of artifacts with other dateable cultures, for the most part, as little organic material remains for isotope analysis. The people of La Tolita left behind a very interesting artistic legacy, much of it in the form of molded clay vessels and statuettes, but also in the form of worked metals. The metal artifacts were primarily intended for decorative or ritual uses, but a few were also utilitarian. Most were made from gold, alloys of gold, and platinum. The raw material for these pieces, some of which show advanced workmanship, seems to have originated in the several placer deposits located nearby, especially on the Santiago and Cayapas Rivers. It is likely that some gold and platinum was also collected in the vicinity of present-day Barbacoas, Colombia, though no chemical analyses have yet been undertaken to prove whether or not this was a primary source area.

Other aspects of La Tolita-Tumaco metallurgy have been studied, however, and several researchers have established that this culture's techniques were among the most complex practiced in the Americas. The Danish chemist Paul Bergsøe, in a pair of treatises published in the 1930s, described how early coastal peoples were able to achieve many difficult metallurgical feats involving alloys of gold, silver, copper, and even platinum. Most stunning of all, they were able to create very complex alloys using a limited array of primitive tools. Bergsøe analyzed a variety of small artifacts and fragments recovered from what was apparently a pre-Columbian jeweler's workshop, and found that the early artisans had managed

¹⁵⁵ Izumi Shimada, "Pre-Hispanic Metallurgy and Mining in the Andes: Recent Advances and Future Tasks," in eds. Alan Craig and Robert West, *In Quest of Mineral Wealth* (Baton Rouge: Louisiana State University Press, 1994), 37-73.

¹⁵⁶ Warren R. DeBoer, *Traces behind the Esmeraldas Shore: Prehistory of the Santiago-Cayapas Region, Ecuador* (Tuscaloosa: University of Alabama Press, 1996). For an overall summary of pre-Columbian cultures in Ecuador, see Betty J. Meggers, *Ecuador* (London: Thames and Hudson, 1966).

to create everything from fishhooks to nose ornaments using only a blowpipe and a bed of coals. Aside from their accomplishments in drawing gold into wires, alloying it to varying degrees with silver and copper for more functional hardness and durability, and the perfection of delicate soldering and filigree techniques, Bergsøe also found that the La Tolita goldsmiths had made great strides in their use of platinum.

The indigenous goldsmiths' ability to work with platinum was of special interest, since this metal was one of the last to be used by Europeans. As will be seen below, the Spanish government issued many directives against miners in the wet Pacific littoral in the later colonial period, accusing them of seeding their gold ingots with this heavy and refractory metal. The paradox for Bergsøe, then, was to figure out how the pre-Columbian inhabitants of La Tolita had managed to fashion beautiful pieces of jewelry from a substance that could not even be smelted in the best European furnaces prior to the late eighteenth century. Since Bergsøe doubted from the start that the indigenous goldsmiths could have achieved the 1,700° C necessary to found platinum with their charcoal pits and blowpipes, he began examining the fragments and blobs of platinum-like material in his collection. What he discovered was that the La Tolita smiths had figured out a way to bind very fine-grained placer platinum fragments together using a very small amount of gold. When heated, the fragments were welded together so solidly that the worker could then hammer the resulting ingot into any desired shape. To make the article appear pure platinum the metalsmith would then hammer or burnish its surface until it shone like silver. In solving the platinum riddle, Bergsøe demonstrated the genius of early Native American metallurgy in northwest Ecuador, this in a period some 1,500 years before the arrival of Columbus.¹⁵⁷

Whereas early metallurgy has received much attention from archaeologists and other scholars, pre-Columbian mining in the Andes is still poorly understood. This situation has improved recently, however, with a series of multi-disciplinary studies of copper mining and refining complexes in northern Peru and coastal Chile. The Peruvian case is of interest here due to its proximity to Quito. Shimada has shown how late pre-conquest miners used hafted stone tools to excavate high-grade copper ores near Lambayeque. In spite of the difficulties of using stone tools, these workers managed to clear pits, trenches, and even dig shafts of a few meters depth. Ores were then ground in crude hand mills called *batanes* (the name is probably a post-conquest borrowing from the Spanish *batán*, or fulling mill) and smelted in buried clay furnaces. As among the La-Tolita-Tumaco metalsmiths, high temperatures were achieved by using blowpipes outfitted with heat-resistant ceramic tips. The resulting copper-bearing slag was further separated and beaten into ingots, and some pieces were traded over long distances, especially to the north. The presence of *Spondylus* shells in the Lambayeque sites suggests a potential seaborne trade with Ecuador's Manabí coast (just south of Esmeraldas), a region known for its abundance of copper ingot caches (these flat ingots were called *naipes*, or "playing cards," by the Spanish). Unlike this apparently currency-like material, functional copper hatchets were almost certainly traded to the Cañar, in the vicinity of modern-day Cuenca, and even the Jíbaro, or Shuar, of the eastern jungle lowlands.¹⁵⁸

This information provides only hints concerning the extent of pre-Columbian vein mining in what would later become the Audiencia of Quito. It could be asserted, perhaps, that the pre-colonial mining practices of northern Peru made their way to southern Quito. Southern highland sites such as Zaruma and Zamora would have been likely candidates for such diffusion even though hard evidence is lacking. Murra (1946) has suggested that the silver mines of Cañar (possibly Malal) were worked before conquest.¹⁵⁹ The possibility of Quito's gold mines having pre-Columbian origins finds further support in that mines located in other regions of the Inca empire were intentionally concealed from Spanish intruders, sometimes for a generation or more. In Vilcabamba, near Cusco, for instance, a series of silver mines were kept secret by

¹⁵⁷ Paul Bergsøe, "The Metallurgy and Technology of Gold and Platinum among the Pre-Columbian Indians," (*Ingeniorvidenskabelige Skrifter* No. A44, Copenhagen: Danmarks Naturvidenskabelige Samfund, 1937), and "The Gilding Process and the Metallurgy of Copper and Lead among the Pre-Columbian Indians," (*Ingeniorvidenskabelige Skrifter* No. A46, Copenhagen: Danmarks Naturvidenskabelige Samfund, 1938). La Tolita clay figurines now located in the Banco Central museum in Quito suggest that both women and men engaged in goldwork (see the various "mujeres orfebres").

¹⁵⁸ Shimada, "Pre-Hispanic Metallurgy and Mining," 49-55. For a discussion of traded copper items in pre-colonial Ecuador, see Salomon, *Native Lords of Quito*, 93. Copper hatchets among the indigenous inhabitants of Zamora are mentioned by Governor Juan de Salinas, in Ponce Leiva, *RHGQ* 1: 110.

¹⁵⁹ John V. Murra, "The Historic Tribes of Ecuador," in ed. Julian Steward, *Handbook of South American Indians* (Washington: Smithsonian, 1946) 2:799.

the family of the rebel neo-Inca Tupac Amaru until the 1570s. In other sources, as Ramírez has shown, mines were considered sacred places by native Andeans, and were even referred to as *huacas*. Choice pieces of ore were collected and venerated, called “mothers of the mine.”¹⁶⁰ In short, the circumstantial evidence points to a relatively advanced understanding of both precious and base metals mining in the northern Andes prior to the Spanish invasion. That Native Americans were loathe to reveal their knowledge of mining and metallurgy to the gold- and silver-hungry Spanish, however, seems readily understandable.

While mining in pre-conquest times (beyond simple stream panning) remains somewhat of a mystery, metallurgical knowledge, as mentioned above, was clearly well-developed throughout the region. In northern Colombia, gold and gold-copper alloys were worked in a number of ways, including lost-wax casting, embossing, and extremely fine soldering, or “filigree.” Indian metallurgists experimented with a variety of plating and burnishing methods, in some cases fashioning alloyed plates of multiple colors. Some of these plates and discs, especially those associated with Nariño Culture burials around Pasto, consisted of patterned copper, silver, and gold. Some were so cleverly designed that when spun on a stick or other axle they created optical illusions. The Sinú of the northern Cauca valley excelled at filigree work, creating ritual items and nose ornaments of remarkable, lace-like fineness. A cache of high-quality gold and *tumbaga* (gold-copper alloy) artifacts from Pirincay, near Cuenca, Ecuador, described by Murra, suggests strong links between Colombian and Peruvian metal work by way of the Ecuadorian highlands. The copper used in their manufacture was probably imported from the south, but the gold may well have been local, perhaps from the Gualaceo-Santa Bárbara region. In addition, indigenous traders in the northern highlands apparently carried on some sort of truck in gold and silver beads (*chaquira*), probably from the vicinity of Pasto, right up to the conquest. While these and other culture areas from the Atlantic coast to Peru showed great metallurgical skill, few exceeded the advances of the earlier La Tolita-Tumaco culture as described by Bergsøe.

The only firsthand description we have of highland Andean goldsmithing in the vicinity of Quito comes from Girolamo Benzoni, a Milanese merchant who visited the region in the late 1540s. The methods of smelting described by Benzoni resemble those found in early Colombia, and also those presumably used by the very early master smiths of coastal Ecuador. His brief description, which was accompanied by an illustration (see fig.), reads as follows:

When they smelt gold and silver they arrange the ore in a long or round crucible, made from a piece of rag daubed with wet earth and [filled with] crushed charcoal; once the crucible is dry it is placed in the fire with whatever quantity of metal fits in it, and [then] five goldsmiths [seated] on the floor with some black stones fashioned for this type of work, helping one another, make, or, better said, *used to make in the time of their prosperity*, whatever they had been ordered to make, this being hollow statues, cups, llamas, jewelry, and, in sum, all sort of animal figures seen [here]...¹⁶¹

Wherever this seemingly crude but no doubt effective method of smelting originated, it was clearly not uncommon in the Quito highlands at the time of Spanish conquest. Exactly how advanced these particular jewelers' methods were, however, is not well-known since the majority of gold and silver artifacts they produced were destroyed by the Spanish for their raw value as bullion. We may imagine that some of these pieces approached the beauty and complexity of the famous Quimbaya pieces of northern Popayán.

The business of digging up buried Indian religious artifacts, especially gold and silver ones, was treated under Spanish law very much like mining. The crown did not care if the ancestors of the vanquished were despoiled of their ritual instruments for use in the afterlife, nor was a thought given to preserving and studying these items even as contributions to art and history. Instead, indigenous artifacts

¹⁶⁰ Susan Ramírez, “Ethnohistorical Dimensions of Mining and Metallurgy in Sixteenth-Century Northern Peru,” in eds. Craig and West, *In Quest of Mineral Wealth*, 95.

¹⁶¹ Girolamo Benzoni, *Historia del Nuevo Mundo* (Guayaquil: Banco Central, 1985), 119 (“cuando funden el oro y la plata colocan el metal en un crisol largo o redondo, hecho de un pedazo de trapo embadurnado con tierra mojada y carbon machacado; una vez que el crisol esta seco lo ponen al fuego con cantidad de metal que pueda caber en el, y con cinco orfebres en el suelo, con unas piedras negras confeccionadas para esta clase de labor, ayudandose uno al otro, hacen o por mejor decir hacian en la epoca de su prosperidad, lo que se les habia mandado confeccionar, esto es, estatuas vacias, vasos, ovejas, joyas y, en fin, toda suerte de figuras de los animales que se podian ver”).

were almost always written off as “idols” and reduced to taxable bullion. As will be shown in the following chapter, pre-Columbian *huacas*, or burial caches, would make up a substantial portion of the gold “mined” in early colonial Quito.¹⁶² These huacas, which were discovered from time to time until the early nineteenth century, often included items of gold-copper alloy (*guanín* or tumbaga), and occasionally silver. Because of the alloys, the caches yielded far less pure gold than their finders desired, but they were completely destroyed just the same in the process of smelting, or *fundición*. The sacred huaca treasures, which continue to be looted today, were occasionally brought to the royal treasury by caciques forced to pay their followers’ tributes in gold or silver. In the sixteenth-century *libros de fundición* of Quito, for example, they are sometimes listed simply as “Indian jewelry”; in other cases, one suspects that gold brought in by Spaniards was of huaca origin since it tested as low as eight or nine karat (c. 33-38% fine), a sure sign of intentional alloying. Since gold originating in huacas was taxed at least at the full quinto, or twenty percent, and that mined in certain remote districts was taxed as low as a *veintavo*, or five percent, to stimulate production, Spanish finders of Indian burial caches had a built-in incentive to melt down priceless treasures and claim them as mined gold. The loss of such irreplaceable items in Quito, though far less than that which occurred in New Granada to the north and Peru to the south, was immeasurable.

A sample case dates from the 1720s, when a huaca was discovered by indigenous laborers working on a hacienda near Cayambe, just 60 km northeast of Quito. The laborers attempted to conceal their findings, but word soon reached their priest, or *doctrinero*, possibly during confession. The news led to a frenzied search of native houses by the priest, his henchmen, and other Spanish authorities in Cayambe. They spared no methods in their interrogation of the suspected finders, in one instance threatening to hang and disembowel a woman's children in order to make her reveal the location of part of the treasure. In the end, the workers who had originally located and excavated the pieces were completely despoiled of their findings, and were corporally punished besides. The priest and certain town officials then cut up or melted down most of the irreplaceable items, which included golden crowns, figurines, and containers, some weighing several pounds, and sold the resulting bullion, which was generally of low karat, to gold dealers in Quito.

Having heard rumors of a huaca discovery in Cayambe, officials of the Real Hacienda (Royal Treasury) in Quito began an investigation into the matter. The indigenous finders testified through interpreters regarding the exact number, size, and shape of the pieces, and it was discovered that one town official had even commissioned a local tinsmith to make a copper fake of one of the items, a large gold vessel. His intent had been to claim that the piece he took from the Indians was not actually gold, and hence was not valuable to the crown. In the end, the thieves were reprimanded and fined for failure to pay their quintos, the Andeans whose lives had been made more miserable than usual by their bad luck in finding the huaca were left uncompensated and unavenged, and what remained of the intact pieces was melted down in Quito to determine its taxable value as raw bullion.¹⁶³ This was not an isolated case; it simply demonstrates the kind of violence and ignorance which surrounded such finds in the colonial Audiencia of Quito, even some two centuries after conquest.

While other minor finds continued until the end of the colonial period, one lost treasure continued to excite the imaginations of the Spanish in Quito. This was the famous Llanganatis hoard, a stash of gold and silver of legendary proportions, supposedly a hidden contribution to Atahualpa's infamous ransom. As stated by several of the early chroniclers, the Inca lords of Quito had assembled a vast quantity of precious items to be sent to Cajamarca, where Atahualpa was being held captive by Francisco Pizarro and his brigands. While the ransom was being sent southward, however, the Inca general Rumiñahui received word that the captured ruler had been double-crossed and murdered by the Spanish. Before setting out to avenge the death of Atahualpa, Rumiñahui supposedly ordered the Quito treasure hoard secreted in a remote mountain lake, thought to be in the hills east of Ambato. The hiding of the treasure was said to have been so secretive that even the carriers of the pieces were murdered and thrown into the lake so that they could not be forced to disclose its location. After the conquest, indigenous persons in Quito were

¹⁶² Susan Ramírez, in *The World Upside-Down: Cross-cultural Contact and Conflict in Sixteenth-century Peru* (Stanford: Stanford University Press, 1996), describes the importance of huaquería around Trujillo in the early colonial period in great detail.

¹⁶³ ANHQ Minas, caja 2, 9-viii-1724. The decision to melt the objects was not legal by this time, as Spain had changed laws to demand that pre-Columbian treasures be sent to the crown as found. Here the fiscal decided to favor Quito's heavily indebted real caja by recommending the meltdown, even though it went against the law.

repeatedly pestered and tortured for information regarding this supposed treasure by the first encomenderos, though apparently to no avail. Indeed no one has yet discovered even a fragment of the so-called “Rumiñahui ransom” of the Llanganatis wilderness, though not for lack of effort.¹⁶⁴

Placer Mining

The Spanish found other ways of exploiting the mineral treasures of the Americas, and as with the location of huacas the role played by Native Americans in locating and working natural gold deposits was crucial. As Robert West has shown, placer mining in the northern Andes was widely practiced by native peoples before the invasion of the Spanish. In fact, in his comparisons of known European placer techniques of the sixteenth century and those described by colonial authorities, it appears that native American placering methods prevailed throughout colonial times, with the introduction of only a few European innovations. The native inhabitants of New Granada and Quito were familiar with simple panning and cleaning of stream gravels, but this was not the end of their considerable mining knowledge; they also employed several ingenious damming and excavating techniques which were very efficient and far exceeded Spanish understanding at the time of conquest. Several of these rather complex placering methods were widely employed in the Antioquia and Quindío regions in order to supply the ritual centers of Sinú and Bogotá, and the Spanish, seeing their effectiveness, sought to control and expand rather than alter indigenous methods, for the most part. West also notes that those techniques not native to what is now Colombia may have been imported by the Spanish from the Caribbean islands, where their exploitation of the peaceful Taínos in the gold mines of Hispaniola and Cuba was already infamous. One such instrument of possible Taíno origin was the *batea*, or wooden gold pan, though such a simple item may well have been in use on the mainland prior to Spanish occupation (this instrument was used all over Europe, as well, as shown in various illustrations in *Agricola*, see fig.).¹⁶⁵

Most of the indigenous placer mining techniques which West describes for the whole of Colombia applied to one part or another of the Audiencia of Quito. Still, it should be noted that the simplest of these, stream placering, was most commonly used in the region south of Popayán. Only in rich placer districts with peculiarly hard-to-reach gravel benches, such as Barbacoas and the Caloto district of northern Popayán, did such techniques as booming and pit placering (to be described below) develop. These innovative but labor-intensive operations could involve years of labor in the construction of canals (*acequias*) and dams (*pilas*). Most of the placers located within the Audiencia of Quito proper, such as those of the Sucumbios, Napo, and Gualaceo (Santa Bárbara) regions, were mined using only the simplest technology available. In general, few miners in these regions had access to the labor (usually African slaves in Popayán) and capital (for timber, livestock, food, and tools) needed to sustain a complex placer mining operation long enough to realize a profit. The indigenous inhabitants of highland Quito, though they had experience in mining, were not apparently as technologically advanced as their northern neighbors. They had no such traditions, as far as we know, of building bamboo (*guadúa*) aqueducts and earthen reservoirs in order to exploit hard-to-reach deposits. In keeping with the tradition of simplicity, later Spanish miners in Quito only occasionally introduced such methods to marginal placer districts.

Stream placering, though potentially quite dangerous, could be easily practiced throughout the audiencia. This technique consisted of locating a low-current section of river known to contain gold, gathering a pile of sand into a pan, and washing away the detritus. While this may sound temptingly simple, the operation requires a great deal of experience and dexterity before it can be done effectively. Even still, a highly-skilled single person working the pan, or *batea*, along even a relatively rich stream could only produce a small amount of gold per day. At the equator, a worker had only twelve hours of sunlight, less a midday meal break, and could only be expected to wash a few cubic meters of gravel in that time. A good day's work would rarely produce more than one gram, or about two *tomines* (1/4 peso) of gold dust, and was thus an inefficient use of labor power. This time-consuming method, though widely

¹⁶⁴ Many fruitless Llanganatis treasure hunting expeditions have taken place in the last century or so; see, for example, Luciano Andrade Marin. *Llanganati: expedición Italo-ecuatoriana Boschetti-Andrade Marin, 1933-1934* (Quito: Editorial Santo Domingo, 1970 [1st ed. 1937]).

¹⁶⁵ Georgius Agricola, *De Re Metallica*, trans. Herbert Hoover (New York: Dover, 1950), 157. Although he acknowledges the existence of this item in Europe, West maintains that the native Americans were more experienced miners than the early conquistadors and their followers, and hence the practice of *washing gold with the batea as a skilled procedure* was adopted from the local inhabitants.

practiced in colonial Quito, was really only appropriate for mining a recently discovered district or for prospecting. Otherwise, in order to be done profitably, stream panning had to be used in conjunction with some other labor-saving, hydraulic technique.

Indian miners in colonial Colombia, as West has shown, developed a wide array of methods to improve the efficiency of stream placering. The basic problem was devising a method to skim off large amounts of waste gravel and thus concentrate more labor on removing gold from the heavier, finer sands. One simple but dangerous method of extracting fines was to excavate sands which had accumulated around large boulders when stream levels were low. These fines were collected for later washing by workers who gathered them underwater in a large batea and then transported them to the shore. Some of this difficult collection work was even conducted by skilled divers, often women, who tied stones to the small of their backs to weight them. While underwater, they would carefully fill a pan with gold-bearing sands, constantly in danger of upsetting the balance of the boulder, and then swim to the surface after jettisoning the weight-stone. A more dangerous form of work, especially considering colonial-era medical knowledge, could not be imagined.

Divers were also employed in more complex placer works, such as those which exploited deep stream fines by the use of large wing dams. These dams were constructed from logs, sticks, mud, and palm fronds, and retarded the current enough for divers to excavate the sands which collected on the downstream side of the wall. As West has noted, a load of gravel in a batea could be sufficient to negate a diver's buoyancy, so miners often constructed chicken ladders (notched logs) along the sides of the dams for the divers to climb up. Many of these gold divers, male and female, were killed by drowning, dam failures, and lung ailments. These methods were largely restricted to the mining zones worked by African slaves, such as Barbacoas (west of Pasto), but diving was not unknown in other parts of Quito.

On the coast, in fact, Native Americans and Africans were routinely forced to dive for pearls from Guayaquil to at least Manta. Pearl divers were said to be active off the coast of Quito by the late sixteenth century, if not before, but the quality of the pearls was generally poor.¹⁶⁶ Early seventeenth-century maps of the Barbacoas coast, prior to its development as a key gold district, show known pearl fisheries as well. Other divers, mostly slaves owned by Guayaquil merchants, but also free blacks and Afro-Indians from Esmeraldas, were often employed in shipwreck salvage operations, an activity that resembled mining both legally and technically. Using large balsa rafts for platforms, black divers, mostly males in this case, would locate wrecks and recover their valuable cargoes for Spanish contractors.

One such operation, which may serve as an example, involved the salvage of the wreck of the *Jesús, María, y José*, a merchant ship downed by storm off Bahía de Caráquez on its way from Panamá to Lima. The diving operation which ensued raised considerable scandal in Puerto Viejo in 1645; apparently a Limeño named Juan de Bedía had duped several of the town's slave owners into contracting divers (*buzos*) and raft pilots (*balseros*). After completing the operation, which had recovered a considerable quantity of tools and iron pigs, Bedía had apparently stolen away to Lima without compensating the subcontractors. They sued in Quito to recover the rents (*jornales*) of their slaves and the costs of materials used to construct the rafts, but no resolution seems to have been reached. As for the divers, like their counterparts in the deepwater placers of Popayán, they were constantly exposed to a variety of dangers, including powerful currents, unstable structures, and even carnivorous fish. For this reason, slave owners demanded high rents and more binding compensation contracts when slaves were employed in such tasks. Only occasionally were indigenous persons forced to do such work, as they were at least nominally protected from it by law.¹⁶⁷

¹⁶⁶ Mention of pearl divers off Manta is found in Ponce Leiva, *RHGQ* 1: 531. The Quito oidor Arias Pacheco claimed that the pearls of this coast had a disconcerting tendency to fade from white to yellow, and noted that pearl divers had on occasion been attacked by sharks ("se han cebado allí los tiburones y creo les era de algun daño"), adding yet another hazard to an already dangerous task. Pearl diving off the coast near Guayaquil continued into at least the seventeenth century. Local and French buccaneer sources mention the capture of a pearling brigantine in 1689 near Isla Puná, for example. See ANHQ Popayán, caja 4, 1689 ("Autos sobre el enemigo pirata"), and *Journal de bord d'un flibustier* (Bayonne: E. Ducéré, 1894), 54. The owner of the brig employed eight African slaves as pearl divers in this instance.

¹⁶⁷ ANHQ Fondo Especial, caja 2, v.5, 150-51. See also Peter Bradley, "The Loss of the Flagship of the Armada del Mar del Sur (1654) and Related Aspects of Viceregal Administration," *The Americas* 45: 3 (Jan. 1989): 383-403. A few unfortunate divers on this valuable wreck in the Gulf of Guayaquil were said to have been lost to sea snakes.

Pearl and salvage diving seem to have been common activities in colonial Ecuador, but deep water gold mining was less frequent. Among few examples, in 1655 a New Granadan miner arrived in Quito and applied for a patent, or license to experiment with his new invention, a kind of deep water placer mining apparatus. Although no drawing or detailed description of the device was included with the petition (probably for fear of having it copied and stolen), the applicant, Pedro Santiso de la Pedrisa, claimed that with a force of only ten operators his machine would do the work of one hundred divers. The device was intended to excavate deep water gravels in the Quijós region and near Gualaceo (Cuenca), but was also said to be suitable for placering in lakes. Santiso claimed that a few Indians could easily operate his *artificios* without having to enter the water, suggesting that the machine was some sort of modified dredge boat. No mention is found of any other such device in colonial documents, and it may have been a rare Spanish placering innovation. In any case, though Santiso received permission to use his machine freely in the lakes and rivers of Quito, the record does not say whether or not his apparatus worked, or if it was even built.¹⁶⁸

Simpler colonial methods of improving the efficiency of stream placering included the use of *sombras*, or baffles. This process entailed pounding stakes or posts across a river and then constructing a kind of impermeable fence with palm mats. The stream's current could then be concentrated at the base, where deep scouring of lighter gravels would yield a line of concentrated sands. These enriched sands could then be scooped up and washed with bateas. West suggests that the sombra may have been an Antioquian invention, as, probably, was the dredge machine described above. Unlike the dredge, however, no mention is made of the sombra in colonial Quito. Likewise the *tapa*, or three-sided dike, described by West. This device, which called for a fair amount of timbering in deep water, could well have been used in certain mines around Barbacoas. The tapa was an expensive, though ingenious means of reaching river bottoms to excavate gravels; the rushing stream was essentially walled off and the interior bailed with bateas down to the riverbed. As West also notes, this method, which he found still in use in parts of the Chocó in the 1950s, was extremely dangerous, especially during high water periods, as workers could be instantly crushed by timbers weakened and pushed by a strong current.

Other complex and capital-intensive methods of placer mining were clearly practiced in several Quito districts by the mid-seventeenth century. These included pit placering and ground sluicing. Pit placering entailed the excavation of river terraces and bars in order to reach rich sand layers buried by the shifting of stream channels. These pits were dug using heavy iron bars (*barras*) and wood-handled, iron-tipped spades (*barretones*). The overburden was removed by chopping at headwalls with these tools and by filling bateas with waste and passing them upward, worker to worker, in the manner of a fire brigade. This method was also used to remove enriched sands for washing elsewhere, as well as for draining the pits, a constant necessity in rainy regions like Barbacoas and the Oriente. Although they are not mentioned in the Barbacoas records, West describes a variety of crude hand- and water-powered pumps devised by the ever innovative Antioquian miners to eliminate the labor-intensive batea line. These pumps varied in design from giant syringes to bizarre Archimedes' screws powered by mules. Mechanical pumps or no, once a paystreak was reached, pits were enlarged or elongated by hand and repeatedly drained and excavated until the deposit was exhausted.

A hand-drawn illustration of a pit placer mine from late seventeenth-century Barbacoas offers some perspective on how extensive such works could be (see fig.). This mine complex, consisting of a group of canals and odd-shaped pits and holding tanks, was apparently located along the banks of the Telembí River, near Santa María del Puerto. Water appears to have been diverted from the river to a canal beginning well above the mines, near a cluster of stilt-houses, probably the dwellings of indigenous workers or African slaves. The main canal was then subdivided and diverted downstream to at least three riverside cuts, presumably for use in booming or flushing *canelones*, or narrow earthen sluice channels. A hut located in the forest midway down the main *acequia*, or canal, may have been attended by a slave or other worker charged with keeping the channel clear of debris. The dependence of such rain forest mines on outside food sources is hinted at by the absence of maize plantings or plantain groves.¹⁶⁹

Placer complexes of this kind clearly entailed much more capital investment than a simple stream panning operation, and as in hardrock districts, mine owners in areas like Barbacoas had to invest large

¹⁶⁸ ANHQ Minas, caja 1, 13-v-1655. Santiso, who was apparently a native of Acapulco, Mexico, showed a previous *provisión* from the Audiencia of Santa Fe, suggesting he had already used his invention in some unnamed New Granadan gold mines.

¹⁶⁹ Illustration from AGI Mapas y Planos, Panamá No.246.

sums in a wide variety of specialized tools. In 1656 a mine owner and encomendero of Santa María del Puerto left an estate rich in mine tools to his illegitimate son, also a miner and encomendero. Listed alongside a small number of slaves, some skilled in mining, are the following: eighteen *barras*, four *barretones*, twenty-seven shovels (*palas*), twenty *almocafres* (see description below), ten hoes (*asadones*), fifteen hatchets, five sickles (*calabozos*), one adze, one set of chain-gang shackles (*collera con sus collares*), a pan (*sartén*), and a syringe (*geringa*). It is not clear from the document whether or not this last item, the syringe, was a draining apparatus or something smaller, but its appearance in the inventory, along with the shovels, is noteworthy. Shovels, in particular, which one would expect to have been quite common, are almost never found on merchants' lists or in inventories. Perhaps they were most often fashioned locally by blacksmiths. This dying miner, a relatively wealthy descendant of the first Spanish conquerors of Barbacoas, was very well outfitted with the mobile capital needed to work in the district. Aside from the above materials, he also owned blacksmithing equipment and a large amount of raw iron and steel, presumably imported from Spain via the coastal shipping trade with Panamá.¹⁷⁰

The pit placers, which could be quite deep, placed workers in constant danger of cave-ins, a problem which was only occasionally solved by timbering. Timbering was avoided whenever possible, not because of an absence of trees, but because preparing logs took time and energy away from mining production. It should be noted, then, that the simple absence of tunnels in placer mining did not render this activity any safer for laborers. Aside from the rigors of punishment meted out by overseers, workers were constantly faced with the possibility of drowning in swift streams, being buried by unstable masses of wet mud and rock, or being crushed by collapsing logs and boulders. And no one was spared these dangers. Indeed, if current practices are any indicator for the colonial past, pit placering has always been an activity involving whole families. Even today, the mines around Barbacoas often consist of pit placers near the water level in which men work the barra, and occasionally hydraulic hoses (like a more powerful version of colonial booms), juniors of both sexes manage the sluices, women sort fines and wash them with the batea, and children perform miscellaneous fill-in tasks. Danger is constant and seniors must pay careful attention to the whereabouts of children.

In spite of the dangers, the sight of such family work groups in action is (and must have also been in colonial times) amazing to behold. One quickly realizes that beneath the apparent chaos of activities and cacophony of sounds there lies an implicit rhythm of production. These marginal miners, young and old, male and female, are constantly engaged in the perfection of a human- rather than machine-based work process. In spite of the advent of modern machinery, especially the large diesel-powered backhoe and high-powered hydraulic hoses, hand excavation has survived. My feeling is that it has done so only because of the twin historic conditions of grinding poverty and hundreds of years of accumulated experience. The small-scale miners of Barbacoas and the Chocó continue to produce gold and platinum using archaic technologies only because of their ingenuity in maximizing on collective, skilled labor power. Skills such as the ability to determine a deposit's value after a quick reconnaissance, to arrange workers in a time-saving chain, and to wash many cubic meters of gravel in a batea without losing a speck of metal all had to have been developed over a very long period of time. Whether these skills date to the period of slavery or even before is not clear, but they are definitely not a recent development. Just the same, placer mining is very demanding work, and miners are not so fond of their time-honored skills that they reject all forms of labor-saving technology. Unlike colonial miners, they pool capital to buy machinery whenever possible, and with the arrival of every gasoline-powered sump pump, another colonial survival like the batea line--not much missed by the miners of the Pacific coast--disappears.

An even more common placering method, again practiced mostly in the Pacific lowlands, was ground sluicing. This process, like pit placering a likely native American invention, entailed the excavation of a sluice channel (*canelón*) along the base of a gold-bearing gravel terrace. As described by West, the channel would be cleared to the level of false bedrock (hardpan, or *peña*), just above which were located the richest gravels. As with pit placering, workers then removed overburden and rich sands with the barra and barretón. The richer gravels were then washed in the channel by diverted water streams, removing the ever-present lateritic clays and other soil remnants. Detritus, particularly large river stones, was removed by hand or by using a pair of crescent-shaped wooden scoops, called *cachos*. These curiously simple tools, again an apparently indigenous invention, resemble sections of melon rind (*cacho* in fact means "slice"),

¹⁷⁰ ANHQ Popayán, caja 33, 1656, 8v. The inclusion of the *sartén* among this equipment suggests that it may have been used for something other than food preparation. It is possible that the miners used frying pans to boil off mercury from amalgam, as is done in some areas today.

and are still in use throughout the Pacific lowlands. Workers of both sexes rounded up and removed unwanted pebbles, working the cachos either singly or together as pincers.

As with almost all placer processes described here, ground sluicing was followed by a final panning in the batea. One other process was involved before this, however, and it entailed the collection of fines from the base of the canelón. This was accomplished using the *almocafre*, a hoe-like tool of apparently Old World origin (the name derives from the Arabic, *almihfar*). The *almocafre* consisted of a hooked, pointed steel blade and a straight wooden handle of about 40-50 cm, and was used to scrape up and separate enriched sands from surrounding waste and then to scoop the sands into bateas. *Almocafres*, as seen above, were listed alongside barras and slaves in many miners' inventories, and their proper manufacture was a constant concern of blacksmiths. Indeed in colonial times, the *almocafre*, the barra, and the batea were as essential to placer mining as the hammer, pick, and candle were to vein mining.

As inventories of colonial miners indicate, the bulk of placer mining capital lay in the instruments of production, namely slaves and tools. In Popayán in 1614, for example, the convent of the nuns of the Encarnación was audited after a series of scandals involving fiscal and sexual misconduct.¹⁷¹ One product of this investigation was an inventory of the convent's mining assets, which included a gang, or *cuadrilla* of slaves, a variety of tools, beasts of burden, and mining and associated agricultural properties. This document offers a rare glimpse into the finances of an early placer mining operation. The *mayordomo*, or overseer of the slave gang listed each of the forty-nine members, identifying family units and the *capitán*, or head miner among them. Of these forty-nine slaves, about a third of whom retained African ethnic or place names as surnames (e.g., Congo, Angola, Bañón, see chapter 5), thirty-three were active in mining, the rest being either underage or engaged in support tasks ("*lo demas es chusma y servicio*"). Interestingly, the *mayordomo* referred to the miners themselves as "bateas," reducing them to their basic economic function as gold washers.¹⁷² These thirty-three "bateas," he claimed, produced an average of 1,300-1,400 pesos of gold dust per year, or about thirty-nine to forty-two pesos each. At approximately 4.2 g per peso, the miners yielded, in modern terms, from 164-176 g per year each, or about 5.5-5.9 kg total. Even if the gold was of high karat this level of production would have to be considered quite low; it would have barely covered the costs of maintaining so many slaves.¹⁷³

However small it may appear in modern terms, the *cuadrilla*'s production at the convent's mines, called San Onofre and San Lorenzo, was not substandard for the region and period. It was, however, only marginally profitable. The *mayordomo* stated that the gold recovered by the living and breathing human beings he called "bateas" was subject to a finance charge (*refacción*) of 1.5 tomines (0.8 g) per peso (about 240-260 pesos total per annum). Furthermore, the Popayán mining gang, according to the *mayordomo*, required about 400 pesos "of the said gold" for its sustenance, not including tools "and other necessary things." Subtracting this and the mine administrator's annual salary of fifty pesos it is surprising that the

¹⁷¹ For a brief description of this scandal see Peter Marzahl, *Town in the Empire*, 143-46.

¹⁷² ANHQ Religiosos, caja 1, 16-x-1613, f.5 ("de los cuales sirven de sacar oro en las dichas minas treynta y tres bateas"). This phenomenon of referring to workers as tools is also noted in the colonial sugar industry of northeastern Brazil. Stuart B. Schwartz mentions the use of the term *fouce* (scythe) to refer to a male-female cane cutting and binding pair; see his essay "Plantations and Peripheries," in ed. Leslie Bethell, *Colonial Brazil* (Cambridge: Cambridge University Press, 1986), 77.

¹⁷³ Marzahl, *Town in the Empire*, 24, gives production figures for the crown-administered vein gold mines of Chisquío, just west of Popayán, between 1618 and 1631. The Chisquío mines, which were worked by about twenty-one *encomienda* Indians, produced c. 20 pesos of gold per week, or 1,040 pesos per year, again a relatively small sum. In terms of individual productivity, the fifty or so pesos per year produced by each indigenous miner at Chisquío was roughly comparable to the approximately forty pesos produced by a slave of the Encarnación *cuadrilla*. Variations in the weather or in the quality of the mines could easily account for the difference, but both were exceptional due to the corporate nature of their ownership. The Chisquío mines were owned by the crown and supplied with crown-controlled *encomienda* labor; the only overhead costs were tools and a food and clothing ration for the indigenous workers, and a stipend to the mine administrator. The convent's mines were similarly subsidized in that much of the African labor force had probably been donated by elites from Popayán--again the only cash outlay was for a mine administrator, food, and supplies. For private individuals, mining on this scale required huge investments and consequently huge risks, and was thus prohibitively expensive for all but the wealthiest elites. Without access to Native American labor, one would have had to purchase a *cuadrilla* of mine slaves worth between 10,000 and 25,000 pesos simply to produce a gross income of 1,000 gold pesos per year.

mines yielded profits at all. Other moveable capital, unfortunately not priced, included four mules used to plow fields and haul maize to the miners, 140 head of cattle at a nearby pasture to provide them meat and milk, and twenty horses, male and female, presumably used to round up these cattle. Tools included the thirty-three actual, wooden bateas, or gold pans, fifteen iron bars, and thirty-three almocafres. The mining properties themselves included key fixed capital assets, most importantly “their waters and established buildings.” Even with all the necessary deductions, which also included a nine-peso consulting fee (*mineraje*) paid to an experienced miner, perhaps the mayordomo himself, the output of the mines exceeded the convent’s *censo*, or long-term loan income in 1613.¹⁷⁴ The convent, with its pooled and donated capital, not to mention inheritance exemptions, was clearly advantaged in relation to non-corporate mine owners. Still, the example demonstrates the immense cash outlay needed in colonial times to run a productive placer mine. The value of the slaves alone probably exceeded 15,000 pesos (at a very conservative estimate of 300 pesos per slave). The iron tools, though much less valuable in absolute terms (c. two pesos per barra and one peso per almocafre), were just as crucial to the operation's success.

Aside from the forced introduction of African miners, some of whom may have been skilled in these tasks in their homeland, steel and the art of blacksmithing were probably Spain’s most significant technical contributions to American mining. The forging of durable metal tools--all mines of any size employed a blacksmith or two--enabled capitalized mine owners to engage in some very difficult, large-scale placer projects. As mentioned above, many of the auriferous gravel terraces of Barbacoas and Popayán lay well out of reach of present stream and river courses. Since these gravels were not consolidated into gold-bearing ores, *per se* (i.e., the solid rock characteristic of vein mines), they could not be economically transported to rivers for washing. Water had to be brought to the deposits themselves. This was accomplished primarily by means of diversion canals (*acequias*) and reservoirs (*pilas*). Constructing pilas often required a substantial investment in gang labor and steel implements, but acequias were almost always the most expensive of placer mining investments, and could require years of heavy work before being put into production. Some of these canals, which had to be constantly patched and cleared once built, extended for over twenty kilometers. Hundreds of slaves were employed in these huge work projects, only a few of which ended up paying off, and all of them had to be outfitted with picks, bars, shovels, and other necessary tools. Indeed, without iron tools these projects would have been unthinkable. In rare instances, acequias were even cut through solid bedrock, a process which must have consumed an enormous amount of African toil and Spanish steel.¹⁷⁵

More often, however, acequias were earthen affairs. One such canal operation was proposed in 1665 by Pedro de Arboleda Salazar, a member of Popayán's close-knit elite families, nearly all of whom counted placer gold mines among their assets. Arboleda's project entailed a reopening of abandoned mines in a place called San Antonio el Viejo, in the Caloto district, some 50 km north of the city. According to local residents’ testimonies, these mines, called Santa Catalina, Las Sabaletas, and La Chipa, had not been worked for at least fifty years. The reason for their abandonment was a chronic lack of water; long acequias would be needed to wash the high terrace gravels which abounded in the district once again. According to some of the witnesses, described as “old, reliable” people (*fidedignos*), Arboleda was not the first entrepreneur to attempt a reopening of the mines. In fact, a series of companies, or joint capital ventures, had been formed over the years in order to gather up enough slaves to clear and rebuild the old canals. One such failed enterprise had even involved the renting of the cuadrilla belonging to the troubled Encarnación convent, mentioned above.¹⁷⁶ Several witnesses claimed that in light of the risks involved with this project, they themselves had pulled out. Tempting offers of many shares (*partidos*) in the resulting product were not sufficient to convince them of the mines’ potential. Local encomenderos had even been entreated to rent their Indians (illegally), but these requests had been refused, not on moral or legal grounds but because of the physical dangers inherent in the work. As will be seen below, it was not uncommon for slave owners to sue for compensation if a rented worker died on the job.¹⁷⁷ It was unlikely,

¹⁷⁴ ANHQ Religiosos, caja 1, 16-x-1613, ff.5-6. The *censo* income was listed as 819 pesos of 20 k gold per year.

¹⁷⁵ An acequia cut in bedrock, probably dating to colonial times, was recently stumbled upon by miners upriver from present-day Barbacoas, Colombia (personal communication with G. Estrada Ortíz, Barbacoas miner, July 1995).

¹⁷⁶ ANHQ Popayán, caja 4, 1665, f.10v.

¹⁷⁷ *Ibid.*, ff.11, 12.

however, that the audiencia would choose to back an encomendero who had willingly and illegally placed his Native American charges in similar danger.

And the task at hand was definitely dangerous--and huge; Arboleda was proposing to build a canal stretching for some six leagues (about 28 km!) through very rough country. Once open, the acequia would require at least five slaves just to keep it flowing. Lacking sufficient manpower, Arboleda claimed that he would rent fifty slaves from neighboring cuadrilla owners, paying out over 3,000 patacones (silver pesos of eight reales) in jornales. Local officials in Popayán approved his project, granting rights to the mines, and, more significantly, the waters he sought to divert. The mines had cost only 700 patacones, 100 in cash and the rest pledged as a lifetime annuity of thirty-five pesos per year (5% of the 700 peso total). The cost of labor, though not precisely accounted for, would exceed this amount by a wide margin. Arboleda claimed he paid two gold pesos (worth four silver patacones) per slave per week in jornales, and employed some forty-two *esclavos útiles*, or adult male laborers.¹⁷⁸

The exact amount of time needed for the canal's reconstruction and expansion is not given, but it was said to have taken more than two months. At ten weeks, jornales alone would have amounted to 1,680 patacones. In addition to this, Arboleda was forced to pay some 600 patacones compensation to a slave owner for the death of a worker in a fire. Apparently the slaves had been burning brush to clear a section of ditch when the fire trapped a man and killed him.¹⁷⁹ Labor costs would have thus exceeded 2,200 patacones, at least. No account is given for tools, livestock, maintenance of slaves, and other costs, but these must have been substantial. No doubt due to the heavy compulsion of the rented workforce, the immense project was completed by early October 1665. With a local official and scribe looking on, Arboleda's mine administrator took formal possession of the property on the twentieth of that month, "ordering the blacks to dig earth from the mines and to let water run from the acequia."¹⁸⁰ Thus the fortune of another European entrepreneur, a man no doubt characterized by his peers as a bold visionary, was built on the sweat and blood of Africans. For the Arboleda family, the fortune-building did not end here. Using similarly brutal, risky, and labor-intensive methods of expansion, they went on to become some of the largest placer mine operators of the Chocó and Barbacoas.

Though generally less ambitious in terms of fixed capital investments, mine owners in seventeenth-century Barbacoas used similar irrigation works in booming terraces and flushing troughs. As in northern Popayán, canal construction was vitally necessary in this region since many of the richest terrace gravels lay some distance from or above the water level of major rivers, and some miners who failed to register gold output in a given year would claim to have been engaged in such improvements (*obras muertas*). Periodically their slaves, or a group of slaves rented from other miners, would build acequias and holding tanks for years at a time before a mine could be brought into production. Poor planning and inefficiency were not unknown, and were commented on by royal visitors, as in the case of Maestre de Campo Juan Ortíz de Argueta, whose mine on the Guelmambí River, called La Herradura (the Horseshoe), was under improvement in 1684. The visiting Real Hacienda official vouched for Ortíz's claim of temporary closure by stating that he was certain that no gold had been produced since the mine's owner was "a man so poor at managing that no work gets done."¹⁸¹ Foresight and management were key ingredients to success in an industry which required labor-based, long-term, and expensive improvements such as canals, dams, and worker housing. It may have given some respite to the slaves, however, not to have in every master an enterprising Arboleda.

Placer mining of all varieties ended with the cleanup, or separation of gold dust from black sand, called *jagua*. This process, which required great steadiness and concentration so as not to lose the results of so many hours of hard labor, was effected by several methods. Large pieces of gold, or nuggets (*puntas*), were usually removed by hand from the batea as soon as they were visible and placed in a gourd. Smaller particles, however, were more problematic. Sometimes the fines could be dried and the iron oxide flakes blown away by breath. When this was not possible indigenous miners in New Granada employed an ingenious "chemical" method. This method entailed the mixing of several plant saps and using them to wash the *jagua* in a batea; somehow the lighter, unwanted materials would bond to the sap froth while the gold dust would stay behind. In addition to this method, West suggests that the magnet was in use for the

¹⁷⁸ Ibid., ff.7-8v. No mention is made of the slaves' families.

¹⁷⁹ Ibid., f.13v, "se quemó perdido en los inmensos pajonales que ay en las dichas minas."

¹⁸⁰ Ibid., f.14v.

¹⁸¹ ACC 1099 (1685), f.18. "un hombre que se gobierna mal en azer que se trabaje."

purpose of iron separation by the mid-eighteenth century.¹⁸² It may well have been common much earlier, as a magnet (*imán*) is listed among the tools left behind by a late seventeenth-century Popayán mine administrator who happened to have been executed for murdering a creditor.¹⁸³ Surprisingly, mercury seems to have been a rare means of separating gold from jagua in placer mines before the eighteenth century, though it was very common in hardrock zones. West's suggestion that the high cost of mercury led miners to prefer other methods to amalgamation seems reasonable.¹⁸⁴

Platinum, as noted in the case of the La Tolita-Tumaco culture of ancient Esmeraldas, occurred alongside gold in many placer districts of the Pacific littoral. With a specific gravity almost identical to that of gold and a similar corrosion resistance, platinum was often found among the jagua. The trouble with platinum was that the Spanish had no use for it--there was no demand for it in Europe (or anywhere else, for that matter), and it was impossible to melt even in a Castilian bellows furnace. Furthermore, it normally occurred in such tiny flakes that it was virtually impossible to separate completely from gold. The miners tried hiding the platinum in their gold ingots, but this practice was soon discovered by highland goldsmiths, and treasury officials in Santafé de Bogotá warned miners in the Pacific districts that this type of fraud would not be tolerated. The officials were backed by medieval Spanish laws regarding the adulteration of precious metals which called for extremely harsh penalties, including mutilation and death. Intent to deceive was difficult to prove, however, and slaves or employees could always be blamed for adulterated ingots; miners were rarely prosecuted for "platinum seeding" as a result. Eventually, worried ministers who had been casting about for a solution to the platinum problem for years were informed that mercury, a crown monopoly supplied mostly by Spain's mines at Almadén, would draw gold away from the worthless *platina*. Several *cédulas* were thus issued in the mid-1720s requiring miners to clean up their produce with state-subsidized mercury.¹⁸⁵ How often these directives were obeyed is not clear, but little mercury seems to have been purchased through official channels.

Placer gold dust traveled all over the Audiencia of Quito and the Gobernación of Popayán in spite of a flood of laws to prevent such trade. As will be discussed in more detail in the following chapter, the crown wanted its share, and gold dust was a tax collector's nightmare. Unlike bulky silver ores, which could be monitored with relative ease, gold dust was the most compact, universally accepted instrument of exchange available on the Spanish frontier. It was an uncontrollable, if primitive form of cash. A variety of means of controlling the trade in placer gold were attempted, including the establishment of smelting houses, or *casas de fundición*, near mining camps. As will be treated in the following chapter, these royal smelttries employed a licensed assayer, usually a goldsmith, who melted the dust, determined its fineness, extracted the crown's tax and his own commission (1-2.5%), and finally stamped the resulting ingots with the royal seal. This system seems to have worked for a while, even in isolated camps, but it rarely lasted long. Miners, and the merchants they dealt with, often avoided the *casas de fundición* and hid their take by several means, sometimes transforming it into jewelry or religious paraphernalia prior to taxation.

In Barbacoas, a region notorious for quinto fraud, the crown experimented with several new control methods in the late seventeenth and early eighteenth centuries. One of these was to require miners to keep accurate production records, or *libros de sacas*. These books would be inspected periodically by circulating officials and miners not up to date and backed by witnesses would be subject to substantial fines. In theory this method was sound, but in practice it failed miserably. When the time came to make their required visits to the hot and unhealthy coast, crown officials stalled and even ignored their duties. Some who did visit accepted bribes and claimed that all was well. Others, more honest, were felled by "accidents"--at least two were murdered in Barbacoas in the 1690s alone. When the miners were at last cornered and held to account by the crown in the 1710s and 1740s, they were found, perhaps unsurprisingly, to have kept no *libros de sacas*.¹⁸⁶

¹⁸² West, *Colonial Placer Mining*, 62.

¹⁸³ ANHQ Popayán, caja 4, 1681, f.111v.

¹⁸⁴ Various account summaries from late eighteenth- and early nineteenth-century Quito (ANHQ Real Hacienda) mention mercury being sold to miners in Barbacoas. Mercury was a crown monopoly, and was thus not always readily available from itinerant traders.

¹⁸⁵ ACC Sig. 3153, 24-v-1726, mercury sent to Popayán province "para purificar los oros de la platina."

¹⁸⁶ See ACC Sig. 1292. In 1664 the miners' *libros de sacas* were inspected at the remote Barbacoas mines of San Francisco de Borja de Timbiquí. As they had only been ordered to keep them since 1658, many mine operators could show a record, however empty or improperly formatted. In 1685 (ACC Sig. 1099) a Barbacoas *fundición* ledger revealed that some miners still kept books, but most did not. No mention of

What the miners claimed in their defense is worth noting, however, as their excuses reveal one further aspect of the mining process. Apparently the law required them to periodically wash fines, or *molinos*, in the presence of a magistrate. This was obviously a marginal control, but the miners apparently complied with it, at least to some extent. If nothing else, the practice of supervised cleanups suggests that miners stored jagua, sometimes for several months, at the mines themselves. Since the cleanup had to be enacted on site by law, taxes were at least occasionally paid. Tax collection was still tricky in spite of this change, however; the crown now bore the burden of determining how much the local magistrates, who were miners themselves, had failed to report. These problems, and how they affect modern reconstructions of production figures, will be treated in more detail in the next chapter, but suffice to say here that the crown tried every method possible to stick its long fingers in the golden pies of Quito's backcountry. By the early eighteenth century, if not before, gold finally did make the transition from currency to commodity, but this change, as will be seen later on, had more to do with the mechanics of commercial expansion than with increased bureaucratic efficiency.

How gold dust (*oro en polvo*) was transported is not well known, though occasional mention of gourds is found.¹⁸⁷ Leather pouches, or bladders (*bejiguitas*) were probably also used, as suggested by a late seventeenth-century robbery which took place in Pasto.¹⁸⁸ Nowadays in Barbacoas and in the Ecuadorian Oriente people carry gold in tiny folded papers, often cigarette foils tied with thread. This "paper" method was clearly used in colonial times as well, as mention is made of emeralds being wrapped in papers (as are most gemstones even today) and carried to prospective buyers (e.g., "*un papel de esmeraldas*").¹⁸⁹ In 1692 a miner in Punino, on the upper Napo River, was said to have carried nuggets from the mine to town wrapped in paper.¹⁹⁰ Indigenous traders of Mainas, in the Jesuit Marañón country, were said to have carried gold dust in quills, but no matter how it was carried, gold dust got around. It was used to pay debts, purchase offices, trade with pirates, bribe prying officials. In colonial times, as today, mine gold was also used to purchase the services of prostitutes, to wager in card games and on cockfights, and to finance "lost weekends." In a mercantilist age, after all, no other instrument of exchange was really as good as gold.

Vein Mining

Although fewer in number than their placer counterparts, vein deposits were exploited profitably in several parts of the Audiencia of Quito. Most important of these districts was Zaruma, in the southern highlands of present-day Ecuador, but others included Nambija, near Zamora, and Chisquí and Almaguer in southern Popayán. These hardrock, underground gold mines, and the less extensive silver mines at Malal, near Cuenca, and La Plata, in Popayán, required a set of technologies distinct from those employed in placer mining. These technologies differed in nearly all phases of production, from ore removal to beneficiation. Here Spanish, or rather, medieval European mining techniques seem to have prevailed, although underground mining of vein deposits was not unknown to native peoples of the North Andean region. As West has described in the case of northwestern New Granada, pre-Columbian vein mining was surprisingly extensive considering the absence of iron or other hard metal tools. Europeans would change this by introducing iron and steel bars and picks, but an even greater impact on mining in the Americas would result from the introduction of German-inspired milling machines.

Vein mining was distinct from placer mining in almost every respect, but the beginnings and ends of both processes were somewhat similar in colonial times. Gold deposits had to be located before they

fines or punishments for this oversight was made. By 1744 (ACC Sig. 4062) no Barbacoas miners claimed to possess *libros de sacas*, testifying instead that they were too indebted to highland merchants to even lay hands on the gold coming from their own mines (see chapter 6).

¹⁸⁷ One unwelcome visitor to late seventeenth-century Barbacoas was the English buccaneer William Dampier, who took gold dust from Indians stored in "Calabashes." In *A New Voyage Round the World* (London: Adam and Charles Black, 1937 [1697]), 122.

¹⁸⁸ ANHQ Popayán, caja 13, Pasto, 23-iii-1694. In this strange case, a young man was sentenced to six years exile and service at the fort of Chagres (Panamá) for breaking into a merchant's shop and stealing a bladder (*bejiguita*) containing fourteen pesos worth of gold dust and fifty pesos in silver.

¹⁸⁹ See, for example, ANHQ Popayán, caja 25, 4-v-1701. Here a Barbacoas mining family sought to purchase "*un papel de esmeraldas*" worth 500 to 600 patacones.

¹⁹⁰ ANHQ Minas, caja 3, 1692.

could be exploited, and this usually entailed a wide reconnaissance of stream gravels with a gold pan, the familiar batea. When a batea showed “colors,” or tiny gold flakes, the stream was followed upward and panned at intervals until no gold was found. Somewhere in the hills above the upper limit of stream gold lay the lode that had supplied it, at least theoretically. These lodges were found by searching the hill surfaces for traces of gold and related host minerals, such as quartz. Once a lode was located, the later, more complicated steps of excavation, milling, and refining were undertaken. In the end, as with placering, the fines were once again subjected to a washing in the batea.

Prospecting by unschooled individuals (*buscadores, cateadores*) was most likely a hit-or-miss affair. The geographer Theodor Wolf, who made a geological reconnaissance of southern Ecuador in the 1870s, described prospecting around Zaruma at that time. It was an interesting, but most un-scientific process which may hint at colonial-era practices. Local mine-seekers, Wolf claimed, seemed to consider the finding of a deposit something of a spiritual epiphany, tinged with mystery. Prospectors spoke of “fumes” or “exhalations” (*ardiciones*) given off by potentially rich deposits. When Wolf asked them, “What is it that fumes?” the locals would reply that it was “the antimony of the gold and silver.”¹⁹¹ With the contempt of a structural chemist, Wolf dismissed these beliefs as superstition, yet they may represent a survival of alchemical teachings regarding the properties of antimony. Alvaro Alonso Barba, the seventeenth-century Potosí metallurgist whose work was known to several wealthy Quiteños by at least the early eighteenth century, mentioned the claims of Basil Valentine and others that a “fire stone” made from antimony could enable the transmutation of silver to gold.¹⁹² The local prospectors’ claims of “exhalations” may have in fact been a reference to some earlier European scientist’s mineralogical observations, and possibly a belief that silver was being transmuted by antimony underground. (Zaruma’s ores do, after all, contain an assortment of unusual gold-silver alloys.)

If placer miners found themselves in great need of iron and steel tools, vein miners, once prospecting was done, were even more dependent on these items. The beginnings of a vein mine involved the use of picks, bars, hammers, gads, and, later, shovels in order to remove valuable ores. All of this work was done by hand, most often with native Andean and African labor, and, as miners were quick to learn, with every meter of excavation it became geometrically more difficult, dangerous, and expensive. The first hardrock operations in Quito’s hinterland seem to have been open-topped (*tajo abierto, desmonte*), or quarry-like mines. This method could only be carried on for short distances into a hillside, as rich ores would be increasingly overlain with waste material. Particularly in steep and hilly districts it was quickly obvious that removal of the increasingly deep overburden, by absorbing ever more labor, would yield correspondingly thinner returns. Nevertheless, in certain areas heavily oxidized surface ores were sufficiently widespread to allow this practice of relatively shallow surface mining to continue for centuries.¹⁹³

These open-topped mines were worked in a fashion similar to high placer benches, as described above in the case of Popayán (a process called “booming” in English). Mine owners forced indigenous and slave laborers to build long canals to reach the edges of their pits, and with these running waters the workers proceeded to excavate (*desmontar*) and clean (*limpiar*) the extremely weathered, hardrock ores. An anonymous relación of 1592 described the use of this method at Zaruma, especially during the wet months of December to March.¹⁹⁴ Also in the 1590s, a well-known miner and Quito oidor, Diego de Ortégón, mentioned the use of holding tanks or reservoirs (*albercas*) for this same purpose, probably with the intention of continuing to work during dry spells.¹⁹⁵ As noted in the case of large-scale placer mining in Popayán, the control of water was crucial, and albercas were used in the gold mines of Zaruma much like pilas and estanques in Barbacoas. And indeed, since water was also the source of power for Zaruma’s many stamp mills, as will be seen, it was perhaps even more important than in the Popayán placer districts.

A different work environment developed when veins of gold-bearing quartz or calcite had to be followed vertically, or nearly so, into a hillside. These hand-excavated shafts and drifts reached great depths, in rare cases exceeding 50 m, and as principal veins were worked out, miners would follow

¹⁹¹ Wolf, *Viajes Científicos por la Republica del Ecuador* 1: 43.

¹⁹² Barba, *Arte de los Metales* (trans. Douglass and Mathewson), 24.

¹⁹³ Such mines were referred to as *desmontes* (literally, “clearings”) in Zaruma, and in 1592, they prevailed over underground works, or *minas de socavón*. See Ponce Leiva, *RHGQ* 1: 492.

¹⁹⁴ Ponce Leiva, *RHGQ* 1: 498.

¹⁹⁵ *Ibid.*, p.492, “haciendo ciertas albercas y soltando el agua se llevo la tierra que alla le llaman desmonte y queda el metal el cual se muele con ingenios y con azogue se benefician.”

offshoots of rich ore in meandering side drifts and upward into galleries (*salones, galerias*) and chimneys. Blackpowder blasting, surprisingly, does not seem to have been used in the Audiencia of Quito before the late eighteenth century, an odd thing considering the availability of this material from the nearby factory at Latacunga. It is tempting to speculate on the use of powder at Zaruma, Malal, and elsewhere, but records for the Real Hacienda, which administered the powder factory, do not include requests from miners prior to the 1790s.¹⁹⁶ Instead, Andeans and Africans, outfitted with hardened steel tools, provided the force needed to break up the hard rock of underground works. Given the general lack of safety features in early colonial mines, it was perhaps a blessing not to have had to contend with the added dangers of explosives.

Dangers abounded in underground works just the same, and instability of mine walls, especially in wet, weathered zones like Zaruma, was foremost among them. Timbering, as in the case of pit placer mining, was an effective but expensive means of preventing cave-ins. As in Barbacoas and elsewhere, timbering in Zaruma was nevertheless avoided whenever possible, and workers bore the consequences. Tunneling was highly irregular, and unsupported drifts and shafts worked by separate work gangs often caved in on one another. Interestingly, these problems continue today in Zaruma and Nambija, especially among so-called “artisanal,” or informal miners who lack the capital to make improvements. As in colonial times, these miners, among whom helmets are unknown, must simply keep a close watch on ceiling fractures (*rayas, roturas*) and hurry through high galleries, where calving of deadly boulders is frequent. Colonial mine workers must have been similarly keen to such changing and treacherous conditions, though with the added fears of punishment from coercive overseers. Even when used, timbers had to be replaced often due to mine rot, a condition caused by perpetual subterranean heat and humidity. Dressed timbers were expensive, and mine owners (*dueños de minas* or *de ingenios*) simply did not want to spend the money required for safety. Indeed, whereas numerous colonial mines in Mexico and Alto Perú were shored up with stone and mortar archwork, this wise, long-lasting method of reinforcement was simply unheard of in the more primitive mines of Quito.¹⁹⁷

Numerous deaths by cave-in were reported at Zaruma, but not even royal cédulas mandating timbering were sufficient to change the mine owners’ short-sighted practices. The usual excuse was poverty, but some apologists claimed that the dangers were overblown; some even went so far as to deny that Andean *mita* laborers at Zaruma even worked underground, a patent falsehood. Eventually an order went out stating that no indigenous *mitayo*, or rotational laborer, be allowed to enter a mine prior to a safety inspection by a mine magistrate. The mine adit (*socavón*) was to be “well propped so that it will not fall in on them [the workers].”¹⁹⁸ As will be seen in chapter 4, these types of laws were never enforced at Zaruma, and death by cave-in was still a common problem at the turn of the eighteenth century. Although the mine works in this gold district, as late sixteenth-century observers were quick to point out, were never as deep or as extensive as the much more famous silver mines of Potosí, the dangers faced by mine laborers were nevertheless very similar, and sometimes worse.

Other means of preventing underground instability included the cost-effective and simple method of leaving behind natural support pillars (*puentes, pilares, pilas*-as in “buttresses,” not “tanks”) during tunneling. This practice, though mandated by law, was rarely observed; mine owners would constantly order workers to remove the pillars, especially in periods of low productivity, since they almost always contained gold. Removing pilas and puentes was such a destructive activity that an otherwise productive mine, thus altered, could be rendered unsaleable, a bad investment. This problem was regularly mentioned with regard to Zaruma mines, and mine owners in the late eighteenth and early nineteenth centuries even

¹⁹⁶ ANHQ Minas, caja 4, 26-ii-1795. In this case the owners of a silver mine called Tagulo, on the Cerro Macuchi near Latacunga, requested mercury and powder at cost, even though they could produce no sample (*pella*) to prove viability of the claim (ff.5, 5v). Given the pro-mining climate of the late Bourbon period, however, the request was granted.

¹⁹⁷ A lasting testimony to the durability of stone archwork can be found in several mines on the Cerro Rico of Potosí. Colonial-era stone reinforcement has survived, largely intact, at the mouths of many currently active (1995) silver mines.

¹⁹⁸ Ponce Leiva, *RHGQ* 1: 502. The inspector was to see that the mine was “bien apuntalada y que no se caera ni derrumbera sobre ellos; porque de haberse dejado de hacer esto, se han muerto en ellas muchos y recibido otros malos tratamientos.” Cave-in deaths were mentioned by oidor Auncibay (Ibid., 536). He claimed that Zaruma’s miners were too poor to afford to “ademar ni mortificar los socavones.” Licenciado Ortigón, a notorious Indian abuser and lover of gold mines (Ibid., 492) claimed that Indians did not actually enter socavones at Zaruma.

went so far as to sue small operators renting sections (*caras*) of mine. These “share-croppers” were charged with destroying pillars and puentes for profit. As always, it is difficult to distinguish the truth in owners’ claims of worker greed and ignorance. No doubt more often the owners themselves were at fault for creating unsound structural conditions in their mines; at issue, usually, was their unwillingness to pay for essential improvements such as timbering and ventilation shafts or drainage adits. In general, a short-sighted approach to vein mining, often bordering on the irrational, seems to have prevailed at Zaruma throughout the colonial period. This tendency was confirmed by many visitors, and was very much unlike the capital-intensive improvements undertaken by mining entrepreneurs at Potosí and in northern Mexico in the seventeenth and eighteenth centuries, and even differed from the few enterprising placer miners of Popayán.¹⁹⁹

After ore was chopped and pried from a mine’s various “veins,” it was removed from the shafts by other indigenous and African workers who were drafted or bought for the sole purpose of transporting rocks on their backs. These workers, called *cargadores* (carriers, as opposed to the *barreteros*, or “choppers”) routinely filled hide and agave-fiber bags (*zurrones*) with huge loads of ore, sometimes over 60 kg, shouldered them, and made their way up and out of the narrow and unstable mine passages, often on rickety ladders and shaky notched logs. Once at the surface, the *cargadores* would dump the ore to be sorted in daylight, the refuse thrown on a dump and gold-bearing rock taken to a nearby mill. Galo Ramón, in his study of the early economic links between Zaruma and Loja, has shown that mules were most often used for ore transport to mills, but that particularly unscrupulous mine owners instead used indigenous *mitayos* for this purpose.²⁰⁰ The process of ore cutting, transport, and sorting went on all through daylight hours, and, in some cases, it did not cease on Sundays and feast days, a clear breach of law. Stone cutters and carriers worked in near total darkness, aided only by occasional oil lamps and tallow candles, another cash outlay which mine owners resented. As is true today, many workers fell ill with lung ailments, such as (presumably) tuberculosis and silicosis (from breathing quartz-rich dust) as they labored in the hot and unventilated mines. Indeed, probably no form of forced labor in colonial Latin America was so hideously exploitative as hardrock, underground mining.

Flooding was another chronic problem in vein mining, and it killed more than a few workers. Again, in wet regions like Zaruma, mines were constantly leaking and filling with ground- and rain-water. In some cases, miners tapped into hidden reservoirs by accident and were drowned or crushed in the ensuing rush of water. More common, however, was the technical problem of draining steadily filling mine shafts of seepage from above and below. In rare cases, drainage adits (*socavones*) were cut in order to remedy this problem, but the capital required for such works was very considerable, and they offered no immediate payoff. Instead miners usually chose to employ workers who hauled pitch-lined bags of water out of a mine’s depths with hand-powered windlasses and other types of winches. More complex pumps, like those mentioned above with regard to placer mines, may have been used, but they are not mentioned by name in the documents.

In spite of a brief pre-Independence revival in Zaruma's mining industry, few technical advances seem to have been made, at least in terms of drainage and tunnel supports. A *relación* of 1808 claimed that the Cerro was virtually covered with abandoned underground works. Most of the mines, it was said, were “deep, without direction, out of production (*sin laboreo*), without light, without ventilation, without support pillars or bridges, all of them flooded.” To make matters worse, the observer claimed, Zaruma's mine owners were so careless in milling and refining the ores that half their product was “washed away in sand and mud.”²⁰¹ This judgment was probably an exaggeration, but unimpressive tax receipts between 1750

¹⁹⁹ The best example of a Potosí miner who understood the benefits of sound “obras muertas” is found in Peter J. Bakewell, *Silver and Entrepreneurship in Seventeenth-Century Potosí: The Life and Times of Antonio López de Quiroga* (Albuquerque: University of New Mexico Press, 1988).

²⁰⁰ Ramón, “Loja y Zaruma: Entre las minas y las mulas,” *Revista Ecuatoriana de Historia Económica* 7 (1990), 119.

²⁰¹ Ponce Leiva, *RHGQ* 2: 758, “sus minas profundas sin dirección, sin laboreo, sin luces, sin vientos, sin pilares, ni puentes y aguadas todas; sus máquinas unos martinetes o morterillos que apenas muelen 8 arrobas de metal en día y noche, y se llevan en arenas y lamas la mitad de su riqueza, y sus brazos ningunos o muy pocos ignorantes y desidiosos.”

and 1821 support the notion that the Bourbon mining reforms, spearheaded in New Granada by the Basque engineer Juan José D'Elhúyar, did little to improve production at Zaruma.²⁰²

The geographer Theodor Wolf, in his late nineteenth-century reconnaissance of the Republic of Ecuador, described the mines of Zaruma in much the same way:

We arrive at Zaruma and here a vast field for the study of mines opens before us, as the entire landscape is filled with tunneling from *ancient mines*, none of which are exhausted. All the old works were executed without the slightest technique, and commonly according to a very poor plan which necessarily impeded complete exploitation by means of extensive underground workings, and even made difficult small workings of minimal depth.²⁰³

Wolf went on to denounce the “ancient Spaniards” for their tendency to enrich themselves without a hint of foresight or planning, noting that not only were most tunnels at Zaruma sunk vertically or nearly so, but that few underground works of any kind had been reinforced with timbering. The general method of vertical tunneling, coupled with a rainy climate, led to inevitable flooding and the resulting multitude of shallow, “drowned” mines (*minas ahogadas*). Another folk belief which confounded Wolf added to this tendency to create self-limiting mine works. Local miners claimed that at a certain depth excavation was no longer possible, as “the gold cuts the chisel” (*el oro se cortase a cincel*).²⁰⁴ As with the problem of antimony “exhalations,” Wolf failed to elicit an explanation; perhaps in earlier times the miners’ iron tools were insufficiently hard to break up less decomposed ores in the secondary enrichment zone. In any case, Wolf’s descriptions confirm earlier assessments of Zaruma’s low-capital, low-technology mining industry. As Wolf also noted, the evasion of investment in fixed mining capital killed the workers just as it killed productivity; poor reinforcement techniques led to constant cave-ins, and so many vertical works led to crippling falls. In these conditions, it seems unsurprising that eligible workers fled from the Zaruma district en masse.

Workers had more to worry about besides dying in mines, unfortunately. The Spanish had borrowed an apparently German invention in their opening of the famous silver works of Mexico and Potosí. This innovation, which would be crucial to the hardrock gold mining industry in Quito, was the overshot stamp mill, a complex machine driven by the force of falling water. Stamp mills, or *ingenios de agua* (water-powered “engines”), became common in Zaruma almost from the beginning of the colonial period. The Peruvian Viceroy, Toledo, who had established the Potosí mita and reformed Spanish American mining law by the mid-1570s, claimed in a letter to the crown that there were twenty-two *ingenios* operating in Zaruma in 1579. This high number of working mills suggests that they had been around for some time already.²⁰⁵ Indeed, there is earlier mention of stamp mills operating in the goldfields of Zamora, located on the other side of the mountains from Loja. In his *relación* of 1571, Governor Juan de Salinas, giving no exact numbers, claimed that in order “to grind the said gold ores [the citizens of Zamora] have built many *ingenios de agua* at the said mines, with great results.”²⁰⁶ Calero also notes the construction of two stamp mills at a site called Cerro Caguacara, in the Abad country northwest of Pasto, in 1582, a district better known for its placer operations.²⁰⁷ For miners, the stamp mill was a boon, as it made

²⁰² For a discussion of D’Elhúyar’s expedition and its results in northern New Granada, see Sandra Montgomery Keelan, “The Bourbon Mining Reform in New Granada, 1784-96,” in *Reform and Insurrection in Bourbon New Granada and Peru*, eds. John Fisher, Allan Kuethe, and Anthony McFarlane (Baton Rouge: Louisiana State University Press, 1990), 41-53. D’Elhúyar is better remembered for having discovered tungsten in 1783.

²⁰³ Wolf, *Viajes Científicos*, 1: 46

²⁰⁴ *Ibid.*

²⁰⁵ Roberto Levillier, *Gobernantes del Peru*, 6: 181.

²⁰⁶ Ponce Leiva, *RHGQ* 1: 101. See also p.103, where Salinas notes that in the absence of wheat at Zamora, no grist mills had been constructed. In his *relación* of Loja province, also from 1571, Salinas says mine mills had been operating in the Zamora area for twenty years, or since 1551. The year is significant in that it would predate the publication of Agricola’s widely copied treatise. Salinas also claimed that deposits of lead and iron had been located in the province but had not been worked because of their poor quality (125).

²⁰⁷ Luis F. Calero, *Chiefdoms Under Siege: Spain’s Rule and Native Adaptation in the Southern Colombian Andes* (Albuquerque: University of New Mexico Press, 1997), 149.

possible the trituration, or necessary powdering of very hard ores. For workers, the mills were simply a new source of injury and death. Limbs were routinely crushed by the stamps and clothing was easily caught in the large and powerful waterwheels. As if to add insult to injury, the stamp mills, like the quasi-industrial sugar *engenhos* of northeast Brazil, often operated round the clock.

In an anonymous *relación* of 1592, a Spanish observer suggested that the mills of Zaruma should continue to run at night in spite of worker complaints. His justification, aside from the obvious—"being simple business that half a year's milling would be lost"—was that the indigenous *mitayos* were lying to priests and officials about the dangers of round-the-clock operation. The observer claimed that it was "very little work for an Indian, or even a boy, to tend the mill" since "feeding" the stamps was only necessary every two to three hours, between which the attendant could sleep. Presumably one would have had to sleep elsewhere given the constant crashing of metal on stone, but even this problem would solve itself, according to this observer, since once the ore had been powdered, the more distinctive sound of the unhindered stamps would become so loud it could arrest even a deep sleep, perhaps at some distance. The worker would then feed the mill again, a process which supposedly took only four "minutes" (*credos*), after which he could return to his "heavy" slumber, satisfied that his pay more than compensated his nocturnal labors. What was more, according to the Spanish observer, milling at night was better than during the day, since "the water comes colder and heavier and gives more force as it hits the wheel."²⁰⁸ The force of night water would in time break more than a few Indian attendants on the wheels of Zaruma's stamp mills. As late as 1700 we find complaints of *mitayos* being hurled through the air or crushed in the darkness.

The stamp mill, as described by the German metallurgist Georgius Agricola in his much celebrated mining and beneficiation treatise, *De Re Metallica* (1557), was operated by diverting a stream of fast-flowing water through an aqueduct to a waterwheel. As the wheel was turned by the force of the water, an attached axle, which had cams carved on it, alternately raised and dropped wooden beams (*mazos*) with steel shoes. Each wheel powered some four to twelve of these beams, sometimes with three, four or six on either side of the hub. Ores were placed on metal plates beneath the falling stamps, and were thereby crushed to a fine powder, or trituated. The powdered ore was then washed, panned, or amalgamated to retrieve the gold contained in it, much like the cleanup in placer mining. The maintenance of these mills involved oiling the wheel and other moving parts, regulating water supply, and, most importantly, managing the movement of ores beneath the stamps to maximize the mill's crushing potential. Given the mill workers' long hours, the crushing potential of the stamps was too often experienced firsthand. Also, whereas in silver districts like Potosí and Zacatecas non-village Indians (*naborias* or *yanaconas*) and Africans often took over these risky, skilled positions, no such specialization among permanent workers seems to have developed at Zaruma.

As in remote placer districts, water was crucial to the milling process in vein mining zones. In 1592, for example, an anonymous observer at Zaruma described acequias of two, three, and four leagues (c. 11, 17, and 22 km) length, apparently diversions used both for ingenios and for booming decayed face material.²⁰⁹ In the *Pirotechnia* (1540) of Vannoccio Biringuccio, a contemporary of Agricola whose work was known to early Spanish American miners, water was described as "a material of the utmost importance" in the milling of ores since "the lifting power of a wheel is much stronger and more certain than that of a hundred men." Biringuccio made no claims about the force of "night water," but he recommended that miners locate mills as near to mine entrances as possible, and to bring water to them by whatever means, no matter how difficult. This clustering of productive processes would, he claimed, yield "a saving of time, effort, and expense."²¹⁰ Though none credited Biringuccio, the miners of Zaruma, like those of other hardrock districts in the Audiencia of Quito, apparently tried to follow this practical advice in the construction of their mills and aqueducts, and nature seemed to favor these miners, at least to some extent, as nearly all these districts were cut by numerous small, but steeply-graded streams.

Other, more primitive forms of ore crushing were known in the colonial period as well. One of these was the Andean *quimbalete*, or lever-mill. This half-moon-shaped mill stone was attached to a long timber and was rolled back and forth over ores placed upon another, flat stone. This simple and ingenious method of milling, which was common in early Potosí, does not seem to have been employed in the

²⁰⁸ *Ibid.*, 498.

²⁰⁹ *Ibid.*, 495. Booming was a low-pressure method of hydraulicking.

²¹⁰ Vannoccio Biringuccio, *The Pirotechnia*, trans. Smith and Teach Gnudi (New York: Dover, 1990 [1540]), 22.

Audiencia of Quito.²¹¹ A more likely means of crushing ores in pre-Columbian Ecuador was the *batán-chungo*, a device which combined the concept of the quimbalete with that of the maize grinding device known in Mexico as the *mano/metate*. Here a heavy rocker stone (*chungo*) was rolled back and forth over ores placed in a concave base stone (*batán*). As noted in the section on pre-Columbian metallurgy above, this technique of ore dressing was common in the Lambayeque region of northwestern Peru just prior to conquest, and may have been diffused to vein mines of the southern Quito highlands.²¹²

Another milling device introduced by Europeans and especially common in Mexico was the *arrastre* (or *arrastra*) This animal-powered mill (*molino de sangre*, v. *molino* or *ingenio de agua*) was reminiscent of Spanish grist mills, and consisted of a circular millstone dragged around upon a hollowed base by a yoke of oxen or mules. Considering the wide movement of Mexican miners in the colonies, the *arrastre* may well have been used in certain areas of early colonial Quito. A device of this kind is mentioned by Marzahl in use at Chisquí, near Popayán, in the early seventeenth century,²¹³ but only in the early nineteenth century does one find mention of this type of mill at Zaruma. In 1817 an artist depicted the Cerro and the types of ingenios in operation, one of which was an *arrastre* (see fig.). It should be remembered that unlike most of highland Peru and Mexico, Quito's mountains were rainy, for the most part, so water-driven mills were generally a ready possibility. This was not true everywhere, however, as a shortage of water power at Malal, northwest of Cuenca, led an early seventeenth-century miner to propose a six-stamp mill powered by horses.²¹⁴

As mentioned above, crushed ores from whatever type of mill had to be washed in the pan to separate gold from remaining gangue, or waste minerals. Gold of this kind was extremely fine-grained, so the batea cleanup was left only to very skilled workers, often slaves or salaried indigenous workers rather than occasional mitayos. Also, because of the fineness of gold taken from vein deposits, mercury amalgamation was much more common in this final step than in placer mining. González Suárez, in his *Historia General*, claims that mercury amalgamation only arrived in Quito's mines in 1607, and was then only poorly applied.²¹⁵ There is much evidence to the contrary, however, beginning with Benzoni's account of 1547-50. Benzoni described amalgamation as he observed it in the Quito region as follows: "The gold which they get from these mountains is like fine sand, and they obtain it by separating it from the earth with mercury."²¹⁶ This is a clear reference to mercury use in placer mining, but the Quito oidor Auncibay claimed by 1592 that miners at the vein mines of Zaruma "founded" gold with mercury.²¹⁷ Zaruma received shipments of mercury from Spain and Peru (Huancavelica) via Loja, Cuenca, Quito, and Guayaquil, but it was never cheap given the high demand in Potosí and other silver mines. At one point the crown even attempted to calculate gold production and reduce tax fraud by monitoring mercury demand. As with other control methods tried by Real Hacienda officials, this system failed. Mercury was either smuggled or gold was separated by other means, such as careful hand sorting with a magnet or smelting. The principal drawback to smelting gold ores, of course, was the added cost of fuel and furnace construction.²¹⁸ This was undesirable given the fact that the gold in Quito's ores was free, that is, it was generally not chemically bonded to other elements aside from silver, which is what gave it such low karat in the first place. By the late eighteenth century the crown began to lower mercury prices in order to stimulate production in vein mine zones like Zaruma, but given the notorious mismanagement of the mines

²¹¹ For a full description of the quimbalete, see Peter Bakewell, *Miners of the Red Mountain: Indian Labor in Potosí, 1545-1650* (Albuquerque: University of New Mexico Press, 1984), 15.

²¹² Shimada, "Pre-Hispanic Metallurgy and Mining in the Andes," in eds. Craig and West, *In Quest of Mineral Wealth*, 69, fn.

²¹³ Marzahl, *Town in the Empire*, 24. Alan Craig, "Spanish Colonial Silver Beneficiation at Potosí," in eds. Craig and West, *In Quest of Mineral Wealth*, 275, describes the use of *arrastres* in sixteenth-century Potosí.

²¹⁴ From Archivo Nacional de Historia/Cuenca, Not.III: IX, f.586-87v (1605), quoted in Juan Chacón, "Historia de las minas de oro y plata de la antigua Provincia de Cuenca," in *La Sociedad Azuayo-Cañari: pasado y presente* (Quito: Editorial Conejo, 1989), 60.

²¹⁵ Federico González Suárez, *Historia General de la Republica del Ecuador*, 3 vols. (Quito: Daniel Cadena, 1931), 3: 442.

²¹⁶ Girolamo Benzoni, *Historia del Nuevo Mundo*, 123, "El oro que sacan destas montañas es como arena menuda y lo consiguen separandolo de la tierra mediante mercurio."

²¹⁷ Ponce Leiva, *RHGQ* 1: 534, "se funde por asogue."

²¹⁸ The 1817 illustration of Zaruma's hills and mills includes furnaces as well (AGI Mapas y Planos Panama/Santa Fe/Quito, 232).

and refining operations already noted, the results were not dramatic. A relación of 1765 mentioned only fourteen mills operating at Zaruma, and the town was said to have consumed a suspiciously low twelve pounds of mercury annually.²¹⁹

Another method of gold separation which seems to have been used in the late sixteenth century in Zaruma's refineries was the catchment of fines in cloth strips (*paños, frazadas*). This method, described in detail in Agricola, entailed the attachment of tilted, cloth-lined wooden channels of about 4-5 m length, like sluice boxes, to the stamp basin. Triturated ore was scooped out from under the stamps and into the sloping channels, which ran with a thin stream of diverted water. The flow action of the water carried off the lighter gangue, and the heavier gold, even the tiniest of particles, remained snagged in the rough surface of the cloth. At the end of the day, the cloths were carefully rolled up and taken to a basin and washed of their gold content. The water was then poured off from the basin and the gold collected and separated from the inevitable black sand, or iron oxide, with mercury (see fig.).²²⁰ Interestingly, this method of fines collection is still in wide use in Zaruma today.

Silver, unlike gold, was rarely found in its native state; ores could be easily milled, high-grade oxides or low-grade, refractory sulphides. For this reason smelting only seems to have been employed extensively in the silver mines of Malal, near Cuenca. As noted in the previous chapter, there is even mention of indigenous-style smelting furnaces, or *huayras*, in that district, suggesting possible pre-Columbian exploitation.²²¹ As a 1682 request for twenty quintals of mercury from the *caja real* of Loja suggests, however, amalgamation must have also been practiced at Malal.²²² Silver refining in general was much more complex than that of gold, and partly for this reason few silver deposits were profitably worked in colonial Quito. Given colonial technologies, economical silver deposits had to be high-grade, extensive, and accessible. Not even Malal, Quito's only productive silver mine of note, fit these criteria. The ores, located in rough and remote high country, were generally of the refractory sulphide variety (*negrillos*), and were thus expensive to refine. That these deposits were worked for over a century without clear indications of profit seems something of a testament to the Spanish miners' blind hopes--and to the cheapness of indigenous labor.

Mining Law

Another significant Spanish innovation in American mining was the implementation of "Romanesque" property law. Given the economic importance of the activity, a significant corpus of laws developed alongside the precious metals mining industry in the Americas. These laws varied greatly over time, and from place to place, but the basic concerns--protection of claims from others and maintenance of high productivity levels--were everywhere the same. When it came to mining properties, the crown gave and the crown took away, and for this and other reasons, mining claims were rarely passed on for more than one generation. Just the same, miners clung to their properties, or rather, their "rights to mine the king's domain," tenaciously, suing one another for all manner of real or imaginary infringements. Whereas mining in pre-Columbian times may have been a rather casual affair, for the Spanish it was a dead serious, highly competitive business.

As with bringing a mine into full production, gaining legal possession of a claim was no mean feat. One had to locate a mineral deposit, determine whether it was minable or not, mark the find with wooden stakes, and then register it as a working claim with a certified magistrate. This process was never as simple as it sounded as prospectors routinely preyed upon one another's finds, moved stakes, alleged prior rights, and otherwise cheated their neighbors. Even the process of registry was complicated by various laws requiring a demonstration of mineral, usually an ingot of silver or a parcel of gold dust, a promise to pay taxes and other fees to different officials, and proof that one had sufficient access to labor and capital to work the deposit once opened. Further, differential rights were granted to discoverers of new finds and later exploiters, leading to constant assertions of preeminence and denunciations of false

²¹⁹ Ponce Leiva, *RHGQ* 2: 359.

²²⁰ Ponce Leiva, *RHGQ* 1: 496. The illustration is from Agricola, *De Re Metallica*, 331.

²²¹ ANHQ Minas, caja 1, 20-xii-1684. Chacón has also noted this in "Historia de las minas de oro y plata de la antigua Provincia de Cuenca," 63. A useful overview of silver mining and refining techniques is found in David Brading and Harry Cross, "Colonial Silver Mining: Mexico and Peru," *Hispanic American Historical Review* 52:4 (November 1972): 545-79.

²²² ANHQ Minas, caja 1, 29-v-1682.

claimants. As mentioned above, mines could not be worked without water, so usufruct disputes over streams and canals were likewise endemic to the industry. In a word, Spanish American mining laws came to resemble a laundry list of all the ills inherent in competitive industry; as such, they were a natural outgrowth of early industrial capitalism. In order for mining to develop into a principal engine of the colonial economy, the rights of private investors and corporations had to be guaranteed, but at the same time, government intervention in the early modern period could easily become meddlesome and corrupt, creating new obstacles to capitalist expansion. Still, industrial legal developments in this age must be viewed through a mercantilist rather than free-market lens; from the point of view of the Spanish state, mining rents (quintos) were a perquisite of empire and were to be collected at the expense of the colonists. Thus, efforts to suppress contraband and prevent local capital accumulation always lurked behind efforts to stimulate production.

One of the principal concerns of mining laws, in colonial times and later, was the extent of rights to be granted. It was soon realized that the nature of the deposits, especially for gold, would determine the size of a claim. Placer mines would be extensive rather than deep, and vein mines would be measured by depth rather than surface area. Most underground claims allowed a miner to follow a vein for sixty *varas* (about 50 m) in whatever direction it sank into the ground. Discoverers were granted eighty *varas*, and were also obligated to work sections of their claim or open up adjacent mines in the name of the crown, an ambiguous, medieval practice which was largely ignored.²²³ In describing the gold mines of Zamora in 1571, for example, Juan de Salinas claimed that the mining ordinances of Philip II (1563) were being followed, but not to the letter. Discoverers, he said, had properly registered mines next to their own in the name of the sovereign, but since these mines were in the hands of private individuals who were expected to pay rents of one-half, one-third or one-fifth of their produce to the Real Hacienda, depending on the richness of the veins, the miners preferred to work their own mines and neglect those belonging to the crown.²²⁴ Essentially, sixteenth-century Spanish mining law retained medieval notions of the repartition of war booty and the yielding up of tribute from vassal to lord. As such it ignored the complex realities of mining production, especially in the remote backcountry of the colonies. Mining did not, as the crown seemed to believe, simply entail stumbling onto a hidden treasure, and miners let officials know about this misunderstanding in their day-to-day practices, as in the Zamora case above. In time these feudal vestiges would fall away from the mining codes, at least in terms of observance, and severance taxes would be gradually reduced to less crippling levels; in the Andes the shift toward rational capitalist codes was more or less accomplished by Peru's Viceroy Toledo in the mid-1570s.

Placer claims, which were more carefully delineated in New Granadan laws (as opposed to Peru's Toledan code, designed for Potosí and other vein districts), covered large areas of stream gravels, sometimes up to several leagues in length, depending on assays conducted by local officials (*alcaldes mayores de minas*). The general code for placer mining in New Granada, which seems to have been only partly followed in Quito, was written up by Gaspar de Rodas between 1587 and 1593. According to the Rodas code, placer claims were a more or less flattened version of vein mine claims: A miner had rights to work gravels falling within a square of eighty *varas* to the side. A stream might run more or less down the middle of such a claim, but not necessarily. As West notes, claims made on terraces and interfluves measured sixty *varas* on the side, and could be located some distance from the stream.²²⁵ The code also allowed for each miner to stake two claims, one operating (*mina salteada*) and another reserved and dormant (*mina estacada*). The second claim, which had to be brought into production within a year and a half of staking, was marked by a ritual, secret burial of a batea and an almocafre somewhere on the site.²²⁶

²²³ Roberto Levillier, *Gobernantes del Peru, Cartas y Papeles*, vol. 8 (Madrid: Juan Pueyo, 1925), contains the Toledo mining ordinances of 1575. These were largely aimed at regulating the silver mines of Alto Perú, but were more or less followed at the vein gold mines of Zaruma, Zamora, and Almaguer. It seems clear that the mining ordinances passed under Philip II in 1563 were not closely followed anywhere in the colonies (see *Recopilación de Leyes*, Libro Sexto, Título XIII, Lei V).

²²⁴ Ponce Leiva, *RHGQ*, 1: 101-02, and relación de Loja, 125.

²²⁵ West, *Colonial Placer Mining in Colombia*, 103, fn. 108-09. Terraces could be close to the water level (*sabanas*, *sobresabanos*) or high and dry (*aventaderos*). Following vein mining jargon, older upland gravels were called *cerros* (West, 103).

²²⁶ *Ibid.*, 103, fn. 109. The Rodas ordinances are reproduced in Vicente Restrepo, *Estudio sobre las minas de oro y plata de Colombia* (Bogotá: Banco de la República, 1952 [1884]), appendix B. The size of placer claims was more or less fixed at two adjacent sixty-*vara* squares, as demonstrated by ACC Sigs. 2990,

In backcountry zones, such as Barbacoas and the Chocó, nearby forests and plantain groves were usually included in mining claims, though their extent and exact location was rarely mentioned. In spite of these legal guarantees, both vein and placer claim-staking processes were vague enough, and generally so poorly supervised as to allow for widespread fraud. Over-claiming was most common, but claim jumping, often violent, was also not unknown.

In an illustrative case dating from 1791, a freedman (*negro libre*) named Sebastián Lisardo registered a small placer gold claim on a tributary of the Chimbo River, in the hills east of Guayaquil. The site, called Copalillo, was a dry creek bed (*quebrada seca*) and thus required the construction of canals to wash its gravels. Although Lisardo was working alone, he was granted the initial concession. The law was ambiguous in that it favored slave owners over poor individuals, yet it also granted prospecting rights to individuals, explicitly including people of color, in order to stimulate expansion of mining frontiers. In the Copalillo case, the Audiencia of Quito was apparently balancing its need for quinto revenues with its dedication to capitalist freedom, at least initially. Shortly after Lisardo began washing gold, a rich Guayaquileño named Yturalde began to harass him. Verbal intimidation apparently did not work against Lisardo, so Yturalde sent his mayordomos to run the poor miner off with violence. They descended on Lisardo while he was working in the quebrada, pelting him with stones and apparently breaking some bones, and he barely escaped with his life. The audiencia investigated his allegations of abuse, but chose to side with the defendant, Yturalde, who claimed that he alone had the means to work the mine at capacity.²²⁷ No argument by Lisardo's state-appointed defender could change this outcome, demonstrating that even for free people, the law was not the refuge that some so-called defenders of the poor made it out to be. Elsewhere in New Granada small-scale miners such as Lisardo were marginally protected as *mazamorreros*, or informal panners, licensed to work leftover tailings, but in southern Quito, it seems, disputes between poor prospectors and wealthy outsiders were more likely to be decided in favor of the latter.

Placer claims were also problematic in many places due to the fluctuation of river channels and other mitigating circumstances. In 1643 a miner from Antioquia who had recently migrated to the Popayán-Cali area with his family and a cuadrilla of skilled slaves ("*una cuadrilla gruesa de negros de mina*") petitioned the local governor for aid. His aim was to work the beaches, or interfluvial placers, of the Cauca River and its tributaries. Residents of the region, he charged (hacienda owners in particular), had run him off at every opportunity, claiming the gravels were theirs and theirs alone. The miner protested by saying that these placers were "*playas realengas y comunes*," that is, they constituted an open commons. In such river placers, by law, no one could impede any miner who took the trouble to engage in gold washing, and the governor of Popayán issued a statement backing the outsider's claim. The Antioqueño and his cuadrilla were also allowed to prospect (*catear*) and exploit any abandoned claims (*minas viejas desamparadas*) they encountered along riverbanks.²²⁸

Though generally more precise in their wording as time went by, colonial mining laws were still insufficient to handle some situations. An illustrative case involves a conflict between the powerful Caicedo and Arboleda families of Popayán in the late seventeenth-century Chocó placer district. As described by Sharp, one side in the dispute had laid claim to a huge tract of agricultural land which happened to contain gold-bearing gravel terraces and the other side challenged the claim on the grounds that its "owners" could not possibly work it all. The Audiencia of Santa Fe, in Bogotá, decided in favor of the challengers, but without stripping the agricultural exploitation rights of the primary claimants; in short, it was a paper compromise which would inflame rather than solve the dispute.²²⁹ Subsoil and agricultural land grants were legally separate entities, but they almost always overlapped in practice since landowners could denounce would-be miners as trespassers. If these cases suggest anything, it is that the crown was less interested in precision of measurement than in maintaining some kind of continuity in production.

Laying claim to a mine could be a confusing and strange process, sometimes entailing, as seen above in the case of the buried tools, some apparently ancient rites of possession. In 1694 the Augustinians of Popayán purchased gold mining properties near Quinamayó. They sent a friar to take possession in the

3069, where a claim for a placer gold mine near Popayán in 1722 was said to run one-hundred-twenty varas on one side and sixty varas wide along a quebrada.

²²⁷ ANHQ Minas, caja 4, 24-viii-1791, 6-iii-1792.

²²⁸ ACC Sig. 2289.

²²⁹ William F. Sharp, *Slavery on the Spanish Frontier: The Colombian Chocó, 1680-1810* (Norman: University of Oklahoma Press, 1976), 47.

company of a magistrate, a process which included circumambulation of the site and the selective uprooting of weeds, “all acts said to be signs of true possession.”²³⁰ While possession of one’s own mine might be resolved, adjacent claims belonging to different miners often led to disputes over water rights and fixed capital works. In early eighteenth-century Barbacoas, a mine owner who referred to herself as a “*minera y dueña de cuadrilla*” (“miner and slave-gang owner”) sued a neighbor for interfering with certain acequias on her claim on the Jaujúi River, near Santa Bárbara de la Isla del Gallo. She charged that the administrator and slaves of the adjacent claim had been working “in the very same canelones and acequias” that belonged to her mine. An *alcalde de minas* visited the site, checked its survey stakes, and found that the neighboring miners had in fact constructed a parallel acequia exactly on the border, separated from the dueña’s claim by an earthen dam (*pila*). He ordered her not to interfere with the neighbor’s operation, and not to tap into the new acequia by “breaking” the *pila* surreptitiously (“*sin trabajarla ni romperla*”).²³¹ Again, the law was enforced to the extent that productive mines were not to be interfered with; the Barbacoas dueña de cuadrilla had a weak case, not because she lacked precise claim to the surface area of the mine, but since the canals on her side of the demarcation line had been allowed to languish and had become overgrown with vegetation.

More important in legal terms than mine boundaries or individual expertise, however, was mine labor. Labor, as suggested by Viceroy Toledo’s reforms, was as crucial to success as water. The use and abuse of labor in colonial Quito’s mining regions will be the subject of chapters four and five, but it should be noted here that after claim disputes, labor litigation was always the most pressing concern for miners. For the period from conquest to about 1700, labor disputes centered on access to indigenous workers, usually *mitayos*, or temporary *draftees*, but also over Indians held in *encomienda*. Miners during this period were in constant competition for scarce labor throughout the region, not only among themselves, but also with other elites, such as hacienda owners and textile manufacturers. After the Indian labor reforms of the early eighteenth century, mining labor disputes had more to do with buying, renting, and controlling African slaves, but indebted peons and criminals were also fought over in the courts. Other so-called *castas*, or persons of mixed heritage, were targeted as well; beginning in the seventeenth century, technically free poor persons, especially *mestizos* and *mulatos* classed as vagabonds, were drafted into mine works.

Labor legislation was vitally important, but the crown’s primary interest, of course, was collecting its share of the mineral wealth exploited by colonists. In this rent-seeking, mercantilist world the two concerns overlapped in that indigenous laborers doubled as tribute payers, and as such had to be carefully conserved. Subsoil mineral rights, like Indians, were considered part of the royal patrimony, and both could only be exploited by Spanish subjects possessing the proper licenses, and paying the proper rents. The rent paid to the crown from mining was a severance tax, generally referred to as the *quinto real*, although the actual portion varied a great deal. Quinto collection is the subject of the following chapter, but suffice to say here that colonial tax laws were considered *the* major impediment to production, surpassing even insufficient labor subsidies—the most stimulating of Bourbon mining reforms to affect New Granada came in 1777, when the crown reduced the gold tax to three percent of production. Precious metals mining in early modern Quito was not a free market capitalist enterprise, but it exerted continued pressure in that direction as miners sought to remove institutional obstacles to expansion. At the same time, mine owners called for crown subsidies (labor, mercury, and finally, powder) which would stimulate production, thus suppressing the free exchange of these items. In these and several other important ways mining was unlike any other economic enterprise in Spanish America. Its many technical peculiarities, along with its unquestionable importance in the imperial and intracolony economy, have thus demanded continued study of bullion production and flow.

²³⁰ ANHQ Popayán, caja 13, 23-iv-94, “minas y aguas” (11v) claimed by a friar who walked around and “arancó (uprooted) algunas yerbas de las dichas minas todos actos que dijo abia en señal de verdadera posesión,” accompanied by two local witnesses and a magistrate.

²³¹ ANHQ Fondo Especial, caja 13, vol.34, doc.1201, f.102 (6-v-1739).

Chapter Three
Production and Flows of Precious Metals in the Audiencia of Quito

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Peculiar challenges are involved with the task of producing a reliable estimate of colonial gold production in the Audiencia of Quito. Whereas more central mining regions of greater colonial Latin America, such as Alto Perú, Mexico, New Granada, and Brazil have received close attention in this regard, in the case of the Audiencia of Quito, no such attempt has yet been made. There are several reasons for this void in the economic historiography. First of all, in the long view Quito was a marginal producer of precious metals by comparison to these other regions, leading historians to focus most of their attention on the audiencia's substantial textile industry. Secondly, the region was blessed, or cursed, as the case may be, with mostly gold rather than silver, and often in widely scattered and ephemeral deposits. This scattering of mining districts over space and time erased the memory of earlier bonanzas in the region even among Quito's own colonial elites by the mid-seventeenth century. Lacking concentrated hardrock deposits of precious metals such as those of Potosí and Zacatecas, Quito could hardly boast of a mining heritage in any one region. The goldfields of Zaruma, in the southern highlands, approached this kind of association, but their relative poverty and low quality gold yield prevented the development of a firm association between the Audiencia of Quito and mineral wealth. Mining in colonial Quito, as the title of this study suggests, was a marginal activity, yet I would submit, based largely on the data to be presented below, that it was nevertheless an important activity in the regional economy, especially in the first century after conquest.

This chapter examines first the nature of the evidence regarding colonial gold production and then describes and analyzes the data sets assembled from this evidence. Since this study attempts to combine and compare all production records available to date in both local and Spanish archives, a brief discussion of sources and methods is necessary. Most of the problems of calculation arise, in short, from the complexity of gold severance taxes, which, unlike those regarding silver, fluctuated from place to place and over time. Volume and flows of gold produced in colonial Quito will be treated in two parts, the first involving the boom years of 1535-1639, and the second treating the long seventeenth-century decline and partial renaissance in the late eighteenth and early nineteenth centuries (1640-1821). In both of these sections, I will highlight the importance of distant goldfields, especially those located in the Gobernación of Popayán. How and why gold from these areas made its way to Quito emerges as a central point of inquiry through the first two centuries of colonial rule. Finally, the possible implications of these data with regard to regional, trans-Andean, and international economic trends will be discussed. It is my feeling that this new information sheds light on features of the north Andean economy which may significantly alter the prevailing conception of Quito's economic development relative to other parts of Peru.

The Quinto Real and the Casas de Fundición

Gold...is almost always found virgin. It is sometimes found in pieces of some bulk; and even when mixed in small and almost insensible particles with sand, earth, and other extraneous bodies, it can be separated from them by a very short and simple operation, which can be carried on in any private house by anybody who is possessed of a small quantity of mercury. If the king's tax, therefore, is but ill paid upon silver, it is likely to be much worse paid upon gold...--Adam Smith, *The Wealth of Nations*.²³²

Adam Smith needed little firsthand experience to arrive at these conclusions. Still, he was fascinated by the published reports of Juan and Ulloa and others regarding the mining industry in Spanish America. By simply contrasting the natures of silver and gold one could divine how problematical it would be to tax their production, especially in a far-flung empire. Silver was bulky and concentrated in certain hard-rock mining zones, gold was everywhere and nowhere. For these reasons the Audiencia of Quito, being much more renowned for its gold than its silver, was likely to have suffered a higher rate of tax fraud than might have been experienced in the silver districts of Upper Peru and Mexico. Also, the processing of gold mined in Quito never approached the complexity of silver beneficiation at Potosí. Even with the crown's monopoly on mercury, tracking gold production by following the rate of mercury consumption proved virtually impossible. All the potential for defrauding the crown notwithstanding, many people paid their taxes. Certainly not everyone did so, and many probably underreported their mining incomes, but taxes on gold--even on very small amounts--were paid. This section will describe the means used by the

²³² Adam Smith, *The Wealth of Nations, books I-III*, New York: Penguin Classics, 1986 [1776], 276.

crown to collect gold taxes, and will try to evaluate the various types of evidence useful in reconstructing production figures.

Although this is the first systematic attempt to assess gold production in colonial Quito, others have contributed to the project. Most recently, Adam Szaszdi (1981) has compiled a series of tables estimating total gold production for Spanish America from 1501-1610.²³³ Szaszdi undertook this extremely difficult task by compiling a wide variety of sources, including ledgers for various *cajas*, shipping documents, Earl Hamilton's Seville receipts and other secondary estimates, and even some local *libros de fundición*, or smeltry books. The sizeable Quito portion of the study, as the author submits, is largely hypothetical, extrapolated from snippets of information. Hence, though Szaszdi's guesses may be based on actual receipts for a few years, they are nevertheless guesses, and in my view are quite incorrect (most of his regional projections, except for the *caja* of Quito, seem to be overestimates). The following compilation of gold receipts does not aim to be a last word, but rather a contribution to the larger project which Szaszdi inherited from Humboldt, Soetbeer, Hamilton, and others. It also aims to reveal some internal bullion flow patterns which are only quantifiable by closely examining the local *libros de fundición*.

In addition to Szaszdi, several Ecuadorian and Colombian historians have contributed to the project of reconstructing Quito's gold receipts. As early as 1947, the Ecuadorian historian Aquiles Pérez included partial production figures taken from Quito *libros de fundición* for the 1560s and 1590s in his study of the *mita* system in the early *audiencia*. Given the poor archival organization and paucity of sources available to him, Pérez was only able to guess at the production of the intermediary years. Still, Pérez did notice that surviving receipts from the seventeenth century appeared surprisingly lean by comparison to those of the sixteenth, suggesting a rapid decline in mining, which he attributed to Indian demographic collapse. As tentative as this conclusion may have been, it was a pioneering attempt to relate colonial gold production to Indian demographic and hence labor patterns. One feature of the accounts which Pérez examined was the high proportion of gold proceeding from the *Gobernación* of Popayán, especially in the later sixteenth century. Pérez took note of this pattern, but did not venture an explanation.²³⁴

The strength of ties between Popayán and Quito in colonial times is only now coming to light, as shown by the work of several historians on both sides of the present-day border between Ecuador and Colombia. In Popayán, Zamira Díaz and Guido Barona have recently (1994, 1995) published their examinations of Popayán gold production in the first and second halves, respectively, of the colonial period. Díaz has developed her findings from the amazingly well-preserved *libros de fundición* of Popayán, Cali, Anserma, Arma, and Cartago, along with certain account summaries located in the Archive of the Indies in Seville.²³⁵ Since Popayán, and Quito, for that matter, were a part of the Viceroyalty of New Granada after 1739, gold accounts for the last century or so of colonialism are fairly well preserved and nearly complete. In the case of early Popayán, however, my findings suggest a strong market for Popayán gold in Quito, so strong that Díaz's production figures will have to be expanded significantly. Quito drew gold from Popayán districts in the later period as well, as noted in the discussion of regional trade in Chapter 6, but since taxes were by then paid locally and records sent to Santafé de Bogotá, the overall figures given by Barona are less directly affected.

Like those of Popayán, the royal tax records on gold and silver production in early colonial Quito are surprisingly complete. Beginning in 1535, just after the founding of the capital, one finds day by day records of bullion coming into the *casa de fundición* in Quito. There are a few missing years, but the record is often supplemented by account books from more distant *cajas reales*--for instance, a book recording *quintos* in the remote southern Oriente mines of Zamora from 1561-67 survives. These invaluable accounts provide us with more than simple tax figures, giving also names of miners and often the exact provenance of their gold or silver. Among the most outstanding difficulties presented by the early

²³³ Adam Szaszdi, "Preliminary Estimate of Gold and Silver Production in America, 1501-1610," in *Precious Metals in the Age of Expansion*, Hermann Kellenbenz, ed. (Papers of the 14th International Congress of Historical Sciences, Stuttgart: Klett-Cotta, 1981), 151-223.

²³⁴ Pérez T., Aquiles R. *Las Mitas en la Real Audiencia de Quito* (Guayaquil: Biblioteca de Autores Ecuatorianos, 1987 [1947]), 246.

²³⁵ Zamira Díaz, *Oro, sociedad y economía: El sistema colonial en la Gobernación de Popayán, 1533-1733* (Santafé de Bogotá: Banco de la República, 1994), and Guido Barona B., *La maldición de Midas en una región del mundo colonial: Popayán, 1730-1830* (Cali: Editorial Facultad de Humanidades, Universidad del Valle, 1995).

documents, however, is the absence of audiencia-wide summaries. Whereas mid-seventeenth-century and later account books tend to provide a summary of quintos collected within Quito's own jurisdiction, at least, the earlier documents suggest a much more confused state of affairs, one in which high production in widely scattered regions led to highly irregular bookkeeping. For instance, in the *libros de fundición* of 1568-76, we find gold dust being brought to Quito to be smelted and registered from as far north as Buga, at the extreme northern border of the Gobernación of Popayán. On the other hand, much gold taken from the still distant, but relatively nearer mines of Zamora was taxed and smelted there in the jungle wilderness. Such irregularities are especially disturbing given the fact that a royal smeltry existed in Cali, quite near to Buga.

Other such *cajas reales* existed, at least for a time, in Jaén de Bracamoros, Valladolid, Loja, Zaruma, Cuenca, Guayaquil, Tumaco, Barbacoas, Iscuandé, Raposo, and Popayán. Many of the account books for these *cajas* have not survived, but in several instances the quinto portion of their treasuries was sent to Quito, or even Seville, thus leaving us with a near-complete record of production.²³⁶ Accounts from the northern smeltries, including Popayán, Cali, Arma, Anserma, and Cartago, were either kept in Popayán or sent to Spain via Santafé de Bogotá. Accounts for the southern districts were either kept in Quito, Cuenca, Loja, or sent to Spain via Guayaquil or Paita. Putting together a clear picture of gold production using all these incomplete puzzle pieces is, needless to say, a perplexing task, but one aid comes in the form of an account *visita* from 1588-89, now located in the Archive of the Indies. My findings are drawn from both this *visita* and local ledgers in order to reconstruct patterns of production and flow.

Quintos recorded do not necessarily reflect gold produced, of course, but calculating a reasonable “rate of fraud” is a highly subjective endeavor. In general it appears that early merchants and miners registered their gold and silver whenever and wherever they saw fit, and the fact that they did so at all may have resulted from fear of punishment, hope for some kind of reward, or simple loyalty to the crown. Szaszdi has gone so far as to suggest that the notation of very small amounts of gold dust in the registers means that merchants and miners simply found it inconvenient to carry on business with loose gold.²³⁷ While my own findings lead me to question this, I believe Szaszdi is more or less correct in stating that nearly all the gold produced in Quito eventually found its way to a royal smeltry somewhere; suffice to say here that the evidence suggests a somewhat conservative estimate of untaxed production for the boom years (ca.10-20%) and a more liberal one (ca.30-50%) for the period following 1640.

It is in this latter period that charges of tax fraud appear much more frequently, especially in Popayán. In 1663, for instance, the Audiencia of Quito charged treasury officials in Popayán with embezzlement of some 150,000 pesos in gold, most of it improperly collected quintos.²³⁸ Nearly every Popayán governor to serve between 1610 and 1730 came under attack from zealous officials from either Quito or the Santa Fe Tribunal de Cuentas. Indeed, many investigators were sent to newer frontier mining districts, such as the Chocó and Barbacoas, and several never returned. Quinto fraud investigations in Barbacoas alone led to several murders of investigative judges and executions of supposed mining tax evaders in the 1690s. Several angry and perhaps overzealous officials went so far as to claim that the amount of total production being reported and taxed in the Chocó and Barbacoas was between zero and one third by 1698.²³⁹ It seems clear from comments such as these that quinto fraud was on the rise, especially in backcountry zones, but declines in overall production could also be blamed. The hardrock mines of Zaruma were moribund at this time, and those of Chisquío, in Popayán, had finally been abandoned.

More problematic than the rate of fraud, for the sixteenth century at least, is the problem of establishing clear severance tax rates. There is much more room for error here, as the term “*quinto*,” when applied to gold production, rarely referred to a taxation rate of twenty percent. In order to stimulate the production the crown routinely granted temporary concessions to gold miners in specific districts. These concessions ranged from the *octavo* to the *veintavo*, or twelve-and-a-half down to five percent, and usually lasted for five to ten years, with the possibility of extension in some cases. The circumstances which the crown considered necessary for these discounts were geographical remoteness, unavailability of local labor

²³⁶ An order went out some time before 1590, for instance, stating that all quintos collected in Loja and Cuenca be sent to Quito before remission to Spain via Guayaquil and Panama. In Ponce Leiva, *RHGQ*, 1: 496 (anonymous relación de Zaruma). When available, these distant *cajas*' remissions have been included in production totals, especially for the sixteenth and seventeenth centuries.

²³⁷ Szaszdi, “Preliminary Estimate of Gold and Silver Production in America,” 152.

²³⁸ ANHQ Popayán, caja 3, 1663, f.1v.

²³⁹ ANHQ Popayán, caja 16, 11-vi-1697, f.50v (Huesterlin *recusación*, or “challenge”).

sources, necessity of expensive water works to begin milling and washing, and other mitigating factors. In terms of reconstructing production figures, these multiple and changing rates of taxation mandate a close reading fundición records, but it would be safe to say that an average of about ten percent was charged on gold mined in the sixteenth-century Audiencia of Quito.

The Casa de Fundición

The newly established Audiencia of Quito, having received reports of rampant tax fraud in the backcountry, ordered an inspection of the real caja of Zamora in the late 1560s. The officials charged with mismanaging this remote caja, for all their supposed shortcomings, kept remarkably good books, and they may serve as an example of how a fundición operated. Throughout the 1560s, the boom years of the district, the miners had paid an average of some 7,000 gold pesos per year, this at the crown-sanctioned *diezmo*, or ten percent rate for new and distant mines. This translated into a substantial 70,000 pesos (c. 322 kg) per year in registered production, mostly of high-karat gold. As will be seen, Zamora produced handsomely for some years more before it was destroyed by Indian uprisings directly resulting from the avarice and cruelty of its miners. The 1567 inspection includes an inventory of the Zamora strongbox, which was fitted out with the customary three-key lock of the *caja de comunidad*. Instruments inside included the ledgers themselves, along with royal cédulas and some gold to be assayed, two scales for weighing gold “in their cases from Milan with their tiny weights,” and still other weights, two standards (*marcos*) of six pounds and one of eight. Tools included a small, two-horned anvil (*bigornia*), a hammer (*martillo*) and four chisels (*cinceles*). Surprisingly, the caja also contained the assayer's workspace, a table with two benches and a blue woolen tablecloth. Lastly, there is mention of a small coffer (*cofre*) containing the *marca real*, or official tax stamp. Also in this box were located nine needles (*punzones*) for determining the purity (*quilataje*) of gold.²⁴⁰

These last items, the punzones, or assaying needles, require some explanation. Determining the purity of gold was always crucial, especially when much quinted gold from the early years consisted of Indian jewelry and ritual objects. Worked objects, stolen from living subjects and from graves alike, were usually composed of less-than-pure gold. Most of these priceless artworks had been intentionally alloyed with silver or copper, causing much consternation and disappointment among their destroyers. Other taxpayers tried to defraud the crown by withholding purer gold and paying quintos with alloy. Also, as noted in Chapter 2, gold does not occur freely without some natural alloying, usually with silver, so the determination of purity, or karat, was of great importance.²⁴¹ The Spanish in the sixteenth century had a limited understanding of the nature of metals, to be sure, but they knew the difference between ten- and twenty-karat gold. By sight alone an experienced person, usually a jeweler, could guess karat within a narrow margin, high-karat (20 k+) being quite yellow and low-karat (8-16 k) approaching the color of silver or nickel. To determine purity down to the grain, or one-sixth of a karat, however, required certain tools.

Had early Spanish assayers known the specific gravity of gold, they might have used Archimedes' principle to determine the purity of a sample by measuring its weight and volume in water. They did not understand the chemistry of this or any other metal with such precision, however, so the most reliable method of assaying gold in the sixteenth century, without resorting to smelting, was the touchstone (*pedra de toque*). This ancient method, dating at least to the early Greeks, involved the rubbing of a gold object against a certain black, flint-like stone and judging the streak. The process, being simply color-based, was too subjective, and at some point, probably in the Middle Ages, calibrated “touch-needles” were added. Agricola described the use of these needles in detail. He claimed that in the absence of a furnace, or when the object to be tested could not, as in the case of a coin or a piece of jewelry, be smelted without destruction, the use of touchstone (*Goldstein*) and needles was the best method available for establishing fineness.²⁴² The touch-needles were made, by a jeweler or alchemist, presumably, of varying alloys of

²⁴⁰ AMQ misc. #104, minas de Zamora, 1561-67, f.191.

²⁴¹ “Karat” comes from the Arabic, *qirat*, a kind of seed measure, but expressed as a fraction of 24, e.g. 14/24=14k, or 58.33% fine--not to be confused with “carat,” a weight measure for gemstones.

²⁴² Agricola, *De Re Metallica*, Hoover trans., 252-60, ill. 255. See also Biringuccio, *Pirotechnia*, Smith & Gnudi trans., 204, 359. Biringuccio mentions the use of these devices, but gives no explanation of their manufacture. Barba, in *Arte de los Metales*, Douglass & Mathewson trans., 203-06 gives a similarly brief

copper, silver, and gold, and were marked accordingly. In Quito, in 1597 for example, a jeweler was commissioned by officials of the Real Hacienda to fashion three tax stamps and twenty-one touch-needles.²⁴³ The color of the gold to be tested was compared with the needles, then the streak of both the chosen needle and the object on the touchstone were compared, and the purity thus determined by trial and error. Since the severance tax was a fraction, one did not need to determine purity to pay. Still, the crown favored standards, and encouraged assayers to determine karat as precisely as possible; it was in fact in their own best interests, since the assayer's wage was a percentage of the amount of gold registered. "*Buen oro*," the unit of choice for most of the period, was set by the crown at 22½ k (93.75% fine), but other standards existed as well, such as "*Oro de Quito*," set at 19½ k (81.25%). Twenty-karat gold (83.3% fine) was considered standard in much of the Gobernación of Popayán until at least the mid-seventeenth century. Whatever the prevailing purity standard, once karat was determined, taxes could be reduced to the universal accounting unit of *maravedies*, if need be.

A single, universal unit of account in colonial times, the maravedí was nevertheless problematic. First of all, the copper maravedis used as currency in Castile never made their way to the Americas, rendering small change transactions difficult. Secondly, the massive production of silver relative to gold in the sixteenth and early seventeenth centuries led to changes in the value of the gold peso. Initially set at 450 maravedis, in 1579 the gold peso was recalibrated at 556 maravedis and raised again, to 589 maravedis, in 1600. In this same time period, the value of gold relative to silver had jumped from ten-to-one to just over twelve-to-one. These adjustments were somewhat confusing, as the purpose of the revaluations was to maintain a two-to-one relationship between the gold peso (later known as the *castellano*) and the silver peso (*peso duro* or *patacón*). The value difference was accounted for in the differential weights used, with the gold peso at c. 4-4.6 g and the silver peso at c. 35-40 g. Real Hacienda officials in Quito, always starved for tradable currency, often purchased Peruvian silver coin with locally-produced gold ingots (there was never a mint in the audiencia), and usually offered their gold bullion at an attractive discount. Although it is not clear exactly how it operated, Quito seems to have developed a kind of bullion exchange during the height of the so-called "age of silver." In any case, gold would certainly have offered Lima merchants a hedge against the declining value of silver.

Miners and gold traders who were willing to pay taxes initially dealt with a licensed assayer (*ensayador y fundidor*), usually a jeweler who had bid for the office and worked out of a private residence. Before Quito became the seat of the Audiencia, however, official *casas de fundición* were constructed in the already-established, de facto capital, and also in Cuenca, Zamora, Cali, Anserma, and Cartago. In 1556 the ledgers of the real caja of Quito record payments made to the caciques of Panzaleo for building materials gathered for the construction a separate *casa de fundición*. Lumaná, a cacique of Sigchos, was also compensated for the labor of four of his tributaries, who actually undertook the construction of the building.²⁴⁴ In Cuenca in 1559 Indians of the crown-held *encomienda* of Tiquizambe were paid fifty pesos gold for building that emerging city's *casa de fundición*. The Spanish civilizing process in Cuenca also entailed the simultaneous construction of a public jail, which netted the Indians of Macas sixty-five pesos in day-wages (*jornales*).²⁴⁵ Although it is not clear if official buildings or private residences were used, the *casas de fundición* of Cali and Cartago were operating by 1551, and that of Anserma before 1558.²⁴⁶ Much later, in the late seventeenth and early eighteenth centuries, *casas de fundición* would be established at Barbacoas, Iscuandé, Raposo and in the Chocó.

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description of the touch-needle system, and offers a good illustration of the basic kit of the *casa de fundición* in Spanish America.

²⁴³ ANHQ Real Hacienda, caja 38, vol. 2, 1597, f.118v. Here a platero named Francisco Velásquez Samaniego was paid 110 pesos "plata corriente" for "opening" (*abrir*) three marcas reales and 21 "punzones para quilatar el oro y plata." The same method was apparently in use a century later, as Real Hacienda ledgers again mention the purchase of "unas puntas de tocar oro de todas leyes," along with 24 "quilateras de fierro" (possibly iron weights, but more likely misnamed alloy touch needles, ANHQ Real Hacienda, caja 7, 12-xii-1697).

²⁴⁴ AGI Contaduría 1538, 1550s quinto records, f.16a.

²⁴⁵ *Libros de Cabildo I*, Cuenca, (2-x-1559), 227-9.

²⁴⁶ See Zamira Díaz, *Oro, sociedad y economía*, 105-107.

On 3 June 1535 the great conqueror of the northern Andes, Sebastián de Benalcázar, paid some 3,000 pesos in quintos, the true fifth, on over 15,000 pesos worth of “oro bajo y joyas,” or gold alloy and jewelry. Thus opened the era of European precious metals exploitation in Quito, and, as in early Peru, the first metal treasure to be quinted was entirely comprised of stolen Indian artwork, mostly ornamental and religious objects. Sometimes items were listed, as in the case of an early Quiteño, Pedro Martín Montanero, who paid half the value of “a globe (*coco*) and disk (*tejuelo*) of gold said to have been taken from a grave (*sepultura*).”²⁴⁷ Since funerary regalia was treated legally like war booty, and thus subjected to taxes of up to fifty percent, early Spanish plunderers quickly learned to melt items down and present the resulting “scrap” bullion to royal officials in order to pay only the fifth, or twenty percent. Plunder of this accumulated Indian wealth continued throughout colonial times, but theft was eclipsed by mining production with surprising speed.²⁴⁸ In these same libros de fundición, the first entry of taxes paid on *oro de minas*, or mine gold (gold dust), in Quito came on 12 March 1537, less than two years after the conquest of the highlands was completed. The crown encouraged the early establishment of mines by lowering the mine-gold tax in Quito to ten percent, the *diezmo*, a concession which was initially intended to last five years. Similar concessions would be granted to miners in other areas, and would often be renewed again and again until the mid-seventeenth century, when gold taxes were universally lowered to the *veintavo*, or five percent.

Table 1. Gold Registered in Quito, 1535-1541 (in pesos de buen oro of 450 maravedis):

<u>YEAR</u>	<u>Grave and Stolen Gold</u>	<u>Mined Gold</u>	<u>TOTAL registered</u>
1535	17,352		17,352
1536	12,545		12,545
1537	10,297	1,097	11,394
1538 (office closed)	--	--	--
1539	24,308	12,000	36,308
1540	11,106	11,360	22,466
1541 (to Sept.)	113	13,780	13,893
TOTAL (7 years)	75,721	38,237	113,958

*source AGI Contaduría 1536²⁴⁹

Most mining, as will be seen in the following chapter, was actually done by African slaves or coerced Indians, the latter usually held in encomienda. Since Indian numbers were highest in the sixteenth century, much gold in the early period was collected as tribute. This practice of collecting tribute in gold dust would continue in the Napo River basin and select other districts until the eighteenth century, but tribute payment in gold was most substantial in the Quito area only until about 1580, when this activity was partially suppressed by law in the highlands. Encomenderos increased their tribute incomes in gold still further by forcing Indian caciques to pay taxes prior to remission. Thus one can see, especially during the years 1550-1580, that gold procured by Indian miners, much of it apparently independently gathered and brought to Quito by caciques, constituted a large portion of the bullion registered in Quito's casa de fundición. Of a total of some 216,544 gold pesos registered in Quito between 1553 and 1557, the portion brought to the casa de fundición by Indians amounted to approximately 77,819 pesos, or just over one third.²⁵⁰ Between January 1569 and September 1576, Indians registered at least 108,350 gold pesos out of a total of 165,827 not originating in the Gobernación of Popayán.²⁵¹ By this time a great deal more gold was being transported from mines all over Popayán province to Quito by merchants and miners wanting to take

²⁴⁷ AGI Contaduría 1536, Quito quintos f.28, 13-iii-1539.

²⁴⁸ See, for example, Jorge Garcés G., ed., *Testamento del Señor Capitán Don Sebastián de Benalcázar (1551)* (Quito: Archivo Municipal, 1935), 24. Among Benalcázar's belongings were six disk-shaped ingots (*tejuelos*) of gold of various karats weighing almost 1,500 pesos, some labeled “oro de minas.”

²⁴⁹ Szaszdi, “Preliminary Estimate of Gold and Silver Production in America,” 177, also summarizes these records. His calculation of total production for the period is slightly lower, at 105,222 pesos, 6 tomines.

²⁵⁰ ANHQ Real Hacienda, caja 34, libro de fundición, vol.2.

²⁵¹ ANHQ Real Hacienda, caja 35, vol.2. Most entries were for caciques, but others seem to have been individual, village Indians.

advantage of tax breaks. This northern gold aside, the Indian-registered figure still represented some two-thirds of all gold produced locally. According to the fundición records, tributary gold was collected from Indians from many villages and regions, including Sigchos, Angamarca, Chimbo, Tiquizambe, Cañaribamba, Latacunga, Tungurahua, Cayambe, Carangue, Otavalo, Guaca, Pimampiro, Tuza, Tulcán, Mira, Los Yumbos, and others. It should also be noted that almost all gold registered by indigenous persons in the sixteenth century was taxed the full fifth while much of that registered by non-Indians (mostly Spanish merchants and encomenderos) was charged ten percent (the diezmo, not to be confused with the Church's tithe) or less.

Gold collection from Indians held in encomienda continued, to be sure, but after the civil wars of the mid-1540s, gold mining in Quito became much more capital intensive and was largely overseen by Spanish specialists. Miners flowed into the placer districts around Santa Bárbara, Loyola, and Valladolid, and soon made their way to the jungle lowlands around Macas, east of Cuenca, and Zamora, east of Loja. Some time in the mid-1550s, gold was discovered at Zaruma. The southern bonanzas were only part of the picture. At the same time, in the 1550s, especially, gold was discovered in the lowlands around Mocoa, Sibundoy, and Los Abades, near Pasto, in the highlands to the north, at Almaguer, and in the several river basins surrounding Popayán. Some of this Popayán gold would flow northward, eventually to Cartagena and then Spain, but much of it would find its way south to Quito's casa de fundición.

Apparently recognizing the need for a constant flow of precious metals in the booming capital, Quito's early bureaucrats sought out means of stimulating the long-distance gold trade. Gold specifically said to originate in Popayán first appeared in the libros de fundición of Quito in 1549.²⁵² Popayán gold was to be taxed in Quito at the diezmo, or ten percent, for at least twenty years afterwards. Still, little gold came to Quito before 1569, when this concession was extended and improved to the *dozavo*, or just over eight percent. Quito's Real Hacienda officials seem to have been consciously competing with the northern fundiciones of Cali, Cartago, and Anserma, and their continued tax incentives seem to have worked. Quito itself was not located in gold country, so it added tax incentives to mercantile and administrative services as a means of attracting precious metals from its own administrative margins. Further mandates stated that all gold collected in the southern cajas of Zamora, Jaén, Loja, and Cuenca were to be remitted to the capital prior to transshipment to Guayaquil, though this did not always happen due to transport and other difficulties. Thus, by effectively monopolizing gold collection, at least for a time, Quito was able to almost artificially transform itself into the principal hub of trade in the northern Andes. It was no Potosí, to be sure, but for almost a century Quito was a legitimate center, a kind of golden pole.

Table 2. Gold Registered in the Audiencia of Quito, 1548-1599 (not including fundiciones of Cali, Cartago, or Anserma), in pesos de buen oro (c. 4.2 g, 22.5 k Au each)

<u>Year</u>	<u>Total</u>	<u>Year</u>	<u>Total</u>	<u>Year</u>	<u>Total</u>	<u>Year</u>	<u>Total</u>
1548	45,100	1561	74,511	1574	237,280	1587	123,730
1549	48,768	1562	74,511	1575	223,430	1588	186,530
1550	53,420	1563	74,511	1576	233,500	1589	156,190
1551	110,640	1564	74,511	1577	219,000	1590	131,280
1552	108,410	1565	74,511	1578	227,950	1591	107,170
1553	99,255*	1566	151,460	1579	278,270	1592	no record
1554	99,255	1567	218,980	1580	296,330	1593	95,590
1555	99,255	1568	214,860	1581	257,900	1594	150,310
1556	99,255	1569	132,820	1582	406,790	1595	74,720
1557	99,255	1570	166,520	1583	187,650	1596	130,710
1558	99,255	1571	174,280	1584	212,980	1597	80,720
1559	104,201	1572	142,550	1585	156,770	1598	176,830
1560	74,511*	1573	225,920	1586	212,170	1599	127,680
					TOTAL	(all years)	7,632,005

²⁵² ANHQ Real Hacienda, caja 34, vol.1, f.104v. Benalcázar's booty registries of the 1530s probably also originated in part in Popayán. Mined gold from this district seems to have first entered Quito about a decade later.

*averages based on multi-year, unitemized totals; sources for all totals include AGI Contaduría 1538, 1540, 1468, 1469, 1470 and ANHQ Real Hacienda, Cajas 1-37.

The southern goldfields of Cuenca, Zamora, Zaruma, and Yaguarsongo would all play a significant role in the creation of Quito's "golden age," but gold originating in the Gobernación of Popayán was also very important, especially after 1560. In 1569, for example, oro en polvo, or gold dust from Popayán comprised just over two-thirds of all gold registered in Quito's casa de fundición, or 44,198 pesos out of a total of 67,505.²⁵³ All receipts from the southern mines of Quito combined suggest a total registry of just under 64,000 pesos in 1569, so gold originating in Quito proper amounted to approximately 87,000 pesos. Popayán gold registered in Quito in this year, then, amounted to almost exactly one third of the total of 132,820 pesos (c. 611 kg). Zamira Díaz estimates that about 65,000 gold pesos were registered in the northern fundiciones of Popayán in 1569, bringing Popayán's share of total production to approximately 110,000 pesos, or about fifty-five percent.²⁵⁴ Gold production in Popayán, as Díaz's figures from Cali, Cartago, and so on suggest, appears to have fluctuated wildly from year to year between 1551 and 1599. My feeling is that some of this apparent instability may be accounted for by gauging the importance of overland trade in raw gold to Quito.

As the following table demonstrates, Popayán gold by the 1570s, at least, constituted over seventy percent of all gold taxed in Quito's casa de fundición. Gold produced in the southern highlands was also peaking during this time, but most of it was taxed at the smeltries of Zamora, Loja, and Cuenca. The resulting quintos, diezmos and other taxes were sent on to Quito's Real Hacienda officials, as mandated, but the remaining eighty to ninety percent of southern gold production could have gone anywhere. It is very likely that much of this taxed gold also made its way to Quito merchants, but other outlets included Guayaquil (the normal destination for Quito's remittances) and, more significantly for the extreme southern districts, Paita and thence Lima. Because it could not easily control bullion flows in the southern highlands, Quito depended as much on a steady flow of gold southward from the more-or-less isolated upper Cauca Valley as it did on gold flowing northward from Zamora and Zaruma. This flow was assured to some extent by trade with the relatively nearby Pasto region, which boasted important mines to the east and west, but gold from mines located further to the north must have been drawn southward in part by Quito's tax incentives. By at least 1569, as noted, gold originating in the Gobernación of Popayán was taxed at the highly attractive rate of 8.33% (the *dozavo*, or twelfth). No other casa de fundición could boast such a rate for mined gold, and as a result merchants plying the Quito-Popayán trunk line quickly set about supplying the northern miners with goods in exchange for this privileged gold.

Table 3. Popayán Gold Registered in Quito's Libros de Fundición, 1569-1576:

<u>YEAR</u>	<u>Gold Pesos reg. Quito</u>	<u>Gold Pesos orig. Pop.</u>	<u>% of Quito fundición</u>
1569	67,505	44,198	65.47
1570	56,660	33,363	58.88
1571	71,923	53,896	74.93
1572	80,610	59,887	74.29
1573	65,505	48,528	74.08
1574	91,618	67,232	73.38
1575	87,595	61,098	69.75
1576	69,416	56,803	81.83
TOTAL	590,832	425,005	avg. 71.58% of total

*source ANHQ Real Hacienda, caja 35, vol.2

Complete libros de fundición for the crucial decade of the 1580s are not available, but fragments from 1580 and 1584 offer some clues. Between mid-May and early July of 1580 the Quito assayer smelted and marked 12,439 pesos of fine gold. Of this amount, 11,092 pesos had originated in Popayán, now favored by the older tax concession of diezmo (v. the usual quinto paid by other regions), constituting some

²⁵³ ANHQ Real Hacienda, caja 35, vol.2.

²⁵⁴ Díaz, *Oro, sociedad y economía*, 132. Díaz only provides a bar graph, unfortunately, where a precise table would be more useful.

89% of the total.²⁵⁵ Another fragmentary record for November and early December of 1584 shows a total registry of 12,121 pesos of fine gold. The Popayán portion was offset somewhat during this period by several shipments of gold originating in the mines of Zaruma (which was also temporarily favored by a diezmo concession at this time), but the northern gold still constituted 78% of the total, or 9,458 pesos.²⁵⁶ If these fragments are any indication of overall trends, it would seem that Popayán gold was flowing into Quito in ever increasing amounts, perhaps up to 80% of the total smelted in the city in the 1580s, up from just over 70% in the 1570s. Production in some districts of the southern highlands was also peaking in the early 1580s, though only the diezmos and quintos, totaling 10,000 to 15,000 pesos per year, seem to have made their way to Quito (taxed bullion from the south no doubt also entered Quito merchant houses). An anonymous relación of about 1580 claimed that miners in Zamora paid some 10,000 gold pesos per year in diezmos, Zaruma's miners paid some 2,000 to 3,000 in diezmos (a strong indication of the district's early weakness, as these numbers translate into only 20,000 to 30,000 pesos of low-karat gold per year) and the Yaguarsongo district of Santiago de las Montañas was likewise yielding a yearly diezmo of approximately 2,000 to 3,000 pesos.²⁵⁷ These estimates are supported by a region-wide account summary undertaken in Quito in 1589, which showed the southern caja remissions in the 1580s to have ranged from 7,000 to over 20,000 gold pesos per year in the 1580s.²⁵⁸ Region-specific tax breaks seem to have expired toward the end of this decade, and were under review for renewal during the 1589 visita.

By the mid-1590s, Quito's fundición was recording up to 92% percent Popayán gold. This extreme dependence on the northern governorship was all the more notable at a time when the southern cajas of Loja and Cuenca were not remitted to Quito, but rather were being sent overland to Paita and thence to Panama and Spain.²⁵⁹ On 11 November 1597, a royal cédula granted the diezmo to all gold originating in the Audiencia of Quito for three years, leveling the field somewhat and encouraging a northward flow of bullion to correspond with the already overwhelming southward one.²⁶⁰ As the table below demonstrates, this cédula temporarily encouraged southern producers to send gold to Quito's fundición, lowering Popayán's proportion to just under 80% in 1598. Quito was at a disadvantage in this endeavor, however, since the southern cajas were also allowed the universal diezmo concession during this time, part of a crown effort to stimulate mining exploration and expansion in a period of increasing fiscal pressure in Europe. Partly for this reason, Popayán gold continued to dominate in Quito, approaching 90% of the total once again by 1600. The casas de fundición of Cali and Cartago were apparently still saddled with higher tax rates during this time, as gold originating as far north as the Queibraloma mines of Anserma was recorded in Quito in 1599.²⁶¹ Other Popayán sources named during these years were Jelima, Chisquí, Almaguer, Pasto, Pupiales, and Mocoa, while Quito sources included Tuza, Quijós, Macas, Zamora, Santiago de las Montañas, Santa María de Nieva, Cangaza, Valladolid, Loyola, Zaruma, Cañaribamba, and Santa Bárbara.

Table 4. Popayán Gold Registered in Quito's Libros de Fundición, 1595-1600:

<u>YEAR</u>	<u>Gold Pesos reg. Quito</u>	<u>Gold Pesos orig. Pop.</u>	<u>% of Quito Fundición</u>
1595	52,435	47,299	90.20
1596	67,442	62,410	92.54
1597	57,273	51,965	90.73
1598	58,594	46,129	79.65
1599	56,804	48,088	84.66
1600	51,985	45,884	88.26
TOTAL (6 years)	344,533	301,775	avg. 87.67% of total

²⁵⁵ ANHQ Real Hacienda, caja 1, 14-v-1580, ff.171-86. (original page numbers used).

²⁵⁶ ANHQ Real Hacienda, caja 1, 2-xi-1584, ff.143-150v. (original page numbers).

²⁵⁷ Ponce Leiva, *RHGQ* 1: 488-89.

²⁵⁸ AGI Contaduría 1538, ff.179-224.

²⁵⁹ Szaszdi, "Preliminary Estimate of Gold and Silver Production in America, 1501-1610," 183. Szaszdi notes that remissions from the caja real of Cuenca for the years 1596, 1598, 1599 and 1601-03 may be found in AGI Contaduría 1468, 1469, 1470 and 1862.

²⁶⁰ ANHQ Real Hacienda, caja 37, libro de fundición 1595-1600, f.123v.

²⁶¹ *Ibid.*, f.194v.

*source ANHQ Real Hacienda, caja 37

The tables above demonstrate that gold production in the entire Kingdom of Quito during the sixteenth century was quite substantial, but it remains to be shown where this gold flowed beyond the city of Quito itself. A clear sense of this next stage is hinted at by Tamara Estupiñan Viteri's recent (1996) study of notarial records for the same period. Estupiñan notes that bullion exports registered in Quito between 1568 and 1603 consisted largely of gold, though the amounts appear suspiciously low and inconsistent (ranging from a few hundred to over 25,000 pesos annually). An interesting trend is visible, however, as beginning around the turn of the seventeenth century registered exports began to consist largely of marked silver, though again without much consistency (ranging from under 100 to over 13,000 pesos duros annually between 1591 and 1623).²⁶² I suspect a good deal more bullion was leaving the *audiencia* than is noted here, but it seems clear that this shift reflects the declining fortunes of Quito's gold mines. As other data presented by Estupiñan suggests, the shift to silver exports may well reflect the corresponding growth of the highland textile industry and its growing links to Peru (though established in the 1560s, this industry expanded most rapidly in the early seventeenth century).

One may also observe records relating the size of Quito's official Real Hacienda remissions for some years of the sixteenth century. Periodic overland shipments from Quito to Guayaquil of Real Hacienda *caudales*, or tax receipts, of 10,000 to 30,000 pesos are recorded in surviving account summaries from the 1590s.²⁶³ In 1592 a shipment of Peruvian bullion was recorded and itemized at Panama. Most of the shipment, as might be imagined, consisted of silver, largely from Potosí (in excess of 1,000,000 pesos), but 31,646 pesos of fine gold (22.5 k) were also counted. Of this sum, 24,539 pesos, or 77.54% of the total had originated in Quito, picked up at Guayaquil by the bullion fleet sailing from Callao.²⁶⁴ The remainder of the gold was from other parts of Peru, some perhaps originating in the placers of Carabaya, but most apparently looted from graves (listed as "oro de huaca"). This brief glimpse into the hold of a late sixteenth-century treasure ship does not account for much of the production noted above, but it suggests that in the so-called Age of Silver Quito was considered Peru's gold cache. Where the bulk of this gold traveled to remains to be proved, but it is likely that most eventually landed in Spain (possibly by way of Lima). Szaszdi, whose estimates of Quito gold production are important, if generally imprecise, has gone so far as to suggest that between 30% and one-half of all gold produced in the Americas was retained in the colonies between 1500 and 1610, mostly by merchants.²⁶⁵ If this was true in the case of Quito, we would expect to see some evidence of increased lending and hence capital investment in textile manufacture, land improvements, and internal commerce. This hypothesis, too, remains to be proved.

1600-1640: The Boom Ends

As is evident in the charts above, gold production in Quito underwent a precipitous decline in the 1590s. By 1600 the *audiencia* entered a mining crisis from which it would never recover. The industry would be mildly resuscitated in the first and third decades of the seventeenth century, but these brief bursts of activity seem only to have been the last gasps of a dying organism. The organic metaphor is not entirely inappropriate, in fact, as the decline of the mines was directly linked to the decline in Indian numbers. The *audiencia* in general, but especially the harsh mining zones, had become graveyards for tens of thousands of native Americans. Those who had not perished from mistreatment, hunger, or disease had fled, migrated to non-mining zones or, in some cases, openly rebelled. Uprisings among the Jibaroans, or Shuar of the

²⁶² Tamara Estupiñan Viteri, "El mercado interno en la Real Audiencia de Quito, siglos XVI y XVII" (Maestría en Historia Andina, FLACSO, 1996), 93 (Cuadro 10).

²⁶³ Some of these records may overlap with Estupiñan's, but some clearly do not; see, for example, ANHQ Real Hacienda, caja 1, 22-x-1601, f.39v., where over 15,000 pesos fine gold were sent with a merchant to Guayaquil by Real Hacienda officials. Merchants normally charged a 5-7% commission on all bullion shipments, private and public.

²⁶⁴ AGI Contaduría 1540 (26-x-1592). See also AGI Contaduría 1540 (Cartas 1608), which mentions a Peruvian *tesoro* sent from Portobelo (Panamá) in 1608. Here 1,042,991 pesos of bulk silver (*plata ensayada*) and a miniscule 321 pesos of fine gold are recorded. Most of this small amount of gold, some 261 pesos, was however from Quito. An additional 67,796 pesos in silver coin (*patacones*) was less than one-tenth (6,181 pesos) of Quito origin.

²⁶⁵ Szaszdi, "Preliminary Estimate of Gold and Silver Production in America," 223.

southern Oriente and the Andakis of the Mocoa district, in the northern Oriente, had created an extreme contraction of mining frontiers in the audiencia. Other mines, such as the placers north of Cuenca and around Pasto, had simply played out, labor shortages notwithstanding. The hardrock mines of Zaruma struggled on, but Indians could not be made to stay and Africans were deemed too expensive. Only the Pacific lowlands remained to be conquered, and with the decline in exploitation of highland and Oriente gold deposits, some Spanish elites shifted their focus westward.

Quito did not give up hope for the older districts, to be sure, but few remedies seemed viable. In response to one attempted solution, a major conflict arose in the 1620s between the casa de fundición of Quito and those of Loja and Cali. Quito had gained a new concession from the crown and was now charging only a fifteenth (the *quinzavo*, or 6.7%) on all gold originating in mines (as opposed to graves), no matter how distant. Though presented as a means of stimulating production, an aid to miners, this was an obvious ploy to draw gold away from other, rival collection centers. The Real Hacienda officials of Loja and Cali petitioned for relief, claiming that they were left with such minimal income that they could not even pay their own salaries. The mines of both districts were in crisis, and now what little gold continued to be produced was being siphoned off by the Quito treasury, in spite of the fact that it was located almost a thousand kilometers distant--over extremely rough trails--from either town. The crown responded by granting equal footing, the *quinzavo*, to Cali and Loja, but the mining industry did not recover.²⁶⁶ Quito, as a result, essentially disappeared from view as a major gold market in the Indies after the first quarter of the seventeenth century. Quito's treasurer, Pedro de Vera, called for a new tax concession in 1632, but his remarks were hardly hopeful:

...after [the *quinzavo* concession ended] there has been a great shortage [of gold] and very little is brought in and it would serve Your Highness to renew the said concession (*merced*) for another ten or twelve years in consideration of the costs that are involved and since the mines of this land are becoming exhausted it would serve to animate them, that they should be worked again, and that new ones be searched out...²⁶⁷

These were the twilight years of the Morga presidency, and it seemed that the Audiencia of Quito shared a similar trajectory with its most famous bureaucrat. A lifetime of opulence and bold "conquests" had ended in a quagmire of accusations, failed cosmetic remedies, decadence, and gout. The mines were dead, an entire indigenous underclass was in danger of disappearing and now Dutch heretics threatened to destroy the weakly-defended settlements of the Pacific coast. The celebrated textile industry of Quito, which J.L. Phelan dubbed the "Sweatshop of the Andes," would become relatively important in the meantime, but it was simply not well enough developed or situated to offer more than a tenuous lifeline to the southern Andean silver economy, which was itself entering a period of crisis by this time. As Kenneth Andrien has shown, the so-called seventeenth-century depression was real and immediately felt throughout Peru, Quito being no exception. Without a new gold or silver cycle to revive it, Quito's fortunes would continue to

²⁶⁶ For Loja, see AGI Contaduría 1540, carta 13-vi-1629, where Loja official Andrés Delgado de Segovia complained that the caja real could not keep up with annual bills of 9,000 pesos, especially when quintos from Zaruma had fallen to only 966 pesos by 1628. For Cali, see ACC Sig. 305, 14-iv-1622, where the governor of Popayán, Juan Menéndez Márquez, issued a temporary cédula ordering that mined gold be sent to Cali, and not elsewhere, for smelting. This bold gesture came in response to cries from Cali's oficiales reales, who claimed that locally-produced gold was flowing to Quito because of the *quinzavo* grant. Their argument was stronger than Loja's considering that Cali had been charging the full quinto, rather than the diezmo, for some years. Further, it was claimed, gold was being lost in river crossings on the way to Quito and local merchants were making profit (*granjería*) at the crown's expense by trading miners "jewelry and chains" for their "oro en polvo."

²⁶⁷ AGI Contaduría 1540, 1624-29 accounts. The original *quinzavo* *merced* had been granted for eight years beginning in 1620 due to failing mines and chronic shortages of Indian labor. The request of the treasurer is found in the same legajo, dated 12-vi-1632. ("...despues a faltado y es muy poco lo que se trae y sirvase V Magd de prorrogar la dha merced por otros diez o doce anos en consideracion de los gastos que tienen y que se van acabando las minas desta tierra y es bien animarlos que trabajen y busquen otras...").

decline into the early nineteenth century, with only a brief upswing in tropical exports toward the end of the Bourbon period.²⁶⁸

Table 5. Gold Registered in the Audiencia of Quito (excluding fundiciones of Cali, Popayán, and Cartago), 1600-1639 (in Castellanos de buen oro)

<u>Year</u>	<u>Total</u>	<u>Year</u>	<u>Total</u>
1600	51,370	1610	45,260
1601	55,130	1619	11,588
1602	101,360	1624	37,089
1603	115,950	1625	64,267
1604	58,800	1626	83,139
1605	62,600	1627	69,549
1606	48,200	1628	53,880
1607	40,200	1629	43,178
1608	45,260	1639	2,855
1609	45,260		
		Total (all years):	1,035,835

*Source AGI Contaduría 1540, 1862, ANHQ Real Hacienda, Cajas 1-37.

In spite of the compounding crises of the early seventeenth century, however, the mining sector in Quito was not forgotten. Officials in Loja complained in the late 1620s that Quito had bankrupted the local *caja real* by offering tax breaks to Zaruma's few remaining gold miners. The *quinzavo* (6.7%) offered in Quito after 1620 had drawn so much gold away from Loja, which was still saddled with the *diezmo* (10%), that the *caja* could not cover its minimal annual expenditures.²⁶⁹ Loja's officials recognized the decadence of Zaruma's hardrock mines, but claimed that official corruption and general tax evasion were exacerbating the situation significantly. They claimed that, despite the miners' hand-wringing testimonies to the contrary, Zaruma still boasted at least fourteen stamp mills in constant operation, each capable of producing three to four pesos of gold per day. Alongside this milled and refined hardrock gold, seventeen or eighteen merchants (*rescatadores de oro*) purchased at least twelve pesos each per month from free-lance Indian stream panners. These figures suggested a yearly production of some 20,000-25,000 gold pesos at Zaruma, well above the amounts represented in tax ledgers. Contaduría officials in Spain lowered Loja's gold tax to the *quinzavo* and authorized an investigation of the Zaruma mines. The *visita*, which took place around 1630, resulted in a general revolt; the miners refused to pay an estimated 30,000 pesos in back *quintos* and shut down their mines and mills in response. They only agreed to restart the mills when the burden was reduced to 12,000 pesos and threats of confiscation were removed.²⁷⁰

Official attempts to rationalize mining tax collection, such as the Loja initiative seen here, did little to stimulate a gold mining recovery in the Audiencia of Quito. If anything, the punishing *visitas* seriously dampened whatever enthusiasm for investment that might have remained in the mining camps by the 1630s. In an economy as fractured and isolated as seventeenth-century Quito's, gold miners inevitably formed quasi-independent enclaves with peculiar economic features only fully understood by insiders. Mining was a complex, extremely risky, and cyclical business, a thing which crown officials bent on increasing or at least stabilizing *quinto* revenues repeatedly failed to grasp. Unlike large-scale agriculture, which tended to produce revenue in a relatively stable fashion over the long term, mining, especially gold mining, was inherently unpredictable. In an era marked by very limited geological understanding, one year's bonanza (always referred to as a God-given bounty rather than a result of specialized knowledge) was another year's bust. For this reason miners often appeared to have hidden more gold than they actually could have produced, a problem of understanding both for contemporary officials and for historians interested in calculating production volume.

²⁶⁸ Kenneth J. Andrien, *Crisis and Decline: The Viceroyalty of Peru in the Seventeenth Century* (Albuquerque: University of New Mexico Press, 1985), and *The Kingdom of Quito, 1690-1830: The State and Regional Development* (Cambridge: Cambridge University Press, 1995).

²⁶⁹ AGI Contaduría 1540, carta, 13-vi-1629.

²⁷⁰ *Ibid.*

That Zaruma could have theoretically produced 20,000 castellanos of gold per year in the 1630s is not unreasonable--in the 1570s the district had probably yielded four times this amount. To claim that this figure was actually achieved based on a calculation of optimum productive capacity, however, is to ignore the many other factors involved in mining and refining. Mines were deeper and more expensive to excavate now, and Indian mitayos were increasingly hard to come by. Ignorance of this breach between potential and reality, I would argue, was as important a factor in the decline of the southern gold economy as Indian demographic collapse. As will be seen below, similarly zealous and ignorant official meddling would hobble gold miners in the new placer mines of the wet Pacific littoral at the end of the seventeenth century.

The Long Decline: Gold Production in Quito, 1640-1821

In May of 1726 a silversmith named Francisco Murillo petitioned the Audiencia of Quito for a space to practice his new office. He had just been named official assayer and smelter for the crown, but he had not been given keys to the “casa de fundición.” The audiencia claimed that unfortunately there was no such place in existence, and that as long as they could remember the official smelters and assayers had simply operated out of their private shops in town. Murillo was not convinced of this, and he set out to prove, almost two hundred years after its initial founding, that Quito had indeed had a casa de fundición, and that the building was still standing. The determined platero collected memories from older silversmiths, some of whom recalled a set location behind the audiencia palace, apparently near the royal jail. He also examined documents in the audiencia's archives which further bolstered his claim. Eventually, Murillo presented his employers with a firm proposition: the casa de fundición, so long neglected, was still in existence, only it was now serving as an apartment for a court door-guard. The assayer demanded that this servant of the audiencia, the *portero* Francisco Pico, be evicted so that he may reclaim his due workspace. The audiencia sent an inspector to examine the compact apartment, indeed immediately adjacent to the court jail, and evidence of a former oven of some kind and a royal seal painted on the doorjam outside were found. The place, it was agreed, might have served as a smeltery at some point in the distant past. Unconvinced of the need to kick out a reliable tenant, however, the audiencia turned down Murillo's request.²⁷¹

Murillo's petition reveals more than a dispute over a workshop. In fact, it symbolizes the incredible decline in gold receipts through most of the seventeenth and eighteenth centuries in Quito. By 1726, only the oldest silversmiths in town could remember there ever having been an official smeltery. Murillo, in his quest for a rent-free shop in the crowded downtown capital, would even claim that re-opening the casa de fundición would lead to a renewed influx of gold into the city. This seemingly absurd “if-we-build-it-they-will-come” argument was scoffed at by the audiencia's members; they knew all too well that Quito was no longer a major gold producer. The southern mines of Zamora and Yaguarsongo were overrun with recalcitrant Indians, the mines of Zaruma were experiencing a new labor crisis with the ban on Indian mita labor, and the mines of the northern Oriente were small works to begin with, but were even less productive now due to high transport costs and encomienda service restrictions. Most important among the many factors leading to Quito's decline, perhaps, was the re-orientation of the Popayán mines to the north. Whereas in 1590 a large portion of Popayán gold production made its way to Quito for taxation and transshipment, by 1690 this portion had dwindled significantly. Only the Barbacoas mines, which were tentatively controlled by the audiencia, were producing in the 1720s, but their gold was now taxed in the local capital of Santa María del Puerto or in Popayán, if it was taxed at all. The only gold entering Quito by the early eighteenth century came in the saddlebags of merchants, some stamped with the royal seal, some clandestine and illegal, but neither amounting to the volumes seen in the sixteenth century.

Decline in Quito, as in all mining regions, is difficult to gauge with precision. Short-term production cycles can easily lead to false impressions of long-term trends. Still, the accumulated weight of evidence, especially for the period after 1640, strongly suggests that the gold mining industry, especially in the south, was dying. Annual gold production in the southern highlands, as judged by the Loja quintos, averaged only 4,600 castellanos between 1650 and 1663, the only years for which we have continuous records, and totaled only 64,514 castellanos over this entire fourteen-year period.²⁷² Serious fluctuations appear to have plagued the mines of Zaruma during this time, as exemplified by the years 1650-52. Annual

²⁷¹ ANHQ Real Hacienda caja 10, 9-v-1726.

²⁷² AGI Contaduría 1540.

production jumped from less than 4,000 castellanos in 1650 to over 13,000 in 1651, only to drop again, in 1652, to only 1,200 gold pesos. In the following eleven years, gold output ranged from about 1,300 castellanos to about 7,000 castellanos each year. To add insult to injury, Zaruma gold, due to its low karat, was heavily discounted by merchants and crown officials; it garnered only twelve reales per castellano (1.5 pesos silver for c.4.2 g gold), compared with at least eighteen reales for a castellano of gold from Barbacoas. Gold prices aside, in none of these years did production in the southern highlands, most importantly at the venerated hardrock mines of Zaruma, approach sixteenth-century levels.

Officials in Loja had complained of this situation in the late 1620s, as seen above, but their remedies had clearly fallen short of the mark by the 1650s. In 1663, an official of the real hacienda in Loja, after summarizing the quinto records just noted, lamented his district's mining bust as follows:

the decline which this member of the Royal Hacienda has experienced has been caused by the shortage of Indians and their consumption (*consumo*) in the mining districts, and likewise the mines [have been consumed by them], such that those of the province of Zamora were terminated, leaving not a single citizen nor ingenio for many years now, and those of the Gobernación of Yaguarsongo lack ingenios and the Indians only pay their tribute to their encomenderos, taking gold from the quebradas and river beaches with such tenuousness that they can barely sustain themselves, and they live in such poverty and necessity that the greatest number of Indian miners (*curicamayos*) held by an encomendero is twenty, most having only two or three, all of them together not amounting to eighty Indians, and those held in encomienda by the Charity Hospital of Lima in the province of Zamora do not amount to forty; and the mines of the villa of Zaruma are so exhausted (*acabados*) that not even ten ingenios operate, and these continue to work not because of the interest of the dueños in recovering gold, which does not pay for itself (*no rinde para el gasto ordinario*), but rather in order to not lose their share (*acción*) of the mitayos, whose labor and rent sustains them, as if they were slaves, occupying them in other tasks, which the corregidores do not prevent for fear of losing their five-hundred-ducat salaries, annuities from the said ingenios and paid [in exchange] for supplying mitayos for them in the same fashion as when the mines were productive (*en cuya grosedad antigua*), when likewise this caja was founded, but now the decline [in income] is such that it is a rare year when costs do not exceed income by many pesos²⁷³

This crown official's assessment of the southern gold districts in the later seventeenth century deserves to be quoted in full because it expresses what would come to be a fixed notion in Quito until the late eighteenth century, at least. In a word, the Kingdom of Quito had no mines. If it did, there were no Indians to work them, or the only Indians available were intractable rebels. This fatalism and malaise seems to have been accepted without question, as if it were the will of God. Countless commentators from the mid-seventeenth century onward would remark that what mineral wealth remained to be had in the audiencia was not worth the trouble involved in extracting it. With the experiences of Zamora, Zaruma, and Yaguarsongo in mind, by the mid-seventeenth century it seemed that the buried treasures of the southern highlands had been cursed to oblivion.

But while gold receipts in the southern audiencia were in decline, and Quito itself fell from a primary position as a central casa de fundición of the northern Andes, gold mining was by no means disappearing altogether. Indeed, new mining frontiers were constantly sought out during the last quarter of the seventeenth century, leading to the development of the Napo and Punino placers in the Oriente, but much more importantly the development of major districts along the Pacific coast. These districts, in order of conquest, were Barbacoas, the Raposo-Dagua drainage near Buenaventura, and the Chocó. All three of these districts fell within the governorship of Popayán, and thus by proxy were presided over by the Audiencia of Quito. As these new frontier gold districts expanded, their produce found its way to the highland cities, especially Popayán, but also Pasto and Quito. Locally established casas de fundición, however, meant that most of the bullion which arrived in these cities had already been taxed.

Fragmentary tax records from the 1660s show production in the early Chocó and parts of Barbacoas to have been rather small. Miners on the Timbiquí River showed their account books, or *libros de sacas*, to visiting officials in 1664. Seven mine owners and administrators reported their production for 1663 and 1664 as only 2,710 gold pesos, or an average of under 200 pesos per year each.²⁷⁴ Timbiquí was a sub-district of Barbacoas, and it had been in sporadic production only since the 1630s, so low yields were

²⁷³ Ibid. (comments of Alfonso de la Cueva, 1663).

²⁷⁴ ACC Sig. 1292.

perhaps not surprising. The first quintos recorded for the southern Chocó and Raposo, from 1667-70, show production for those four years as 7,920 gold pesos, or just under 2,000 castellanos per year, with an added 4,000 pesos collected in tribute from the Noanamá Indians.²⁷⁵ Much of this gold made its way to Popayán, where most of the seventeenth-century miners and conquerors of the Chocó were based. The heavy mining burdens of these early years led to serious revolts in the Chocó in the 1680s, involving both Indians and African slaves. As a result, development of the gold fields around Nóvita and Citará would be delayed for another generation or two.

Royal treasury officials, whether in Quito or Popayán, were very attentive to the problem of collecting all types of taxes from distant mining centers, and some even made frequent, if difficult journeys to make sure that laws were enforced (and simultaneously to insure that their own interests were not being ignored). A long-standing treasurer of seventeenth-century Popayán, Bernardino Pérez de Ubillus, visited Barbacoas on several occasions, establishing the libros de sacas accounting method in 1658 and returning to check accounts in 1672. Quinto figures from the 1672 visit do not survive, but related letters reveal the crown's willingness to enforce tax collection. Apparently several miners who had failed to pay alcabalas (sales taxes) and tributes along with quintos, were stripped of their holdings, their mines placed in the care of administrators and their slaves auctioned. One delinquent debtor, a miner named Pedro de Santa Cruz, claimed that his failure to pay alcabalas was the result of his advanced age and ill health. Ubillus responded harshly, calling these excuses "frivolous evasions for failing to pay to His Majesty's dues after many years in arrears."²⁷⁶ The debts of the master could also easily reverse the fortunes of a freed slave, as happened in this case. Apparently Cristóbal Ruiz, a slave freed by Santa Cruz some years earlier, had been purchased on credit; since his former master's mortgages (*hipotecas*) remained unpaid, Ubillus had the unfortunate slave Ruiz apprehended and auctioned without hesitation.

In the early 1680s a miner and emerging caudillo in Barbacoas, Bartolomé Estupiñán y Flores, claimed that over the five-year period 1678-1682 combined remissions from Santa María del Puerto (capital of the Province of Barbacoas) to the Real Hacienda officials of Popayán amounted to some 13,000 castellanos. Given other costs paid by regional cajas, including fines, *medias annatas* (office-holders' rents) and royal *estanco*, or monopoly income, probably no more than 10,000 pesos had derived from quintos. This would still suggest a handsome 153,800 to 200,000 castellanos produced during these five years, or between 30,760 and 40,000 gold pesos annually. This rate seems high compared with registered figures from the following three years, and Estupiñán's own mines yielded only 4,000 castellanos during this five-year period. In short, some forty other miners would have had to have registered similar yields during the same five years, an unlikely possibility at this stage of regional development. A boom during these years would not have been impossible, but more precise tax records for the years following this interim suggest a more likely annual production in Barbacoas of about 15,000 to 20,000 gold pesos by the late 1670s.²⁷⁷

One surviving ledger of the caja real of Santa María del Puerto from the early 1680s suggests that registered production in Barbacoas jumped from 5,475 gold pesos in 1683 to 20,442 pesos in 1684.²⁷⁸ Some of this gold had been brought in by miners working on the Río Timbiquí, but most was recovered from nearby mines on the Telembí, Magüí, Guelmambí, and Telpi Rivers. Barbacoas gold was highly esteemed throughout the audiencia, as it averaged 20-karat or higher purity, and, unlike much Chocó gold, it contained little platinum. The account books for these years contain not only smeltry records, but also customs duties (*almojarifazgos*). These taxes reveal a substantial coastal trade with Panama and Guayaquil, suggesting that some Barbacoas gold was sent to merchants based in these cities in exchange for slaves, salt, iron, wine, and other commodities. The volume of trade in bulk goods seems to have been greater with the highlands, however, as several entries mention gold bullion being sent to Popayán and Quito to settle debts with merchants residing in those cities. In any case, mining income seems to have been fairly unstable in Barbacoas during this time, as registered gold production for 1685 declined somewhat to 18,387 pesos.²⁷⁹ How well these figures represent actual production is not clear; considering

²⁷⁵ AGI Quito 67, f.113.

²⁷⁶ ACC Sig 1774, f.2v. ("ebaciones frívolas por no pagar a su Magd lo que deve de muchos años atrasados")

²⁷⁷ ANHQ Popayán, caja 8, 1683. Estupiñán claimed that his mines yielded 3,973 castellanos between 30-xi-1677 and 24-xi-1682.

²⁷⁸ ACC Sig. 1099, f.3.

²⁷⁹ ACC Sig. 1888.

the remoteness of the region and its easy access to sea lanes, a high rate of contrabanding in the Pacific mines was not unlikely. Still, given the vagaries of weather, worker resistance, pirate attacks, and so on, year-to-year gold output was bound to be inconsistent. Furthermore, gold could be quinted elsewhere, as evidenced by an additional 1,500 pesos from Barbacoas registered in Quito in 1685, bringing that year's registered total production to 19,887 pesos.²⁸⁰

Quinto records from Popayán for the decade of the 1680s, though far above collections in contemporary Quito, show similar fluctuations. Based on the *veintavo*, or five percent tax rate in effect for this period, gold production registered in Popayán (not itemized) ranged from 4,400 castellanos in 1682 to 109,060 in 1684. The total registered for the twelve year period, 1680-1691, was 637,340 castellanos, or an average of just over 53,000 per year.²⁸¹ Although crown officials tried to control movement of untaxed gold from the Pacific frontier districts, some of this gold must have originated in Barbacoas and the Chocó. Most, however, apparently came from the nearby mines of Jelima, Caloto, and even the struggling hardrock district of Chisquío.

Table 6. Registered Gold Production in Popayán, 1680-1691:

YEAR	VEINTAVO (Castellanos Au)	TOTAL (Castellanos Au)
1680	1,299	25,980
1681	2,403	48,060
1682	220	4,400
1683	2,805	56,100
1684	5,453	109,060
1685	2,351	47,020
1686	1,825	36,500
1687	1,868	37,360
1688	3,424	68,480
1689	5,070	101,400
1690	1,618	32,360
1691	3,531	70,620
TOTAL (12 years)	31,867	637,340

*source AGI Santa Fe 766

By comparison, gold production registered in Quito during these same years amounted to a total of only 38,890 gold pesos, or about one sixteenth of that recorded in Popayán. Much of this gold originated in the Oriente, and some even came to Quito from the near-moribund mines of Zaruma. Only a tiny fraction of this bullion was from Barbacoas.

The evidence suggests that while Quito's southern mines declined, a modest revival occurred in the northern districts. Less clear is how much of this Popayán gold found its way to Quito merchant houses in spite of the decline in the drawing power of Quito's *casa de fundición*. As has been demonstrated for the sixteenth century, this trade nexus had long been established, and gold could still be traded, taxed or untaxed, for Quito's many specialized products. Along with such mundane items as blue serge (*pañó de Quito*) and baize blankets (*bayeta*), Popayán elites in the seventeenth and eighteenth centuries purchased notable quantities of religious paintings and sculptures originating in Quito's famous workshops. Trade will be discussed in detail in Chapter 6, but suffice to say here that in order to gain a true sense of the continued importance of gold exchange in the north, one would need to undertake a thorough reconnaissance of seventeenth-century notarial records in both Quito and Popayán, at the very least. Quinto records from late seventeenth- and early eighteenth-century Barbacoas, for their part, strongly suggest that ties to Quito merchants were important, and that private commercial transactions continued to draw bullion to the capital after taxes were paid.

Officials of the Real Hacienda in Quito seem to have been very much aware of the traffic in gold going on in that city, and they tried desperately to tap into it for tax revenue. A *cédula* of 1684 had been

²⁸⁰ ANHQ Real Hacienda, caja 6, 7-i-1686 (tanteo for 1685), f.11v. I have not seen quinto records for Lima and Panama, but some Barbacoas gold may have been registered in either or both.

²⁸¹ AGI Santa Fé 766.

announced by pregoneros and posted in Quito reducing the gold tax to a universal veintavo, or five percent, a rate previously established but now modified by the outlawing of assay fees (*cobos*), which ranged from 1.5% to 2.5%.²⁸² For a miner who produced 1,000 castellanos in a given year, severance taxes would have dropped from a high of seventy-five castellanos a year to fifty. Although seemingly negligible at first, a difference of twenty-five castellanos, worth fifty silver pesos, would have been enough extra cash to support a mortgage payment on a slave. In spite of this tax drop, which probably stimulated registration, if not production in remote gold districts like Barbacoas, failed to draw much gold into the *caja real* in Quito. In 1693 an hacienda official reviewed Quito's books and claimed that, "it is constant and common opinion that in the gold districts, hardrock and placer, of the Provinces of Barbacoas, Loja, Jaén, Zaruma, Sucumbios, Macas, and Quijos they gather each year more than 70,000 gold pesos in dust, paste (*pasta*), and bars."²⁸³ This estimate is important in that it focuses on regions specifically considered to fall within Quito's direct administrative jurisdiction and excludes the rest of the Gobernación of Popayán north of Pasto. The Quito official went on to lament that it was also well-known that a large portion of this gold was traded ("*se reducen y comercian*") in Quito, which he called "the head of the said provinces." In order to benefit from this apparently rampant and fraudulent underground trade in mined gold, the official called for an investigation to reveal the names of all gold dealers and petty merchants operating between Quito and the mining districts. These individuals, who could, he claimed, be denounced by secret testimony, would be subjected to search and seizure of any contraband gold found in their homes or in their baggage, to be inspected at way stations along the trunk lines.²⁸⁴

Miners and officials in Barbacoas were in the thick of these accusations from the start, and their apparent defiance toward outside investigators from Popayán, Quito, and Santafé de Bogotá only led to further fraud charges and more damaging *visitas*. One of the most outspoken officials in Barbacoas by this time was the Superintendente de Armas, Bartolomé Estupiñán y Flores, who loudly proclaimed his innocence when charged with quinto evasion.²⁸⁵ In 1692 officials from the Tribunal de Cuentas in Santa Fé became interested in his case when remissions to Popayán failed to represent an estimated production of 30,000 castellanos for the year 1691. As was common in these instances, Estupiñán claimed that he had been denounced secretly (in an anonymous letter, in fact) by a local rival, and protested to the Audiencia of Quito that such unsubstantiated claims of fraud constituted slander. Interestingly, Quito's *oidores* agreed with Estupiñán and dismissed the charges, in blatant defiance of recommendations from the Tribunal de Cuentas. Here Barbacoas miners revealed their ties to Quito when challenged from Santa Fé or Popayán, a common strategy of survival in a region which was claimed and taxed by all three highland cities.

This power struggle was exacerbated by the threat of foreign attacks on the coast in the 1680s and 1690s, when English and French buccaneers began to roam the Spanish South Sea. Attacks on Barbacoas itself were limited to minor skirmishes in Tumaco in 1680 and 1684, but fear ran high. The buccaneers regularly careened their vessels off the Barbacoas coast, on the Isla Gorgona, and even put in occasionally at the much nearer Isla del Gallo. The pirate threat was exploited to the maximum extent possible by Barbacoas elites, as it gave them new leverage with which to hold off highland tax officials' claims of fiscal irresponsibility and even sedition. Minor elites like Estupiñán, who had had previous military experience in the Atlantic and Mediterranean, gained new titles after organizing reconnaissance missions and occasional raids on pirate hideouts. Calls for state-subsidized arms, provisions and powder filled the account books of Quito's *caja real*, and tons of supplies were sent to Barbacoas from Quito and Latacunga, and billed to neighboring Popayán. Suddenly every miner in the wet Pacific littoral was claiming service against the "pirate enemy" and hence demanding a wartime tax credit on mined gold. As long as the buccaneers lurked offshore this unpaid sentinel strategy worked, but when the external threat passed in the 1690s the crown's officials returned in force, uninterested in claims of valor but endlessly curious about local productivity calculations.

²⁸² Freile-Granizo, ed., *Autos Acordados*, 254.

²⁸³ *Ibid.*, 259.

²⁸⁴ *Ibid.*, 260 ("inquieran, registren y averiguen los que traen, venden y compran el dicho oro en polvo, pasta o fundido, procediendo por indicios, conjeturas y sumarias y justificandose por información anterior que en cajon, Petaca o en otra cualquiera parte traen y tienen el dicho oro, lo abran y registren pasando en su comiso a lo que por derecho esta dispuesto, admitiendo las denunciaciones secretas y ejecutando las aplicaciones que se ordenan en la dicha Real Cédula y Leyes Reales")

²⁸⁵ ANHQ Popayán, caja 12, 6-ii-1692.

The late seventeenth century was seen as a time of general uncertainty in the Audiencia of Quito. Pirate attacks on the coast, including a very punishing sack of Guayaquil in 1687, were compounded by other, internal disasters. Between the 1660s and 1690s earthquakes and volcanic eruptions rocked the highlands, burying Quito in several feet of ash and razing Latacunga, Ambato, and Riobamba. A drought hit Quito and Popayán in 1692, followed by a massive plague of locusts. In 1693 a combined smallpox and measles epidemic swept up into the audiencia from Peru and wiped out huge numbers of Indians and Africans, and even many Spaniards and mixed people of color. Lawlessness was said to be on the rise, as evidenced by various murders, highway robberies, and other crimes denounced and punished during these years. In Quito, moreover, a *cédula* was issued in 1683 decrying the increasingly common problem of counterfeiting. Partly because of the audiencia's poverty in silver, false coins had flooded into the region, angering merchants and tax officials alike. Copper-debased pesos and reales, said to be "discrediting the commerce of this kingdom" were to be handed over to Hacienda officials and ceremoniously cut and smelted.²⁸⁶ With the sort of drama customary to the baroque era, the 1683 counterfeiting decree was proclaimed by a *pregonero* "in a loud and intelligible voice" and "in conjunction with trumpets, drums and fifes, as used in war." Thus Quito's late seventeenth-century "war on forgery" was loudly declared, with musical accompaniment, "in the streets of the merchants and traders, as well as the plazas of Santo Domingo, San Francisco, and La Merced."²⁸⁷

The many natural and man-made uncertainties of the times were vexing, to be sure, but in fiscal terms they translated directly into unprecedented strain on the treasury. When Indians died, the tributary base of the audiencia--far more important in real terms than the gold tax--immediately shrank. Pirate raids, especially in the Caribbean, led to massive construction projects at Chagres (Panama), Cartagena, and Santa Marta. Meanwhile indigenous rebellions again rocked the Kingdom of Chile, leading to calls for still more aid, and even criminal draftees from Quito to serve as Indian fighters. These projects were costly, and the burden of finance, which also included manning the new forts with salaried soldiers, fell squarely upon the shoulders of colonial subjects. In the case of Quito, budget shortfalls by the end of the seventeenth century had reached mammoth proportions. Since nearly everyone was short of hard cash in Quito, desperate attempts to raise money from elites through forced donations and fixed capital *composiciones* rarely did more than extend the audiencia's list of outstanding debtors. As might be expected, falling quinto collection in such a time of fiscal pressure was particularly suspect in the eyes of Santa Fé's Accounts Tribunal. Compared with the volume of taxes gathered during the first century after conquest, Quito's mining income seemed to have declined inordinately by the 1690s. As a result of these new pressures and growing suspicions from the highlands, too-independent districts, such as Barbacoas, drew immediate scrutiny in the search for hidden revenues.

In reality, Barbacoas was the only mining zone experiencing a substantial boom during this period anywhere in the audiencia, so it probably drew more attention than necessary. Nevertheless, many of the tax evasion charges leveled against the miners and merchants of Barbacoas (and, by extension, the merchants of Quito) seem to have been true. Quinto fraud was said to have been so entrenched in this region by 1698 that "almost all the gold taken from Barbacoas is removed and leaves without quinting." Furthermore, Quito's Fiscal claimed, "at this time there is even a bounty (*porción*) paid," apparently an allotment given to those traders willing to traffic in untaxed gold.²⁸⁸ Crown officials broadened their search powers and ordered an inspection of all chests, boxes, bundles, parcels, letter cabinets, and other containers leaving Santa María del Puerto. This order had existed for some time already, but clearly the problem of contraband had only worsened with time such that renewed vigor was needed at the way stations. There were too many paths leading out of the gold mines, however, and too high a price offered for gold dust in highland cities like Quito to make tax payment incentives, such as the waiver of assay fees, a genuine inducement to compliance.

The inevitable Barbacoas *visitas* began in earnest in the 1690s, with the twin intentions of counting Indian tributaries and assessing gold taxes. Local *encomenderos* and mine owners were not fond of either of these ideas. Many held Indians in *encomienda* illegally, some captured from neighboring regions, others forced to migrate from the highlands and still others held for more than the legal limit of two generations. The fifteen-odd *encomenderos* of the Barbacoas region were worried by the prospect of *numeraciones* in a time of sudden interest in Indian welfare and increased tax needs, but they were just as

²⁸⁶ Freile-Granizo, ed., *Autos Acordados*, 1-vi-1683, 176-77.

²⁸⁷ *Ibid.*

²⁸⁸ *Ibid.*, 282-83, 24-x-1698.

concerned with how outside officials might misinterpret the mining industry and levy unreasonable quinto demands. The crown's new assessment method, which was hotly disputed, was to estimate annual production and write up an advance-payment tax schedule (*prorrata*). As seen in the case of early seventeenth-century Zaruma, any tax code based on estimated income was sure to be unpopular in a region where one's annual produce was not at all certain and one's credit was usually overextended.

The first visitor, sent by the Audiencia of Quito, fell ill in the midst of his numeration duties; after a brief fever, he died and was buried in a churchyard in Santa María del Puerto. The audiencia at first seemed unsurprised by the investigator's sudden death, especially considering the region's supposedly "sick" (*enfermizo*) climate, and sent word to his scribe urging him to finish the mining tax assessment and head-counting. The scribe wrote back to the audiencia claiming that the work would have to be postponed indefinitely as heavy rains had forced the mines to shut down for the season.²⁸⁹

Santa Fé's Tribunal de Cuentas was equally interested in tax collection in Barbacoas, and was also displeased with the blatant corruption practiced in the mining zones by Popayán's governors. The Tribunal dispatched an extremely aggressive *juez pesquisador*, or investigative judge, a jurist native to the Canary Islands named Pedro Sarmiento y Huesterlin, to Barbacoas by way of the Chocó. Huesterlin, whose self-importance led him to favor the accompaniment of a marching band upon entry into suspect towns, quickly lost favor among the often happily corrupt elites of the Chocó, Popayán, and Pasto, all of whom showered audiencia officials in Quito with demands for his recall. In Quito, in 1698, affairs were more or less settled and Huesterlin was allowed to continue his mission in Barbacoas, now accompanied by a neutral judge who would take notes and presumably speak out against official excesses.²⁹⁰ While in Pasto, Huesterlin sent ahead a *juez receptor*, or judge charged with taking depositions, to continue the counting and quinto assessment in Barbacoas. This unfortunate official, after achieving about the same results as his Quito predecessor, was brutally beaten and hacked to death while writing up his reports in Santa María del Puerto. Rumors now coming out of Barbacoas also suggested that the first investigator had likewise met his end as a result of foul play--a slave cook acting on her master's orders was said to have poisoned his fish. Now both the Audiencia of Quito and the Santa Fé Tribunal were alerted to the possibility of a mine-owner conspiracy to prevent enforcement of new tax collection rules in Barbacoas.

While both audiencias favored an end to corruption in the gold districts, neither was satisfied with the course of action followed by Huesterlin. In a vindictive series of measures, the judge rounded up all Barbacoas residents, including masters, slaves, and Indians, thought to be involved in the alleged slayings of government officials. Testimonies were taken under duress and most fingers were said to have pointed at the most powerful man in Barbacoas at the time, the caudillo and pirate-fighter Bartolomé Estupiñán y Flores. Since direct evidence linking him to the murders was never produced, Estupiñán was instead charged with quinto fraud and imprisoned. Estupiñán's extensive family, including many compadres and cuñados, but also several prominent sons, were outraged by the arrest and may have begun to plot an uprising. Many other elites in the region, on the other hand, seem to have applauded and even aided the visitador's harsh actions; Don Bartolomé's cunning and power were widely feared and envied, it seems. Amazingly, and most disgusting to both the Audiencia of Quito and the Santa Fé Tribunal, Huesterlin ordered the caudillo, a decorated military officer and Lieutenant Governor, summarily executed by garrote in December of 1698. This severe choice of punishments--all the more so since tax evasion, the only proven charge, was not a capital crime--was explained by Huesterlin as an exigency driven by several factors. First of all, he claimed, Estupiñán's slaves, some of whom were named as the killers of his juez receptor, were on the verge of rebellion, openly threatening all those involved with their master's jailing. Huesterlin, among others, had feared for his life. Besides, he said, "in these short circumstances it was impossible to be in the midst of the fire without getting burned."²⁹¹ The Audiencia of Quito had direct jurisdiction over capital cases originating in the Gobernación of Popayán, and all were subject to automatic appeal by the high court. With this in mind, the audiencia immediately removed Huesterlin from the investigation, confiscating from him a substantial ransom in gold dust and jewelry offered by the unfortunate widow of Don Bartolomé.

²⁸⁹ ANHQ Popayán, caja 14, 27-v-94.

²⁹⁰ Marzahl, *Town in the Empire*, 133-34, provides a good overview of this and other late seventeenth-century visitas in the Gobernación of Popayán.

²⁹¹ ANHQ Popayán, caja 16, 11-vi-1697, f.564 ("siendo imposible en esta cortedad estar dentro del fuego y no quemarse," letter of 21 Jan. 1699).

The disastrous Huesterlin visita became a focal point for crown officials concerned with the extent of jurisdiction in the ambiguously divided northern Viceroyalty of Peru. Huesterlin was later captured in Tunja and charged with miscarriage of justice and other abuses of power, but he escaped and disappeared from view. For miners in Barbacoas, however, the 1698 inquest was a more immediate affair. Aside from executing the most powerful man in the region, Huesterlin and his followers had confiscated much gold dust and jewelry, many mines and slaves, and had filed dozens of fraud claims against the remaining mine owners.²⁹² The killing of Estupiñán may have been applauded by other miners who had suffered at the hands of this powerful caudillo, yet the gesture reminded them of the immense power of the crown to suddenly strip even a “self-made” Spanish vecino of both his life and life's work. This chilling reminder of the arbitrariness of absolutism, even in a region which Huesterlin himself had described as “a corner, the most remote on this earth,” could not have helped but have a negative impact on mining investment.²⁹³ At a time when the entire region was steeped in fiscal crisis, officials from Quito, Popayán, and Santafé de Bogotá, instead of opting for measures aimed at stimulating gold production, leaned heavily on gold miners in places like Barbacoas. These marginal producers, already beleaguered by rebel slaves and Indians, not to mention buccaneers, chronic disease and malnutrition, were now being preyed upon by scores of judges who descended upon them like vultures to a carcass—half the district's mine owners were actually jailed at their mines, made to produce solely for the crown. Slaves and Indians clearly bore the brunt of the hard labor involved, but from the dueños' point of view, the dawning of the eighteenth century in Barbacoas hardly presented an atmosphere of hope, one conducive to risk-taking and expansion.

In fact, mining in Barbacoas does seem to have contracted noticeably in the wake of the Huesterlin visita, a condition which appears to have lasted into the 1740s, at least. An account summary from a 1709 tax document shows that between September 1700 and May 1708 Barbacoas fundiciones yielded only 5,024 castellanos, representing total production over that approximately eight-year period of about 100,480 gold pesos (only the veintavo, or 5%, was charged).²⁹⁴ These tax records suggest an annual output of just over 12,500 castellanos a year in Barbacoas in the first decade of the 1700s. While these numbers represent a clear drop from levels achieved in the 1680s and 1690s, this level of gold production was still the highest in the audiencia, and thus continued to draw unwanted attention from highland officials.²⁹⁵ The much-studied Chocó region, which was similar in many ways to the Province of Barbacoas, had undergone similar official reprisals under Huesterlin in 1697, and production may well have been similarly affected. In the absence of reliable accounts we may never know, but in any case, the Chocó does not seem to have reached substantial gold yields until the 1720s. In 1726 the Chocó became a separate province directly administered from Santafé de Bogotá, and hence less closely linked with Popayán and certainly Quito elite interests. Now entering a period reminiscent of the sixteenth century bonanzas, the region's gold output was close to double that of Barbacoas throughout most of the eighteenth century, averaging between 100,000 and 200,000 castellanos per year.²⁹⁶

Hacienda officials from the highlands returned to Barbacoas in 1716 to levy yet another tax based on estimated annual production, older debts having apparently been cleared. The investigation and assessment yielded the first census of slave and Indian workers engaged in mine labor in Barbacoas, but the resulting head tax was not reflective of actual output. As in the time of Estupiñán and Huesterlin, about a score of cuadrillas, most of them small and made up largely of hired freemen and rented slaves, continued to struggle against nature, human and otherwise, in the same mining camps as before. No new, major finds were claimed, and most mine owners complained of poor yields and recalcitrant workers. Again, meddling

²⁹² Ibid., f.566 (“luego inmediatamente proseguí las causas de pesquisa contra todos los mineros y rescatadores de oro contra quienes resultaba culpa y cargo de la dicha pesquisa y presos en sus minas por que no sesase la labor de estas”).

²⁹³ Ibid., f.561 (“un Rincon el mas Remoto del mundo”).

²⁹⁴ ANHQ Popayán, caja 35, Barbacoas *prorrata* 1710, ff.2-3v.

²⁹⁵ It is quite possible that the Chocó, technically a sub-province of Popayán until 1726, was more productive than Barbacoas by this time. Reliable quinto records for the Chocó, according to Sharp, are not available for the period before 1721 (William Sharp, *Slavery on the Spanish Frontier*, 71). Colmenares, in *Popayán, una sociedad esclavista*, 166, notes, however, that only 514 castellanos were collected from eight miners in Citará and Nóvita (the heart of Chocó mining) between 1698 and 1706. At the veintavo this would have translated to only 10,280 castellanos over almost a decade, precisely the years immediately following Huesterlin's visita.

²⁹⁶ See Sharp's graph (Ibid., 201) for a summary of Chocó quinto records to 1803.

from outsiders seems to have exacerbated the region's continued stagnation and chronic underreporting of gold yields. Buccaneers were by this time largely replaced by contraband traders in the loosely patrolled Pacific, and the disadvantaged and annoyed consumers of Barbacoas were among their first customers. Indeed, some of the most angry charges leveled against Popayán's governors, and also against Huesterlin, were from Barbacoas vecinos forced to purchase goods brought into the goldfields by these visitors. In exchange for favors from investigating officials they were routinely made to purchase everything from cheeses to playing cards at ridiculous prices. Contrabanding was thus an attractive option, as gold dust and local food products could be more or less anonymously and "justly" traded for a variety of necessary and sumptuary goods, many of them stolen from Spanish ships. English and French *contrabandistas* such as Woodes Rogers, who camped out on Isla Gorgona for some time, offered such locally desired items as fine cloth, alcohol, iron, slaves, and even Spanish-style playing cards, all duty-free.

An official visita to the mines of Barbacoas in the early 1740s found little change. A dozen or so mine owners, about a fourth of them women, continued to work small cuadrillas, mixed free and slave, in no more than twenty mine sites.²⁹⁷ Those free laborers (*playadores* or *mazamorreros*) who chose not to hire out often mined marginal beach gravels and yielded their take to outside gold dealers (*rescatadores de oro*). None kept production records in the form of libros de sacas by this time, so quintos were anyone's guess. Nearly all of the Barbacoas mine owners who testified in 1744 claimed that they were so deeply indebted to highland merchants, most from Quito, that they simply turned over their yields to them, like the playadores assuming that the traders paid the quintos in either in the regional capital or in Quito. Real Hacienda ledgers pertaining to Quito suggest that Barbacoas gold was either taxed in Santa María del Puerto or it was not taxed at all. In fact, between 1727 and 1739, less than 200 castellanos were collected in Quito, only some of this small amount possibly pertaining to gold from Barbacoas.²⁹⁸ The Quito fundidor and platero Francisco Murillo had claimed in 1726 that the moribund casa de fundición could be revived by new advertising. Perhaps this could have been possible in the late seventeenth century, if official interest had encouraged the expansion of the gold mining industry rather than the effective stifling of it, but it seemed nothing more than a wild hope between the first and second quarters of the eighteenth century.

Table 7. Registered Gold Production in Barbacoas (including Iscuandé), 1752-1767:

<u>YEAR</u>	<u>Veintavo (Castellanos Au)</u>	<u>TOTAL (Castellanos Au)</u>
1752	1,624	32,480
1753	1,013	20,260
1754	1,577	31,540
1755	1,601	32,020
1756	1,637	32,740
1757	1,600	32,000
1758	1,799	35,980
1759	1,756	35,120
1760	1,968	39,360
1761	2,077	41,540
1762	2,341	46,820
1763	1,579	31,580
1764	1,934	38,680
1765	1,854	37,080
1766	2,193	43,860
1767	2,045	40,900
TOTAL(16 years)	28,598	571,960

*source AGI Quito 450, 496

Some gold continued to be mined in the Oriente at this time, but it never amounted to more than a few thousand castellanos per year. Barbacoas, the only nearby district which Quito merchants could count

²⁹⁷ ACC Sig. 4062. The miners' testimonies are examined further in Chapter 6.

²⁹⁸ AGI Contaduría 1540, Quito quincenios 1727-31, 1734-38, and ANHQ Real Hacienda, caja 10.

on, would be slow to recover its former productivity, and by the time this occurred the district was drawn more firmly into the orbit of Santafé de Bogotá, seat of a new viceroyalty after 1739. In the second quarter of the eighteenth century, gold mining in other parts of the Gobernación of Popayán, including the Chocó, but also the nearer districts of Jelima and Caloto, began a fairly significant expansion which would continue, though with some breaks, until the end of the century. Barbacoas would join this trend only after midcentury, when registered production climbed from an annual average of about 30,000 castellanos in the 1750s to about 40,000 in the 1760s before jumping to almost 100,000 castellanos per year in the 1780s.²⁹⁹ This last leap in production, sustained until at least 1800, was largely attributable to the crown's final tax concession of three percent severance on 1 March 1777, but as noted by Anthony McFarlane, the establishment of a mint in Popayán in 1758 (run by the crown after 1771) must also be credited.³⁰⁰ By the end of the eighteenth century, the mining industry of the Barbacoas district was still expanding when those of the Chocó (as noted above, now a separate district) and the rest of Popayán were experiencing notable decline.³⁰¹ The eighteenth-century revival in Barbacoas came at a price, of course. The district became a living hell for thousands of African slaves, many transferred southward from the Chocó as that region's mines played out.

Table 8. Registered Gold Production in Barbacoas (including Iscuandé and Raposo), 1777-1784:

<u>YEAR</u>	<u>3% severance (Castellanos Au)</u>	<u>TOTAL (Castellanos Au)</u>
1777	3,446	114,867
1778	2,303	76,767
1779	2,564	85,467
1780 (incomplete, 26-i to 3-iii)	526	17,533
1781	2,167	72,233
1782	3,034	101,133
1783	2,805	93,500
1784	3,275	109,167
TOTAL (8 years)	20,120	670,667

*source AGI Quito 539, 540, 451, 469

No similar revival in the mining districts of southern Quito would be forthcoming. A 1765 relación of the Loja district claimed that at Zaruma some fourteen mills were operating, but that gold yields ranged between three and four *arrobas* (c. 6,000 to 10,000 castellanos) per year.³⁰² The Loja report was not written by hacienda officials as that city's *caja real* had been merged with Cuenca's in the 1660s due to dwindling receipts and charges of rampant corruption. Cuenca's real *caja* accounts for the eighteenth century record much less gold from Zaruma than the Loja relación claims, but the author accounted for this by stating that most of this produce was exchanged directly for mercury and possibly traded to the coast, presumably at Tumbes. Be this as it may, not until after 1767 does one find quinto records of Zaruma gold that hint at a slow revival of the mining industry in the era of Bourbon reforms. As in the case of Barbacoas, the crown's concession of a three percent total royalty in 1777 was the most crucial stimulus of the period. Registered production at Zaruma, based on Cuenca's real *caja* receipts, appears to have risen from only about 5,000 castellanos per year between 1767 and 1777 before leaping to over 30,000 castellanos per year between 1777 and 1785. Gold production then seems to have fallen off to just over 20,000 castellanos per year for the remainder of the 1780s before more or less leveling out at 12,000 to 14,000 castellanos annually for the decade 1790-1800. Records for the turbulent years of 1800-1821 are

²⁹⁹ AGI Quito 450, 539, 540, 451.

³⁰⁰ Anthony McFarlane, *Colombia Before Independence: Economy, Society, and Politics under Bourbon Rule* (Cambridge: Cambridge University Press, 1993), 85.

³⁰¹ Jaime Jaramillo Uribe, in "La economía del Virreinato," in Ocampo, *Historia económica de Colombia*, 50, cites Jorge Orlando Melo's figures for gold production in eighteenth-century New Granada (except Quito). According to these figures Popayán and Barbacoas together accounted for approximately 40% of total production between 1735 and 1799. The Chocó, on the other hand, dropped in importance from 57% of total production in the 1730s to 27% in the 1790s.

³⁰² Ponce Leiva, *RHGQ* t.2, p.359.

spotty, but registered production seems to have declined even further at Zaruma to between 5,000 and 9,000 castellanos per year.³⁰³ In sum, Zaruma's late eighteenth- and early nineteenth-century “boom,” generously estimated, seems to have yielded less than 500,000 pesos of low-karat gold, equivalent to less than a decade's worth of Barbacoas production in the period after 1777.

NO GRAPH FOR 1767-83?

Table 9. Registered Gold Production for Zaruma (at Cuenca), 1783-1819:

<u>YEAR</u>	<u>3% severance (Castellanos Au)</u>	<u>TOTAL (Castellanos Au)</u>
1783	250	8,843
1784	487	16,229
1785	279	9,123
1786	378	12,594
1787	298	9,907
1788	446	14,867
1789	378	12,579
1790	395	13,156
1791	414	13,800
1792	427	14,236
1795	447	14,900
1796	424	14,142
1797	311	10,367
1798	349	11,633
1799	341	11,375
1801	157	5,228
1802	131	4,378
1803	94	3,133
1804	129	4,294
1808	382	12,733
1809	86	2,867
1810	159	5,311
1818	258	8,600
1819	177	5,900
TOTAL (26 years recorded)	7,197	239,900

*source AGI Quito 541, 453, ANHQ Real Hacienda, caja 31

Quito hacienda officials had more or less given up on the southern mines after the mid-seventeenth century, focusing instead on continued, if intermittent income from Popayán and Barbacoas. Various small-scale mining projects continued in the Oriente, but none blossomed into vibrant mining camps, potential markets for crown monopoly items such as *aguardiente*, playing cards, and tobacco. After thumbing through many years of blank “quinto” pages in Quito's annual account summaries, or *tanteos*, an official remarked in the mid-eighteenth century that:

it is because the district pertaining to the said reales cajas has no gold and silver mines continuously worked, and if one is discovered, it is in a short time abandoned, and the gold that is marked and quinted [occasionally] in the said cajas is brought by certain merchants or associates of the mines of Barbacoas, and of the Province of Popayán, where frequently, one must believe, [the gold] is declared and quinted in the cajas reales of those cities³⁰⁴

³⁰³ AGI Quito 453, ANHQ Real Hacienda, caja 31.

³⁰⁴ AGI Contaduría 1540, doc.5, f.30av. (double fold).

Even after the creation of the Viceroyalty of New Granada in 1739, of which Quito was an integral part, jurisdictional ambiguities among the various gold districts remained. In general, however, it is clear that Quito faded from its former position as a center for gold collection in the northern Andes.

Commercial transactions in gold continued in the capital, but their volume declined, especially as the textile industry—with its important links north and south—suffered from a growing influx of cheap European woollens. Even with the Bourbon reforms and optimistic predictions from such mining specialists as Juan José D'Elhúyar in the 1780s no new bonanzas materialized in the southern audiencia and resuscitation efforts in established camps like Zaruma fell short of expectations. The camps of Yaguarsongo, and, more importantly, those of Zamora were essentially forgotten, and would remain dormant for another two centuries. By 1790 Quito's hacienda officials lamented that there was no one in the area who understood mine development, and that agriculture and textile manufacture were insufficiently capitalized to awaken an already cash-starved, quasi-feudal economy. As it was, Quito's elites survived by supplying internal urban markets with agricultural produce and livestock, and lived in near total isolation from the south Andean economy. Quito's textiles, once famous throughout Peru, were now shunned by even the lowliest Indians, who were said to prefer nakedness to the shame of wearing second-rate Quito cloth (*pañó de segunda de Quito*).³⁰⁵ The coastal cacao industry, which had great potential to revive the region, was so hobbled by restrictions prior to the 1770s that it only began to expand significantly in the turbulent decade prior to independence.³⁰⁶ Even the growing quinine (*cascaquilla*) industry was insufficient stimulus, being, as it was, a rigidly controlled crown monopoly. Likewise the burgeoning tobacco industry, which yielded substantial rents in Guayaquil, and connected growers in the Macas region with highland factories and outside markets. As textile manufacture and mining struggled, agricultural exports were growing. Still, as Kenneth Andrien has noted, the new atmosphere of reform and so-called *comercio libre* created only a superficial economic renaissance in the Audiencia of Quito; increased tax revenues did not necessarily reflect improved productivity.³⁰⁷

The mood in Quito, well established by the first gold mining bust and Indian demographic decline of the late sixteenth century, was as pessimistic as ever. Elites claimed that the audiencia's decadence was all the more obvious when one observed the crumbling structures of Quito, once among the most opulent cities in the Americas. Now, as in the 1690s, everything from cattle diseases to major earthquakes—Riobamba was so thoroughly leveled in 1797 that its residents moved to a new site to rebuild—appeared suddenly and without warning, crushing hopes for economic growth. As one observer put it, “in sum, everything conspires to render impossible, or block the relief which the moribund Province of Quito incessantly needs.”³⁰⁸ In spite of the region's seemingly permanent fall from grace, some diehards believed that somewhere in the rugged, wet mountains or jungles of the audiencia there lay a hidden treasure or two that would revive the regional economy and return Quito to its former glory. “So pleasing and enchanting is the profession of miners,” a Quito friar exclaimed, “that one scarcely hears the echo of a bonanza and all come running, from all parts, to pool their capital in order to participate in it. The most rugged and unpleasant forests,” he continued, “are converted into numerous settlements, frankness and generosity reign, and always filled with great hopes they squander and spend as much as they have.”³⁰⁹ Such a scenario, a merchant's paradise, to be sure (and probably a friar's, as well), never materialized in the pre-independence period. No “echo of bonanza” rang through the so-called Avenue of the Volcanoes, and the

³⁰⁵ AGI Quito 569, f.53.

³⁰⁶ See Michael Hamerly, *Historia Social y Económica de la Antigua Provincia de Guayaquil, 1763-1842* (Guayaquil: Archivo Histórico de Guayas, 1976), 124. Hamerly's table and other relevant statistics are summarized in Hugo Arias, “La economía de la Real Audiencia de Quito y la crisis del Siglo XVIII,” in Enrique Ayala Mora, ed., *Nueva Historia del Ecuador*, mult. vols. (Quito: Corporación Editora Nacional, 1983), 4: 189-229.

³⁰⁷ Kenneth Andrien, *The Kingdom of Quito*, 144. Though correct on this issue, Andrien fails to even mention the existence of Zaruma, or any other mining zone in the Audiencia of Quito, for that matter; this in spite of the fact that mining revenues appear in his Real Hacienda tables for late eighteenth-century Cuenca (e.g., 197).

³⁰⁸ AGI Quito 569, f.54.

³⁰⁹ *Ibid.*, f.60 (“como es tan lisonjera y encantadora la profesión de Mineros, a penas se escucha el eco de la bonanza, quando todos, y de todas partes concurren con sus caudales a ser participantes deella. Los montes mas asperos y desapacibles se combierten en poblaciones numerosas, reyna la franqueza y la liberalidad, y llenas siempre de buenas esperanzas prodigan y gastan quanto tienen”).

economically moribund but ecologically blessed Quito district which so enchanted European visitors from Condamine to Humboldt, continued to languish in its marginality.

Chapter Four Indigenous Mine Labor at the Margins

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While the volume of gold production might appear well recorded for colonial Quito, it has been much more difficult to calculate the social costs of precious metals extraction. This chapter and the one following it are concerned with a comparative analysis of the principal labor regimes employed by Spanish miners in the audiencia, from black slavery in Popayán to the *encomienda* in Jaén de Bracamoros. The regional comparisons are important in that marginal miners in Quito seem to have made use of whatever sources of labor they could lay hands on, whether indigenous, African, or otherwise, yet significant differences in the demography of labor emerged over time. In most every case mine labor was considered brutish and unhealthy and therefore was overwhelmingly coerced, throughout the long colonial period. Thus, mine work fell to Indians and slaves, for the most part, and to a lesser extent to criminals, “vagabonds” and other socially undesirable persons. With regard to gender, mine labor was primarily the lot of males, but as will be seen, women were also very much a part of colonial mining society and economy, sometimes as *encomienda* holders or slave owners, sometimes as mine workers.

That laboring groups in colonial Quito both understood the terms of and resisted all forms of oppression is demonstrated by a wide variety of sources, including abuse complaints, missionary appeals, and outside observations. Still, it should not be forgotten that gold was still effectively mined, well over ten million pesos of it. This continued production was largely effected in early modern Quito, a place where no commodity but gold itself was dearer than labor, by a consciously measured use of violence, both physical and psychological. Other means of social control were important, but always supplementary to violence. As with their counterparts in Brazil and British North America, Spanish masters and *encomenderos* offered incentives and limited means of elevation within coercive systems, and slaves and Indians, faced with few options other than death or permanent separation from loved ones (i.e., overt violence), often chose the path of limited cooperation. All so-called ameliorative measures and compromises, in whatever form, were overshadowed by this constant threat, and they constituted the only means by which productivity--however short of potential--was maintained. Elites, for their part, feared workers, and in a few cases, such as the extremely rich gold fields of Zamora and Mocoa, in the upper reaches of the Amazon Basin, violent uprisings permanently destroyed colonial mining camps.

The following discussion treats indigenous labor systems as they evolved in the mining camps of the Audiencia of Quito. A discussion of the *encomienda* will be followed by an examination of Quito's early attempts to organize an Indian draft labor regime similar to the one established in Potosí in 1575. The Quito mine *mita*, first implemented in the 1580s, operated primarily in the vein mines of Zaruma, but as will be seen it was never as large or as effective as the immense *mita* that essentially subsidized silver production in the southern Andes for more than two centuries. Following the discussion of the *mita*, Indian mine labor reforms in Quito will be treated, especially those dating to the turn of the eighteenth century. These reforms altered the nature of both the *encomienda* system and the *mita*, essentially proscribing unfree indigenous mine labor in the audiencia altogether. These late-coming reforms will be evaluated in terms of their effectiveness in relieving indigenous persons of mining related hardships and in terms of their effects on gold production. This discussion of indigenous mine labor reform is intimately tied to the subject of the next chapter, the rise of African chattel slavery in Quito's gold mining industry, particularly in the placer mines of the Gobernación of Popayán. Like the *encomienda* and *mita*, black slavery had very deep roots and lasting social and economic consequences in the gold districts of the Audiencia of Quito.

Conquest and the *Encomienda*

El Dorado, needless to say, was not discovered in Quito. He was thought to be nearby, however, and several expeditions in search of the gilded cacique were launched from this highland city, including Orellana's famed Amazon navigation of 1541, but to no avail. In lieu of a golden kingdom, or of finding Rumiñahui's fabled hoard, Quito's first Spanish settlers began to rob their new subjects of whatever precious metals they possessed or could get hold of. Some early highland caciques, as noted in the preceding chapter, turned over a large amount of gold to their new overlords, apparently taken from other *indigenes* as well as from graves, or huacas. These low-karat gold artifacts did not satisfy Spanish demands, however, so the conquerors and their followers soon began to force their native charges to wash for raw gold dust and nuggets in Quito's numerous streams and rivers. The first *oro de minas*, as noted above, was registered in Quito in 1537, shortly after the record books were opened. Indeed, the transition

from plunder to production was so quick that we can hardly separate the two activities with certainty. As soon as the invading Europeans had Indian captives in hand, they must have put them to work in panning operations. Quito's famous founder, Sebastián de Benalcázar, serves as an example of just such an early collector of both hastily mined gold dust and stolen oro de huacas.

The conquistadors of Quito, it seems, were following a pattern of exploitation established on Hispaniola, site of the first Spanish American gold bonanza. The conquistador philosophy was simple: the recovery of gold was imperative, first come, first served. Conveniently, common Indians (as opposed to caciques and their families, as local hierarchies were recognized) had been placed at their disposal by God in order to carry out this task.³¹⁰ Quarrels arose not over the injustice of indigenous exploitation, but rather over the control of newly acquired labor power and the products it afforded. It is tempting to view these early adventurers as simple exempla of the sin of cupidity, but for most gold was means rather than end, not a thing to hoard but rather a social lever. The dream of almost every Spaniard was, in Quito as on Hispaniola, to accumulate liquid capital in the Americas and return to Spain a "new man." Gold was the most compact and universally accepted form of liquid capital in the Mediterranean world in the sixteenth century, and as such it opened even the heaviest palace gates with magical ease.³¹¹

In their excitement (as on Hispaniola), the first Spaniards in Quito put gold recovery ahead of everything else, including food production. The only reason that this action was not so disastrous in Quito as it had been in the Caribbean was that the Andean highlands, under Inca rule and before, had been intensively cultivated and generally produced a handsome surplus. Furthermore, the region had been outfitted with an exploitable infrastructure of supply lines and storehouses for provisioning Inca troops. Unlike Hispaniola, in Quito one could marvel at growing piles of gold ingots and savor boiled potatoes and roasted *cuy*, or guinea-pig, besides. Quito's conquerors also had access to supplementary African slave labor, although, as will be seen below, slave-based mining ventures of scale -- though present in some parts of Peru at this time -- were still some way in the future.

The conquerors, especially those who remained loyal to the crown during the civil wars of the 1540s, received several kinds of rewards, including high-sounding titles, but it was the gift of native labor that mattered most. The *encomienda* was an American variation on the medieval and reconquest ideas of the Christian fiefdom in Iberia. While this system wore a missionary mask, it was in fact a lease on the lives and labor of captive indigenes. It was not chattel slavery, to be sure, but it often came to resemble it very closely when gold nuggets were nearby. In this early period, the *encomienda* system of indigenous labor repartition was the cornerstone of empire; it rewarded Spanish newcomers, especially self-motivated and self-financed conquerors, with an immediate, captive source of labor power. But even when flat and fertile land was still relatively plentiful in the New World, indigenous labor power was proving disappointingly exhaustible; Indians rebelled, fled, died en masse from disease, and otherwise fell short of Spanish expectations of subservience and easy prosperity. As will be described below, many attempts were made, however disingenuous in practice they may have been, to control settler abuses. The problem, of course, was that the *encomienda* system was itself an abuse, albeit a very rigidly structured one. Like African slavery, the Indian *encomienda* was a form of institutionalized inequality based on perceived physical and cultural differences (expressed in terms of relative "barbarity" and "civility"), and despite spiritual arguments to the contrary, the system, like chattel slavery, was inherently exhaustive. Since the fundamental paradox of temporal inequality and spiritual equality was never satisfactorily challenged, encomenderos continued to commit excesses against their Indian charges. In Quito, as elsewhere, the excesses brought about by the *encomienda* system were nowhere more evident than in the gold mines of the backcountry.

As Lewis Hanke, Lesley B. Simpson, and others have noted, the *encomienda* had been established by Queen Isabella in order to effectively organize gold extraction (along with food production) on Hispaniola shortly after 1500. The subsequent Laws of Burgos allowed for Spanish settlers to use

³¹⁰ The best discussion of the early gold economy of Hispaniola is in Frank Moya Pons, *Después de Colón: trabajo, sociedad, y política en la economía del oro* (Madrid: Alianza América, 1987).

³¹¹ Tomás de Mercado struck an early monetarist vein in his massive *Suma de Tratos y Contratos*, 2 vols., ed. Nicolás Sánchez Albornoz (Madrid: Fábrica Nacional de Moneda y Timbre, 1977[1569]), suggesting that a steady flow of gold and silver were the unquestionable foundation of any kingdom's wealth (2: 359).

indigenous labor in gold mining as long as they paid wages and did not harm their laborers.³¹² The wording of these laws was quite ambiguous as to how exactly Indians were to be simultaneously exploited and protected, setting the stage for future controversies. By the 1530s the moral issues raised by settler abuses in Caribbean gold mines culminated in the much celebrated theological debates between Las Casas and Sepúlveda over the “humanity” or “bestiality” of native Americans, which led in turn to the more restrictive New Laws of 1542-43. As Simpson and Hanke have noted, the *encomienda* system was effectively tamed by this legislation, at least in Mexico and the Caribbean. As will be seen below, Quito’s first *encomenderos*, if they were aware of these reforms at all, were certainly not quick to follow them. The uprisings of the 1540s were a direct rejection of the New Laws, and in a recent prosopography of this group, Javier Ortíz de la Tabla has shown that even in the fertile highlands of Quito, many native Andeans were held in virtual slavery, many of them forced to travel to distant gold districts against their will and without pay, a direct violation of both the New Laws and the Laws of Burgos.³¹³

This continuation of mine-related *encomienda* abuses was in some ways a natural reaction to crown attempts to restrict settlers’ control of indigenous labor power. As Timothy Yeager has recently argued, the reformed *encomienda*, especially when compared with chattel slavery (African, Amerindian, or otherwise) was an obstacle to capitalist development.³¹⁴ In analyzing the long-term consequences of the *encomienda* system in Spanish America, Yeager claims that the crown forfeited long-term development by restricting settler access to native labor. His argument, though it sidesteps the undeniably important moral arguments of the day, may be supported by the fact that African slaves did eventually replace native Americans in northern Quito’s gold mines, a strong factor in explaining the comparative vibrancy of the industry in this region vis-à-vis southern Quito after 1700.

Slavery was not without inherent contradictions as well, but, as Yeager notes, it was less inhibitory of capitalist-style development in the long term. The *encomienda*, by law if not by practice, entailed immobility of workers, limited inheritance (set at two generations after the New Laws) and the explicit prohibition of sale or rent of workers. By contrast slaves could legally be freely transported, inherited, sold, or rented. As mobile chattels they could be more easily plugged into or pulled out of a given capitalist enterprise, such as a remote gold mine or cacao grove. Yeager’s argument is sound on paper, but in Quito *encomenderos*, until at least 1700, broke all of these rules. Their indigenous charges, though only rarely bought and sold, were forcibly uprooted, passed on to favorites, and frequently rented. They were only free in the sense that *encomenderos* did not pay for them, and this was perhaps the Achilles’ heel of the system as a sustainable institution. As long as supplies of “warlike Indians” could be had and laws were not enforced, abuse of labor would prevail over conservation; as soon as such captives were no longer available, the system would collapse.

A stark example of such exhaustive abuse comes from the remote southern town of Loyola, in the highlands south of Loja, near the present border with Peru. In 1589, a Spanish *encomendero* named Pedro de Bañuelos was charged with a long list of crimes against *encomienda* Indians. Apparently a sadist, Bañuelos kicked, beat, burned, incarcerated, raped, and shaved the heads of his “entrusted wards.” In one instance he went so far as to hang three individuals upside-down over a fire, forcing them to inhale smoke, then rubbed their eyes with a mixture of urine and hot peppers.³¹⁵ The Indians of Loyola and surrounding villages were subjected to all these acts of cruelty for supposedly working too slowly in a variety of domestic chores, and for not washing enough gold. Apparently Bañuelos was forcing some of his charges to march from their temperate homes up into a cold, mountainous area to pan gold from streams. These indigenous mine specialists, or *curicamayos*, were supplied with food, especially maize, by Bañuelos’s other *encomienda* Indians. Anyone, male or female, who failed to meet the *encomendero*’s demands in supporting this enterprise was beaten or otherwise mistreated. As incredible as these offenses were -- Bañuelos was even charged with the murder of one man who died from his torture wounds -- he was not severely punished. The sentence he received, and which was apparently carried out, was two years in the

³¹² Lewis Hanke, *Aristotle and the American Indians* (Bloomington: University of Indiana Press, 1959), 222, and Lesley Byrd Simpson, *The Encomienda in New Spain: The Beginnings of Spanish Mexico*, (Berkeley: University of California Press, 1950), 11-15.

³¹³ Javier Ortiz de la Tabla Ducasse, *Los Encomenderos de Quito, 1534-1660: origen y evolución de una élite colonial* (Sevilla: Escuela de Estudios Hispano-Americanos, 1993), 189-92.

³¹⁴ Timothy J. Yeager, “Encomienda or Slavery? The Spanish Crown's Choice of Labor Organization in Sixteenth-Century Spanish America,” *Journal of Economic History* 55:4 (Dec. 1995): 842-59.

³¹⁵ ANHQ Criminales, caja 1 (8-iii-1589) 1f, folded.

South Sea galleys and a small fine. In his absence, the fiscal noted, the crown would administer the *encomienda* and collect its revenues.³¹⁶ Newson mentions a similar case from Loyola dating to the late 1570s, suggesting that these charges were not unique; in fact, Bañuelos may have learned his outrageous behavior from the *encomendero* Juan de Estrada, who was charged with torture, mutilation, and murder of his indigenous wards by dog attack.³¹⁷ Given these sorts of excesses, it is hardly surprising that Native American workers became an ever-scarcer commodity in the gold districts of Quito. The New Laws may have been “on the books,” but throughout most of the sixteenth and even seventeenth centuries conquered and colonized indigenous peoples at the margins of empire lived and worked essentially without protection.

The Loyola cases were extreme, but were by no means isolated instances of Indian abuse in gold mining operations. Many of the earliest *encomenderos* of the central highlands were similarly rapacious, and they did not hesitate to send their indigenous subjects to work in the most notable gold district of the early post-conquest period, Santa Bárbara, near Cuenca. The abuses faced by *encomienda* Indians working in these mines (and nearby Sangurima and Shingata) included forced marches, exhaustion, drowning, sickness, and starvation. Only after over a decade of unbridled exploitation did the Cabildo of Quito (precursor to the *audiencia*, established in 1563) at last see fit to establish a basic set of protective rules. The Quito mining ordinances of 1549 seem only to have been aimed at slowing the destruction of the Indian population, not at genuine protection.³¹⁸ In short, the “new laws” of 1549 in Quito only revealed that the New Laws of 1542 were not being observed.

The mining mandates stated firstly that Indians should not be moved from hot country to cold, or vice versa, a common enough stricture in tropical Spanish America. Innate adaptability to one climate zone or another was suggested by the phrase “made for” (e.g., “*hechos al calor*,” or “made for heat”), used later with reference to Africans and their supposedly innate qualities in hot, low country. Instead of the previously customary eight months, mine work was to be limited to the six-month period of heavy rains, and hence high water volume for washing gravels, beginning in August and ending in February. Mine overseers or owners (*mineros*) were to provide indigenous workers with a sleeping platform (*barbacoa*), a blanket and a shirt at the beginning of the season, and with more bedclothes if they became ill in the interim. The *minero* was also to provide each worker with two *almudes* (c. 9.25 l) of maize, along with some ají (capsicum peppers) and coca leaves, a swine every fifteen days, and a small bag (*taleguilla*) of salt each month. Indian workers charged with keeping watch over canals and holding tanks during the night (*indios veladores*) were to be relieved of daytime duties and allowed to rest. As merchants were apparently already abusing the new market created by the captives, another ordinance outlawed private truck in maize within ten leagues of the mines. Work hours were said to stretch from sunup to sunset (always twelve hours at the equator) with some unspecified break for eating and resting, and mine laborers were not to be made to carry burdens before or after their own mining shift. Indians who had completed their six-month obligation were to be freed for the remaining six months to tend to their farms (*labranzas*), and indigenous women who were pregnant (*preñadas*) or who had recently given birth (*paridas*) were to be relieved of carrying duties altogether. The maximum cargo for men and women alike was set at the equivalent of four *almudes* of maize (c. 25 kg), and no *minero* was to keep more than two indigenous women and two boys in personal service. Perhaps most revealingly, no *cuadrilla*, or work gang, was to exceed eighty Indians, including hired peons (*concertados*). Although there may have been some exceptions, these latter individuals were not free wage workers but rather laborers rented from other *encomenderos*, a clear violation of the New Laws.

In sum, the 1549 ordinances reveal that *encomienda* Indians in Quito’s early gold mines were treated much like slaves: they were moved around at the *encomenderos*’ will; they worked incessantly, even at night, in mines, on farms, and in carrying cargoes in between; they were exploited without regard to age or gender; and they were rented and otherwise exchanged against their will. After 1549 the Santa Bárbara mines would be served by some 2,165 Andeans taken from twenty-five villages between Quito and Cuenca, and the twenty-odd *encomenderos* who held these workers in captivity would share the booty yielded by their newly-organized labors. Such late-coming and loosely enforced controls as the 1549

³¹⁶ Galley service in the Mediterranean was akin to a death sentence, but this was hardly the case in the context of the sixteenth-century Pacific, Elizabethan corsairs like Drake and Cavendish notwithstanding.

³¹⁷ Linda Newson, *Life and Death in Early Colonial Ecuador* (Norman: University of Oklahoma Press, 1995), 293.

³¹⁸ The 1549 ordinances are summarized in José María Vargas, *La economía política del Ecuador durante la Colonia* (Quito: Banco Central, 1981 [1957]), 190-91.

ordinances did little to slow the destruction of indigenous communities, and those who did not die in the mines or on the way to them fled to regions where gold was not found. As Karen Vieira Powers has suggested, migration in response to mine labor abuses in the southern audiencia may well have contributed to Quito's seemingly unusual demographic curve in the early colonial period (in short, the indigenous population of the central highlands does not appear to have declined as precipitously nor rebounded as slowly as in Mexico, Peru, or the Caribbean).³¹⁹ Still, as Newson has demonstrated, overall figures for the region, especially when the mining districts of Zamora, Zaruma, and Yaguarsongo are taken into account, suggest nothing short of a general demographic disaster.³²⁰

Unfortunately, demographic collapse due to sixteenth-century plagues and abuses did not spell the end for the *encomienda* system. Instead, new gold finds in unconquered lowland regions, mostly at the audiencia's margins, would continue to revive the institution for at least another century. An example of a region in which the *encomienda* survived and was repeatedly revived in gold mining operations is the Pasto district, politically part of the Gobernación of Popayán, but subject to both the Audiencia and the Bishopric of Quito. As Luis Calero has shown, *encomienda* Indians from the several sub-regions of Pasto were made to work in gold mines from the conquest until the late seventeenth century, in some cases to the point of virtual extinction. Of the three major ethnic groups in the district, known loosely as Pastos, Quillacingas, and Abades, the last appear to have suffered most in the mines during the sixteenth-century boom; between 1558 and 1590 the number of Abad tributaries dropped from 2,772 to 357.³²¹ Demographic catastrophe notwithstanding, several thousand *encomienda* Indians were drawn from these three groups annually to work in the placer mines of the Sibundoy Valley and the vein mines of Almaguer, some as tributary *curicamayos* and others as *mita* laborers reported by crown officials. Furthermore, though *encomienda* abuses in the hot Mocoa lowlands to the east led to violent uprisings similar to those experienced in the southern mines of Zamora, the *encomienda*, as will be seen below, was revived by Pasto elites in the seventeenth century in the conquest of the gold-rich Pacific lowlands of Barbacoas.

Survival of the *Encomienda* System in Quito

The *encomienda* system was not uncontroversial in Quito after 1549, but arguments surrounding it generally had more to do with intraelite struggles than with a new interest in Indian welfare. As an institution of political control the *encomienda* was surprisingly resilient, especially in outlying areas where central authorities were at a disadvantage. Restless Spanish elites, mostly from the highlands, were given the incentive of Indian charges, often held for more than the legal limit of two generations (*dos vidas*), in exchange for pacification and settlement of frontiers. Some of these regions, such as the Province of Esmeraldas, were not effectively settled until just before independence, while others, such as the upper Napo River basin, were under tight control, despite some attempts at resistance, by the last quarter of the sixteenth century. While both of these peripheral regions contained some gold, neither emerged as a large-scale producer. The Province of Barbacoas, on the other hand, was a veritable treasure trove. This marginal region, marked by extremely militaristic inhabitants and dense, hot forests, was immensely rich in gold, was home to numerous potential tributaries, and therefore drew much more attention from both the crown and from highland creoles than did the Oriente. The conquest of Barbacoas was slow and very costly, but by about 1650 most of its principal gold fields were settled and the region converted into the most important mining district to fall within Quito's immediate jurisdiction. In the process of conquest, *encomienda* Indians in the region bounded by the Bay of Buenaventura in the north and the port of Tumaco in the south were captured and parceled out to the conquerors and their families.

³¹⁹ Karen Powers, *Andean Journeys*, 45. Powers gives the example of two towns subject to mine labor at Zaruma in the 1570s and 1580s, Cañaribamba and Garrochamba. The former had declined in population from 2,100 to 500 in six years, and the latter from 2,000 to 183 in the same period. The local residents explained that those Indians not working in the mines already had chosen to flee in order to avoid this work (38).

³²⁰ Newson, *Life and Death in Early Colonial Ecuador*, 347. Newson estimates that declines between conquest (1535) and 1600 ranged from c. 80% in the Quito Basin to c. 90% in the Corregimiento of Loja to a staggering 99% in the area around Guayaquil (here due largely to new diseases rather than labor exploitation).

³²¹ Luis F. Calero, *Chiefdoms Under Siege: Spain's Rule and Native Adaptation in the Southern Colombian Andes, 1535-1700* (Albuquerque: University of New Mexico Press, 1997), 186.

A case from the early seventeenth century is illustrative. In 1621 doña Brígida Prado y Zúñiga petitioned the Governor of Popayán asking that her son be granted his father's encomienda of Nulpe, Tangalá, and Pijús Indians. The father, don Juan de Bayona Godoy, along with several of his brothers, had been killed in a skirmish with indigenous warriors in the region, probably of the Sindagua band, shortly after having been granted the encomienda in 1620. doña Brígida, whom the Popayán Governor described as a very "manly" woman ("*varonil muger*") because of her fearlessness in venturing into the backcountry, was not personally eligible to inherit her husband's encomienda.³²² She was asking that it be granted to her eldest son, who was still a minor. The wish was granted and Bayona's encomienda, comprised of some seventy Indians in three villages, or *pueblos*, was inherited, "en segunda vida," by her son, Francisco. As was customary in such cases, the protective and "varonil" mother would administer the encomienda as executor until the boy reached maturity. The grant was insufficient, however, as one of the governor's lieutenants in Barbacoas, along with some of his soldiers, had taken the encomienda Indians, some of whom were highlanders, and forced them to act as carriers and gold miners, "all without pay like new people."³²³ After a few years of working with local officials in Popayán and Pasto, it became clear that the governor's decree was not going to be respected, and doña Brígida Prado y Zúñiga turned to the Audiencia of Quito for help. The case was not heard until 1624, and the audiencia seemed ambivalent in its response.

The high court, presided over by Antonio de Morga at this time, wanted nothing more than to control the extent and influence of these kinds of frontier encomiendas. Spanish efforts to settle such outlying and exposed regions had been failing for years, and rebellious coastal groups, especially in a period of bold pirate attacks -- the Dutch sacked Guayaquil in 1624, for instance -- could be very hazardous to the safety of the empire. The *fiscal*, or state attorney, in this case offered a compromise by recommending that Doña Brígida's son be granted the encomienda but that he not force collection of tribute from the newly pacified and reduced Indians. He claimed that because the majority of the indigenous inhabitants of Barbacoas were still unconverted, and furthermore were in a state of rebellion, any attempt to tax or otherwise burden them would lead to yet more violent rebellion and flight. The example to be presented to the still recalcitrant Indians of the lowland forests, the *fiscal* suggested, was to be that of orderly villages centered on instruction in the Catholic Faith, not hard labor and misery.³²⁴ This was a deluded dream on the part of the audiencia, however, as elites from Popayán and Pasto, among them the Godoy, Prado, and Zúñiga clans, ignored such orders from Quito. Instead they made what they wanted to of the minable margins of Barbacoas and its native inhabitants, who, after years of bitter conflict, were now their personal enemies. As in Yaguarsongo and Zamora, the line between trusteeship and ownership would often become blurred in the ensuing years, and Barbacoas Indians, with a slip of the encomendero-come-master's tongue, would be referred to, like slaves, as "*piezas*."³²⁵

In lieu of official mandates from faraway courts, what, one may ask, did a frontier encomienda consist of? How did it operate? In the case of doña Brígida and her perhaps unfortunate husband, the original Barbacoas grant consisted of at least 140 individuals (the local limit was 200), "with all their lands, farms (*estancias*), works (*labranzas*), forests, waters, and fisheries."³²⁶ As elsewhere in Spanish America, the encomendero was to gather tribute in kind (often converted to cash, in the form of gold dust) after a set rate (*tasa*) determined by a magistrate and later checked and adjusted by an audiencia-appointed visitor. Encomenderos were also required to provide their charges with protection from their enemies (presumably non-Spanish) and with Christian instruction. As a partly genuine and partly symbolic, feudal gesture, the encomendero was to keep an active household (*casa poblada*) in the area, "with arms and horse in order to serve Your Majesty."³²⁷ With these accouterments, it was hoped, he would be able to fend off whatever pirates or rebels might come his way. The law of succession, to which doña Brígida appealed, allowed Spanish Barbacoans to hold encomiendas for two "lives," or generations. If the price was right, however, the grants could be extended for many more. As in the earlier ordinances, lowland indigenes were not to be moved from their so-called natural climate, and were not to be forced to carry burdens or work in mines

³²² ANHQ Popayán, caja 2 (1630), f.5v.

³²³ *Ibid.*, f.4. (*todo sin paga como gente nueva*)

³²⁴ *Ibid.*, f.2v.

³²⁵ This practice appears to have been especially common in Barbacoas, but examples from the upper Amazon and Popayán can be found (e.g., ANHQ Popayán, caja 5 [1670], where encomienda Indians of Guanaca and Pisambalá are referred to as "*piezas*," f.2).

³²⁶ ANHQ Popayán, caja 2 (1630), f.6.

³²⁷ *Ibid.*

involuntarily. In Barbacoas these rules of exploitation were practiced largely in the breach until about 1700; aside from fishing, canoe making, and subsistence farming, encomienda Indians did little else *but* carry burdens and work in the mines against their will.

The Audiencia of Quito was still reviewing the Prado-Godoy case in 1630 when it called for an account of the “natural and industrial fruits” (*frutos naturales e yndustriales*) of the province of Barbacoas.³²⁸ Part of the account they received was the report of Lorenzo de Villaquirán, the new governor of Popayán. His *relación* of 1634-35 included a map of the province drawn up by the same Francisco Prado who had inherited the encomienda mentioned above.³²⁹ Villaquirán claimed that he and Prado had led an *entrada* into the region after an uprising of the Sindaguas in 1634. He went on to say that now (1635) they had thirty-two caciques in custody and some 900 Indian “souls” in their charge.³³⁰ Only one other renegade cacique was said to be at large, with a small following, but Villaquirán was certain of his imminent capture. It is notable that no Barbacoas encomenderos other than Prado are mentioned, a sign that this second-generation conquistador had made an important connection in meeting up with Villaquirán. Also curious is the governor’s brief mention of an Italian Jesuit named Francisco Rugi, whom he claimed had taken a band of Guapí Indians away from soldiers camped at Santa Bárbara de la Isla del Gallo. The Guapians were needed, according to Villaquirán, to populate the new port town, but instead this priest had taken them north to the Timbiquí River to wash gold for him.³³¹ It seems clear that after the conquest of the region was more or less complete, the victorious encomenderos set out to accumulate all of its available human spoils, including any Indians held by clergymen. They managed to do so in Barbacoas with little resistance from the capital, successfully confiscating and redistributing Rugi’s entire Guapí group by 1638.

Quito’s influence in such affairs, for a variety of reasons, would decline dramatically after President Morga’s exit in 1636. It would take most of the remaining seventeenth century for the audiencia to regain its primacy, mostly by reining in Popayán’s chronically corrupt governors. These notorious officials, whose allegiances were routinely bought by the same highland elites who were prime movers in the conquest of Barbacoas, and later the Chocó, left behind enormous wakes of corruption, often centered on the illegal distribution and use of encomienda Indians in mining. Since most of Quito’s principal sources of gold had rather suddenly played out shortly after 1600, control of this new frontier gold district was an important factor in the capital’s survival as a commercial and administrative center. This control, however, would be problematical for most of the colonial period due to the jurisdictional complications with Popayán and the relative isolation of Barbacoas from the highland economy. Disputes over encomienda Indian abuses, as will be seen below, would play an important role in helping Quito establish hegemony in the lowland gold fields, and more broadly over Popayán, not simply as a court of appeals, but also as an investigative authority. Indigenous persons, in Barbacoas and elsewhere, would gain little from these disputes, even when they were the plaintiffs, but for the Spanish elites of the minable margins these “Indian questions” constituted a means of waging war on one another, of constructing personal fiefdoms built on gold dust and sealed paper.

Although sporadic Indian rebellions continued into the eighteenth century in Barbacoas, the majority of the region’s indigenous inhabitants who were not killed or felled by disease were reduced to encomiendas and thus gold mining after 1635. In marked contrast with highland encomiendas, however, the coastal and lowland Indians, after about 1650, if not earlier, were not forced to live in villages. Instead, apparently in response to the complex geography of the area, small bands lived in scattered family dwellings, mostly in stilt houses (*barbacoas*) built alongside rivers. Encomienda charges had to work for their new masters no matter where they lived, and “personal service,” as it was officially called, was the key to understanding the place of frontier Indians in the encomienda system. A set of guidelines for miners, most of whom were encomenderos, was drawn up in Barbacoas in 1668. These ordinances, which were posted and announced by town crier in the Spanish towns of Santa María del Puerto, Santa Bárbara de

³²⁸ *Ibid.*, f.1.

³²⁹ A facsimile of the map is included with the printed portion of Villaquirán’s report in Ponce Leiva, *RHGQ* 2: 203-07.

³³⁰ *Ibid.*, p.205.

³³¹ A numeration of the Indians taken by Rugi, whose brother was an important Quito theologian, may be found in ANHQ Popayán, caja 14 (1695), ff.27-28. The dispute over control of this particular group of Guapí Indians (forty-six individuals of all ages were confiscated from Rugi in 1638) continued into the late seventeenth century. Calero suggests that Rugi’s motives were genuine and that his mission-building efforts were only undermined by greedy encomendero-miners (Calero, *Chiefdoms Under Siege*, 153-54).

la Isla del Gallo, and San Francisco de Borja de Timbiquí, laid out the basic rules regarding indigenous labor in post-conquest Barbacoas, and, like the local ordinances drawn up by Quito's Cabildo in 1549, they are revealing of the early political economy of the district.

Many of the 1668 ordinances, which had resulted from a visita by an oidor from the Audiencia of Quito, Diego de Inclán Valdés, were at least nominally aimed at protecting Indians from overwork, excessive punishment, and debt traps. To a lesser extent, these new laws sought to control questionable behavior among the recently reduced indigenous Barbacoans, and two of the forty-three ordinances were concerned with controlling the ill treatment of African and mixed-heritage slaves, who were already coming to represent a substantial portion of the mining labor force. As is often true in the case of local ordinances, these rules hint at past transgressions. Unsurprisingly, most had to do with local mine owners blurring the line between encomienda and slavery, always showing a preference for the latter. Ordinance Two, for instance, banned forced resettlement of Indians, and was punishable by forfeiture of the encomienda.³³²

Apparently as a result of domestic-type abuses, Ordinance Three outlawed the practice of Spaniards living in Indian pueblos (really house clusters in this case), stating that all Europeans must reside in the three established towns of the province. Ordinance Eight prohibited sale, exchange (*permutar*), and renting of Indians held in encomienda; slaves, by contrast, were routinely pledged for debts, rented, and sold. Following the Quito ordinances of 1549 and in blatant rejection of the New Laws of 1542-43, the visiting Quito judge did not ban indigenous mine labor outright. Following on his visit to the few remaining *curicamay* camps of Pasto, Inclán Valdés ruled mine work essential to the project of Indian evangelization, no matter that it had all but killed off groups such as the Abades in the process. The 1668 visita seems to have bowed to local encomenderos' claims that subsidizing the mines with forced Indian labor was integral to the survival of the regional economy. Quito was in desperate need of hard cash and markets for its products, and as in the case of the Santa Bárbara mines over a century earlier, highland officials sought only to rationalize Indian exploitation to prevent demographic disaster.

Indigenous mine labor was restricted by the ordinances to eight to ten hours per day (one hour after sunup to one hour before sundown, with an unspecified break at midday) and to 312 days per year (the so-called *año de rayas* found also in highland obrajes). Sundays and religious feast days were exempted, along with one hour each Wednesday and Saturday morning for religious instruction. The doctrinero, or mission priest for the Indians (often a Mercedarian by this time), was supported by local tributes and was served by three encomienda Indians granted in yearly rotation, one female (over forty years of age and "above suspicion") and two males. Mine labor proper was restricted to *indios útiles*, defined legally as healthy males between the ages of eighteen and fifty. Among men, only the gravely ill and indigenous caciques escaped mine work. In order that whole villages could not claim exemption as caciques or their kin, primogeniture was enforced. Hinting at an expanding market and consequent contraction of indigenous freedom within it, Ordinance Thirty mandated that the living not be forced to pay the debts of the dead, or wives the debts of their husbands.³³³ As in the Santa Bárbara case, restrictions on non-mine labor included limitations on cargoes Indians were forced to carry from tambo to tambo on the rough trail to the highlands. Ordinance Seven ambiguously prohibited the forced carriage of litters (*guandos*) by encomienda Indians. The ordinance provided an escape clause by stating that Indians could carry loads up to 24 kg (two *arrobas*) if they were "willing." Another rule established a *mita ordinaria*, or rotational service for house and church repairs, in which Indians were to receive a small wage (three tomines gold, or 3/8 castellano, per week) along with a daily lunch, and were not to be corporally punished. Essentially, as in the Quito mine ordinances of 1549, encomienda labor was only barely mitigated by these guidelines, and indigenous persons rarely received, as will be seen below, the wages that were due them.

Another set of restrictions hints at concerns over indigenous-African alliances. Ordinance Four strictly prohibited the presence of *mulatos*, *negros*, *mestizos*, and *zambahigos* (persons of mixed African-Indian background) in indigenous villages, a common enough restriction in the highlands at this time, but delivered here with the added note that "they [persons of African descent] often claim to be children or relatives of the Indians."³³⁴ This comment suggests that in spite of the difficulties faced by encomienda Indians in mid-seventeenth-century Barbacoas, their situation was preferable to that of slaves. This "Indians only" restriction was further reinforced by Ordinance Eleven, which banned any African or

³³² A copy of the ordinances was found in ANHQ Popayán, caja 233 (1743).

³³³ *Ibid.*, f.17.

³³⁴ *Ibid.*, f.10v. ("aunque pretenden ser hijos y parientes de los dichos yndios").

mixed-heritage person from holding a title of cacique. Perhaps most interesting for this discussion, Indians were banned from working with or under the direction of Africans and mulattos. Cuadrillas of curicamayos and cuadrillas of Africans were by law to work in separate diggings (*cortes*, or “cuts”), strongly suggesting that they had been working in concert in the past, and possibly had been forging alliances against their Spanish masters. The existence of many rules aimed at the separation of these groups, both at home and at work, suggests that elites clearly understood the dangers of a mixed rebellion. Given the economic realities of early Barbacoas mining, however, it is difficult to believe that such segregation actually took place. Labor was too dear and many mining tasks too large and complex to prevent the daily mixing of encomienda Indians or concertajes and African and *ladino* slaves.

On the more mundane level, but no less important in the overall scheme, the 1668 ordinances sought to control indigenous behavior, public and private. Indians were not allowed to carry knives, machetes, or other arms, a surprisingly broad and probably unenforceable restriction considering the rain forest environment of Barbacoas. Another ordinance prohibited the sale of wine, chicha (corn beer), aguardiente, and *guarapo* (sugar beer) in indigenous pueblos. Similarly, gaming and prostitution houses were banned, with indigenous and African violators being subject to fifty lashes and Spanish violators subject to a fifty-peso fine (a remarkable parity between the perceived punishment value of coin and stroke).

That these ordinances were primarily concerned with controlling rather than protecting indigenous subjects is most clearly stated in Ordinance Twenty-Two. Here *corregidores*, or Spanish wardens charged with tribute collection and other Indian-related duties, were called upon “not to tolerate lazy, vagabond Indian men nor Indian women of ill repute” (“*no consientan yndios vagamundos y osiosos ni yndias de mal vivir*”).³³⁵ Such persons were to be rounded up, with males put to work in various mita projects around town and females, following the time-honored Spanish practice of *recogimiento*, or female seclusion, “placed to serve in honorable houses, as inmates, not permitted to go out at night” (“*las pongan a servir en casas honradas donde las tenga recogidas, sin permitir las salgan de noche*”). Further, if females were not sufficiently restricted in one household, they were to be moved to another. Morally questionable behavior on the part of technically free indigenous persons of both sexes was thus punished with imprisonment and forced labor, much in the way that African slaves were punished for similar infractions. These ordinances reveal that the authorities believed control of indigenous labor power in the gold mines also entailed control of indigenous social life in the gold towns. If relations between master and servant were allowed to become too intimate, they believed, the fragile social structure upon which economic exploitation rested might come apart.

Labor, specifically mine labor, was the whole point of the encomienda in Barbacoas and similar backland districts in the seventeenth century; mitigation was only intended to prevent premature exhaustion of the indigenous labor pool and to prevent rogue Spaniards from upsetting the delicate social balance of the region. Curicamayos were to work under supervision of experienced mine administrators only, and were not to be exposed to excessive risk.³³⁶ Other rules prevented encomenderos and priests from interfering with Indian marriage choices. Likewise small girls (*chinas*) and boys (*muchachos*), as well as married women were not to be removed from villages and forced to act as domestics for Barbacoas elites. Such disruptions of Indian families would no doubt interfere with reproduction and hence the much-needed supply of mine laborers. Only single women over forty years of age, and “unsuspicious,” that is to say unlikely to reproduce, were allowed to serve as domestics by law.

Rules such as these had little to do with a Spanish struggle for Indian justice. They were rather, quite simply, the pragmatic result of a struggle between crown officials and local mine owners to establish a rational, self-perpetuating system of Indian exploitation. Fewer encomienda Indians translated into fewer tribute payers and thinner gold receipts. But who would check the encomenderos when the visitadores were gone? In some ways, outside investigators trusted Indian workers more than their masters. In fact, the Quito visitor Inclán Valdés, like visitors to the southern gold mines near Loyola around this time, mandated that curicamayos keep records of days worked on memory-sticks (European-style *tarjas*) or knotted strings (Inka-style *quipus*).³³⁷ Whether or not indigenous Barbacoans were accustomed to using such devices is unknown, but they were encouraged to keep their own records in order to produce proof of excessive work demands, and, more importantly, evidence of tax evasion.

³³⁵ Ibid., f. 14v.

³³⁶ Ibid., f. 18v.

³³⁷ Ibid., f. 14v (Ord. 21).

In the extreme southern audiencia, in the former Gobernación of Yaguarsongo (by this time part of the Corregimiento of Loja), the crown faced similar problems of bringing encomenderos to part with the gold portion of their tributary incomes. Gold receipts in the caja real of Loja had become so negligible by 1658 that local officials were going without salaries. An investigation into the matter revealed that encomenderos living in the former gold towns of Loyola and Valladolid, among others, had not paid quintos for decades. The cabildo, at the audiencia's request, sent two magistrates to see what was going wrong. After speaking with the encomenderos of Loyola and Valladolid, it was discovered that either the mines had lost their former productivity or production costs had simply become too high. The encomenderos claimed that, "one only loses in these labors [gold mining] and it is impossible to recover enough of anything [to justify bringing it into Loja]."³³⁸

The Loja officials disagreed, saying that the priests and encomenderos of the southern highlands had been receiving all of their payments from indigenous persons in gold dust and had been conducting business in this medium before it had been taxed, a clear violation of law no matter how much or how little gold dust was circulating. The proposed solution to this problem of the disappearing gold, as in Barbacoas a decade later, was to make the Indians keep accounts of their own gold production with *quipus*. In all seriousness, the Audiencia of Quito, not the local officials, sent out orders to the effect that all indigenous mining captains belonging to encomenderos in Loyola and Valladolid were to go to Loja after finishing each mining job. There they were to give testimony to the Real Hacienda officials as to the volume of gold produced, proving their accounts by means of the knotted-string method. If they refused to do this, or were found to have given false testimony, the Indian *capitanes* would be subjected to one hundred lashes and a shaved head.³³⁹ Apparently little had changed in this region since the days of the sadistic encomendero Pedro de Bañuelos. The incredible irony of this mandate, of course, centers not on the violence with which it was to be enforced, but on the audiencia's apparently sincere belief that the burden of record-keeping should and could be placed on the shoulders of the Indians. It was as if *they* were the ones trying to defraud the crown in the first place, not their Spanish overlords. As has been demonstrated in so many other instances, the audiencia's preoccupation with gold production justified a constant renewal and even expansion of abusive labor practices under the guise of encomienda. One can only imagine the position of an indigenous miner faced with hard labor in the goldfields complicated by suspicion from both his encomendero, for whom he was supposed to lie, and the royal officials, with whom he was supposed to be honest.

Whether in Barbacoas or Loyola, short-sighted encomenderos obsessed with quick gain were unlikely to concern themselves with indigenous preservation since their grants were not inheritable beyond two generations. That the crown would make more than occasional exceptions to this rule (of *dos vidas*) in still-unstable districts like Barbacoas suggests a conscious compromise between local pretensions and official reservations. The encomienda system, being neither slavery nor freedom, was inherently contradictory in its economic and socio-political aims. A chronic inability to resolve this dilemma meant that the Indians would ultimately be harmed no matter which elite interest group won out. Already the decline in native populations was considered drastic – one telling ordinance exempted ill curicamayos from service, another mandated medical treatment. Try as they might, though, the Spanish could not simultaneously preserve and exploit indigenous peoples in gold mines. Whereas close to one thousand indigenous inhabitants had been distributed in the 1620s and 1630s among a half-dozen encomenderos in Barbacoas, by 1700 more than twice as many elite families shared only one hundred and sixty-eight *yndios útiles*, or tribute-paying males, many of these illegally resettled from the Pasto highlands.³⁴⁰ The excesses

³³⁸ ANHQ Real Hacienda, caja 3 (15-vii-1658), f.2.

³³⁹ Ibid., ff.2-2v ("que de aqui adelante todas las vezes que salieren de acavar sus demoras vengan a esta ciud a darnos quenta y razon por sus quipos que tengan obligacion de hazer y tener el oro que an sacado ellos y sus quadrillas y entregada a sus encomenderos mayordomos o administradores dellas / dandose lo a entender en su lengua natural o general y que de no hazerlo asi, seran castigados por cada ves que no lo cumplieren con pena que se les ynpone de cien asotes y cortado el cabello").

³⁴⁰ ANHQ Indígenas, caja 24. Luis Calero cited a Popayán governor's visita of 1691 which counted 452 tributaries between Barbacoas proper and Timbiquí ("Pasto, 1535-1700: The Social and Economic Decline of Indian Communities in the Southern Colombian Andes," Ph.D diss. Geography, U. of California, Berkeley, 1988, 318-19). This would suggest a more dramatic decline during the epidemics of 1692-93 than in the previous seventy years.

of Doña Brígida Prado's generation, along with a clear diminution of indigenous numbers by disease, were clearly not braked by these late-coming ordinances.

The half-hearted legal reforms of 1668 not only sought to slow indigenous decline and reorder social life in Barbacoas, they likewise aimed to eliminate crown-specified wages, further reducing encomienda Indians to near-slave status. The crown compromised with local officials on this score by allowing encomenderos to compensate curicamayos with payment in kind, often in the form of highland produce which the lowland Barbacoans neither wanted nor needed. Cash, gold dust in this case, was kept out of Indian hands by establishing fixed prices for a variety of tribute items, usually foodstuffs and crude manufactures. Embedded in the ordinances is an official price list for items traded in this fashion (see chapter 6). Curicamayos, according to this accounting scheme, could receive their annual wage of fourteen gold pesos (for 312 workdays) in cloth brought down from the highlands, much of it woolen and entirely unnecessary in the hot, wet jungle, along with more useful but generally unnecessary highland food products such as cheese and salt beef.

Given that almost all the encomenderos in Barbacoas had family ties and in some cases landholdings in the highlands, especially around Pasto, this arrangement worked out rather neatly. The indigenous workers and their families became a captive market in a local version of the infamous *reparto de efectos*. Tribute payment in kind, namely underpriced food items such as fish, maize, yuca, plátano, pineapple and papaya, but also including needed tools such as gold-washing bateas and canoes, further subsidized the mining economy. These goods were collected by encomenderos and redistributed among curicamayos and African slaves engaged in full-time mine work and needful of their legally mandated subsistence rations. As such, the fixing of prices, wages, and tribute payments was an artificial means of drawing gold out of circulation among indigenous persons; elites thus had more gold to trade with outside merchants for luxury items and indigenous labor was thus so undervalued that a year's work (c. ten hours per day for 312 days) could be compensated with only fourteen rough shirts, or seven useless wool blankets.

Guido Barona's study of seventeenth-century Chisquíó, a hard rock gold camp in the highlands near Popayán, reveals similar structures of price and tribute fixing aimed at excluding encomienda Indians from full market participation. In the Chisquíó case, a crown-administered encomienda worked from roughly 1590-1690 with wages translated into goods in kind, such as salt and the familiar Pasto cloth (*mantas pastusas*).³⁴¹ Although some of these items were needed by highland Indians, forced payment in merchandise to captive mine laborers was another means by which the crown subsidized highland elite producers of textiles and agropastoral products, many of them already exploiting coercive Indian labor forms such as the *mita ordinaria*. The system also created much-resented dependencies for indigenous mine laborers, since they could not normally work long enough to settle their forcibly acquired debts. In a murder case from early 1680s Popayán, a former Spanish administrator of the Chisquíó mines was convicted largely as a result of testimonies given by his disgruntled indigenous ex-employees. It was a rare case in which encomienda Indians saw an abusive mine administrator get his comeuppance, in this case a death sentence and public execution in the town square of Popayán.³⁴² More often, forced indigenous miners suffered in silence, or voted with their feet by missing the roll call.

Throughout the Quito backcountry outrageous mining obligations were met with massive flight, and Barbacoas was no exception. A 1671 numeración of Indians belonging to an encomendero near Timbiquí shows that of a total of forty-one Indians twelve were missing (*huidos*) and presumed living somewhere in the forest. This number of runaways gains more significance when it is shown to include more than half of the yndios útiles, or working males between eighteen and fifty years of age. Six of the eleven workers legally eligible for mine labor were gone, leaving behind many younger and older relatives, but taking with them some sons and daughters, and at least one spouse.³⁴³ These individuals, of the Chupa, Boyas and Guapí "nations," clearly preferred life in the forest to mine work. While some runaways seem

³⁴¹ Guido Barona, "Estructura de la producción de oro en las minas de la Real Corona: Chisquíó (Cauca) en el Siglo XVII," *Anuario Colombiano de Historia Social y de la Cultura (ACHSC)* No.11 (1983): 35-42.

³⁴² ANHQ Popayán, caja 10 (1680). Here a small-time miner named Juan de Medina was convicted of murdering a mestizo petty trader, apparently over a small debt. The Indians' testimonies were seen as questionable, given Medina's history of abuses as Chisquíó's principal administrator during the 1670s. He was only convicted after his son and a reticent Indian witness testified against him--neither spoke out against Medina, an apparently sadistic and notorious man, until tortured.

³⁴³ ANHQ Fondo Especial, caja 3, #262 (1671), f.119v.

to have established settlements in the interior or joined the palenques of runaway slaves, chronic truancy appears to have been most common among encomienda Indians along the coast and in the highlands.

An example of this tendency to disappear for brief periods, a constant concern of gold miners, comes from late seventeenth-century Barbacoas. In 1692 María Castro Rosales, a mine owner and widow, filed suit against another miner, a powerful local official named Bartolomé Estupiñán y Flores, claiming that the latter had in his employ one of her runaway Indians. The Indian in question, Alonso Nulpingo Azas, of the Nulpe group, had run off so many times that he was something of a legend among the slave and encomienda populations of Barbacoas. Another Indian belonging to María Castro testified that Azas had been thought lost at sea, “being such a renowned runaway (*cimarrón*) that as soon as his master had him caught, he immediately ran away again, taking other Indians with him.”³⁴⁴ He and his companions were eventually written off as unretrievable when their encomendero, María Castro’s husband, decided that trying to keep track of Azas was more trouble than it was worth. A former slave of Castro Rosales, Miguel Malemba, also testified as to Azas’s reputation for flight, calling him “the greatest of runaways.”³⁴⁵

Even the greatest of runaways could be captured, however, and in the case of Alonso Azas, the long arm of the law landed him in the service of a prominent miner-encomendero, don Bartolomé Estupiñán. As with many runaway slaves and Indians, family ties -- in this case a wife in the encomienda of Estupiñán -- made permanent flight most difficult. Azas had been caught during a domestic visit and was immediately put to work by his new master. When given the opportunity to testify for himself, Azas told a visiting priest, “Here I go, Father, on a thousand errands, because since I was caught by order of don Bartolomé, I have not rested; first going to build canoes, then to plant maize, then to weed the plantain patches as you see me doing now, then [to weed] the canefields further in.”³⁴⁶ Azas was not forced to work in the mines, but he certainly was not spared from anything else. María Castro, outraged upon hearing that one of her workers (like Brígida Prado, above, she had gained legal control of her dead husband’s encomienda) was enriching a neighbor with his labor power, ordered a Spanish friend and a slave to kidnap Azas from a canoe while on his way to one of his “thousand tasks.” The Quito Audiencia did not approve of such violent measures, but it did back María Castro’s rights to the labor of Alonso Azas. Given Azas’s tendencies and Estupiñán’s designs, it is not surprising to learn that this case was not fully resolved, regardless of the audiencia’s decision, until don Bartolomé’s violent death in 1698 (see chapter 7).

Encomenderos did not simply allow runaway encomienda Indians to disappear. On repeated occasions they organized search posses, in some cases entering areas well beyond their own jurisdiction. The high incidence of truancy and permanent flight among indigenous groups of the gold-producing Sucumbios and upper Napo regions of the Oriente and the corresponding practice of cross-border retrieval raids in the seventeenth and eighteenth centuries have already been noted. Similar patterns emerged in seventeenth-century Barbacoas, where mine owners were routinely charged with attempting to capture and “enslave” so-called *yndios cimarrones* in neighboring Esmeraldas Province.³⁴⁷ In one case dating from 1676 a band of four runaway Chupa and Boyas Indians from the mines of the Quebrada Jaujúi fled to a remote site called Chiocuyo, leaving their encomendero with only three *yndios útiles* and a work-exempt cacique.³⁴⁸ A reconnaissance party was assembled and sent out in search of the runaways in the *montaña*, or hilly jungle of the western versant of the Cordillera Occidental. The search lasted some months, but the posse seems only to have located two of the four runaways despite having covered many hectares of rough terrain between the upper Magüí and Micay Rivers. The party eventually arrived in Popayán via Chisquío, suggesting that a trail connecting the highlands to the Upper Micay, in northern Barbacoas Province, was then open, although the surrounding countryside remained in non-Spanish hands. The upper Patia River, on the other hand, was a known sanctuary for both runaway Indians and African slaves, and continued to be so into the mid-eighteenth century. No matter where they ran encomenderos claimed that Indians were

³⁴⁴ ANHQ Popayán, caja 12 (29-viii-1692), f.27v.

³⁴⁵ Ibid., f.29v (“Grandísimo cimarrón”).

³⁴⁶ Ibid., f.28v.

³⁴⁷ See, for example, ANHQ Indígnas, caja 12 (28-vii-1679), where Cayapas Indians complained of slaving raids by Barbacoas encomenderos, and ANHQ Esclavos, caja 1 (1667), where a “zambo” cacique of Bahía San Mateo protested the forced removal of village men to Tumaco to cut and lade timber.

³⁴⁸ ANHQ Popayán, caja 9 (28-vi-1686). The last indigenous group remaining in the Barbacoas region is known as the Awa-Kwaiker of the Pacific borderlands of Ecuador and Colombia. For a recent study of their culture and language, see Benhur Cerón Solarte, *Los Awa-Kwaiker: un grupo indígena de la selva pluvial del Pacífico Nariñense y el Nor-Occidente Ecuatoriano* (Quito: Abya-Yala, 1986).

fleeing in order to return to their “idolatries,” but it was more likely that they found their tribute obligations of three gold pesos per month at least as onerous as forced instruction in the Catholic Faith.³⁴⁹

Whereas Franciscan and Jesuit missionaries in the Oriente routinely gave sanctuary to persecuted encomienda Indians during the seventeenth and eighteenth centuries, religious defenders of the native peoples of Barbacoas were rarely so outspoken. As has been noted, a few Jesuits had settled on the Timbiquí River in the 1630s, but were either driven from the region by encomenderos or had forced their new converts to wash gold for them against the precepts of their order. Other Barbacoas doctrineros, mostly Mercedarians, as in Esmeraldas after the initial peace treaties of the late 1590s, were said to have been barely concerned with their duties by the end of the seventeenth century. One encomendero in 1700 claimed that local doctrineros did nothing more than “wander about enjoying themselves in the different mining camps, sometimes begging for alms and sometimes administering sacraments.”³⁵⁰ Even when the priests had been more dutiful, their actions seem to have elicited little praise. The 1668 mining ordinances stated that priests were not to punish Indians by imprisoning them or placing them in stocks; if punishment was indeed deserved, according to Ordinance Fifteen, the priest was to advise a certified corregidor.³⁵¹ Such measures suggest that not only did priests subject indigenous Barbacoans to physical abuse, but that those being punished had little recourse under the new ordinances since the corregidor could hardly have been viewed as a trusted advocate.

No one, it seems, spoke out against encomienda abuses in the gold mines of Quito’s hinterland. Many indigenous groups were passed on for more than the legal limit of two generations in Barbacoas, Pasto, and the Oriente; in spite of some weak objections from the high court in Quito, Popayán governors routinely granted extensions to favored elites in Barbacoas and Pasto, usually in exchange for some kind of severance fee. Other encomenderos were said to hold multiple encomiendas simultaneously, another clear breach of the law, but one which was almost never punished.³⁵² In several instances women were apparently granted legal titles to encomiendas when male heirs were absent, as in the case of Doña Juana Godoy, who was named *hija primogénita* and allowed to inherit rights to a group of local Pijús and imported *serrano* Indians near the Isla del Gallo in 1686.³⁵³ The legitimacy of Godoy’s grant was questioned but apparently not overturned by the Audiencia of Quito for having extended beyond two generations. The other problem with Doña Juana’s encomienda, namely the presence of forcibly resettled highland Indians, was not questioned at all.

Though evidence from the gold zones of the seventeenth-century Oriente is lacking, this phenomenon of transporting highland Indians to the coastal mining zones had been going on in Barbacoas for some time. One of the worst cases of abuse of this kind appeared in 1696, when a cacique of the highland village of Pupiales testified that an encomienda administrator, Josef de Bolaños, had taken with him six indigenous males from the village to serve him in Barbacoas. It is not clear what type of labor these men were engaged in, but their removal to the lowlands was clearly illegal.³⁵⁴ In 1695 a dispute arose between the Estupiñán clan of Barbacoas and two nuns living in Popayán. The sisters were heirs of two encomienda villages located along the Barbacoas-Pasto trunk line. Apparently the nuns’ relatives had rented the encomiendas to the Estupiñáns but had not received payment as stipulated in a written contract. Litigation revealed a complex web of transactions which had placed the encomienda Indians in the hands of a Spanish gold prospector. After several years of searching and digging, he and his borrowed workforce

³⁴⁹ In a case from the Barbacoas port town of Tumaco dating to 1681, a small number of so-called “indios fronterizos,” or members of recognized “buffer tribes,” were released from encomienda service by the audiencia (ANHQ Popayán, caja 7 [1681]). This was a period of great fear due to an unprecedented wave of buccaneer incursions in the Spanish Pacific, so defense needs were temporarily elevated above labor needs in the mines, timber stands, and careening points. See Kris Lane, “Buccaneers and Coastal Defense in Late Seventeenth-century Quito: the Case of Barbacoas,” *Colonial Latin American Historical Review* 6:2 (Spring 1997): 143-73.

³⁵⁰ ANHQ Indígenas, caja 24 (1700), f.68v.

³⁵¹ ANHQ Popayán, caja 233 (1743), f.13.

³⁵² ANHQ Popayán, caja 8 (1683). In this case the local Superintendente de Armas, Bartolomé Estupiñán, was charged by rivals with illegally holding “dos feudos,” or a double grant of encomienda Indians. In his defense he claimed that Barbacoas numeration methods were unusual; Indians did not live in pueblos as they did in the highlands (26v).

³⁵³ ANHQ Popayán, caja 9 (1686).

³⁵⁴ ANHQ Popayán caja 14 (29-v-1696).

had not only come up empty-handed, but many of his charges had also died of fevers, drowning, and other mishaps along the Yaculá River.³⁵⁵

As in the Chocó and the Oriente, other encomienda laborers were rented to merchants by unscrupulous encomenderos in order to carry cargo into Barbacoas. Indeed, the abuse of indigenous carriers had become notorious all over the Gobernación of Popayán by the last decade of the seventeenth century. Here encomienda Indians not forced to labor in gold mines were made to carry heavy loads over rough terrain, to paddle canoes, to cut timber and to work farms and catch fish to feed their masters and work-gangs of African slaves. In the Jelima-La Teta mining district southeast of Cali encomienda Indians, some of them recently reduced Paeces, complained of being forced to work in cane presses (*trapiches*, a kind of labor restricted to slaves by law), as mule drovers (*arrieros*) and as stone carriers (*acarreadores de piedras*) apparently in privately-run building stone quarries.³⁵⁶ Encomienda Indian abuse around Popayán was said to have reached such extreme levels by the early 1690s that only about 600 yndios útiles remained within a day's journey of the city.³⁵⁷ Those who had not died from overwork and related maladies had fled to the mountains and unconquered parts of the coastal lowlands. All officials, including the governor, were said to have been corrupt and were even charged with openly selling Indians for cash. This charge may have been an exaggeration, but as early as 1663 a Popayán scribe was convicted of selling a Chupa boy to an encomendero in Barbacoas for thirty gold pesos.³⁵⁸

Indeed it seems that the encomienda in Popayán generally, and more specifically in Barbacoas was so uncontrolled by the late seventeenth century that it approached slavery. That is, encomienda Indians were by this time inherited beyond two generations, freely transported over long distances, rented, and even sold. The only restrictions on Indian labor were those imposed by indigenous subjects themselves, namely by flight and concerted rebellion. The other notable restriction was beyond the control of either group, and this curb, the most important of all, perhaps, was epidemic disease. The worst of the seventeenth-century abuses happened to coincide with a series of epidemics that decimated indigenous and even African and mixed populations throughout the Audiencia of Quito.³⁵⁹ These epidemics of measles and smallpox (*sarampión y viruelas*), according to witnesses in Popayán, spared few indigenous and African persons, even in the cooler highlands.³⁶⁰ As if to add insult to injury, a plague of locusts (*plaga de langosta*) also struck many highland farming regions in 1692-93, wiping out a year's worth of badly needed foodstuffs. Only after all of these natural disasters had struck, when it was really too late to effect life-saving reforms, did the Audiencia of Quito at last seek to curb the encomienda and bring it into line with the New Laws of 1542. Unsurprisingly, the new rules came at a time when Africans -- true legal chattels not subject to such controls -- had already come to outnumber Indians throughout the Popayán gold fields.

Indian Draft Labor: The Mita in Quito

Unlike many of the silver districts of Mexico and Peru, which employed up to two-thirds wage workers, even in the sixteenth century, gold districts in the Audiencia of Quito relied almost entirely on coerced labor throughout the colonial period. As noted above, the institution of the encomienda was an essential means of supplying mine labor to about 1700, and as will be seen in the next chapter, African slavery, at least in the Popayán region, took the place of the encomienda by at least this date and would continue as the principal source of mine labor in this district until after independence. Another, less-developed means of coerced mine labor practiced in the Quito district was the so-called mita, a draft labor system based loosely on an Incaic model (the *mit'a*). A pre-Columbian gold-mine mita, as Aquiles Pérez noted in an early study of this institution, was apparently in effect in southern Quito under Huayna Capac

³⁵⁵ ANHQ Popayán, caja 14 (13-x-1695).

³⁵⁶ ANHQ Popayán, caja 9 (1686).

³⁵⁷ ANHQ Popayán, caja 12 (23-vii-1692).

³⁵⁸ ANHQ Popayán, caja 3 (1663), f.58. The boy in question was referred to as Juan, "nación Chupa."

³⁵⁹ For a full discussion of these late seventeenth-century epidemic "waves," which seem to have originated in Peru, see Suzanne Austin Alchon, *Native Society and Disease in Colonial Ecuador* (Cambridge: Cambridge University Press, 1993), 91-99. Alchon notes that the common remedy for these diseases was a purgative made from *cañafistola* (an effusion made from native *Cassia* seeds). This and other herbal remedies seem to have failed, as Alchon estimates a mortality rate c. 40-50%.

³⁶⁰ ANHQ Popayán, caja 15 (14-v-1696) ("dos reguerosas epidemias de sarampión y viruelas en que peresieron mucho número de yndios y negros esclavos").

(1493-1527), if not before.³⁶¹ Under the Spanish this curicamayo mita was revived and, though late in coming and never well organized, was nevertheless destructive and deserves attention here. If nothing else, the study of the mita in the context of the mostly gold and occasional silver mines of the northern Andes offers some useful contrasts to its use and abuse in the mining districts of the central and southern Andes.

The Potosí mine mita, so well described by Bakewell, Cole, Tandeter, and others, was established by the Peruvian Viceroy Toledo in 1575. Toledo's reinvention of the Inka rotational labor form to meet the needs of Spanish silver miners some thirty years after Potosí was discovered was widely hailed as the greatest innovation in mining since mercury amalgamation (another of the viceroy's applied techniques, this one Mexican in origin). Toledo was a highly motivated bureaucrat obsessed with precious metals mining; he toured Potosí, rewrote mining codes based on his observations of local practice, issued cédulas granting miners in remote regions special privileges, and otherwise left his mark on the industry. Toledo did not overlook Quito, which was, after Carabaya, reputed to be Peru's principal gold source, and he sought to rationalize production in the well-situated mines of Zaruma as he had done for those of the more desolate Potosí. The viceroy would order the establishment of a mine mita at Zaruma, lower mercury prices to encourage amalgamation, issue cédulas temporarily reducing the severance tax, and offer whatever other concessions that might make the mines productive. Toledo's belief, not entirely unfounded, was that the mines of Zaruma were not living up to crown expectations due to a lack of discipline, a lack of labor and, in short, a lack of efficient management. Labor was the first problem, and Toledo sought to remedy it by casting a somewhat down-scaled version of the Potosí mita net over the Kingdom of Quito.

The Zaruma mita was first proposed by Toledo in 1573, but does not appear to have become operable until 1579, and even then not without constant impediments and controversy.³⁶² Indigenous population density in the southern highlands was relatively low, possibly due to pre-conquest wars between the Inkas, the Paltas, and neighboring groups. Whatever its causes, this relative natural scarcity of labor in the Zaruma region, coupled with new epidemics in the late 1550s and again in the 1580s, necessitated a fairly broad mita net simply to meet the minimal requirements of the district's gold miners. To complicate matters, gold was more costly to produce at Zaruma than in early placer districts such as Santa Bárbara. Firstly, labor was needed in more tasks, such as tunneling in hard rock, ore removal, carriage, milling, canal tending, and so on, and secondly, aside from the hard labor and complex refining technology needed for recovery, Zaruma gold was of low karat, and thus less valuable in relation to placer gold. The new mill owners, or *dueños de ingenios*, of Zaruma called for crown sanctioned labor subsidies from the very beginning, and the mita was the crown's first and only response.

Initially some six hundred *mitayos* were to be drawn from four ethnic groups living in the Cuenca and Loja regions, specifically the Ambocas, Garrochambas, Paltas, and Malacatos.³⁶³ Since the mitayos sent by these groups failed to meet the miners' demands, the mita net was extended to cover the southwestern Cuenca groups living near Cañaribamba and Pacaibamba. Even with these modifications the Zaruma mine mita in the 1580s never exceeded 700 workers on two-month rotations, a paltry number compared with the several thousands who were drafted to serve one-year stints in the silver mines of Potosí. As Powers notes, many indigenous persons living within the mita zone fled to avoid mine service in the early 1580s. 1581 visitas to Cañaribamba, and Garrochamba, for instance, revealed population drops of seventy-six and ninety-one percent, respectively, since 1575.³⁶⁴ Such precipitous declines before the second wave of epidemic disease, as Powers suggests, reveal that flight was the most likely cause of Zaruma's labor problems. Newson has shown that mining conditions, coupled with extremely low wages (the mitayo received a token wage of one tomin, or two reales, per day, and probably not in cash), meant

³⁶¹ Aquiles Pérez T., *Las mitas en la real Audiencia de Quito* (Guayaquil: Biblioteca de Autores Ecuatorianos, 1987 [1947]), 206. Frank Salomon, in *Native Lords of Quito*, 193-94, suggests that the mit'a was a relatively weak institution in pre-colonial Quito by comparison with other parts of the Inca empire, and that it was dying out among northern principales by the 1550s.

³⁶² See ed. Roberto Levillier, *Gobernantes del Peru* 6: 181-83. Toledo also called for the consolidation of the several cajas reales of the southern audiencia at one site, Loja. Galo Ramón has published a fine overview of Zaruma's regional importance to 1700, including a fairly detailed discussion of the mine mita, in "Loja y Zaruma: entre las minas y las mulas, 1557-1700," *Revista Ecuatoriana de Historia Económica* No.7 (1990): 111-43.

³⁶³ Ramón, "Loja y Zaruma," 121.

³⁶⁴ Karen Vieira Powers, *Andean Journeys*, 38.

that mitayos who survived one trip to the mines made sure they never had to return.³⁶⁵ Unlike rich silver towns such as Zacatecas or Potosí, Zaruma offered few incentives for Indian laborers to stay, even if they picked up specialized occupations. As a regional market for both labor and produce Zaruma remained too small and undercapitalized throughout colonial times to ever escape marginality in spite of its high-sounding designation as a Villa Real, or “Royal Settlement,” in 1593.

As early as 1592, the mita in Zaruma was in decline. The original prediction that some 500-1,000 indigenous workers could be easily drafted into service from the southern provinces quickly fell victim to various unforeseen circumstances. First of all, indigenes died in the mines and elsewhere, largely due to epidemic disease, but also because of overwork, mine and mill hazards, dangerous river crossings, and so on. Secondly, and perhaps more importantly in the long run, encomendero-agriculturalists around Cuenca and Loja were unwilling to send their precious native charges to Zaruma for others to exploit; they quickly learned that too many temporary mine laborers did not come home.³⁶⁶ Thus, if indigenous workers did not run away from the visiting mita officials of Palta and Cañaribamba themselves, their encomenderos or other employers were likely to shield them. Quito officials, being so far away, rarely visited the mines and surrounding provinces and made little effort to alleviate either the situation of Indian mitayos or to resolve the conflicts arising between agricultural and mining elites.

Faced with renewed economic pressures in Europe, the crown in the early 1590s solicited proposals to solve the mita crisis at Zaruma. Most of the observers, audiencia officials from Quito, primarily, called for forced resettlement of some 2,000 “vagabond” Indians collected from the northern highlands, including Pasto and, in one case, Popayán. These non-village, or yanacona Indians were seen as a menace to public safety in Quito and other cities, their forced removal justified on moral grounds. After a round-up the workers would be marched to two sites near the Zaruma mines, presumably along the Amarillo and Calera Rivers, and would there construct and occupy a kind of wattle-and-daub barracks, after the manner of slaves. If they tried to run away or return to their former haunts, they were to be corporally punished and sent back to the mines.³⁶⁷ Some officials argued that these unattached workers, also called *peinadillos* (in reference to their elaborate hairstyles, apparently), were so unaccustomed to work that they would prove intractable under these conditions, and would flee like “runaway slaves” (*negros cimarrones*).³⁶⁸ Massive importation of African slaves was in fact proposed by some observers, including the former Bishop of Nicaragua, Gerónimo de Escobar. Escobar, one of the few proposal writers to complain of Indian abuses, among them periodic floggings in the mines, which he had visited, opposed all indigenous mine labor. He suggested that mitayos instead be restricted to raising food products for slaves. No friend of Africans, apparently, Escobar proposed that the crown should offer slaves to miners at reduced prices, on credit, a recurring theme explored in the next chapter.³⁶⁹

In the end none of these schemes materialized, mostly due to disputes with northern elites who laid claim to the *peinadillos*, but the mine owners of Zaruma also lacked the political clout to see such plans enacted. Toledo had left the project of rehabilitating the district by ensuring a constant supply of mita laborers to the elite Quiteños, and they had failed. Zaruma could never have become another Potosí, in spite of contemporary claims, but in light of the combined resistance of indigenous laborers, mostly in the form of migration, and stubbornly possessive elite agriculturalists in the late sixteenth century, it most certainly failed to achieve its productive potential. For Indians and Africans spared the torture of working in the district’s pits, shafts, and mills, this shortcoming was no great tragedy, but for Spanish elites in the southern highlands, the decadence of Zaruma was at least one factor leading to a sustained regional economic decline which would ultimately outlast the colonial period itself.

By the turn of the seventeenth century Zaruma’s half-dozen or so principal mines, along with some two dozen *ingenios de agua*, or stamp mills, were barely operating. The number of mitayos had dropped to less than two hundred, and those who came could not be enticed to stay by recent wage hikes (1.5 tomines a day after 1593) or other incentives. Due to the continued high cost of transport and minimal

³⁶⁵ Linda Newson, *Life and Death in Early Colonial Ecuador*, 241.

³⁶⁶ Ponce Leiva, *RHGQ* 1: 492 (“no se ha de sacar más por causa de los pocos indios que ay en los dichos pueblos, de enfermedades de viruelas y otras, y tambien por repartir los dichos indios a los labradores moradores en Loja y Cuenca y para el servicio de las dichas ciudades sin los cuales no se pueden sustentar,” 1592).

³⁶⁷ *Ibid.*, 546 (Lcdo. Auncibay).

³⁶⁸ *Ibid.*, 515-16 (Lcdo. García Tamayo de Morales).

³⁶⁹ *Ibid.*, 517.

local production, food prices were so high in Zaruma that a fanega of maize cost the equivalent of a month's pay.³⁷⁰ In the 1610s gold production languished and was only partially revived in the 1620s with the reintroduction of tax breaks (the *quinzavo* instead of the quinto). With a renewed interest in mining, abuses apparently increased. In 1621 mitayos from Cañaribamba filed a series of complaints with the corregidor of Cuenca, claiming that many Indian workers had died from drowning, disease and overwork.³⁷¹ One worker, a night watchman for a stamp mill, had been stabbed by the dueño with a rapier for sleeping on the job. Others employed in the same man's mines had been beaten with canes for minor infractions and had had their heads shorn.

In the 1630s mining slumped again, and dueños de ingenios even began to quarrel with priests over Indians employed in rotational service for the church. The doctrineros, the miners charged, were allocating to themselves the services of "their" mitayos, calling them *pongos* (precursor of the term *huasipunguero*, or debt-peon) or *semaneros* (weekly domestic workers) and paying them nothing. It was insinuated that these pongos were illegally put to work in gold collection, possibly stream panning in nearby rivers, as they were made to pay the priests some kind of tithe in gold.³⁷² Further, the Zaruma cabildo charged, the priests had used these new means of extortion so effectively that many indigenous workers, mostly forasteros, had permanently run away. Perhaps most annoying of all, the priests charged the mine owners themselves exorbitant fees in gold for religious services. As for their own labor practices the mine owners claimed they were offering fair wages to native laborers, the least being one tomin, or two reales per day, but graduating to a full patacón (four tomines, or eight reales) for workers in rivers and *desmontes* (shallow excavations).³⁷³ The vecinos, who in 1639 had demanded that the priests be banned from using indigenes in personal, unpaid service, tried to persuade the audiencia that mine work in Zaruma was competitively priced and even attractive. Needless to say few native workers seem to have agreed with this assessment.

Though Zaruma was the only district in the Audiencia of Quito to rely heavily on it, the mine mita was tried at other sites from time to time. In the early 1690s, a silver mine at the previously worked Malal site northwest of Cuenca was apparently staffed with mitayos for a short time. The mines, which were administered by a New Granadan specialist named Carlos de Acuña, quickly fell into disarray when the first allotment of workers fled. Those who did not flee, or had not yet been sent away from their pueblos, were said to have been taken away by local *obrajeros*, or textile mill owners.³⁷⁴ Further, Acuña claimed, the obrajeros had slandered him, telling corregidores and other officials that Indian workers were mistreated at Malal, not properly fed, clothed, or sheltered, and made to endure a chilly climate in what were described as *punas rigurosas* (the wet, high páramos of the Cordillera Occidental). Officials in Quito showed little sympathy for this mine administrator, calling on Cuenca officials to mandate a set ration of meat, maize, salt, and vegetables for any mitayos sent to Malal.

Also in the early 1690s a mine owner in the northern Oriente, on the Punino River, petitioned the audiencia for thirty indigenous mitayos to work a placer gold claim. Surprisingly, the court granted twenty workers, all to be paid jornales and not made to labor in turns lasting more than six months. Placer mines worked with mita labor were a rarity in general, but especially in a region where most of the indigenous population was held in encomienda. This operation, which drew men from the pueblos of Payamino, Guambuno, Becain and Mango, proved to be productive, and some gold was taxed in Quito in order to register the claim.³⁷⁵ Alerted to the peculiar dangers of the northern Oriente, the audiencia stipulated that the new mitayos were to be protected from raiding Sucumbios and Mocoa groups.

Luis Calero has described the mine mita in the gold fields of the Pasto region from its creation in the early 1570s to its decline in the late seventeenth century. Here curicamayos were drafted into mita service as early as 1571, following the visita of a Quito oidor named García de Valverde. Gold-rich areas such as the Abad country northwest of Pasto and the Sibundoy Valley to the east were worked by mitayos drawn from all the pueblos of Pasto. These rotations drew one fifth of each town's workforce and lasted

³⁷⁰ Newson, *Life and Death in Early Colonial Ecuador*, 242.

³⁷¹ Anda Aguirre, *Zaruma en la Colonia*, 69-73.

³⁷² ANHQ Fondo Especial, caja 1, #125 (25-ii-1639).

³⁷³ *Ibid.* This last wage seems exceptionally high (more than 2 g of gold per day) and was probably never paid in cash form, if at all. This was, however, the cost of renting a slave for a day in contemporary Guayaquil.

³⁷⁴ ANHQ minas, caja 4 (4-vi-1807) (fragment of 1692 document in this folder).

³⁷⁵ ANHQ Indígenas, caja 20 (6-ix-1692), ff.3v, 5.

eight months, compensation consisting only of a food and clothing ration. In 1571 some 443 workers were said to be mining in the Abad district at any given time, but by the 1580s this number had risen to 685.³⁷⁶ Many other indigenes were removed from their homelands and forced to settle near the Sibundoy placers and the vein mines of Almaguer, and as Calero notes, the demographic consequences of these policies were catastrophic. The native Abades seem to have suffered most, their tributary population declining from some 2,722 in 1558 to only 357 in 1590.³⁷⁷ As in the southern highlands, gold mining took a huge toll in the backcountry of Pasto and other parts north, yet as in the south, the mita continued to function until the end of the seventeenth century.

As Pérez and others have shown, the mita extended to many other activities besides mining.³⁷⁸ Of the non-mining mita obligations an indigenous person might endure in the Audiencia of Quito, none was quite so deadly as that of serving as a *cargador*, or porter. As noted above in reference to the encomienda, reports of abuses of highland indigenes made to carry loads over high, cold mountains and down into hot, jungle mining zones abound in the documentary record. Porters drawn from the many villages of the Sábana de Túquerres, as will be seen in chapter six, were forced to carry loads and service *tambos*, or lodging houses, between Pasto and Barbacoas. In the villages north of Cali, such as Roldanillo, mitayos were rented by corregidores to merchants wanting to carry goods into the new mining frontier of the Chocó. These Indians' labor, which was supposed to have been used in public works and other projects within the municipality, had been sold instead for four reales, or two gold tomines per day to outsiders. In 1685 mitayos from Roldanillo charged the Cali corregidor with abusing them in this way and several others, including publicly flogging the pregnant wife of a mitayo who had arrived late for his service in the town butchery (*carnicería*).³⁷⁹ In the case of Cali, mitayos were to receive a wage of one real per day plus a ration of maize, meat, and salt, but since most of the eligible workers had been sent to the Chocó many Spanish vecinos' houses and other mita projects had been ignored. Roofs were said to have been leaking so badly that residents had resorted to covering holes with cowhides (*pellejos de vacas*). Cases such as these remind one that native labor, either in the encomienda or mita form, built and maintained the base upon which colonialism in early Quito rested. Indigenous mitayos, who were drafted even to sweep the floors of private homes, were much missed by self-styled elites who considered themselves above even the simplest forms of hand labor.³⁸⁰

Gold mining, as has been demonstrated, was just such a "vile and mechanical" task, and the mita continued to supply native Americans to do it even when production fell off considerably after the early seventeenth century. Indeed, given the steep decline in gold production at Zaruma over most of that century, one would expect that the mita and its problems would have died a natural death as well. The truth, however, was quite the opposite, as an indigenous complaint of 1699 reveals. On 20 October of that year, three workers from the pueblo of Guanazán, located some 20 km north of Zaruma, made a deposition in Quito and presented it to the audiencia. The petitioners, headed by the cacique principal don Pedro Sari, claimed that they had undergone intense hardships in making their way to Quito, but that it had been necessary to make the long journey since no local priests or officials would listen to their pleas for justice. They complained of two things: first, Zaruma's cabildo was interfering with the election of indigenous

³⁷⁶ Calero, *Chiefdoms under Siege*, 70.

³⁷⁷ *Ibid.*, 88.

³⁷⁸ Aquiles Pérez T., *Las mitas en la Real Audiencia de Quito*. See, for example, his treatment of the "mita de hierba y leña," a mowing and firewood collection mita which was provided for Spanish vecinos (87-90).

³⁷⁹ ANHQ Popayán, caja 8 (1685). For Barbacoas, see, for example ANHQ Popayán, caja 5 (29-x-1676). In this case four mitayos were granted to a tambo operator at El Corral, along the Pasto road to Barbacoas, by a local corregidor. The Quito audiencia, at the recommendation of the fiscal (who acted as the natives' attorney), overturned the grant stating that tributates would be adversely affected if the indigenes were removed from their subsistence plots (*chagras*).

³⁸⁰ Similar "municipal," or ordinary mita abuses were reported in Cuenca in the 1680s, and an auto of 1684 outlawed a kind of service customary in this city since the late sixteenth century. Apparently, local Indians were divided up among vecinos every Monday and Thursday to repair walls, roofs, and fences, to weed small plots and to perform other household tasks. The use of these Indians, called *pongos* or *oyaricos* (recall the Zaruma priests), was outlawed by the audiencia as an illegal form of personal service. See ed. Freile-Granizo, *Autos Acordados*, 178-79. Pongo, or *pungu*, means "door" in Quechua, and indigenous "dooryard" workers later came to be known as *huasipungueros*, and the system of debt-peonage as *huasipungaje* (*huasi*, or *wasi*, means "house").

alcaldes in the region, and second; mine owners, in particular a priest named Rua, were abusing mitayos in their mines.³⁸¹ The alcalde appointment issue was important to Zaruma's mine owners because access to mitayos was only possible through indigenous town officers, or *alcaldes*. The natives of Guanazán claimed that Zaruma officials were interfering with their affairs by placing forasteros, outsiders of their choice, in these key village positions, hence guaranteeing easy access to workers. This activity, Sari claimed, would soon destroy the remaining indigenous towns of the region. Mitayos would be consumed by mine labor, their families by hunger, or they would simply choose to flee into the forests and live "like barbarians" in order to avoid certain death by mita service.

More cutting than this issue of meddling in indigenous town politics, however, was the question of abuse of mine laborers. No other document from the period illustrates more clearly the work conditions faced by mitayos in Zaruma's mines and mills, and this brief and plaintive petition is all the more remarkable in that Sari and his companions described the work hazards faced by themselves and their companions firsthand. The workers claimed, to begin with, that the mines themselves were unsafe to enter. They said that contrary to royal cédulas, with which they themselves were familiar, they were being sent to work in dangerous mines, "at the risk of their lives." Sari stated that mitayos from his village were made to work in "a very ancient mine" called Callejuelas ("the Alleyways"), by a parish priest named Juan de Rua. The mine, Sari continued, "is so deep, over twelve *estados* [c. 25 m], that in order to descend to the floor the Indians must cling to a rope ladder that hangs freely in the air."³⁸² "Consider, Your Highness," Sari went on, "with your great understanding, how it would appear: a poor Indian, making his way up such a small ladder made from ropes, a burning wick (*mecha*) in one hand, the same he uses to cling to the ladder, and in the other and over his shoulder a sack (*zurrón*) of ore weighing at least three arrobas [c. 35 kg]." Climbing thus, during Lent of 1698, a mitayo named Marcial fell to the floor of the mine. He was injured so badly that even a year-and-a-half later he had not fully recovered. Another mitayo from the pueblo of Guachanama suffered a similar fall while climbing the ladder. "He remained for a long time almost dead," Sari continued, "pissing blood (*meando sangre*) for three days, his chin and jaw crushed from the great blows."³⁸³ These were the sort of conditions that the audiencia's own visitors had apparently overlooked during their inspections of the mine works of Zaruma only one year prior to the filing of this petition. To trust the official record alone, the cacique contended, was to miss much of the truth about the mine mita.

The list of Zaruma's mining dangers and accidents as presented by don Pedro Sari and his companions continued. Sari claimed that on one occasion a mitayo named Pillasé, "who is miraculously alive," was working in the Callejuelas mine when a wall collapsed. Having nowhere else to go to avoid the falling rock, the worker leaped into a water-filled shaft. "Finding himself in water up to his shoulders," Sari said, "he would have drowned if not for the aid of some Indians who happened to be nearby."³⁸⁴ On another occasion a worker named Pedro Aila was nearly crushed in a similar cave-in at Callejuelas. He had been ordered to excavate a section of mine ceiling with the iron barra (*dar una barretada*) when it collapsed, "the roof (*cerro*) being hollow and false." Like Pillasé, he just barely escaped death. Yet another indigenous worker from Sari's pueblo, Antonio Veldama, was not so fortunate; he was crushed and killed in a cave-in a year earlier, apparently in the same fashion.³⁸⁵

The mines themselves were dangerous enough, as these cases demonstrate, but there were other industrial hazards faced by Zaruma's mitayos at the turn of the eighteenth century. Sari claimed that one of his subjects, a mitayo named Manuel Aila, brother of Pedro Aila above, had been made to work at an ingenio, or water-powered stamp mill, belonging to the same Maestro Rua. While operating the mill, at night, no less, Aila "was caught by the wheel and raised with it and flung to the ground, nearly dashed to pieces." Sari claimed that the priest and mill-owner Rua had been informed of this accident but did nothing, "leaving the said Indian for dead." The unfortunate worker would have died had he not been rescued by another indigenous man who happened to be his brother.³⁸⁶ Working in the mines and mills of

³⁸¹ AHHQ Indígenas, caja 23 (20-x-1699).

³⁸² *Ibid.*, f.3.

³⁸³ *Ibid.*, f.16v.

³⁸⁴ *Ibid.*

³⁸⁵ *Ibid.*, f.3v.

³⁸⁶ *Ibid.*, f.16v. For an interesting case from the same period involving an "industrial" accident with a cane press, or trapiche, see ANHQ Popayán, caja 9 (1687). Here a young boy's hand was crushed by a water-driven trapiche near the village of Tagua, below Pasto. The audiencia investigated the case as a potential instance of Indian labor abuse in spite of the testimony of the mill owner, who claimed that the boy and his

Zaruma was a deadly business, especially for indigenous draft laborers who received no safety training and had no officials available to enforce mining and milling ordinances. This case illustrates the fact that low gold receipts in faraway Quito, and even in the relatively nearby caja real of Cuenca, did not necessarily mean that mining activities had ceased in places like Zaruma. For all we know, individual abuses may have been worse during periods of low productivity, when official attention waned.

The Guanazán cacique's petition is also revealing in that it explains the difficulty of the mitayo's position in the local economy. First of all, service was unavoidable. The only means of escaping duty was to pay five *patacones*, or silver pesos, at each six-month turn. In a remote region like Zaruma there were few things an indigenous man could do to raise this amount of cash, and even if he had the value of goods in kind, a general scarcity of coin made cash conversion virtually impossible. Because mine labor was so horrible, however, many mita-eligible indigenes, Sari claimed, still chose to "sell what little they had, leaving their wives and children perishing from hunger, naked, with nothing to maintain themselves" just to try to avoid the mita. If these individuals failed to pay, or were not "very punctual in going to the mita" they were "placed in stocks in the jail," whipped and subjected to "other unspeakable cruelties," including having their hair shorn.³⁸⁷ Other miners committed similar crimes, according to Sari, but since the owner of his village's mita labor was a priest, no one could stop him except the audiencia; Padre Rúa's clerical status meant that only the high court or a church authority could censure him. Since there were no such ecclesiastical authorities in Zaruma, and those of Loja and Cuenca were too easily influenced, the cacique and his followers had been forced to make a more than 100-league trek in order to seek justice.

Aside from the issue of a priest being the chief culprit in this case, the situation was all the more ironic in that the audiencia had just sent a visitor to Zaruma, precisely to investigate the relationship between mine owners and mitayos. The investigator, whose report Galo Ramón has summarized, reported on the number of mines and mills in operation, the types of workers employed, and the potential income the crown could expect to collect in quintos.³⁸⁸ Of the seven principal mines visited, Rúa's mine was only one of two which were said to be currently productive (i.e., paying quintos). Both of these producing mines' owners, including Rúa, had access to more than two mitayos while four others listed only one each and a fifth none. Rúa's mine was one of only two which were listed as "unsafe" (*insegura*) and "old" (*antigua*). Tellingly, in light of Sari's complaints, of the seven, Rúa was one of three owners who paid his workers with goods in kind, in effect retaining their cash salaries. Three other dueños claimed they paid a wage of five pesos per month (of twenty-six work days) and a fourth rented indigenous workers from an unknown source (illegal in any case), possibly from an encomendero. Only one other mine owner, who had only one mita employee, was said to have had complaints registered against him for abuse (*maltratos y quejas*).³⁸⁹

Sari claimed that the investigation of 1698-99 was a farce even though the existence of indigenous complaints against mine owners had been noted. The visiting judge had spent most of his time in town, and although he was required by law to "personally enter the mines (*boquerones*) with the veedores to see if they were secure and firm, he did none of this." "Instead," Sari continued, "he only came to each mill, spoke briefly with the dueño, and asked for his fees (*derechos*)." The judge took no depositions from the mine owners, and none from the mitayos.³⁹⁰ If there were abuses being committed, big or small, he took none seriously and focused instead on prompt compensation. Sari continued to denounce the visita, saying that even the local teniente, who was also supposed to participate as a witness and correct abuses, had simply not shown up. Corrupt officials such as these should have been fined, Sari claimed, and deprived of their offices. It was, after all, "a grave sin to cause the loss of a soul, as has occurred in the dangerous mines to many Indians" by not "seeing with one's own eyes what one must."³⁹¹ Such was the business of checks and controls in late seventeenth-century Zaruma's gold mines. No one, it seemed, neither the

friends, in a prank ("travesura"), had tried to press some canes in secret to make "una vevida que llaman guarapo," or sugar beer (f.30). Luis Calero also cites this incident in *Chiefdoms Under Siege*, 138.

³⁸⁷ ANHQ Indígenas, caja 23 (20-x-1699), f.3v. Other indigenes in the Zaruma area were apparently made to work in cane trapiches in this period as well. An auto of 1687 ordered a visita after receiving claims that several "indios de concierto," or hired hands (more likely rented mitayos), had suffered injuries and even death in such work. See ed. Freile-Granizo, *Autos Acordados*, 205 (8-iii-1687).

³⁸⁸ Galo Ramón, "Loja y Zaruma: entre las minas y las mulas," 141. A copy of these documents may be found in ANHQ Indígenas, caja 29 (27-iv-1706).

³⁸⁹ Ibid.

³⁹⁰ ANHQ Indígenas, caja 23 (20-x-1699), f.3v.

³⁹¹ Ibid., f.4.

crown's nor God's supposed servants, was watching out for indigenous miners. Up to this point the mitayos' only recourse was to look out for themselves, exploiting whatever regional feuds and differential policies they could discover. It just so happened that the complaints of Sari and his subjects corresponded with the vespers of the Habsburg period, a time of renewed interest in indigenous labor reform throughout the empire.

Reform and Restriction of Indigenous Mine Labor

As early as the mid-seventeenth century Quito officials began to question the legality of forced indigenous labor in mining. Given that Las Casas had argued against the same things in the Caribbean context over a century earlier, and that the boom years of the first century after conquest were now well in the past, this late-coming concern for indigenous welfare seems disingenuous from a modern perspective. Still, the very fact of renewed attention was notable, if not noble. In 1650 church officials in the Cathedral of Quito suggested that the New Laws of 1542-43 had not been properly observed in their district, and that the worst abuses had appeared in mining centers. They called for an end to perpetual service (favoring the temporary mita over the multi-generational *encomienda*), an end to corporal punishment and "imprisonment in private jails," fair payment of wages, and exemption from underground and ingenio, or mill work of any kind. In mining districts such as Zaruma and Almaguer, they claimed, "an Indian who enters into mita service at eighteen years, when he is first subject to pay tribute, never leaves the ingenios and mines until he is an old man of sixty or seventy, and there he dies without having enjoyed the liberty God gave him."³⁹² Complaints about this type of abuse had been heard before, but the church's statements signaled the beginning of the first serious reform efforts since the early sixteenth century.

As Diana Bonnett has shown in her study of the office of the Quito Fiscal Protector de Naturales, or state attorney for indigenous rights, the Spanish Crown itself began to favor new ameliorative legislation prior to the Bourbon accession. In 1666, for instance, the regent Queen Mariana of Austria at last signed long-pending *cédulas* in support of the creation of the office of Protector General in the colonies.³⁹³ These *cédulas* were slow to take effect in Quito, as *audiencia* and viceregal authorities sought to block any moves that might erode their power over indigenous affairs, especially their access to native lands and labor. Not until 1699, in fact, when the Zaruma *visita* and other complaints appeared, did the office gain a firm foothold in Quito. Though the title itself had existed for some time, only with the final establishment of the Protector's office at the end of the seventeenth century was serious reform legislation finally passed.

The Indian mine reforms of the late 1690s also came in the wake of restrictions on abuse in another key sector of the economy, namely the at this time much more productive highland *obrajes*, or textile mills. A royal *cédula* of 1680 denounced Quito's colonial elites for forcing indigenous workers to labor in the *obrajes* from dawn to dusk, day-after-day, not allowing them to leave their work long enough even to be educated in Spanish, much less converted to Christianity. *Obraje* workers, who were said to have received no more than eighteen pesos per year in wages, included children as young as six years, many of whom were left crippled or dwarfed (*tullidos o enanos*) from their constant and demanding tasks.³⁹⁴ Since they were driven from their subsistence plots, these sweatshop workers were forced to buy food, mostly barley, unambiguously referred to as "relief" (*socorro*), from *corregidores* in order to survive. Many *obraje* workers had been previously engaged in agriculture or stock raising in service of some private or corporate, usually church-run *hacienda*, and these workers, driven to hunger, were forced to compensate their employers for any livestock which died in their charge, either by slaughter or accident, landing them in situations of permanent indebtedness. Debts of this kind, unsurprisingly, were serviced by work time in the *obrajes*. It was a nasty cycle, in short, which kept most indigenous workers in the Quito highlands entrapped and unpaid for decades at a time.

The crown now demanded that indigenous *obraje* and agricultural workers be paid at least two reales per day, or ninety pesos per year, as this was the going wage in Charcas (present-day Bolivia), and that they be at least eighteen years of age, which was the law already. Quito's Fiscal Protector, who had much less authority at this time (i.e., prior to 1699), could only recommend the latter, preexisting restriction. The customary wages of twelve pesos per year for agricultural workers and eighteen per year

³⁹² Ponce Leiva, *RHGQ* 2: 250.

³⁹³ Diana Bonnett V., *El Protector de Naturales en la Audiencia de Quito, Siglos XVII y XVIII* (Quito: FLACSO, 1992), 26.

³⁹⁴ ed. Freile-Granizo, *Autos Acordados*, 133 (*cédula* of 7-xi-1680, with commentary by Quito officials).

for obraje hands would be impossible to change, he claimed. Still, he was sympathetic to the indigenes' plight, stating that, "the Spaniard who has charge of an Indian tributary gives him nothing and cares not if he dies of hunger or mistreatment, saying that they will give him another in his place, a thing which one would not do with a slave, because if he dies there is no such replacement (*subrogación*)."³⁹⁵ Indigenous laborers were clearly being abused in Quito in ways not seen elsewhere, and they were in some senses worse off than certain types of slaves, as the fiscal suggested. Still, as a result of the Protector's powerlessness at this time and continued pressure from highland elites, the audiencia agreed only to raise the agricultural worker's salary to fifteen pesos per year, and to keep the obraje wage, which rarely materialized in cash anyway, as it was.

Only with the introduction of an empowered state protector of Indians in 1699 did abuse complaints finally receive due attention. The complaints of the abused mitayos of Zaruma have been noted above, but individuals made to work in so-called personal service capacities throughout the audiencia also took their cases to Quito to be heard. Those engaged in gold mining, especially in remote districts like Barbacoas and the Oriente, began to realize the potential of this power shift in the highlands almost immediately. Indeed, they joined a long tradition of indigenous use of the Spanish court system to seek justice. One such case of abused, peripheral miners from this period stands out for its poignancy and serves as a kind of laundry list of all the ills accumulated under the encomienda system in the Pacific lowlands.

This complex case of alleged abuse came from Guapí and Nulpe natives working the mines of the Magüí River, near Santa María del Puerto, in 1700. In this instance, a mine owner and encomendera was charged with having ordered her slaves to flog encomienda charges, male and female, as punishment for supposed witchcraft (*brujería*). Because an elderly indigenous woman died shortly after being so punished, the Protector in Quito approached the case with unusual fervor, treating it as an example of what was wrong with the encomienda system. First of all, it was illegal to corporally punish indigenes held in encomienda, and expressly forbidden to do so by way of African slaves. Secondly, indigenous persons, even under the now-old New Laws of 1542 were not to be made to work in gold or silver mines, underground or elsewhere. This was the first serious challenge to the Barbacoas mining ordinances of 1668, which had expressly included mining in the list of obligatory indigenous tasks. Both policies were being observed in the breach, it seemed, and furthermore, the fiscal charged, the Barbacoas encomenderos had clung to their encomienda grants illegally for more than two generations. Lastly, they had failed to make certain that their supposedly pagan charges received instruction in the Catholic Faith, probably the root cause of the current witchcraft misunderstanding.

The Quito Protector at this time seems to have been a follower of the mid-seventeenth-century Spanish jurist, Juan de Solórzano Pereyra, whom he quoted in his recommendations to the audiencia. Solórzano had argued in the late 1640s that native Americans, no matter how "uncivilized" their customs -- a genuine concern when dealing with recently-conquered coastal and Oriente groups, who lived by hunting and collecting and were said to have practiced ritual cannibalism -- could be brought into civilized society by disciplined instruction.³⁹⁶ This was a quasi-relativist view of Amerindian culture shared by many members of the clergy prior to 1700, but one not much accepted among encomenderos and government officials. Deriding the practice of indigenous personal service as an "evil and outdated custom" (*mal y envejecido costumbre*), the Protector called for an end to useless and fraudulent investigations (he referred to bribery as "an old sin paid with gold"), to excuses of defense against pirates or sliding gold receipts in the real caja, and recommended a return to missionary principles.³⁹⁷ Ignoring the fact that the indigenous population of Barbacoas had declined by some ninety percent since the 1620s, he argued it was now time that the Indians be freed and educated. Again following Solórzano, the fiscal recommended that the natives of Barbacoas, and the rest of Quito, for that matter, not be left to their supposed natural inclination to sloth, but that they be persuaded to engage in ordinary mita labor in town, improving public works and the like.³⁹⁸

³⁹⁵ Ibid., 139.

³⁹⁶ See, for example, Anthony Pagden, *The Fall of Natural Man: The American Indian and the Origins of Comparative Ethnology* (Cambridge: Cambridge University Press, 1982). Solórzano's views on Amerindian "barbarism" are summarized on p.165.

³⁹⁷ ANHQ Indígenas, caja 24, 1700. For a discussion of the particulars of this case see Kris Lane, "Taming the Master: Brujería, Slavery, and the Encomienda in Barbacoas at the turn of the Eighteenth Century," *Ethnohistory* 45:3 (Summer 1998).

³⁹⁸ Solórzano classed Amerindians alongside European beggars and vagabonds as persons not yet acculturated to work without coercion (see Pagden, *The Fall of Natural Man*, 196-97).

Africans, he claimed, already outnumbered indigenes in the mines of Barbacoas, and it was on their labor that the region's economy should now depend. The Protector acknowledged that native tributaries had done much work in placer mines but called the river-side encomiendas "tenuous," claiming that "many [encomenderos] have cuadrillas of blacks which do the greater part of the work."³⁹⁹ The ending of personal service would not be such a sacrifice as the mine owners contended, and would not greatly upset production and thus the payment of quintos. Besides, there were many known runaway slaves and free people of color living "scattered" (*esparcidos*) in the backcountry. The fiscal called upon the vecinos of Barbacoas to round up these "unsubjected" and "barbarous" Africans and mulattoes and "reduce them to service," all by following "the Law of Vagabonds, Maroons (*Cimarrones*), and Rebels (*Alzados*)."⁴⁰⁰ Clearly placing runaway Indians in a different category, the Quito official recommended that any indigenous peoples "who have retreated with them [the Africans and *mulatos libres*] be reduced in order to live in Christianity and civility (*cristiana- y politicamente*)."⁴⁰¹ If these things were not done, and if the Spanish citizens of Barbacoas failed to keep order in this way, the precious gold mines of the so-called unhealthy and sterile coast would be lost.

All of these momentous decisions came at the end of a single abuse case which had little to do with mining in any direct sense. What had apparently happened was that an indigenous woman had been sexually violated by a Barbacoas encomendera's husband, himself a mine owner in charge of a cuadrilla of slaves. The encomendera, upon discovering the incident of *mal amistad*, or illicit relations, had punished the native woman that her husband had violated by having her lashed to a beam and whipped. In return, the indigenous woman's mother and husband had used a variety of magical and herbal *hechizos*, or spells, to get revenge for the unjust beating. The encomendera fell gravely ill and eventually learned from an indigenous domestic (*china*) that she had been bewitched (*brujeada*) and possibly poisoned. This discovery led to a new round of beatings, and ultimately to the death of the rape victim's mother. Because herbs were proved to have been used against the encomendera, she was given only a light punishment for having ordered her slaves to flog the her encomienda charges. Simply put, this case was not serious enough to have directly caused the audiencia's final ban on personal service in mine work, but it was here that the Protector chose to expound on the reasons why such a ban was now necessary.

Thus, the combination of complaints by abused miners in the Pacific Lowlands, Oriente, and Zaruma, steady indigenous demographic decline (worsened by the epidemics of the early 1690s), the growth in availability of African slaves, and changes in Quito's legal approach to indigenous affairs all but ended the mining portions of the mita and encomienda by the turn of the eighteenth century. Although new forms of abuse certainly arose, and talk of reviving the mine mita circulated in the late eighteenth century, the decisions of 1700 were essentially firm.⁴⁰² At least one miner in Barbacoas was said to have been working his claim with a troop of *indios concertados* in a numeración of 1717, but this operation may have been legal if the laborers were considered voluntary wage earners.⁴⁰³ If not, then local enforcement of the new law was simply lax. Policy in the highlands appears to have held firm, however, as a 1739 request for twenty mitayos to work in mining tasks around Barbacoas was denied by the Protector, who simply stated

³⁹⁹ ANHQ Indígenas, caja 24, 1700, f.109. Late-coming reforms of the encomienda system were not unique to the Audiencia of Quito. See, for example, Robert J. Ferry's discussion of a similar late seventeenth-century transition from the personal service-based encomienda to large-scale African slavery in Venezuela in "Encomienda, African Slavery, and Agriculture in 17th-century Caracas," *HAHR* 61:4 (Nov. 1981): 609-35. Ferry notes that personal service encomiendas were outlawed in this district in 1687, but as with the gold mines of Popayán, the cacao economy had already made the transition to a slave base by this time.

⁴⁰⁰ ANHQ Indígenas, caja 24, 1700, f.109.

⁴⁰¹ *Ibid.*

⁴⁰² A case from early eighteenth-century Quijós Province revealed that many encomenderos in that region still believed that forced indigenous labor in mining was legal. Here a small band of captives made to work around mines of the upper Napo fled from their employer, upsetting the operation. A few of the fugitives were said to have returned only from fear that African slaves would be sent out to catch them, an unusual reversal of roles in a frontier colonial context (ANHQ Minas caja 1, 16-x-1713). In 1798 a dueño de ingenio and mine owner of Zaruma called for a review of the documents prohibiting the mine mita (ANHQ Minas, caja 4, 17-x 1798).

⁴⁰³ ACC Sig. 2835, f.6v.

that Indians “cannot be taken to work in mining zones (*minerales*).”⁴⁰⁴ Following his predecessor, the fiscal offered an alternative: “For this type of very hard work one needs to engage the labor of habitual criminals (*hombres facinerosos*) who, for their grave crimes deserve such; their death sentences should be commuted to work in the mines where they will be made slaves (*siervos*) to the punishment which would serve them better than the privation of life with its principles (*fundamentos*).”⁴⁰⁵ Criminals were in fact employed in some mines, but the more simple, if expensive solution to labor problems, especially in Barbacoas, was to expand the size of one’s slave gang. Even though few indigenous survivors remained in many gold districts by the time reforms were enacted, in the end the Indians’ gain of relative freedom seems to have been the Africans’ loss.

⁴⁰⁴ ANHQ Fondo Especial, caja 13 (doc. 1182, 18-ii-1739), f.17.

⁴⁰⁵ Ibid. The use of convicted criminals in mine work had a long heritage in Iberia, going back at least to Roman times. A sentence to work *ad metallum* in the mines of Almadén or Guadalcanal was roughly equivalent to a death sentence. See Ruth Pike, *Penal Servitude in Early Modern Spain* (Madison: University of Wisconsin Press, 1983).

Chapter Five
Popayán and the Rise of Black Slavery

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Alongside the several forms of coerced indigenous labor described in the previous chapter, the Spanish simultaneously introduced, from the beginning and in every mining district, the institution of African slavery. Africans were made to wash gold just like indigenes, but their legal status as mobile chattels, uprooted from their native lands and repeatedly separated from family and friends, made their lives in many ways more difficult. As noted above, gang slavery (as in chain gang, or *cuadrilla*) eventually came to predominate in the gold mines of Popayán, and most of the current black inhabitants of western Colombia and northwestern Ecuador are descendants of these colonial slave miners. By way of contrast, the pronounced absence of substantial pockets of African-heritage populations in southern Ecuador today, along with documentary evidence, belies the paucity of colonial slavery in the southern mines.⁴⁰⁶ This is not to say that African slavery was not important in southern Quito's gold districts, but unlike Popayán, it was generally early and small in scale. Whether large scale or small, in highlands or lowlands, African mine slavery was brutal and uncompromising. And whereas indigenous rights were hotly debated, if only mildly improved, in the course of the colonial period, no such debates arose with regard to Africans. If anything, I would argue, black mine slavery became more abusive as indigenous labor regimes were reformed. Slavery was treated as a question of property rights, not human rights, and as such the system became ever more codified as new issues arose. For crown officials, whether in 1550 or 1750, the main issue at hand not the welfare of the laboring classes, but the collection of rents in the form of precious metals.

As Lockhart, Bowser, and Werlich have shown, the only other important gold district in early Peru to be exploited with African labor was Carabaya, in the lowlands east of Cusco. Lockhart notes that early slave gangs in these hot country placers usually consisted of ten to fifteen male miners, accompanied by a female cook and an overseer. In at least one case a former Panamanian official commanded a *cuadrilla* of forty-five gold washers, but this activity was soon abandoned when rich gravels were depleted. In some areas, such as Huánuco and later Potosí, African slaves came to form what Lockhart calls "permanent cadres" of skilled workers in highland silver mines, often charged with maintenance and operation of milling and refining apparatus.⁴⁰⁷ In the long term, however, mine labor in Peru would become predominantly indigenous by the mid-sixteenth century, a feature which would remain constant through modern times. As noted in the previous chapter indigenous mine labor was predominant in the Kingdom of Quito until about the turn of the eighteenth century, but Africans had long been involved in this industry, along with sugar manufacture and other labor-intensive and dangerous activities. Because of this long heritage of slavery, however small in scale, a general overview of the position of people of African descent in early Quito is necessary in order to comprehend the shape of later developments.

As happened in other regions of Spanish America, the Town Council, or *Cabildo*, of Quito was initially the governing body not only of the municipality, but also of the greater north-Andean region before the establishment of a permanent *audiencia*, or district court. In the case of Quito, the *audiencia* was not created until 1563, nearly thirty years after conquest, allowing the *cabildo* to control the formative years of Greater Quito's legal structure. For the first Africans in Quito and its hinterland, the tone set by the *cabildo* was harsh from the beginning. As early as 1538, slaves and their descendants were barred from carrying swords, daggers, or other arms, usually penalized by public whipping. By 1544, runaway slaves had

⁴⁰⁶ Interestingly, Enriqueta Vila Vilar, in "La sublevación de Portugal y la trata de negros," *Ibero-Amerikanische Archiv*, N.F. Jahrgang 2, Heft 3 (1976): 171-92, notes that a mid-seventeenth-century estimate of slave populations in Spanish South America counted only 5,000 slaves in Popayán and some 6,500 in the rest of highland Quito. Slaves were only identified as gold miners in the Popayán case, however, and were referred to as "negros de batea" (176). More than 21,000 other "negros de batea" were said to be working in other parts of northern New Granada (mostly Antioquia, it seems) at this time. Quito was said to "consume" 250 slaves per year and Popayán 200. The accuracy of these estimates is not well known due to a lack of census data for comparison, but Vila Vilar suggests that they offer a good general guide in terms of scale.

⁴⁰⁷ Frederick Bowser, *The African Slave in Colonial Peru, 1524-1650* (Stanford: Stanford University Press, 1974), 13, James Lockhart, *Spanish Peru, 1532-1560: A Colonial Society* (Madison: University of Wisconsin Press, 1968), 185-86, and David Werlich, "The Conquest and Settlement of the Peruvian Montaña," Ph.D. diss. University of Minnesota, 1968.

become such a problem in the vicinity of Quito that the cabildo passed an ordinance mandating that all slave-owners with missing slaves be required to pay a ten-gold-peso finder's fee.⁴⁰⁸ Such legislation was not inherently racist in the modern sense, but was rather based on notions of control of subject peoples, which at this time included virtually anyone who worked with their hands. The early cabildo legislation, which should not be given any more weight on the ground than cédulas calling for lenient treatment of Indians, is nevertheless reflective of the Spanish desire to replicate, to some extent, the Iberian system of estates. Although one finds suggestion of developing racist notions among Quito's elites, in this period slaves were servants first and Africans afterward. A few cases even suggest that some Quito cabildo members trusted African slaves as individuals, implying that color and status had not yet fused.

In 1551 the cabildo granted a farrier's license to Juan "Moreno esclavo" (*moreno* seems to have been used, as it is today in Ecuador, as a polite, if patronizing term for "black"). Juan "Brown" belonged to Captain Rodrigo de Salazar, a prominent encomendero, and he was given permission by the cabildo to open a shop in Quito, "to shoe and bleed (*sangrar*)" horses and perform other blacksmith's tasks. Juan Moreno's venture was even backed financially by another prominent Spanish Quiteño, a council member named Lorenzo de Cepeda. As fiador he promised to pay any damages "that might come to any animal which is shoed or bled by fault of the said Juan *moreno*."⁴⁰⁹ In another case, an apparently free black Quiteño named Bartolomé was named town crier (*pregonero*) and master of weights and measures (*almotacén*).⁴¹⁰ The former office was not exceptional, as many Indians and even slaves throughout Quito and Popayán were named *pregoneros*. To have been named master of weights and measures for a growing commercial city like Quito, however, does appear to have been something of an exception. Bartolomé was given a "fat *vara* with the city's insignia on top," the staff indicating his second office and also serving as a potent symbol of authority.

Another free black man in early Quito, Bartolomé Hernández ("moreno libre," and possibly the same man as the *pregonero* and *almotacén* above), filed suit against two Spaniards who were infringing on his landholding outside Carangue, near present-day Ibarra. The suit over rights to the lands of Quitubara, which lasted from 1596 to 1602, was decided in Hernández's favor. The *audiencia* had apparently been moved by his testimony, in which he claimed, "being as I am a poor, old black man of more than eighty years, in charge of a wife and children, I do not have any other capital (*hacienda*) nor means by which to support them except for the said, my *estancia*."⁴¹¹ The *audiencia* reaffirmed Hernández's title to five *caballerías* (c. 500 acres), which he had purchased some time before for thirty silver pesos. The possibility of land holding and even protection from predatory Spaniards in the courts, as this case attests, does not appear to have been withheld from free persons of color in early Quito. In 1593 a free mulata named María de Villorin, for example, sold several solares of urban property in Quito, mostly to indigenous buyers, as evidenced by *alcabala* records.⁴¹²

Revealing as they are of the apparent malleability of racial concepts regarding persons of African descent in early Quito, these cases seem to have been by far the exception. Instead, members of the cabildo, and later *oidores* of the *audiencia* routinely suggested that African slaves be imported in order to relieve the Indians of the burdens of mining and other labor-intensive activities. In his recommendations to the crown regarding the vein mines of Zamora and Almaguer in 1592, for instance, Licenciado Arias Pacheco suggested that Africans, rather than *indigenes*, be made to work the rich gold deposits. First, he claimed, the nature of the work (excavation, or *desmonte de piedras*) was such that the Indians could not sustain it, "the blacks being stronger." Second, the mines were so rich that even poor mine owners could

⁴⁰⁸ *Libros de Cabildos, Quito II* (19-iii-1544), 1: 26 (runaways were referred to as, "negros en términos desta ciudad").

⁴⁰⁹ *Libros de Cabildos Quito II* (10-vi-1551), 2: 412.

⁴¹⁰ *Libros de Cabildo de Quito, 1573-74* (3-vi-1573), 42.

⁴¹¹ AMQ Miscelánea #93, "tierras de Carangue," f.13.

⁴¹² ANHQ Real Hacienda, caja 37, vol. 2 (1593 *alcabalas*, f.102v). Another person of color, Julian Larrea "color moreno," was said to owe *alcabalas* for selling a solar in the Barrio San Blas (135v). Bowser, in *The African Slave in Colonial Peru*, notes numerous cases of free black women operating retail stalls and inns in early Lima and Cusco (106-09). As in Quito, black vendors, in spite of their obvious enterprising spirit, were repeatedly sanctioned by discriminatory legislation.

buy slaves with day wages (*jornales*, i.e., in installments gained from daily produce).⁴¹³ Arias Pacheco added, almost casually, that “the climates of these two places are hot, which is a great help to the blacks with respect to the poor climate (*destemple*) of Potosí; blacks do not work well in the recovery of silver.”⁴¹⁴ Of course, Arias Pacheco was here confusing altitude with temperature; blacks did work in “cold” mines in Quito, including the rather high (c. 3,000 m) silver mines of Malal. Had there been no indigenous persons to work the mines of Potosí, Africans would no doubt have been forced to adapt to that extremely high-altitude (over 4,000 m) and cold environment. Indeed, as Bakewell and others have shown, some 5,000 black slaves lived and worked in Potosí by the turn of the seventeenth century in spite of dire Spanish predictions of climate unsuitability.⁴¹⁵

If any group was ill-suited to the extremes of climate encountered in the gold and silver districts of equatorial America it was the Spaniards -- one finds precious little evidence of them working anywhere in the mines themselves. Such were the luxuries of ownership that one could speculate on the adaptability of chattels to this or that climate, and these elite speculations eventually gelled to form a kind of venture capitalist’s race/labor logic in Quito and the rest of Peru; some jobs, such as cane-cutting, were legally earmarked for blacks, others, like weaving, came to be thought of as quintessentially Indian. In these incremental ways, and over an extended period of time, Spanish prejudice and simple ignorance developed into a more codified, pseudo-scientific ideology which resembles modern racism (terms like “physiognomy” become popular by the late eighteenth century, for example). It is important to avoid the temptation of projecting modern constructs back into sixteenth-century minds, but it is likewise necessary to remain critical of early Spanish justifications of indigenous and African servitude; these issues were treated as debatable moral questions in their own day. That they were argued with different levels of enthusiasm raises a fundamental question: Why were Africans and native Americans treated differently?

As Anthony Pagden and others have shown, even such eminent humanist theologians as Las Casas recommended the importation of African slaves into the mining districts of the Americas in order to relieve Indian suffering.⁴¹⁶ Though few spoke out to this extent, most sixteenth- and seventeenth-century Spanish theologians and jurists did not question the justice of African slavery as they did that of native Americans. Sovereignty had to be considered first, they argued, since the African trade was essentially in the hands of the Portuguese.⁴¹⁷ Outside Brazil, indigenous Americans were overwhelmingly controlled by recently-arrived Spaniards, and hence the formation of a long-term indigenous labor policy was an issue of firsthand importance. (Even if this was so, one wonders why no moral objections to the burgeoning slave trade were raised during the Portuguese-Spanish unification of 1580-1640.)

Racism may not have been developed yet in any codified way, but some clear differentiations between native Americans and Africans were made, with more obviously negative consequences resulting for the latter. In 1592, for example, another Quito official recommended that the troubled mines of Zamora, which were then experiencing the twin effects of indigenous rebellion and demographic decline, be re-populated with crown-subsidized Africans. In clear, rational-capitalist fashion he called for the crown to send five hundred blacks (*negros*), a third of them females between fifteen and thirty years (for reproductive purposes) to be purchased by mine owners on a five-year lien (*fiado*).⁴¹⁸ The plan, which would include the auctioning of a supply contract (*asiento*) in Seville, would revive the district’s glory days of the 1560s, and would not “consume” the newly-introduced Africans. Instead, he claimed that “the

⁴¹³ Ponce Leiva, *RHGQ* 1: 530. Arias Pacheco claimed that this type of payment in installments had not proved feasible in placer districts, which yielded less gold (“minas de oro corrido que se lava con las bateas y no son de tanto aumento”).

⁴¹⁴ *Ibid.*

⁴¹⁵ Peter Bakewell, *Miners of the Red Mountain*, 191-93. Bakewell describes Spanish attitudes towards Africans in the south Andean context but does little to question these prejudiced views about race and supposed climate suitability. The same sort of solutions to Indian labor problems proposed in Quito and Popayán were even considered in the late sixteenth century, but as in the cases of Zaruma and Zamora, Africans never came to constitute more than a supplementary workforce. Most slaves were engaged in refining and, in the case of Potosí, minting tasks.

⁴¹⁶ Pagden, *The Fall of Natural Man*, 32, 214, fn.26. In the note Pagden mentions a request from the Audiencia of New Granada in 1581 for subsidized importation of Africans from Cape Verde to offset declining indigenous numbers.

⁴¹⁷ *Ibid.*, 33.

⁴¹⁸ Ponce Leiva, *RHGQ* 1: 550 (relación of Pedro González de Mendoza).

climate of the said mines is very appropriate for the conservation and even increase of the blacks.⁴¹⁹ If Spanish attitudes towards native Americans seem to have been concerned but disingenuous and often hypocritical, their general attitude toward Africans was, by comparison, bluntly exploitative.

Though plans such as this for introducing slaves to the southern districts never materialized, in time gold mining, while still practiced by indigenous curicamayos and mitayos all over the audiencia, came to be the lot of Africans imported en masse to the Gobernación of Popayán. As noted above, there were a variety of reasons for this regional development. First, even the highlands of Popayán in the early sixteenth century were thinly populated by comparison with Quito, or even Pasto. The earliest Spanish settlers were very much aware of the abundance of gold that lay all around them; the problem was finding someone other than themselves to mine it. The indigenes of the region generally lived in widely scattered dwellings, spoke a variety of tongues, did not willingly accept Spanish ways and domination (as did many of the caciques of highland Quito) and, as elsewhere in the Americas, quickly fell victim to epidemic diseases. Popayán's indigenes were forced to work in mines, both placer and underground, to be sure, but the Spanish early on turned to African slave labor in the northern highlands. Only in the crown-administered vein mines of Chisquíó does one find a continued reliance on native labor through most of the seventeenth century. The shift to a slave-based mining economy was partially facilitated by the relative proximity of the Gobernación of Popayán to the slave market at Cartagena, but it was the richness of the mines and the shortage of hands that transformed Popayán from thinly populated backwater of empire to genuine slave society. This transformation, as the great Colombian historian Germán Colmenares has shown, took more than a century to materialize, but its beginnings are to be found in the first decades after conquest.⁴²⁰

As evidenced by numerous sixteenth-century relaciones, Africans were among the first miners to work under Spanish control in Popayán, but the poverty of local elites kept their numbers from increasing dramatically until after the mid-seventeenth century. As in Quito, local residents sought crown subsidized shipments of African slaves in order to avoid a labor crisis -- a direct result of the indigenous demographic crisis -- in the goldfields. A number of proposals were made to ship slaves to the mines of Popayán, but perhaps none was more revealing of Spanish views toward Africans, both as workers and as human beings, than that of Licenciado Francisco de Auncibay. In 1592, the Quito oidor presented the crown with a bizarre plan, loosely patterned after Thomas More's *Utopia* (1516) to populate the mines of Popayán with African slaves.⁴²¹ This plan, which for its absurdity at times appears more like Swift's *Modest Proposal*, was delivered to Philip II in earnest. Auncibay called for the monarch to purchase some 1,000 Africans, males and females between the ages of seventeen and forty, and send them to the gobernación. Here, as in the Zamora proposal, they were to be purchased by local mine owners who would reimburse the crown in installments, at interest. The money for repayment would come from the slaves themselves, in gold taken from their labors in the region's abundant deposits. Organized into carefully managed mining camps, or *pueblos*, the Africans would dutifully extract and hand over the subsoil wealth of the province. Everyone in this tidy arrangement, except the slaves, of course, would become rich. For their part, Auncibay claimed, the Africans would "receive no injury," and would gain "civilization."⁴²²

⁴¹⁹ Ibid.

⁴²⁰ Germán Colmenares, *Historia económica y social de Colombia, t.II: Popayán: una sociedad esclavista, 1680-1800* (Bogotá: La Carreta, 1979).

⁴²¹ Ponce Leiva, *RHGQ* 1: 518-26. It should be noted that More's idea of utopia was rather authoritarian for modern tastes, and slavery was a prominent feature of his imagined community. Unlike European slavery in More's time, however, utopian slavery was not an inherited condition and did not involve massive importation from other lands, but rather relied on war captives and criminals, such as adulterers. See Thomas More, *Utopia* (Cambridge: Cambridge University Press, 1980 [1516]), 80-83). Even more curious is that unlike Auncibay's Popayán, gold was scorned in Utopia and reduced to common uses, like the manufacture of chamber pots and, incredibly, the fetters and chains of slaves (62-63). Bowser, in *The African Slave in Colonial Peru*, 13-25, describes a number of similar proposals put forth by Peru's viceroys before Toledo's implementation of the mita system in the mid-1570s. As in Quito, none of these grand plans came to fruition due to the crown's unwillingness to directly subsidize the slave trade.

⁴²² Auncibay's own ideas of what constituted "civilization" are not fully articulated, but Ortiz de la Tabla notes that he was known for his frequent denunciations of Quito's encomenderos. He himself was denounced by others as a philanderer and father of illegitimate children by both Indian and slave

Aside from this naïve pretext, Auncibay went on to offer a rare Spanish justification for African slavery. The goldfield slaves of Popayán were to be thought of as rescued captives; poor wretches taken from the supposed cannibal hell of Africa and transplanted to a new land, a land without evil, blessed by God. In the judge's own words:

The blacks would not be harmed, in fact it would be a service to them to be taken from Guinea, from that fire and tyranny and barbarity and brutality where without law and without God they live as savage brutes; but carried to a better land, healthier for them, and fertile, they would be happy at their salvation, allowed to live in politic and religion (*en policía y religión*) and to secure many temporal benefits, and what is far more important, many spiritual ones⁴²³

In following this twisted logic, it was to be the Africans' *privilege* to be stolen from their homelands, shipped across the sea, and forced to work as permanent chattels, yielding their entire produce to their captors until death.

This incredible proposal, for all its optimism, does not overlook the possibility of African unwillingness. Auncibay, himself a slaveowner, was not unfamiliar with the notion of resistance, and the Quito judge's sixteenth-century solutions to negative African responses to coercion should ring surprisingly familiar to historians of North American slavery in the eighteenth and nineteenth centuries. Among his twenty-seven conditions for the smooth working of this scheme we find such rules as: "No.4, [The slaves] must not be allowed to learn to read nor write, nor to fence (*esgrimir*, i.e., practice swordplay), nor to ride horses, nor are they to bear arms, offensive or defensive, *because with this [i.e., these controls] there will be no fear,*" and "No.6: See to it that the slaves are married to black women, because matrimony is the surest means of taming and pacifying the black man."⁴²⁴ Also familiar is "No.25: All tools and machetes used by the blacks in their mine work are to be kept at night in the house of the mine overseer or owner, and not in the slaves' quarters." And if one doubts the violence meant to reinforce the system, "No.15: The punishments administered to the blacks will be lashes and the loss of ears, and for three-time runaways, they shall be stripped (*desgarrarles*), placed in shackles, leg irons, pillories, and the *campanilla* (an iron collar with a hanging bell), but not exile nor the galleys [the usual punishments for Spanish criminals], and if the crime is heinous, death."⁴²⁵ Auncibay, deluded by golden dreams in his new Andean home, offered up a very strange reading of *Utopia*, indeed.

The Quito oidor's petition, while rare for its candor, was not unique. Other literate Spaniards in early modern New Granada offered similarly weak justifications of African slavery. One of the most respected, a Jesuit of Cartagena named Alonso de Sandoval, wrote a manual for the conversion of newly imported slaves, many of whom died at his feet as he and his sainted assistant, Pedro Claver, administered sacraments in thirty African languages. Sandoval was among the very few educated Spaniards who recognized and even attempted to catalogue African ethnic diversity.⁴²⁶ This celebrated "defender of the Africans," however, in his *Tratado sobre la esclavitud* (1627) included many of the same justifications for slavery offered by Auncibay. He suggested that the situation of African slaves was analogous to Christ's suffering at the hands of the Pharisees, the only difference being that the former, unlike Christ, were not innocent. Sandoval claimed that it was understood that African slaves "suffer now without present guilt," but he added that at some point in the past, they had "done other things to deserve their present punishment, and still others [punishments], more grave."⁴²⁷ Casting this business of vague sins in the past aside, Sandoval preached submission as a means of salvation for slaves, and moderation as a means of salvation for masters. The relationship was to be like that of a father and child, he claimed, patterned after God's longsuffering paternal relationship with sinners. Just as the slave was to serve without complaint, so the

mistresses. See Javier Ortiz de la Tabla Ducasse, *Los Ecomenderos de Quito, 1534-1660: origen y evolución de una élite colonial* (Sevilla: EEHA, 1993), 135, 165.

⁴²³ Ponce Leiva, *RHGQ* 1: 521.

⁴²⁴ *Ibid.*, 523-24.

⁴²⁵ *Ibid.*, 526.

⁴²⁶ For a detailed discussion of the particular regional and language groups identified by Sandoval, see John Thornton, *Africa and Africans in the Making of the Atlantic World, 1400-1680* (Cambridge: Cambridge University Press, 1992), 184-92.

⁴²⁷ Alonso de Sandoval, *Un tratado sobre la esclavitud (Tractatus de instauranda aethiopum salute)*, (Madrid: Alianza Universidad, 1987 [1627]), 244.

master was to rule without tyranny. “Do not be like Pharaoh,” Sandoval exhorted the buyers of new African arrivals as they marched off to the gold fields, “who with tyranny oppressed the Hebrews.”⁴²⁸

As will be seen, few masters -- and few slaves -- took Sandoval’s advice. More importantly, however, we must ask how sincerely we can regard such moral “brakes” (a term Sandoval himself used) on the abuse of slaves. I would argue that such claims of moderation and its moral justifications, because they went against the very facts of legal and religious inequality, were self-deluding. Spaniards like Sandoval and Auncibay wanted to have things both ways; they wanted to build a harmonious and productive colonial society, but one in which they were to be served by compliant underlings, in this case Africans and American natives. The scheme was familiarly Aristotelian in its corporatist vision of harmony, but it was also wrought with internal social and religious contradictions. Thus the colonial system of classes and *castas* would turn out to be no more tenable in Quito than the European system of estates which it vaguely mimicked.

Even an educated priest like Sandoval ran into difficulties in probing the morality of African slavery; in what appears to be a conservative Christian reading of Aristotle, he justified the institution and its focus on Africans by claiming secret knowledge. Sandoval suggested that “the same God created lords and servants, both of which, as stated by Saint Gregory, are by nature equal, and by birth similar; although by a secret dispensation of God, some are greater and others, lesser...”⁴²⁹ This was a world in which priests claimed that all were equal in God’s eyes, but that on earth, some were more equal than others, and furthermore, that they themselves were privileged seers of God’s “secret dispensation.” The church’s claim of inside information regarding the natures of different groups of human beings could thus be used as a mandate for Christian Spaniards to oppress “pagan” people of color, particularly Africans, long after they had been converted and “civilized.” This fundamental assumption of Aristotelian “genetics” by way of divine complicity, found likewise in the writings of Las Casas and other so-called Indian defenders, kept Spanish America’s substantial and growing African population in a state of perpetual servitude throughout and often beyond the colonial era. My interest here is not in judgment but rather understanding the philosophical/ theological underpinnings of African slavery in Spanish America, and particularly in the gold mines of the north Andes. It seems to me that this theological base has been largely overlooked due to an overwhelming focus on economic and juridical aspects of Spanish American slavery.

The juridical basis of African slavery in Iberian America, a subject which has drawn much scholarly attention since Frank Tannenbaum’s landmark comparative essay *Slave and Citizen* (1947), has presented historians, both north and south, with a number of interpretive dilemmas.⁴³⁰ Tannenbaum presented Spanish American and Brazilian slavery during colonial times and afterwards as relatively mild institutions when compared with practices common among contemporary British, French, Dutch, and Danish slave owners. A historian whose work directly influenced Tannenbaum was James F. King, whose dissertation and essays on slavery in colonial New Granada, including the Pacific gold zones treated here, painted an absurdly benign picture of the institution based on a cursory reading of Spanish legal and other top-down, descriptive sources. While acknowledging the prevalence of slave rebellions, chronic cimarronaje, rape and forced concubinage by slave owners, malnutrition, disease, and brutal work environments, especially in gold mines, King nevertheless claimed that African slaves lived rather well in this region of Spanish America. King noted that male-dominated sex ratios, coupled with other factors, made slave reproduction difficult, even in optimal environmental conditions, but at the same time, providing no statistical evidence and apparently unaware of the rapid expansion of the trans-Atlantic slave trade during the early eighteenth century, he claimed that “slaves...proved so capable of toil in the rain-drenched jungle (the Chocó) that, notwithstanding a chronic shortage of food, their numbers constantly increased.”⁴³¹

Slavery, as King described it, was no great tragedy in the gold mines of New Granada; he even went on to downplay the practice of branding slaves on the face at Cartagena, borrowing an English slave

⁴²⁸ Ibid., 246.

⁴²⁹ Sandoval, *Un tratado sobre la esclavitud*, 246.

⁴³⁰ Frank Tannenbaum, *Slave and Citizen: The Negro in the Americas* (New York: Alfred A. Knopf, 1946). For a paragraph that essentially summarizes Tannenbaum’s thesis, see pp.97-98. See also p.93 for a caveat on the issue of brutality in British v. Spanish and Portuguese colonies. Also worthy of note, and rarely countered, is Tannenbaum’s description of South American Indians as backward and weak (41).

⁴³¹ James F. King, “Negro Slavery in New Granada,” in *Greater America: Essays in Honor of Herbert Eugene Bolton* (Berkeley: University of California Press, 1945), 298.

trader's description of this degrading and no doubt excruciatingly painful procedure word-for-word without a hint of critical analysis. The operation, carried out with a small silver brand heated over an alcohol flame was said to have been "instantaneous and the pain momentary."⁴³² And what of the lifetime scar, the psychological damage not conveyed by a "momentary" wince or an "instantaneous" tear? It was exactly this sort of uncritical historical treatment of slavery in colonial Latin America that led Tannenbaum to propose his misguided Latin American exceptionalist thesis.

Methodologically, both Tannenbaum and King relied overwhelmingly on legal documents, especially royal cédulas and codes, to press their exceptionalist, "tropical democracy" case. This focus, and its conclusions, in turn led many detractors of the so-called Tannenbaum thesis to seek out on-the-ground evidence proving the equal or worse brutality of slavery in Iberian America (or, on the other side of the coin, to look for counter-examples of "Roman leniency" and quasi-freedom in British North America). After several strong arguments of this sort emerged, the cruelty issue in Tannenbaum's work seemed a moot point.⁴³³ Though flexible, the institution of African slavery was ugly and violent throughout the Americas, and Luso-Hispanic legal protection was truer on paper than it proved to be in gold mines or on plantations.

One such study of relevance here was Norman Meiklejohn's thesis, entitled "The Observance of Negro Slave Legislation in Eighteenth-Century New Granada" (1976).⁴³⁴ Meiklejohn found that although slaves in New Granada were backed by the courts in a surprising number of cases involving deathbed manumission, excessive cruelty and conjugal separation, the fundamental fact of legal dominion over other human beings remained. As with the *encomienda*, so-called excesses might be common in one area and not another, a master might be a sadist, a "saint," or both, depending on his or her stage in life. Thus slave legislation and its observation in New Granada, according to Meiklejohn, was much more nuanced than previously believed. Even in a region which seemed ripe for unmitigated cruelty, such as the gold fields of the Pacific coast, no blanket generalizations seemed to apply.

Meiklejohn quickly discovered that the "simple" question of brutality in colonial Spanish America was not simply proved. Instead, it was an analytical dead-end alley of sorts; a focus on brute force alone failed to address the psychological meaning of slavery, for one, and furthermore it failed to confront the basic point of the system, which in all colonies was expanded production of one kind or another. Production varied from place to place and over time, to be sure, but it was the essential motive behind the African slave trade to Spanish America, even in the sixteenth century. Few people bought slaves, which were enormously expensive, simply as whipping boys, concubines, or status symbols. Comparatively mild treatment, as Meiklejohn rightly showed, had economic as well as sociological features. Amelioration was only common during a slave's productive years or when sexual and hence emotional ties had become permanent.

William Sharp found similar patterns of treatment in the eighteenth-century Chocó, where brutality cases were unusual in spite of isolation from crown or church supervision.⁴³⁵ The Spanish in New Granada and elsewhere, especially in backcountry gold regions, where work and even subsistence were

⁴³² Ibid., 308.

⁴³³ Perhaps the most thorough criticism of Tannenbaum's legalist thesis was David B. Davis's essay, "The Continuing Contradiction of Slavery" and his introductory remarks to *Slavery and Human Progress* (Oxford: Oxford University Press, 1984).

⁴³⁴ Norman A. Meiklejohn, "The Observation of Negro Slave Legislation in Eighteenth-Century New Granada," Ph.D. diss. Columbia U., 1968.

⁴³⁵ William F. Sharp, *Slavery on the Spanish Frontier*, 136-37. Sharp argued that high production could only have been achieved in the Chocó if ameliorative measures such as manumission were the rule rather than the exception. He quite possibly underestimated the equally effective method of terror--few Chocó slaves escaped to tell their stories. One such terror-stricken slave made his way south along the Pacific coast around 1704 before being captured by Noanamá Indians near Raposo. The slave, who had been baptized with the name Domingo, claimed he had run away from a Chocó mining camp with another slave after he had had his right hand crushed by a mayordomo's palo strikes (ANHQ Popayán, caja 32, 24-iii-1707). The Indians who had captured him claimed that he was not only lame in the right hand but also 'quebrado por el umbligo' (literally 'broken across the navel', f.138v.). The case did not regard the slave's mistreatment but rather his lack of brands indicating legal entry at Cartagena. His captors had delivered him to a mine owner on the Raposo River, where he had been working for several years before being discovered by a visiting magistrate as 'un negro de mala entrada'.

difficult, realized that control of non-white labor would have to be based on a strategic combination of rewards and punishments; but the same was true of slave societies everywhere.⁴³⁶ What was unusual (by comparison with northern slave societies, particularly), and indeed even surprising in many cases, according to Meiklejohn, was the very availability of a court system willing to hear complaints from oppressed people of color. Here, then, proof of an exceptional access to the legal system in New Granada replaced an unquestioning belief in slaves receiving equal justice as "citizens." Following Meiklejohn and Sharp, a slave's status in Iberian America again appeared exceptional, but with added ambiguities.

Were African, creole, and mixed-heritage slaves in colonial Quito and New Granada better off in relation to their North American counterparts? The question itself misses several much more important and textured issues, among them the situation of the Ibero-American colonies in the so-called early modern economic world-system, and certain social phenomena now referred to generally as 'cultural differences'. In the case of Brazil, only Schwartz (1986, 1993) has offered an argument which integrates the distinctive cultural or sociological aspects of Ibero-American slavery with the economic similarities of this institution throughout the Americas as an aspect of early capitalism.⁴³⁷ In the early modern period Iberian conceptions of (social) *status* and (economic) *contractus*, especially with regard to human chattels, had not been fully resolved. Racism, in the modern sense, may well have emerged in many colonial contexts as a means of resolving this cultural conflict, itself a result of major world-economic changes. For a theologian like Alonso de Sandoval, as we have seen, sacred texts were mined for evidence of secret dispensations which condemned Africans, in particular, to serve in perpetuity. Such theological (or cultural) justifications were deemed necessary precisely because there was no legal foundation on the Peninsula itself to justify African slavery. In Spanish America, the issue of slavery in the case of Indians was so vexing that monarchs, jurists and theologians were forced to come up with new institutions which tried to preserve both the paternalistic, or 'medieval' culture of the Old Country and continue with the economic exploitation demanded of the colonies. The gold mines, as we have seen, were the first crucible in which the *encomienda* and *mita* systems, true colonial hybrids of this sort, were tested. When it was proved that paternalist amelioration and economic exploitation of native Americans were incompatible desires in the gold fields, Africans were introduced in large numbers as less morally or theologically complicated replacements.

Still, as Schwartz, Meiklejohn and others have shown, Ibero-American paternalist culture could not deny the humanity, and hence legal rights of African slaves (but as *subjects* with particular rights, not citizens with general rights). Ibero-American slavery thus remained culturally distinctive even though legal rights were severely limited on the ground, and no 'struggle for African justice' occurred until the middle of the nineteenth century. We will return to this question of the legal rights of slaves below, but suffice to say here that our understanding of race-based labor forms in early modern Spanish America remains incomplete. For Indians in the Kingdom of Quito, as we have seen, the legal system was somewhat effective. In the case of the mine-related *mita* and *encomienda* reforms of 1700, it actually appeared to decisively favor permanent amelioration. For Africans such momentous changes, for reasons which remain to be fully explored, came only at glacial intervals.

Busily engaged in their quest for material wealth, the master social planners of early Quito, such as Licenciado Auncibay, worried about other things besides juridical and theological justifications for slavery. They expressed their concern over such practical problems as how to regulate the co-mingling of Africans and Indians. Writing in the early 1590s, another Quito oidor, Diego de Ortegón, disliked the idea of bringing Africans to the southern mines of Zaruma, which were already experiencing great labor shortages. Ortegón, like the Viceroy Toledo, favored an expansion of the Indian *mita*, north to Pasto if need be, to fill the void. He rejected the claims of Auncibay and others that crown-subsidized slaves were needed in the mines. Ortegón's argument was that the introduction of Africans would harm the Indians, 'being as they are, the said blacks, more commanding than the said Indians, and cruel, and it has been observed that they do them great harm and bother, taking their belongings and their women, and injuring

⁴³⁶ Katia Mattoso, in *To Be a Slave in Brazil, 1550-1888* (New Brunswick: Rutgers University Press, 1986), 119, briefly describes a similar situation of on-the-ground compromises between masters and slaves in Brazil's eighteenth-century gold and diamond districts.

⁴³⁷ Stuart B. Schwartz, *Sugar Plantations in the Formation of Brazilian Society: Bahia, 1550-1835* (Cambridge: Cambridge University Press, 1985) (on Tannenbaum, see p.253), and *Slaves, Peasants, and Rebels* (Urbana: University of Illinois Press, 1993).

their persons'.⁴³⁸ Another Spanish observer from the period, whose name we do not know, supported the idea of importing some 500 to 600 Africans to the southern mines, with the usual pragmatic that they be 'all of them twenty years of age and up, a third part females'.⁴³⁹ The commentator also seemed to support Ortégón, however, saying that, 'if there are to be blacks in the mines, they must not go among the Indians, but rather remain apart; likewise with mestizo overlords (*mandones*)'. The reason for this forced separation, it was claimed, was that, 'within a very short time, they shall set about killing them [the Indians] with staves (*palos*). They are enemies, and nothing frightens an Indian more than one of these [blacks and mestizos]'.⁴⁴⁰

Another late sixteenth-century Quito commentator who sought to remedy the labor shortage at Zaruma favored the gradual introduction of Africans. He claimed that:

'this Cerro should be populated with Indians, and for now a pueblo of blacks is not suitable due to the submission which the Indians show for this nation (*nación*) and the harm which could arise from their comingling (*compañía*). As time goes by, when the Indians are settled and understand the good work which they are engaged in, blacks could be introduced, as it is a good climate'⁴⁴¹

Such feelings of unease over the comingling of Africans and Indians, usually with concern for the welfare of the latter, continued to be heard in Quito and Popayán in the seventeenth and eighteenth centuries. A 1650 relación regarding the state of the Archbishopric claimed that the Indians had even 'become slaves of the blacks and mulattoes, who, in plain view of the Real Audiencia, Bishop and judges, drag them around and pommel them so that they will serve them as if they were their masters, without pay, stealing their mantles if they resist'.⁴⁴² Juan and Ulloa also observed Africans abusing Indians in Quito in the early eighteenth century, and found it common enough to be worthy of comment.⁴⁴³ Clearly something was wrong here, but what had caused this supposedly 'natural' inter-ethnic, or 'interracial' rivalry?

All of these commentators' observations suggest some kind of inherent antagonism between Africans and Indians in the Audiencia of Quito, and more broadly, throughout Spanish America. Was this so? Amazingly, scholars interested in so-called race relations in the Americas, including such prominent figures as Magnus Mörner (1967), have taken these elite Spanish observations of African-Indian relations at face value.⁴⁴⁴ They have not questioned the veracity of such accounts nor probed their deeper meaning. It is clear that Native Americans made distinctions between themselves and African slaves, sometimes in ways which do not appeal to modern sensibilities. Likewise Africans, faced with harsh colonial realities, took pains to distinguish themselves from Indians. Slaves and free persons of color did in fact abuse Indians; there is simply too much evidence of this phenomenon to claim otherwise. The problem for historians interested in the history of oppressed groups, however, is to avoid easy conclusions as to the mentalities of these groups when viewed from afar, and especially from above. The Spanish, like colonial masters throughout the world, actively encouraged friction among subject peoples, in this case between

⁴³⁸ Ponce Leiva, *RHGQ* 1: 494.

⁴³⁹ *Ibid.*, 504.

⁴⁴⁰ *Ibid.*, 502.

⁴⁴¹ *Ibid.*, 549.

⁴⁴² Ponce Leiva, *RHGQ* 2: 250.

⁴⁴³ Jorge Juan and Antonio Ulloa, in *Discourse and Political Reflections on the Kingdoms of Peru*, ed. John J. TePaske (Norman: University of Oklahoma Press, 1978 [1749]), 146, describe an incident in which slaves abused Indians in their midst in Cuenca in the late 1730s. They claimed that local elites did nothing to curb such abuses, as it saved them the trouble of personally punishing Native American servants. In their sophistication, the creole Spaniards now preferred to leave such unsavory tasks to Africans and mestizo mayordomos while they themselves pretended to be appalled. Juan and Ulloa say nothing, however, about the punishments meted out to plantation or gold mine slaves (usually by Spanish or mestizo mayordomos) in regions like the Chota Valley and Barbacoas during this same period.

⁴⁴⁴ Magnus Mörner, in *Race Mixture in the History of Latin America* (Boston: Little, Brown & Co., 1967), 30-31, claimed that: 'Despite their legal slave status the Negroes, by being associated with the Spanish conquerors, automatically came to occupy a position superior to that of the vanquished Indians'. That such superiority was realized at all, much less 'automatically' given, is doubtful. Conquest patterns, which themselves have not been thoroughly analyzed, must not be extrapolated throughout the nearly three centuries of colonial rule.

slaves and Indians. Indians were rewarded for finding and turning over runaway Africans, and Africans were often made overseers of Indian work gangs. There was constant pressure to create and maintain a certain inter-racial or intercultural antagonism among the oppressed. If Africans and mulattoes were allowed to dominate Indians under the noses of Quito's *oidores* by 1650, it is likely that they had simply been allowed to mimic the older ways of *their* masters, the Spanish elites. Thus elites could terrorize Native Americans into submission indirectly, keeping their own hands and consciences clean.

The Spanish, even as early as the 1530s, knew all too well the combined power of Africans and Indians. The last problem these elite conquerors wanted to deal with was a general uprising, a theme which in certain regions of the empire haunted the Europeans like a recurring nightmare. In marginal regions like Esmeraldas, on the wet Pacific coast, an Indian-black alliance had already been forged. Even as the commentators mentioned above were speaking of solutions to the labor problems of Zaruma, other members of the *audiencia* were engaged in a peace process with the so-called *zambos* (Afro-Indians) of Esmeraldas. In the late 1590s, President Barrio Sepúlveda entreated the coastal caciques, among them the African *ladino* Alonso de Yllescas, to swear loyalty to the crown in exchange for governorships and a legal recognition of their *de facto* autonomy. Among the elites of Quito, there was talk of gold and precious stone mines in Esmeraldas, but few highland Spaniards were willing to face Yllescas and his fiercely resistant 'new tribe'. Here Africans and Indians had got on rather too nicely, it seems.

In the highlands, where the Spanish were more firmly in control, Indian-black relations were constantly becoming more codified. A series of *cédulas*, beginning in the early sixteenth century and continuing to the end of the colonial period, forbade the intermingling of Indians, Africans and, more frequently, Mestizos. The prevention of *mestizaje*, and thus the breakdown of the system of separate, hermetically sealed 'republics', was the true motivation for these decrees. Their increasing frequency, along with the notable growth of an uncategorizable population (of *montañeses*, *zambahigos*, etc.), revealed that no amount of regulation could prevent the masses from voting, if not with their feet, at least with their reproductive faculties. Indeed, another petitioner from Quito, a prominent *encomendero* named Pedro González de Mendoza, who held a massive *encomienda* of 1,100 Indians near the village of Tomavela, suggested that blacks and Indians were already intermarrying, but recommended that the practice be stopped. 'It would suit Your Majesty, and those of the Council of the Indies, to see to it that black men not be allowed to marry Indian women; this is not to impede marriage nor liberty, since they can marry black women, but to allow otherwise would create many irremediable difficulties'.⁴⁴⁵ Segregation was considered good policy, especially for large-scale entrepreneurs whose labor base was mostly Indian. To allow African-Indian marriage would undermine the agreed-upon system of separate and unequal republics by creating interstitial categories of people. Even when intermarriage was not an issue, as in the case of the elderly *moreno libre* Bartolomé Hernández of Carangue above, people of African descent in the highlands could be found acting in concert with Indians in other ways. In his land dispute of 1596, Hernández fought to protect not only his own rights, but also the rights of neighboring Native Americans.

Be this as it may, we must still take into account the question of violence between Africans and Indians, whether in the highlands, in gold mines or elsewhere. Observations like those of Quito's *oidores* and later outside visitors have generally been blown out of proportion by historians in order to suggest that Indians, being more often reported as victims than aggressors, were somehow 'beneath' slaves in the colonial hierarchy. This interpretation is very difficult to sustain. Whatever frictions that existed between Africans and Indians were no doubt the result of either Spanish urgings or cultural misunderstandings. For modern historians to intepet black-on-Indian violence, assuming it was more common than the other way around, as an expression of class difference is to avoid a deeper truth. To be an African slave in the Americas was to be, most often, without family or friends, without recognition of one's native tongue or culture, to be branded, chained, sold and spat upon by the lowliest muleskinner. Whereas Indians were thought of as helpless children, the African in Spanish America was assumed to be worse than a criminal. The Spanish, rather than let the Africans rebel against *them*, it seems, encouraged their slaves to take out the frustration of so much humiliation and pain on Native Americans (and then had the gall to remark on this practice as if it were a scientific curiosity). Violent acts against Indians were despicable, to be sure, but it was the nature of the arrangement, not the nature of African peoples, that led to this outcome. As the cases mentioned above demonstrate, violent confrontation was by no means an inevitable outcome; in fact, it was a forced outcome, one of several social monstrosities created by a vastly outnumbered elite.

⁴⁴⁵ Ponce Leiva, *RHGQ* 1: 552.

As noted, early legislation by the Cabildo of Quito set the tone for Indian-African relations for years to come. Within a decade of conquest, African runaways were everywhere in the countryside, often seeking refuge in Indian villages. After a mild decree of 1544 failed to reverse this potentially disruptive trend, a second, harsher decree was issued in early 1548. It aimed to change the situation by imposing harsh penalties on masters, Indians and slaves. Interestingly, not only were Africans said to be mistreating Indians, but also caciques--apparently mimicking Spanish elites--were charged with making African runaways serve them. This practice, because it made a mockery of their own pretensions, annoyed the Spanish much more than that of supposed Indian abuse at the hands of slaves. The penalties for all three groups clearly defined the social standing of each. Spanish masters were fined if their slaves were discovered to be living among Indians, caciques were fined and then jailed for retaining runaways as servants, and the slaves themselves were subject first to one hundred lashes, then to loss of all toes on the right foot, and finally death upon a third offense.⁴⁴⁶ There was no happy confusion about so-called race mixing in early Quito; right away Spanish elites established an ad hoc *code noir*, and a severe, some would say 'medieval' one at that.

This 'black code' was further reinforced in January of 1551, when the Quito cabildo mandated that any runaway slave (specifically referred to as '*qualquyer negro*', hence applying only to blacks) captured after more than eight days absence would be punished corporally. Females would be given one hundred lashes and males would have their 'genital members and testicles cut off'. For simply being found in the Indian marketplace (*tianguéz*), black men and women were to be given one hundred lashes at the post. For carrying a sword while not in the company of the master, males were to be given fifty lashes. Most tellingly, the cabildo banned relationships between black men and Indian women, saying that 'it does great harm to the natives that black men lie with (*se echen con*) Indian women'. It was ordered that any Indian woman known to have had sexual relations with a black man be tied to the public pillory, given one hundred lashes, and further humiliated by having her head shaven (*la trasquilan*). The black man would suffer the loss of his genitals.⁴⁴⁷ Such legislation defies all attempts to soften the image of Spanish juridical leniency with regard to African slaves. Evidence that such punishments were in fact carried out comes from the Yaguarsongo Governor, Juan de Salinas. In 1572 he claimed that Spanish masters controlled their African slaves with lashes, but also punished cimarronaje and other crimes (*delitos*) with genital mutilation. 'The most effective punishment for them', he claimed, 'in order to domesticate them, has been to cut off the genital member.'⁴⁴⁸ In light of these rules, whatever animosity that might have arisen between Indians and Africans in colonial Quito can hardly be termed 'natural'. Likewise, the local ordinances in no way suggest that Africans enjoyed a class status superior to Indians during this period.

The principal concern among Spanish elites was not racial segregation per se, but prevention of a concerted rebellion of any kind on the part of subject peoples. Encouraging inter-group enmities, along with a general anti-'miscegenation' policy, were obvious and consciously practiced remedies. This stated policy of rule by division was not confined to Indian and African relations; it extended to the slave community itself. A Quito encomendero, in his recommendations for solving the labor crisis in the southern mines, suggested in 1592 that slave gangs be comprised of many ethnicities (*naciones*). This mixture of Africans was necessary, he claimed, 'for the security of the land they populate, so that they shall not commit some effrontery'. The encomendero was speaking from experience, apparently, as he noted that, 'although they [African slaves] have conspired to attempt uprisings, they have not been able to hold together (*concertarse*), being of different nations'. 'When found out, and with the punishment of one or two of the conspirators, [the uprisings] have ceased'.⁴⁴⁹ This member of the Quito elite, long before the Cartagena Jesuits, was quite aware of the non-recognition of color as the most important distinguishing feature among newly-imported Africans. By observance, it seems, he learned to incorporate and exploit ethnic differences among slaves of the same color, and recommended that the Council of the Indies require holders of the *asiento*, or slave trade monopoly, to mix their human cargoes accordingly.

⁴⁴⁶ *Libros de Cabildos Quito II*, 2: 18.

⁴⁴⁷ *Libros de Cabildo Quito II*, 2: 387.

⁴⁴⁸ Quoted in Alfonso Anda Aguirre, *Indios y negros bajo el dominio español en Loja* (Quito: Abya-Yala, 1993), 259.

⁴⁴⁹ Ponce Leiva, *RHGQ* 1: 552 ('se le avise que sean de muchas naciones, para la seguridad de la tierra donde se poblare, para que no puedan hacer alguna desvergüenza; porque jamás, por la razón que tengo dicha, aunque han procurado intentar de alzarse, no han venido a concertarse, por ser de diferentes naciones; luego se descubre, y con castigar a uno o dos de los culpados, cesa').

The Consejo de Indias took the Quito mine labor petitions very seriously, and recommended that slaves be sent en masse to Popayán, Zamora, Jaén and Yaguarsongo. Zaruma, having the best chance of reviving the Indian mita, was not to receive more than a few 'supplementary' blacks. The other districts, however, 'given the great decline of the natives', were to be repopulated with Africans. The council revived earlier arguments justifying this move, claiming that 'there is no doubt that such lands are perfectly suited to the housing and conservation of the blacks, who survive and even live better, more healthy, robust, and with great strength in very hot countries'. The climates of Popayán and the southern gold districts were judged to be quite similar to those of the Africans' homelands, 'which are below the torrid zone in the Kingdoms of Guinea'. The climate was so perfect, it was claimed, that 'it would provide in abundance the staples which the blacks crave (*apetecer*), which are rice, maize, tobacco, fish, squash (*zapallo*), yuca, and other vegetables'. This new labor force would not only help to conserve the few remaining Indians, but would also be preferable for mine work, 'their labor being greater (*mayor*) and more graceful and gay (*mas lúcido*)'. The Council recommended that the king authorize shipment of at least one thousand Africans per year to Quito, a third females, as advised.⁴⁵⁰ Philip II (1556-98) was less than enthusiastic about subsidizing such ventures, and it seems that no mass shipments ever materialized as a result of his stalling. He believed that Indians, as elsewhere in Peru, could eventually be made to populate Quito's slumping gold districts.⁴⁵¹

Perhaps the most important question we may ask of all these petitions and recommendations is, to what extent were these plans realized in colonial Quito? To be sure, no hermetic communities of African miners were established in the sense that Auncibay and the others intended, no slave owners would allow the freedoms or respect the guarantees of unbroken families that the oidor had proposed, however disingenuously. Semi-autonomy had not been granted; no slaves seem to have become alcaldes of their own self-sufficient, malaria-free pueblos. Still, if we were to return to Popayán circa 1680, less than a century after Auncibay's seemingly absurd proposal, we would perhaps be surprised at our findings. In the mines of Caloto and Jelima, just north of Popayán, we would encounter cuadrillas of up to one hundred slaves, living in largely self-sufficient villages, extracting gold for their elite masters, and overseen to some degree by fellow slaves, or capitanes de cuadrilla. In Barbacoas we would find similar camps of slave miners, often living and working at some distance from their masters' homes, some of the crew engaged in mining while others fished, tended plantain groves and so on. In short, we would probably think that the Popayán elites, whether consciously or not, were attempting to make Auncibay's dream come true.

As Peter Marzahl and Germán Colmenares have shown, Popayán in the course of the seventeenth century slowly made the transition from an Indian tributary to a slave-based mining economy. Without citing precise demographic evidence, Marzahl claims that the expansion of gang slavery in the gold mines dates to the 1620s, if not earlier.⁴⁵² This suggested decade is probably a bit late, as we have examined in chapter two the work of a mining cuadrilla of over forty slaves near Caloto in 1614. This relatively large, corporate enterprise was in the hands of the Convent of the Encarnación in Popayán, but private individuals or family groups were probably also engaged in slave-based mining ventures of scale by this time. As recommended by rebellion-wearied officials, the forty-seven member Encarnación cuadrilla was made up of a mixture of creole and African-born slaves, the latter coming from at least five different ethnic or language groups, including Brans, Bañónes, Fulupos, Congos and Angolas. Indeed, the common mention of Africans working in gold mines throughout Popayán in the late sixteenth and early seventeenth centuries, along with the remarkable gold output recorded for this region in the same period suggest that slavery was more common in the early years than has been argued.⁴⁵³ Origins aside, increased gold production and corresponding increases in slave imports led to a dramatic demographic change in late seventeenth-century Popayán. Although in absolute terms the numbers of Africans inhabiting the northern provinces of Quito were never huge (as they were in Brazil, for example) by 1680, if not earlier, as Colmenares has suggested, Popayán could genuinely be termed a 'slave society'.⁴⁵⁴

⁴⁵⁰ Ibid., 567-68.

⁴⁵¹ Ibid., 573-75. Worried about the profitability of such a venture, Philip II ordered careful assays of Quito's various ores.

⁴⁵² Marzahl, *Town in the Empire*, 45.

⁴⁵³ Slaves were said to be common in the early mines of Almaguer, for example, and in many gold districts north of Cali (see chapter one).

⁴⁵⁴ Colmenares, in *Popayán: una sociedad esclavista*, has attempted to quantify the slave trade to the mining districts around Popayán in the first (pp.37-50) and second (pp.54-65) halves of the colonial period.

Marzahl has suggested that the transition from Indian to African slave labor revolutionized the mining economy in at least one notable way. As Yeager's more recent argument has also shown, the fact that slaves, unlike village-bound Indians, could be moved at the master's will allowed for the easy establishment of temporary mining camps nearer to gold sources.⁴⁵⁵ This was important in expanding mining operations at nearby goldfields such as Caloto, but it was even more crucial, as Marzahl notes, in allowing the Spanish to move into the more difficult gold zones of the coastal lowlands.⁴⁵⁶ Without an already established, mobile and experienced labor force at hand, Popayán's elites could never have settled and exploited the rich placers of Barbacoas and the Chocó. It is possible that some Africans, male and female, had even arrived in the Americas with prior experience in gold mining, further enhancing their value as skilled laborers.⁴⁵⁷ Native Americans, from both highland and coastal groups, were also roped into these enterprises, as we have seen, but Africans were from the beginning the key factors of gold production. Gold-mining *cuadrillas*, as Marzahl demonstrates, were largely self-sufficient units, with some members dedicated to subsistence farming (providing labor power in the nutrition sense) while others engaged in mining (providing labor power in the production sense). Another important consequence of the expansion of gang slavery in Popayán not emphasized by Marzahl was the new opportunity presented to private individuals to pool labor forces. Joint ventures, such as the massive canal projects of the 1660s described in chapter two, became much more common in gold mines north of Quito after the 1630s.

As early as the 1610s, large *cuadrillas* of self-supporting African slaves, such as the one belonging to the Conceptionist nuns, were operating in the gold placers around Popayán. Of the forty-seven slaves in the entire group, fourteen were not engaged in mining. These slaves were either too young to work or were engaged in subsistence activities, such as cattle herding and farming. Of the forty-two slaves of working age, twenty-five were males and seventeen were females, yielding an effective sex ratio of about 1.5.⁴⁵⁸ This was not quite the ratio of males to females called for by Quito's *oidores* (2, or two-thirds male), but it was close. A total of twenty-two slaves in the group lived in apparently stable unions, and of these eleven couples, seven had produced offspring. If this case is at all indicative, slave mining operations at this early date seem to have been organized in hopes of reproducing the labor force. The low production of this particular slave gang, in terms of gold pesos registered per slave per year, suggests a relatively low ratio of exploitation, poor quality deposits, or redirection of mine labor to subsistence activities during times of necessity or drought (recall that placer mining was as dependent on water as agriculture).

As African slavery in Popayán grew, so shrunk the Indian labor force in its gold mines. As Marzahl notes, the *tasa*, or work and pay schedule for *encomienda* Indians, shows a marked change with regard to mine work. Between 1607 and 1668, the portion of a given *encomendero*'s Indian charges set aside for mining dropped from one fourth to one tenth, and to zero by 1692.⁴⁵⁹ This change was in part due to an apparent decline in Indian population from epidemic disease, but it also represents a shift in highland

His findings for the period prior to 1680 are only estimates based on imports arriving in Cartagena, and suggest a maximum of 100 to 200 slaves entering the Cauca valley per year out of ca. 500 total debarked. Total imports into New Granada over the entire colonial period did not exceed 200,000, and may well have been closer to 100,000, as Colmenares argues.

⁴⁵⁵ Timothy Yeager, "Encomienda or Slavery?"

⁴⁵⁶ Marzahl, *Town in the Empire*, 46.

⁴⁵⁷ Parts of West Africa, especially present-day Ghana, were known gold source regions in medieval and early modern times. Gold was also mined in the Angola region, south of the Congo, before the arrival of Europeans. For a brief discussion of mining techniques in these regions, see Walter Cline, *Mining and Metallurgy in Negro Africa (General Series in Anthropology, No. 5)* (Menasha, WI: George Banta, 1937), 11-14. Cline notes that it was observed in the late eighteenth century among Mandinga gold miners of the Bouré region (Sigüiri) that men worked in diggings (at depths exceeding 70m) and women worked in panning. The latter activity was considered women's work because it resembled the winnowing of grain. These observations were made by the Danish missionary Mungo Park in 1795-97; see his *Travels in the Interior Districts of Africa* (London: John Murray, 1817), 454-74. Park also noted that Mandinga headmen (*mansas*) were charged with organizing seasonal work groups in the mines, much like American *capitanes de cuadrilla*. Whether these gendered labor patterns traveled to the Americas cannot be proved with certainty, but it should be noted that women are the principal panners in many districts of the Pacific littoral of Colombia today.

⁴⁵⁸ ANHQ Religiosos, caja 1 (31-i-1614), f.5.

⁴⁵⁹ Marzahl, *Town in the Empire*, 49-50.

labor patterns. In the revised scheme Indians were to work primarily in agriculture and Africans would replace them in the mines. The ideal situation, as desired but rarely achieved by Popayan's elites, was to use the Indian labor subsidy to feed mobile slave gangs settled in remote mining districts. As Colmenares has shown, just under 10,000 slaves were sold in Popayán itself between 1680 and 1800, most to mine owners.⁴⁶⁰ The volume of trade shows an overall linear growth, but with clear disruptions mostly due to European wars. Overall price trends show a significant decline commensurate with increased supply, falling from just over 500 pesos for a healthy male slave in 1680 to just over 350 pesos in 1780.⁴⁶¹ As a result of these shifts, Indian-based mining in the southern Audiencia of Quito continued to slide into decadence while African-based mining continued to expand in the Gobernación of Popayán.

Beginning in the mid-seventeenth century, if not before, highland slave-owners began using their skilled, mobile miners to penetrate and exploit more remote and dangerous frontier gold districts, in particular those of the Pacific coast. While slave prices dropped in the highlands, they would remain high and even climb in these new and dangerous goldfields, stimulating a coastward flow of Africans. In 1658, for example, four slaves, one female and three males, were sold in Popayán to a Barbacoas mine owner for 1,900 silver pesos. The four slaves included forty-year-old Manuel Santa Fé, 'nación Angola', his thirty-five-year-old wife, Lucía, also of Angolan ethnicity, Juan Philupo de los Rios, also thirty-five, and Juan Razón, a creole, or American-born boy of sixteen.⁴⁶² As in most slave transactions from the period, the seller included a disclaimer of responsibility for diseases or other 'defects' (*tachas*) among the slaves, and used the legalese of the slave market at Cartagena to refer to the slaves as nothing more than 'bags of bones with their souls in their mouths' (i.e., they might draw their last breath as soon as the sale was finalized).⁴⁶³ Most Africans entered the mines of Popayán via official channels at Cartagena and the Cauca Valley, but word of rampant contrabanding was in the air by the late seventeenth century.⁴⁶⁴

Slaves entered the Pacific lowlands from the sea, as well, as evidenced by customs records (*almojarifazgos*) for late seventeenth-century Barbacoas.⁴⁶⁵ These records mention head taxes of five pesos per slave, but do not list slave prices. Other documents suggest an average of 400-500 pesos for healthy males and females, and even more for skilled males. Labor was clearly more valuable than any other form of property in Barbacoas, where the price of a single slave could exceed the assessed value of a gold mine.⁴⁶⁶ Skilled workers were certainly valued in the highlands, as well. A mulatto carpenter in Popayán was valued in a will at 500 pesos, tools included.⁴⁶⁷ Slaves on a sugar estate near Buga were valued at between 100 and 500 pesos, with one skilled slave, 'Domingo negro *azucarero* (sugar maker)' singled out

⁴⁶⁰ Colmenares, *Popayán: una sociedad esclavista*, 54-55.

⁴⁶¹ *Ibid.*, 67.

⁴⁶² Using ethnic and language designations such as these, Colmenares estimates that the slaves of Popayán were largely drawn from the coasts surrounding the mouth of the Niger River, with the next largest group drawn from the Congo River south (including those slaves designated 'Angolas', *Ibid.*, 48-49). Thornton, in *Africa and Africans in the Making of the Atlantic World*, 184-205, provides an excellent summary of the specific groups affected by the early slave trade in West Africa. Using Thornton as a guide, we see that the slave Juan Philupo de los Rios was probably a native of the Fulupo Kingdom of the Casamance River in Upper Guinea.

⁴⁶³ ACC Sig. 1301, notariales ('a la lengua del agua por huesos en costal y alma en boca'). I follow Bowser's interpretation of this bizarre phrase (*The African Slave in Colonial Peru*, p.84. Bowser credits F. Ortiz with deciphering it in Spanish).

⁴⁶⁴ ANHQ Popayán, caja 14 (25-v-1695). This document regards the entry at Cartagena of 79 slaves purchased from the English *asentista* Nathaniel Houghtham in Port Royal (Jamaica) in 1689, but includes a dispute over alcabala, or sales tax charges for slaves being shipped to Popayán from Santa Marta and inland, at Honda (an official port of entry on the Magdalena, below Bogotá). Officials claimed that many other slaves were being introduced to the gobernación illegally in order to avoid these multiple tax inspections. Another cédula complaining about 'esclavos de mala entrada' was issued at Cartagena and sent to Quito in 1692 (ANHQ Autos Acordados, caja 1, f.9).

⁴⁶⁵ ACC Sig. 1099, f.3v. See also ANHQ Popayán, caja 12 (18-iii-1692), which includes a 1678 contract to import *negros bozales* from Panamá to Barbacoas. Another note of sea entry of slaves in Barbacoas is found in ANHQ Esclavos, caja 2 (1716). Here five slaves imported from the French Guinea Co. via Panamá, three males and two females, were debarked at the Playa de Amaral, near Iscuandé.

⁴⁶⁶ ANHQ Popayán, caja 11 (1699).

⁴⁶⁷ ACC Sig. 880 (notariales, 1658).

and valued at 450 pesos. Several of these slaves, a mulata mistress and four illegitimate children (*hijos naturales*), were supposed to have been manumitted but instead found themselves victims of an inheritance dispute.⁴⁶⁸ Another will from the mid-seventeenth century showed only the captain of a Barbacoas slave gang to have been valued at 500 pesos while thirty others ranged in assessed value from 200 to 450 pesos, depending on age, illness, physical disabilities and gender.⁴⁶⁹ In 1683 a dispute arose in Ambato, a highland town south of Quito, over the sale of a female slave who later turned out to be pregnant--potentially increasing her value from 400 to 700 pesos.⁴⁷⁰ Sometimes an investor could purchase slaves at a discount by buying an entire mining operation, as happened in Barbacoas in 1670. In this case a gentleman (*hidalgo*) of Portuguese descent purchased a Barbacoas mine 'with all its waters, tools, plantain groves and other things connected', including twenty-eight slaves, for just under 9,000 pesos.⁴⁷¹ In spite of his instantaneous possession of all of this productive capital, the buyer was behind on his installments by 1676.

Established miners also seem to have unloaded ill or troublesome slaves on unsuspecting newcomers, a periodic means of trimming unproductive labor expenditures.⁴⁷² In many such cases, as we shall see in chapter six, overambitious and inexperienced mine owners overstretched themselves and had their slaves repossessed and either rented, sold or made to work in the owner's gold diggings under the supervision of an outside administrator. In other cases, slaves could be jailed and held as bonds for a master's debts.⁴⁷³ Thus the chattel status of slaves, reinforced by practices such as branding on the face and chest, was never in question.⁴⁷⁴ In 1700 Quito's Jesuits, apparently unmoved by the testimony of their brethren in Cartagena, purchased thirty-six 'head' (*cabezas*) of Africans, twenty-four males and twelve females (exactly the 2:1 ratio recommended by sixteenth-century commentators) from the Dutch Guinea Company. These so-called 'rescued captives' were at once baptized and branded with the letters 'CR'.⁴⁷⁵ In

⁴⁶⁸ ANHQ Popayán, caja 5 (1670). The mistress and her children were alleged to constitute more than the fifth part of the Buga man's estate, and were hence considered legally unalienable. They were denied their due and temporarily imprisoned at the order of the dead man's heirs, a common occurrence in such cases throughout Quito. For other instances in which the 'one-fifth clause' was invoked to prevent manumission, see Meiklejohn, "The Observance of Negro Slave Legislation in Eighteenth-Century New Granada", 79-82.

⁴⁶⁹ ANHQ Popayán, caja 5 (1658).

⁴⁷⁰ ANHQ Esclavos, caja 1 (1683).

⁴⁷¹ ACC Sig. 336 (notariales). Fernando Jurado Noboa, in *Esclavitud en la Costa Pacífica: Iscuandé, Tumaco, Barbacoas y Esmeraldas, Siglos XVI al XIX* (Quito: Abya-Yala, 1990), 131-32, notes that this mine owner, Gaspar Estacio Amaral y Villada, left behind a much larger cuadrilla of 77 slaves upon his death in 1682. Despite an enticing title, Jurado Noboa's book is more a collection of genealogical notes regarding Barbacoas elites than a study of slavery.

⁴⁷² ANHQ Fondo Especial, caja 13, doc. 1193, ff.83-84, Barbacoas (March 1739). In this case a recently arrived Spaniard sued to recover the purchase price of four slaves, an adult woman of about forty and four small children. Apparently the newcomer had agreed to the sale without inspection, and sued when he discovered that all four slaves were ill or otherwise incapacitated. Local officials, unsurprisingly, backed the seller, leading the 'greenhorn' to claim that no justice could be found in Barbacoas since everyone in power was related to everyone else. A similar case from Barbacoas appeared in 1731, where a buyer claimed that a recently-purchased 'mulatilla' was ill, and hence of 'little use' ('poca utilidad'). Disputes of this kind could be found elsewhere, as in Guayaquil in 1734, where a buyer reported that an uninspected slave, 20-year-old Maria del Carmen, 'nación Caravali', appeared to have been wounded by a hatchet (ANHQ Esclavos, caja 3 [5-iii-1734]). She was presented to a magistrate who agreed with the plaintiff and declared her 'flaca, débil, y descolorida' ('emaciated, weak and discolored').

⁴⁷³ ANHQ Popayán, caja 4 (1668).

⁴⁷⁴ See, for example, ANHQ Popayán, caja 3 (1664), where two slaves on a ranch outside Cali are described as 'una negra llamada Dorotea y un mulato llamado Nicolas Francisco herrado en la cara' (52v). Branding to prove payment of customs duties usually took place in Cartagena, but particular owners may have also engaged in this bestial practice for identification purposes. Bowser, in *The African Slave in Colonial Peru*, 82, illustrates slave brands registered in the notary records of Lima to 1650.

⁴⁷⁵ ANHQ Esclavos, caja 1 (1700). Some of these slaves were probably put into gold mining operations, but most were destined for the order's sugar plantations in the Chota-Mira Valley, just north of Ibarra. Two of the males were referred to as *muleques*, a term meaning 'young bozal', or African juvenile. That the new sugar haciendas of the Chota-Mira basin constituted a new regional slave market seems evident in later

spite of centuries of 'jesuitry' to the contrary, we can well imagine which of these incomprehensible ceremonies was the more memorable.

The slaves' situation in the newly opened mining districts was only barely mitigated by legal protective measures, as the 1668 mining ordinances of Barbacoas demonstrate. Most of these rules were aimed at controlling Indian labor, as we have seen, but some ordinances forbade so-called excessive labor for Africans. 'From here forward', states Ordinance 36, 'the said dueños of black slaves shall not make them work more than that which they conveniently (*buenamente*) can, nor shall they be made to pay excessive *jornales*, nor be punished except with moderation and with cause, and care must be taken that they be indoctrinated in the things of our Holy Catholic Faith'.⁴⁷⁶ The question of rendering jornales, or daily produce, to their masters suggests that unsupervised or 'free-lance' African labor existed in some mines, a feature known to have been common in slave-based gold districts in eighteenth-century Brazil.⁴⁷⁷ We do not know what was considered an excessive jornal in seventeenth-century Barbacoas, but a day's take of ca. 1g (about 2 tomines, or 1/4 castellano) is considered exceptional nowadays.⁴⁷⁸ Apparently slaves were punished if they failed to turn over this set quota. Other ordinances stipulated that slaves and Indians were to be provided with sharpened iron tools and an equal ration of food and clothing. Clothing items were not specified, but probably did not consist of much more than a swatch or two of cotton cloth, evidenced by the fact that later visitors to the region were almost universally appalled by the near nakedness of Barbacoas (and Chocó) slaves. The legal ration comprised one *almud* (4.6l) of maize per week and three pounds of salt beef, two pounds salt fish and one pound of salt per month.⁴⁷⁹ The high number of complaints of slave deaths and illness during these early years suggest that these subsistence quotas were rarely met.

The stipulation regarding indoctrination of slaves was hotly contested by some slave owners in the highlands. In Barbacoas it was generally ignored. The masters had no objection to priests administering sacraments and so on, but they deeply resented being taxed in order to subsidize this activity. As the 1668 ordinances mandated, a salary for a doctrinero was to be extracted from each slave owner at a rate of twelve reales per *cabeza útil*, or 'useful head', a dehumanizing term for healthy mine slaves.⁴⁸⁰ In the late seventeenth century one of Popayán's most wealthy dueños de minas, Francisco de Arboleda, called for a modification of this mandate, claiming that slave owners were unfairly made to pay twelve reales per year for every slave they owned, when encomienda Indians, who paid their doctrineros from their tributes, were only eligible as males between eighteen and fifty years of age. The Audiencia of Quito, apparently unmoved by Arboleda's seemingly reasonable argument, rejected the petition.⁴⁸¹ The high court's decision to keep the tax as it was suggests that slaves of either gender and of virtually all ages were considered útil, or eligible mine workers.

A law going back to the fundamental slave legislation of the Siete Partidas claimed that slaves who were subjected to excessive cruelty (*sevicia*) could petition for a new master, by way of court-ordered

bills of sale. Slaves from all over Quito were sold to the Jesuits until the expulsion of that order in 1767 (e.g., ANHQ Esclavos, caja 2 [1722], Maria de la Cruz, 'nación Guinea', ca.22-24 years of age, sold for 400 pesos; ANHQ Esclavos, caja 3 [9-iv-1735], 8-year-old mulato, or 'zambito' named Lorenzo sold for 150 pesos, died of 'tertian fevers' [*tercianias*] shortly after sale; ANHQ Esclavos, caja 3 [5-i-1742], Maria Teresa, 'negra', 25 years old, sold to Quito Jesuits by a Popayán owner for 400 pesos). In 1749 the rector of Quito's Jesuit university, San Gregorio, purchased nine 'piezas de esclavos' from a Popayán miner working near Raposo (ANHQ Esclavos, caja 4 [2-v-1749]). Given their presumed skills, these slaves were probably placed in another gold mining operation. The Jesuit order in Popayán, which had various mine holdings in both highlands and lowlands, also purchased slaves (e.g., ANHQ Esclavos, caja 3 [19-i-1743], sale of Cartagena mulato named Phelipe de Santiago, 19 years old, no price given).

⁴⁷⁶ ANHQ Popayán, caja 233, ff.19v-20.

⁴⁷⁷ See A.J.R. Russell-Wood, "The Gold Cycle in Brazil", in ed. Leslie Bethell, *Colonial Brazil* (Cambridge: Cambridge University Press, 1987), 224. Weekly rather than daily takes were called *jornaes* in Brazil, and averaged 1/2 to 1 & 1/2 drams (ca. 1-3g).

⁴⁷⁸ A produce of one gram of gold per day over the 312-day año de rayas common in the period would yield some 75 gold pesos (of 4.18g ea.) per year. At this rate (probably too high) a slave's market value could be recouped within six or seven years.

⁴⁷⁹ ANHQ Popayán, caja 233, f.20.

⁴⁸⁰ Ibid.

⁴⁸¹ ANHQ Popayán, caja 17 (23-v-1697).

sale. Such cases were extremely rare in the Audiencia of Quito, but they did occur. One such case regarded a young mulatto named Prudencio Quiñones, who had run away from an obraje, or textile mill, in Loja around the turn of the eighteenth century. His case, which the Quito fiscal supported, and which may have later been decided in Quiñones' favor, centered on issues of chronic physical abuse.⁴⁸² In 1748 a slave in Guayaquil petitioned for a new master, claiming that his present one was interfering with his marriage by severely restricting his mobility and renting him out for long periods of time. The wife's master, backed by the audiencia, purchased the slave.⁴⁸³ In this case the willingness of another master to purchase an unhappy slave was clearly key. Humanitarian concern must not be overplayed in such cases, especially when conjugal union of slaves was openly encouraged for its supposed stabilizing and obvious reproductive effects. Another, unresolved case from mid-eighteenth-century Quito is revealing of such conflicting mentalities. Here an African named Joaquín, '*nación Congo*', petitioned for a new master, claiming that his present one had failed to care for his ill wife (simply referred to as '*negra Conga*'). Joaquín admitted to having stolen books and other valuables belonging to his master and selling them to procure medicines, but claimed that his cruel master, in response, had threatened to sell him 'to the mines of Barbacoas'.⁴⁸⁴ The master, for his part, claimed that this slave was simply a troublemaker who was likely to 'contaminate' other slaves with his 'vices'. Besides, he argued, the threat of sale in the Barbacoas mines was not unreasonable, as even an unruly slave could fetch some 500 pesos there. In this way a master could use a slave's supposed infractions to prevent forced sale, and also counter the slave's petition with a threat of a conjugally divisive and even life-threatening sale into another sector of the colonial economy. Here the law was more an instrument of social control than a means of redress for the oppressed. As Meiklejohn notes in his study of *sevicia* claims in New Granada, slave owners in frontier regions were only admonished for excessive acts of cruelty because they were believed a major cause of *cimarronaje* and hence constituted a threat to state security.⁴⁸⁵

Much more common than petitions for new masters were petitions for freedom, usually manumission orders disputed by heirs of a slave owner. Often, as a last, cynical act of charity, Spanish slave owners in Quito (as elsewhere in the Americas) would grant freedom to one or more of their slaves, most often female mistresses and illegitimate children. These cases are among the most heartbreaking documentary evidence one can find in the archives, as they offer sad testimony of the false hopes experienced by many slaves in the northern Andes. In one case from late seventeenth-century Loja, five slaves were sold to a buyer from Cuenca in spite of a clause in their former owner's will granting them freedom upon her death. The woman's heirs disputed their mother's sanity and had the clause, and with it the slaves' hopes, stricken from the record.⁴⁸⁶ Only occasionally did the audiencia see fit to enforce manumission clauses, as in a case from Pasto in the 1690s. Here an Indian man sought the freedom of his mulata wife, Petrona Fernández, who had been declared free by her dead master. The master's older brother, who had been away on business in Antioquia when his brother died, disputed the will upon his return to Pasto. Because the principal plaintiff was an Indian, the Quito Protector de Naturales stepped in and backed the manumission order, saying that Petrona's freedom was 'based on natural law' (*fundada en derecho natural*) since the owner had admitted to a guilty conscience (probably for rape or some similar offense).⁴⁸⁷ In spite of this backing from a powerful state attorney, the heirs managed to drag the case out

⁴⁸² ANHQ Esclavos, caja 1 (1702).

⁴⁸³ ANHQ Esclavos, caja 3 (26-ix-1748).

⁴⁸⁴ ANHQ Esclavos, caja 4 (7-x-1749), f.6v. The only other case I encountered regarding petitioned forced sale by slaves came from Riobamba in 1751. In this instance a four-member slave family claimed that their master had been forcing them to work, apparently in some hot country region to the west, among poisonous snakes (ANHQ Esclavos, caja 4 [5-iii-1751]). The audiencia apparently chose not to hear the case.

⁴⁸⁵ Meiklejohn, "The Observance of Negro Slave Legislation in Eighteenth-Century New Granada", 112. *Sevicia* complaints in New Granada included such vile punishments as the cutting off of ears, forced drinking of urine, death by flogging and long-term stints in stocks and chains (115). One female slave was crippled after having been placed in stocks for over a year and a male slave was made to wear an iron neck collar for eleven years. Meiklejohn also reports a case from late eighteenth-century Barbacoas in which a cuadrilla of slaves was so mistreated by their master that they killed their wives and children and then committed suicide to end the horror (118).

⁴⁸⁶ ANHQ Esclavos, caja 1 (1692).

⁴⁸⁷ ANHQ Popayán, caja 17 (8-ii-1698). The clause in the will, like most of its kind, stated that Petrona would be freed '*para el descargo de mi conciencia*' (f.9).

for almost twenty years. By the time the audiencia freed Petrona Fernández she was a fifty-four-year-old widow.

Self purchase, or purchase by relatives, was likewise possible but in fact quite rare for Quito's slaves. Accumulating the capital necessary for purchase was extremely difficult anywhere in Spanish America, but it was especially so in economically depressed regions like Quito. Wages for Indian workers, as we have seen, were as much as ten times lower in the Quito region than in places like the Audiencia of Charcas. Likewise jornales, or day-rates for slaves, averaged one peso per day in the seventeenth century. Although in mining zones the jornal seems to have had several definitions, in most regions of the audiencia it was usually a daily rent paid to an owner for the use of a slave. Slaves were only exempted from work for their masters on Sundays and feast days, so opportunities for renting one's labor to others in order to save cash were limited. Slaves were also restricted access to markets, making sale of garden or other surplus produce similarly difficult. One slave in Quito, an apprentice to two tailors, one mulatto and one mestizo, was apparently able to secure his freedom by collecting off-day jornales and other extra wages, along with some loans thrown in by his mentors, in 1720.⁴⁸⁸ A more likely possibility was purchase by a free spouse, as illustrated by a case from late seventeenth-century Guayaquil. Even here, where a mulatto carpenter sought to purchase his wife, partly in cash and partly by promissory note, a slaveowner's recalcitrance and position of power were sufficient to postpone resolution. The audiencia, citing the *recopilación de leyes* (probably the Siete Partidas, more specifically) seems to have supported the free husband, but allowed the slaveowner to set an exorbitant price (claiming the woman's skill at cooking as justification) which no doubt kept economic freedom for the couple just beyond reach for many years to come.⁴⁸⁹ It seemed as if every hope promised to slaves by Hispanic law was dashed on the rocky shores of Hispanic American practice. As for moral incentives, Spanish slave masters were as loathe to part with human capital as capital of any form, and when they did so it clearly pained their purses more than their hearts.

The servile utopia envisioned by Oidor Auncibay would never come to fruition in Quito or Popayán, largely because Africans refused to play along with their own subjugation, especially in the mining zones. In the Chocó in the late seventeenth century, for instance, a major slave rebellion, in concert with local Indians, threatened to snuff out Spanish plans for settling and mining the region. In the upper Patía basin, just above the flourishing Barbacoas gold mines, a long-established palenque, or maroon community, thrived, its members constantly giving refuge to new runaways and harrying Spanish trade caravans that passed nearby. In the camps that were under firm Spanish control slaves struggled to gain independence and freedom for their children, if not for themselves. Alongside incidents of outright rebellion and violence, slaves resisted in myriad ways, among them the well known but misnamed 'passive resistance' techniques familiar to historians of North American slave life. Resistance to bondage was constant and active and only took on so-called passive forms because of the constant threat of physical violence. Indeed, it was the ugly side of Spanish justice, the shackles and floggings, the dismemberment and death, that most slaves had to keep in mind before breaking a tool to avoid work. Fugitives were captured whenever possible, and they were as severely punished as Auncibay recommended.

Slaves were reminded of their status in this 'multi-racial' society not only by the color of their skin but by the brands on their faces and breasts. Old cédulas restricting the movement, dress and right to bear arms for both slaves and free people of color were continually reissued.⁴⁹⁰ In spite of ongoing legal attempts at complete social control of Africans, however, the desire for freedom, whether manifested in the form of a menacing machete, a purloined tail-coat or a surprise leave of absence, was always alive, and the late seventeenth-century Spanish elites of Quito and Popayán, like Auncibay a century before them, realized this fact. Like Auncibay, they also knew that in order to make a profit at mining, especially when people of color were coming to constitute the majority, slave resistance had to be suppressed with a careful mixture of gentle persuasion and brute force.

Short-term strategies of managing slave unrest included incentives such as the eventual hope of freedom. In reality, as we have seen, slaves learned quickly that submission rarely led to manumission, but rather only to despair. In the highlands, such false hopes might be dangled before a vulnerable slave with

⁴⁸⁸ ANHQ Esclavos, caja 2 (1720, case of Manuel Andarbe, 'hijo natural' of a Spaniard and a criolla slave).

⁴⁸⁹ ANHQ Esclavos, caja 1 (1690).

⁴⁹⁰ See, for example, the Quito cédula of 6-xi-1663, which, like the *Libros de Cabildo* of 1538 cited above, 'que los negros y mulatos no traigan espadas, dagas ni machetes', 'asi esclavos como libres' (Freile-Granizo, ed., *Autos Acordados*, 96).

nowhere to go, and could be effectively withheld indefinitely, but the situation may have been otherwise in recently-settled frontier areas where slaves had more leverage. In mining zones particularly, slaves found that chronic cimarronaje and other forms of short-term rebellion could actually be used as bargaining chips against desperate mine owners. Control of large numbers of slaves by terror alone simply could not be effected by a small number of Spanish and mestizo overseers in a rugged region like the Pacific littoral. Survival in the bush was quite possible for many runaways, but periodic raids by well-armed soldiers and Indians could also make this type of existence precarious and even undesirable. This peculiar combination of factors seems to have been resolved by several varieties of compromise in order to make gold mining possible. Spanish force was still present, and terror was used to control both Africans and Indians, but establishing a productive enclave in such a region as Barbacoas would only come about by means of an experimental policy of give-and-take. Manumission, albeit with many strings attached, was one of these compromises.

Indeed, in Barbacoas the labor patterns that emerge from the first slave censuses (*matriculas*) of the early eighteenth century suggest a much more flexible system than might be imagined. As Phelan and Colmenares have often reminded modern historians of the distant colonial past, the economies of Quito and Popayán prior to the late eighteenth century, at least, were hardly developed, or even 'colonialist' in the modern sense.⁴⁹¹ Barbacoas might have been a productive, slave-based gold mining region, but not until the early nineteenth century was it characterized by rigidly structured extraction in the manner of plantation agriculture. Rather, a typical gold camp in the seventeenth and early eighteenth centuries consisted of a jumbled labor force made up of encomienda Indians, Indian and free black or mulatto wage workers, rented and personally owned slaves and, if an outside administrator was deemed too expensive, even the mine owner himself. For at least the first century of Spanish occupation of Barbacoas, only the wealthiest dueños and dueñas de minas in Barbacoas could afford a cuadrilla of slaves large enough to support and perhaps even police itself. Even when cuadrillas of twenty or more slaves were compiled, the long list of uncertainties of life in the backcountry, high among them the ever-present possibility of slave revolt, could easily lead to breakdown and a need to rent out certain members of the group in order to ensure *censo*, or mortgage-paying income.

A matrícula of slaves in the Province of Barbacoas taken in 1716 listed just under six hundred resident slaves, about a fifth of whom (as esclavos útiles) were actively working in about thirty different gold mines.⁴⁹² Working in the diggings alongside these mine slaves were a somewhat lesser number, perhaps half again as many free wage workers, Indian, black and mixed. An earlier *prorrata*, or advance, forced collection of mining taxes, undertaken in Barbacoas in 1709, showed a similar mix of free and slave workers in the area of Santa Bárbara de la Isla del Gallo. Of a total of seventy-two laborers, fifty were specifically described as slaves. The other twenty-two were listed as *confidantes* of a slave owner, possibly free black or mulatto overseers, and free peons, about half working for themselves as *playadores*, or free-lance stream panners who traded gold to small merchants, and half engaged in gang tasks with slaves.⁴⁹³ The existence of so many apparently free workers, almost a third of the total, suggests that manumission was relatively common in Barbacoas as compared with the highlands, at least at this time.

It is not clear if self-purchase or grants from owners were most responsible for this situation, but the former seems most likely. Slaves in Barbacoas, since the establishment of the gold camps in the 1620s, had been required to yield jornales, or daily takes to their masters. Gold exceeding this quota or self rents collected on feast days might have been saved in order to purchase at least partial freedom. Since gold dust still served as a kind of rudimentary cash, slaves engaged in mining were better poised than any others to

⁴⁹¹ J.L. Phelan, *The Kingdom of Quito in the Seventeenth Century*, 121, and Germán Colmenares, "La formación de la economía colonial (1500-1740)", in José Antonio Ocampo, comp., *Historia económica de Colombia* (Bogotá: Siglo Veintiuno, 1987), 13-47. Both Phelan and Colmenares rightly stressed the differences between early colonial and later 'colonialist' or 'imperialist' conceptions of economic exploitation of the so-called 'enclave' variety. If any economic sector approached export enclave status in this region during early colonial times, however, it was definitely the gold sector.

⁴⁹² ACC Sigs. 2835, 2843. This matrícula included all mines between Santa María del Puerto and Raposo, near Buenaventura. Forty-six slaves were counted in the Raposo district alone, including mines on the Río Dagua. Whereas dueños de minas in the rest of the province lived in Spanish towns such as Santa María del Puerto, most of the mine owners in this northern region resided in Cali and paid administrators to oversee their lowland cuadrillas.

⁴⁹³ ANHQ Popayán, caja 35, ff.29v-30v.

accumulate their purchase price. In one case dating to the 1730s, a young mulatto slave living in the village of La Paz del Espíritu Santo, on the Iscuandé River, acquired a grant of 'quasi-possession of liberty' in exchange for a long-term promise to work for the nephew of his owner, a Barbacoas encomendera.⁴⁹⁴ Quasi-possession of freedom was an ambiguous but real legal status, and for a twenty-year-old slave it could only have been regarded as a step in the right direction. Indeed, only the promise of eventual freedom, at least for some, could have led slaves to prefer working hard to hardly working--too much gold was produced (on the order of a million castellanos by 1700) to suggest otherwise. Indeed, the seemingly uncompromising and driven work ethic common among Afro-Colombians and Ecuadorians of the Pacific coast today seems to have had its origins in the colonial mines, and possibly in the opportunity presented by self-purchase.⁴⁹⁵

Other evidence suggests that freedom was as much color-based as work-based. By comparison with mixed people of color, such as the mulatto miner from Iscuandé, first generation African males (referred to by the degrading term *bozal*, meaning 'wild', or 'stupid') do not seem to have had much access to the mechanics of freedom. An important insight into how these men, arguably the backbone of the local workforce, could have been controlled in spite of differential access to freedom comes from the 1716 Barbacoas matrícula. This document suggests that manumission of females, especially mulatas, was not uncommon. Since these lighter-colored women were apparently rarely engaged in mine work, it appears that they were the semi-privileged offspring of Spanish encomenderos, or overseers, and African women. Slave owners were just as likely to have been motivated to manumit mulatas and some purely African women by the chance such so-called charitable acts afforded them in freeing themselves of head tax and other obligations. Free mulatas were free of charge, a desirable arrangement since they would not yield the prized jornales. However they could, it was hoped, contribute to a mining operation by way of reproduction. The mulatas' privileges as free persons did not usually extend to their children, since many eventually married African men, who were almost universally enslaved until death or very old age. In this fashion many African males, often respected capitanes de cuadrilla, were effectively domesticated by marriage and their wives pulled back into the cycle of slavery. Children of such unions were explicitly listed as esclavos, and could only be freed if their parents, or they themselves, managed to accumulate several hundred pesos.

Color and status differences were further reinforced and exacerbated by the appointment of some free mulattoes to military offices. In response to pirate threats in the late seventeenth century, the Spanish had created special companies of so-called *pardos* (mulattoes) and *montañeses* (mestizos and mulattoes from prominent families) in Barbacoas. Outstanding military service was considered grounds for manumission, but so few engagements occurred that this could not have been more than a source of vain hope. Some of the soldiers who did manage freedom, by whatever means, worked hired slaves and free peons in their own mines by 1709, at least.⁴⁹⁶

This gender and color differential in manumission patterns was a conscious and even rational response to the realities of mining gold in Barbacoas. Slave owners, by encouraging African men to wed to legally free black and mulata women, could help to keep mine slaves and free people of color entangled in a complex web of dependencies which would discourage rebellion and cimarronaje. Similarly, creating special opportunities and privileges for mulatto and other mixed-heritage males effectively divided mine laborers along an artificial color scale. Recently arrived Africans, as many historians have rightly remarked, did not consider phenotype a defining characteristic in the first place, so group consciousness was by no means automatic in spite of shared oppression. As the 1716 matrícula shows, Africans in Barbacoas were comprised of at least a dozen *naciones*, or ethnicities, including Araras, Congos, Angolas, Mandingas, Minas, Cafulos, San Tomás, Fulupos, Lucumies ('Locumes'), Caravalies, Ocaras, Cufis and Matambas.⁴⁹⁷ It was not quite the situation imagined by Auncibay in the 1590s, but Spanish elites in Barbacoas by the early eighteenth century had certainly done their best to create a string of internally divided yet productive slave communities in the wet littoral. These communities were further divided by

⁴⁹⁴ ANHQ Esclavos, caja 3 (26-v-1732, liberty of Josef Portocarrero).

⁴⁹⁵ This feature of Afro-Hispanic society in the wet littoral served as the departure point for Norman Whitten's *Black Frontiersmen: Afro-Hispanic Culture of Ecuador and Colombia*, 2d ed. (Prospect Heights, IL: Waveland Press, 1986).

⁴⁹⁶ ANHQ Popayán, caja 35 (1710). In this case Alférez (2d lieutenant) Dionisio Zambrano of the Compañía de los Montañeses worked 'personalmente con tres peones'.

⁴⁹⁷ ACC Sig. 2835

the existence of indigenous groups, however reduced by disease and oppression, in various regions of the backcountry. After the encomienda reforms of 1700, Barbacoas Indians, among them no more than one hundred-seventy male workers, were eligible as free hires alongside the mulatos.

By the late 1730s so many free workers could be found and hired that one miner oversaw a cuadrilla made up of eleven free peons and only one slave. This was not his preference, however, and like most miners who accumulated capital with time, by 1740 this up-and-coming dueño de minas purchased twelve African slaves and began to expand his operations. 'And having as many as twenty *piezas* between free persons and slaves of both sexes', he boasted, 'I managed to work five mines of my own'.⁴⁹⁸ The mine owner's motives for expanding the cuadrilla seem to have been as economic as they were pretentious. Many dueños de minas complained bitterly of the undependability of free wage workers, be they black, Indian or mixed. One miner compared them with the rains, claiming that 'as with the changing of the weather, which makes work impossible for lack of water, so with the peons who, being free, go out to work some days and not others'.⁴⁹⁹ Indeed, other deeply indebted mine owners in early eighteenth-century Barbacoas seem to have felt that all their troubles would be solved if only they could expand their slave cuadrillas. Mine owners testified in 1709 and 1716 that working with free peons was 'uncertain' (*son insiertos*) and 'accidental' (*se sirven por accidente*), and hence unprofitable.⁵⁰⁰ A miner with his own property claimed in 1739 that because he worked 'with two or three of my own slaves and five or six *concertados* (day laborers) between Indians and free mulattoes--these being contingent (*contingentes*) because when they want to work, they do, and when they don't, they don't--my take in gold is very short'.⁵⁰¹ Wage labor was not seen as a benefit, but rather a necessary evil which most miners resented, one they sought to avoid whenever they could.

Some slaves were in fact manumitted, representing a true breakthrough, but these rare freedpersons faced other problems. They might become mine-owning military officers in theory, but in reality most ended up as indebted peons working to gather enough gold dust to pay off advanced supplies from highland merchants. The same went for mulatto playadores, or unattached stream panners; freed from slavery, many now owed their livelihood to men engaged in so-called *rescate de oro*, a business literally translatable as 'ransoming of gold'. In sum, most slaves, especially young and healthy Africans working in gold mines, realized immediately that manumission was an impossible dream; it went completely against the very logic of production. If we consider this carefully, we can see that there was never, even in a place like Barbacoas where the slaveowner was at some disadvantage, any true form of amelioration within the slave system. Slave solidarity, though not dead, as we shall see, was fractured in many ways, making hopes for freedom generational rather than immediate for many people. The many compromises devised by Spanish slaveowners in the remote mining districts must not be misinterpreted as gifts or concessions but rather seen for what they were, namely entanglements. The basic fact of human ownership of other humans was never negated by any so-called ameliorative measures, whether supposedly benevolent Spanish legal customs, religious holidays, or what have you. In short, the slave in colonial Quito, as in North America, was never a citizen. This is not to deny the obvious fact of African and mixed-heritage agency in forcing the Spanish to constantly rethink and retool strategies of domination, but their bargaining position was never sufficient to negate the dominance of the colonizers. As wily resisters, slaves and free people of color were worthy adversaries, but when push came to shove (i.e., where profits were at stake), power was overwhelmingly found to be in the hands of Spanish elites.

As noted above, this argument against Hispanic leniency, especially in a region where one would expect to find either extreme cruelty or relative mildness, has been necessary due to the still-noticeable influence of Tannenbaum's *Slave and Citizen* thesis. In defense of Tannenbaum, the suggestion of a more benign slavery in Cuba, Brazil, Colombia or elsewhere in the Americas provided a useful foil against Jim Crow in the United States. Tannenbaum's argument was legalistic because North American law, he believed, was the key stumbling block that had perpetuated racism and thus prevented true freedom for African-Americans almost a century after emancipation. To suggest in the 1940s, more as a sociologist than a historian, that other former slave societies in other parts of the hemisphere functioned quite nicely without court-enforced segregation was an inspiring idea. So-called 'racial democracies' like Brazil, Cuba,

⁴⁹⁸ ACC Sig. 4062, f.5v. This miner began working the Puchará mine and another on the Telpi River before purchasing two others and staking a third.

⁴⁹⁹ *Ibid.*, f.8v. (declaration of Manuel Rodríguez, Alguacil Mayor).

⁵⁰⁰ ANHQ Popayán, caja 35 (1710), ACC Sig. 2835.

⁵⁰¹ ACC Sig. 4062, f.17v. (declaration of Juan Luis de la Peña Marquina).

and, apparently, Colombia, were living examples of societies unhindered by institutionalized racial prejudice. This was an overly optimistic view, as it turned out, but it may well have served its purpose as a moral tale in the United States. As history, Tannenbaum's thesis was, like King's, overly dependent on top-down legal sources, and far too accepting of elite Latin American historical viewpoints, such as those put forth early this century by Gilberto Freyre and Fernando Ortíz. Slavery in Latin America was different in some important ways from slavery in British North America--it was perhaps more socially embedded, to use Karl Polanyi's terms--but we must never forget that slavery was nowhere anything but a crime against humanity and was always a hugely stigmatizing social, economic and religious institution.

My intention here is not to offer yet another challenge to the already beleaguered (some would say discredited) Tannenbaum thesis, but rather to shift the argument in a direction similarly inspired by present-day realities. In the post Civil Rights era in the United States, other legal issues regarding equal opportunity for people of color continue to make headlines, but there is no equivalent of Jim Crow to blame for current color prejudice. Why then, do we find that racism, especially toward people--full legal *citizens*--of African descent, has continued to thrive in the minds of white Europeans and mixed 'elites' throughout the Americas? Legal culture, as it turned out, was never the objective guarantor of justice it was made out to be, and it constitutes only one aspect of post-colonial societies. Racism in Latin America, as in the United States and the Caribbean, has a much more varied and complex pedigree. Marxist historians such as Eric Williams (1944) were right to point out the undeniable material base of slavery in the Americas, suggesting that white racism against Africans was not pre-established, but rather a result of economic exigency, an excuse offered up to justify massive labor exploitation and capitalist profit.⁵⁰² Slavery was, however, comprised of still more elements than the economic and legal ones. As Williams himself admitted, 'the inhumanity of slavery', and 'the humanitarianism which destroyed it', were also key features of slave societies throughout the Americas.⁵⁰³ Both types of behavior on the part of white colonizers had a basis in European religious-philosophical beliefs, beliefs that Africans deserved, on the one hand, to be treated as a kind of livestock, and, on the other, to be 'rescued' from captivity and brought into the Christian 'fold'. The deepest, most contradictory psychological origins of modern racism, throughout the Americas, I would argue, lie in this field--the role of religion as both a vehicle of oppression and a vehicle of liberation. The present study is simply too preliminary to delve into these issues at depth, but I would suggest that the comments of Cartagena's Alonso de Sandoval and Quito's Oidor Auncibay hint at the importance of this relatively unstudied feature of colonial slavery. The search for origins of modern crises is always wrought with danger, especially when today's realities might seem absurd tomorrow, but the search for historical self-understanding should not be abandoned just the same.

In the cases of indigenous *encomienda* and *mita* labor ameliorative legislation was diffused only very slowly from Spain into marginal colonial regions such as the Audiencia of Quito. With regard to African slavery, seemingly lenient, pre-existing Spanish law codes were more or less set aside in favor of harsher, local ones, 'black codes' such as those of early Quito which restricted African movement, dress, sexuality, religious expression, commercial activity and so on. In both the African and indigenous legal cases 'medieval' paternalism and proto-capitalist labor coercion were represented, even if these motives clashed with one another--the so-called Spanish struggle for justice would in fact lead to minor slavery reforms in the late 1780s. What was distinctly absent from both types of codes, reforms notwithstanding, however, was the notion that people of color in the Americas should be granted equal opportunity to social advancement. This was the nexus of status and *contractus* in the early modern European world, and in a colonial region of middling importance, such as the Audiencia of Quito, it would lead to the formation of a peculiarly racist society. Perhaps a true-life example from the early eighteenth century could best illustrate these developments.

In August of 1726 an African male was beaten to death outside a small thatch farmhouse near the mines of Chisquío, just west of Popayán. According to witnesses, the slave, named Luis Banegas, had stopped to buy a cheese while on his way to the mines of Micay, in the northern province of Barbacoas. The owner of the house, Josefa de la Rosa, did have cheese to sell, but demanded twice the usual price of one real. Banegas, unhappy with this unjust price, apparently cursed or called the woman a name, and she in turn called for the assistance of a ranch hand, a fellow named Melchor. Melchor exchanged words with the slave before striking him with an iron bar just above the eye, 'bathing him in blood'. Banegas responded to this attack, quickly disarming his assailant and soon getting the better of him in a fistfight. In

⁵⁰² Eric Williams, *Capitalism and Slavery* (London: André Deutsch, 1964 [1944]), 7-9.

⁵⁰³ *Ibid.*, 178.

desperation, the ranchhand called upon Doña Josefa to do something. She intervened in the scuffle, took up the iron bar and struck Banegas in the head repeatedly. The slave soon fell to the ground unconscious, but the woman continued to beat him, stopping only when Melchor yelled, 'Enough already!' (*basta ya*). Worried that this slave, who did not belong to his employer, might die, the ranch hand immediately ran to find an Indian folk doctor who lived nearby, in the village of Chapa. Banegas, still unconscious, was thrown over the back of a mule and taken to the Indian's house. His wounds were cleaned and he was forced broth because he could not eat, but nothing helped. 'Spitting up foam', several witnesses testified, 'he died three days later'.⁵⁰⁴

This brutal murder might not have even been recorded had it not been for the value of Luis Banegas. His owner, an elite widow from Popayán, sued Doña Josefa for 500 pesos, a price which was warranted she said, because 'as a skilled miner, he is worth at least that much'.⁵⁰⁵ The case was thus not even about the crime of murder, but rather the destruction of property. Unconcerned with punishing the killers, the slave's owner sought only compensation for the value of her loss--Banegas had been captain of her mining cuadrilla on the Micay River and would have to be replaced. Doña Josefa's thatch dwellings, along with a few cooking utensils, were embargoed by a local magistrate pending the outcome of an official inquiry. Not to be despoiled of her wealth by such a small event as the killing of a passing slave, Doña Josefa poured out all sort of excuses in her defense. She claimed that she thought she was alone in her house, that she did not know that Melchor, the hand, had been present when Banegas approached. She had demanded two reales for the cheese so that the suspect slave would go on and leave her in peace.

But Doña Josefa did not only claim that she had been afraid, she spelled out her fears in detail. In particular, as she would state in repeated and increasingly shrill testimonies, she feared that this black man would rape her. Grasping at straws, the same woman who had delivered the death blows to this man over nothing more than a two-bit price dispute began to claim that she was in fact a victim--of the black man's lust for white flesh. Banegas, she asserted, was a known menace in the region, a killer, a thief and a rapist. In her desperation to absolve herself of the murder, Doña Josefa even claimed that Banegas had been rabid, citing the witnesses' description of his death as evidence.⁵⁰⁶

Doña Josefa's claims, however outrageous they may seem, must have resonated among white elites in the region and later on in Quito. A local magistrate in Popayán, no doubt influenced by the power of the slave's owner, sentenced Doña Josefa to two years exile (she might have been condemned to live in Pasto had the punishment been enforced) and a fine of 250 pesos. The fine, which appears rather small, was intended to cover the value of the slave. Two circumstances led to this decision, it seems. Firstly, Doña Josefa could not come up with the 500 pesos demanded by the slaveowner--hence the exile. Secondly, it was revealed that Luis Banegas, the slave captain of the Micay gold mines, had been purchased for only 250 pesos by the husband of the Popayán widow. The reason he was sold so cheaply, according to the bill of sale, was that he 'suffers from the vice of running away' (*el vicio de ser cimarrón*), 'which blemish the seller acknowledges'.⁵⁰⁷ Banegas, it was later revealed, had other 'blemishes'. He had in fact harassed a number of Indians and mulattoes in the region who had in one way or another crossed him. While no evidence was presented to make him out a rapist or highwayman, as charged, Banegas acted, in short, as if he had no master other than himself. In taking these day-to-day liberties, he had made few friends.

Further testimony revealed that Luis Banegas was indeed a special kind of slave. His 'vice' of freedom had a history which many white elites in the area understood and feared. He had been captured by a small military expedition sent into the *palenques*, or maroon communities of the upper Patia River. There, in the mountainous jungle country above Santa Maria del Puerto, runaway African miners in the seventeenth century had established a series of pueblos, some, as the term palenque (or 'palisade') suggests, surrounded by stockades. While little is known about these runaway communities, they clearly lasted for most of the colonial period, posing a serious threat to the slave-based mining economy. If the slaves like Banegas had their own idea of an American utopia it was realized, if only partially, in these fugitive communities.

While it took a witness called up by Doña Josefa's defense attorney to reveal Banegas's palenque background, his owner, the Popayán widow, acknowledged that her slave captain had indeed been

⁵⁰⁴ ANHQ Esclavos, caja 2 (26-x-1727), f.8

⁵⁰⁵ Ibid., f.3v.

⁵⁰⁶ Ibid., f.5v.

⁵⁰⁷ Ibid., f.2v.

something of a free spirit. She claimed, however, that in spite of everything he had belonged to her. It was her responsibility, and no one else's, to punish his misdeeds. The *alcalde de la hermandad* agreed with the owner and chose to punish Doña Josefa with exile and a fine. Unhappy with this decision, Doña Josefa appealed to the Audiencia of Quito, and the sentence was quickly overturned. There would be no fine and no exile--the judges of the highest court in the land, influenced no doubt by their own racist fears, ruled the death and 'destruction' of Luis Banegas an act of self-defense.

What this case tells us about early modern Spanish American slavery, in particular mine slavery around Popayán, is that no amount of individual or collective agency on the part of slaves, outside of running away and establishing palenques, was sufficient to truly upset the system. Yet this was not, as Colmenares would have argued, a slave living in a rigid, colonialist economy. Here was a remarkably free slave, walking alone over long distances, carrying cash and dealing with all sort of free locals, Spanish, Indian and otherwise. Given these surprising details of everyday life, we might presume that slavery was not so harsh in this particular time and place--we see no slavecatchers with bloodhounds here, no shackles and whips. But when this near-free agent, as we fancy him, a capitán de cuadrilla, attempted to challenge a white person's word, what happened but the worst? He was crushed immediately, he died unavenged and unconfessed, and the true, violent nature of the system, however pre- or proto-capitalist it may have been, was revealed. In the eyes of the powerful, a factor of production, not a human being, and definitely not a citizen, had been killed. The loss was not treated in the courts as a brutal crime but rather as wanton destruction of property and later self defense. The only issues to be seriously discussed, it seems, were the cash value of the worker and the compensation of the owner.⁵⁰⁸

In Quito, as elsewhere in the Americas, slavery was envisioned as a rational, if not quite modern economic system. Auncibay's fanciful sixteenth-century slave utopia, for all its rhetoric about improving the lot of Africans through religion and European culture (except literacy, of course), was still no more than a dressed up business venture. The king was told that he would reap at least five times what he invested, the kind of profits most venture capitalists could only dream of, then as now. Saving the souls of black folk was window dressing, a fringe benefit--it was most definitely not the point of the proposal. Auncibay's hypocritical conflation of freedom and slavery is not absurd; rather it highlights a central paradox (I hesitate to call it a struggle) in colonial Spanish thought. The problem for so many historians of slavery has centered on an unwillingness to believe that something so morally corrupt as slavery could have been at the same time so rational. Auncibay and his contemporaries saw no contradiction. For practical examples, one need only compare the situations of African slaves like Luis Banegas with the Indian mitayos of Zaruma mentioned above to see that structured inequality, whether in the form of chattel slavery or draft slavery, was the means by which Spanish elites, creole or otherwise, made a killing in the gold business. Gold mining, perhaps more than any other venture-capitalist enterprise in the audiencia, was a type of endeavor obsessed with the bottom line. If no gold was recovered, losses were total. With only low technology available and overland transport a perpetual worry, cheap labor was the linchpin of such ventures. Hence it should come as no surprise to historians that it was in this activity, the heart and soul of mercantilism, as it were, that the most hideous human rights abuses were to be found. As Las Casas was quick to point out, where precious metals could be had, exigency almost always overrode morality.

Still, whereas the Spanish state from very early on made some effort to impede the elite settlers' exploitation of Indian 'human resources' in mining, the same could not be said about African slaves. Yes, legal mechanisms existed which seemed to ameliorate the situation of slaves to some degree. In practice, however, these checks proved a greater source of dashed hopes than real help. Manumission was very rare in colonial Quito, and even if it was practiced with some frequency in frontier mining zones, freedom was not complete. Freedpersons living in mining areas were not treated as equals, but rather actively discriminated against, either as wage-workers or as scavengers (*mazamorreros* and *playadores*). A free black gold miner in late eighteenth-century Quito, for example, was run off his claim by an elite usurper from Guayaquil. The audiencia heard the freedman's appeal for justice, but chose to back the claim-

⁵⁰⁸ An unresolved case regarding the death of a slave log-cutter (*hachero*) near Guayaquil in 1704 is also noteworthy. Here a master sued a subcontractor who had rented a slave, Francisco Mina, to cut wood for a shipbuilding operation. While floating logs down river near the town of Baba, Francisco fell from his raft and was drowned in a swift current. The master argued that he should be compensated by the renter for Francisco's full value since he had been exposed to unnecessary danger (the rainy season was well underway when the drowning occurred, and all other *hacheros* had already been evacuated, ANHQ Esclavos, caja 1, [1704]). No criminal charges were filed.

jumper.⁵⁰⁹ In this instance, justice served class interests and hence reinforced the color line; the black man may have been enterprising, but the white man had means. The free person of color, like the slave, was never a truly free agent in colonial society. Mine discovery and development was by law open to people of any color or status, but as we can see here, in reality any such economic action on the part of such persons was immediately sanctioned. A kind of color prejudice, if not codified racism, clearly existed by the eighteenth century. This assertion is further evidenced by a 1740 petition for liberty filed on behalf of a black man in Guayaquil. His fate already decided by the courts, Alejo Flores was described as 'black, the color of a slave' ('negro de color esclavo').⁵¹⁰

Much of the Kingdom of Quito was tenuously held throughout colonial times, and thus forced labor regimes introduced to the mining sector were established over the long term only through compromise with workers. As we have seen, these arrangements, while still disadvantageous to Africans and Indians, were necessary in order to continue and even expand precious metals production in a highly isolated and thinly populated pre-capitalist, or more accurately, 'early modern capitalist' environment. Many of the apparent compromises seen in the case of Quito, such as Indian and mulatto wage labor, were not historical leaps forward, but rather temporary local solutions to colonial realities. In the case of Barbacoas, as elsewhere in the Gobernación of Popayán, large-scale African gang slavery--not wage labor--came to be the preferred labor form as the eighteenth century progressed. Slave prices declined (as supply was expanded) even as Indian labor was restricted or otherwise affected (namely by demographic collapse), allowing for the formation of a slave-based gold mining society in the northern reaches of the audiencia. By this time, however, Quito's power in Popayán had largely been eclipsed by the creation of the Viceroyalty of New Granada (1739), making its importance as a center for gold collection less obvious. Increasingly marginalized, Quito's merchants and administrators sought to hang on to the southernmost of Popayán's gold districts by maintaining commercial ties and hearing cases from the region's residents, who often found themselves at odds with Real Hacienda officials from Santafé de Bogotá. African slavery in Barbacoas was so entrenched by the late eighteenth century, as Minaudier has shown, that elites were by this time more concerned with putting down slave rebellions than with warding off outside officials.⁵¹¹ Slaves and free people of color even acted together in the anti-Bourbon reform uprisings of 1781 and 1791. By contrast, only in a few areas of the Province of Esmeraldas, directly to the south, was mining based on slave labor established before the end of the colonial period, most often with poor results.⁵¹² After centuries of experimentation and forced adaptation, gold mining, especially in the Cauca Valley and wet Pacific littoral, came to be thought of as the natural occupation of black people--indeed many found themselves unwelcome in other sectors of the economy after slavery was abolished in 1854. For many of their descendants today, most of whom struggle against enormous racial barriers elsewhere in Colombia and Ecuador, life still consists of mining the margins.

⁵⁰⁹ ANHQ Minas, caja 4 (24-viii-1791).

⁵¹⁰ ANHQ Fondo Especial, doc. 1226, p.170 (1740).

⁵¹¹ Jean-Pierre Minaudier, "Une région minière de la colonie à l'indépendance: Barbacoas 1750-1830 (économie, société, vie politique locale)", *Bull. Inst. Fr. Et. And.* XVII, no.2 (1988): 81-104.

⁵¹² In one case dating to 1826, in the midst of the wars of independence, mine owners at the site of Playa de Oro complained that slave insubordination had completely killed productivity (ANHQ Minas, caja 5 [29-xi-1826]). The slave gang was said to have been in rebellion for the preceding sixteen years ('han estado sublevados por el expasio de 16 años'). An outside officer with experience handling mine slaves in Barbacoas was hired to put down the rebellion but was driven out after four days of negotiations. The owners were powerless in this situation, claiming that 'la mina de playa de oro por la insubordinacion de los Esclabos no haya producida la renta que puede producir'.

Chapter Six Mining and Trade

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As has been seen, the Spanish did not introduce gold mining or smelting to the northern Andes. Indigenous peoples had mined, alloyed and crafted complex ritual and ornamental objects from gold, silver, copper, and even platinum prior to the arrival of Europeans. What the Europeans did introduce to the Andes, and to the Americas in general, it seems, was a new use for gold, reconfiguring it as a base unit of exchange value, or money. Forms of currency, such as cacao beans, had existed among the *pochteca*, or trader caste of Mesoamerica, but no equivalent form seems to have arisen among the Inca or their predecessors in the Andes. Gold and other precious metals, along with Spondylus shell beads, coca leaves, and subsistence items were traded, but none served as currency in the modern sense. Exchanges in the pre-Columbian Andes, as Murra, Godelier, Salomon, and others have shown, seem to have been carried out solely on a barter basis, with values determined by relative scarcity or abundance of particular items, or immediacy of need.⁵¹³ Salomon has noted that long-distance trade in gold and silver beads was common in the Quito region prior to the arrival of the Spanish, and that a particular kin-group, called *mindalaes*, was largely responsible for this activity. The *mindalaes* (some of them caciques, as noted in chapter three) paid substantial tributes in gold until at least the 1570s. They probably also continued their long-distance trade, unique even in the Inca context, well into the colonial period, offering various wares at indigenous market squares or *tiangueces* (sing. *tianguetz*, a Nahuatl word introduced by the Spanish).

Only with the arrival of the Spanish in the 1530s did a revolution in the valuation of specie occur in the region which came to be known as the Audiencia of Quito. Conquered indigenous groups were unprepared for the Spanish appetite for gold and silver, and they suffered dearly for their inability to lay hands on ever larger quantities of ransom in the first decades after conquest. As has been seen above, it appears that many caciques established independent networks by which they could acquire gold for tribute payment from the 1540s to at least the 1570s, and their payments of quintos suggest that this was an important early source of liquid capital for Quito's first encomenderos.

The north Andean region, including both highlands and lowlands, was, however, rich in many other trade goods besides gold. Other indigenous tribute items consisted of native cotton and alpaca cloth, rope fiber (*pita*, or *cabuya*), vegetable wax, domestic fowls, maize, and other foodstuffs. Trade in native goods continued even to post-colonial times, but the Spanish introduced many items which soon overwhelmed indigenous produce. As Melville has shown in the case of Mesoamerica, perhaps the most revolutionary change in land-use and diet patterns in the fragile Andean highlands came with the massive introduction of large Old World livestock in the first decades after Spanish conquest.⁵¹⁴ In the Audiencia of Quito, cattle and sheep soon edged out the indigenous herds of llama and alpaca, and European animal products such as salt beef, cheese, and Merino wool came to fill expanding urban subsistence and clothing needs. Old World domestic animals such as swine and chickens revolutionized indigenous diets as well, but did not completely displace llamas, Muscovy ducks, and cuy, or guinea pigs, as sources of animal protein. Fields once planted with quinoa and other nutritious native grains were replanted with wheat and barley. Among the few indigenous foods to be taken abroad was the potato; these native Andean tubers, of which only a few varieties continue to be cultivated today, revolutionized European diets at least as much as the introduction of chickens and pigs revolutionized indigenous ones.

Local trade in subsistence items was supplemented by semi-exotic tropical goods, and as in pre-Columbian times various ecological niches were exploited to the fullest possible extent. Hot, low-lying valleys, such as the Catamayo, Chota, and Cauca, which once produced cotton and coca, were transformed during the colonial period to produce another imported commodity, sugar. Cane was grown and processed first by native Americans and later by African slaves in these regions, and crude sugar cakes (*panela*), along with various by-products, such as *guarapo* (sugar beer), aguardiente (rum), and molasses, were consumed locally. Due largely to transport difficulties, the sugar industry in Quito and Popayán, though

⁵¹³ John V. Murra, "The Economic Organization of the Inca State," Ph.D dissertation, University of Chicago, 1956; Maurice Godelier, *Perspectives in Marxist Anthropology*, Robert Brain trans. (Cambridge: Cambridge University Press, 1977); Frank Salomon, *Native Lords of Quito in the Age of the Incas*, 102-06. On the issue of pre-Hispanic Andean currencies, the only possible exception seems to have been the so-called hatchet money of coastal Ecuador and Peru.

⁵¹⁴ Elinor Melville, *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico* (Cambridge: Cambridge University Press, 1994).

substantial, never achieved export enclave status in colonial times. Most of the prime sugar country lacked easy access to the Pacific coast, so even those regions which developed fairly large plantations did so only for the internal urban and mining markets. The vein gold zones in particular, such as Zamora and Zaruma in the south and Almaguer and Chisquío in the north, tended to create new markets for sugar products and subsistence goods of various types. Since nearly all available labor was engaged in gold extraction -- true also in the placer districts -- merchants quickly moved in to exploit new opportunities created by mining bonanzas, exchanging maize, coca leaves, aguardiente, tobacco, clothing, iron, and a variety of sumptuary items for raw bullion.

Of particular importance in terms of the trade in subsistence goods was the beef ration granted to mine laborers, both indigenous and African, by crown officials. Beef and beef products were supplied to the mines by a number of highland pasture zones, particularly the Cauca depression north of Cali, the upper Magdalena valley, near Neiva, and the several inter-Andean valleys between Pasto and Loja.⁵¹⁵ Interestingly, however, as West has shown for similar gold zones in northern New Granada, the relationship between stock raising and mining in the colonial Kingdom of Quito never achieved the intimacy and interdependency which marked these two industries in the silver districts of north-central Mexico.⁵¹⁶ This was probably due to the twin factors of competing urban market centers, such as Quito, and the generally small nature of the mining camps by comparison with genuine cities like Guanajuato or Zacatecas. Cattle were driven to mining towns and often pastured near ephemeral camps, but these market outlets could only be considered large when considered in aggregate and over the long term. By contrast, even in the sixteenth century large herds of five hundred to several thousand head of cattle were seasonally driven to Quito from as far away as Buga, north of Cali. Mining towns were nevertheless attractive, even captive markets for cattle drovers and other traders, and they offered a special commodity in exchange.

Gold and Money in Colonial Quito

In the colonial Audiencia of Quito, as in other regions of Spanish America, money was paradoxically in short supply. In the first place American gold and silver, metals highly valued in Europe, were relatively abundant, at least for a time, but remoteness from sources of traditional Old World commodities such as iron, wine, olive oil, firearms, and fine textiles led to a substantial distortion of prices. In regions such as the Audiencia of Quito, gold was initially plentiful, but there was no mint to translate it into a readily acceptable coin -- a universal measure and means of exchange, to follow Marx's definition. Hence Spaniards, early on, and to a lesser extent indigenous peoples, carried out most of their commodity exchanges either in kind, by barter (*rescate*), or by means of a given quantity of gold bullion. This bullion was normally in the powder form, having been extracted from veins or placer mines, but could also be traded as pellets or ingots. But trading, say cattle, for raw gold was still no simple matter. The purity of the gold, along with its weight, determined its absolute value. Its scarcity or abundance as a commodity in comparison to cattle, in this case, determined its relative value. For this reason, many Spaniards preferred to carry on their exchanges in silver coin whenever possible, as the uncertainties of purity and relative scarcity were difficult for the non-specialist (i.e. persons other than metallurgists and travelling merchants) to determine. Hence silver coin, being both a simpler measure and means (bags of gold dust were liable to leak, no doubt) of exchange value, came to be preferred over gold, and some traders even paid a substantial premium for coin, above the relative value of gold to silver (the so-called "bi-metallic ratio").⁵¹⁷ The scarcity of silver coin in Quito, and a later scarcity also of crude gold, further complicated the circulation of liquid capital throughout colonial times. Some have even argued that the crown's backward monetary policies led directly to the region's economic stagnation and decline in the seventeenth and eighteenth centuries.⁵¹⁸

⁵¹⁵ See, for example, ANHQ Popayán, caja 2 (1656). This document contains a letter of credit for 1,100 patacones for 500 *novillos* (young cattle) to be driven from Pasto to Quito. In this case a Pasto alguacil mayor borrowed from a Quito vecino, apparently a wholesale merchant.

⁵¹⁶ West, *Colonial Placer Mining in Colombia*, 113.

⁵¹⁷ For a detailed treatment of the shift in gold values against silver in the early colonial period, see Adam Szászdi, "The Depreciation of Silver and Monetary Exchange in the Viceroyalty of Lima, 1550-1610," *Journal of European Economic History* (Rome) 4 (1975): 429-58.

⁵¹⁸ See, for example, Hugo Arias, "La economía de la real Audiencia de Quito y la crisis del Siglo XVIII," in ed. Enrique Ayala Mora, *Nueva Historia del Ecuador*, mult. vols. (Quito: Corporación Editora Nacional,

Although probably one of several factors rather than a root cause of this larger problem, it is necessary here to lay out some of the specifics of money as it related to mining in the Audiencia of Quito. As noted above, gold was initially plentiful, but its quality, or purity, varied widely. The crown attempted to solve this problem, as has been seen, by establishing *casas de fundición*, or smelting houses, near many mining zones. Ideally, these smeltries were staffed by knowledgeable metallurgists, usually gold- and silversmiths, and were to use standardized weights and measures in counting gold brought in by miners and others, most notably merchants. As royal officials, these individuals were expected to keep an accurate log of all assays and quantities, and to subtract the royal tax on bullion, whatever it might have been for that time or region. The gold that left the *casa de fundición* was normally reduced to bars of high-karat gold, ideally between 19 & 1/2k (*oro corriente*) and 22 & 1/2k (*buen oro*). As a multitude of notarial contracts from late sixteenth- and early seventeenth-century Quito testify, pesos of *buen oro* were the preferred method of settling accounts among wealthy merchants. Other currencies, such as silver bullion, known as *plata ensayada* (assayed silver), circulated during the gold boom, but in general the peso de *buen oro*, smelted into bars and disks but not minted, was the most common instrument used in large exchanges prior to the mid-seventeenth century.⁵¹⁹

Long-distance Trade

Most wholesale merchants supplying the Audiencia of Quito and its gold mines with luxury goods were members of the so-called *Carrera de Indias*, or Indies Route guild, and were based in Seville, with factors scattered among the ports of Panamá, Cartagena, Guayaquil, and Lima, and also in the highland cities of Quito, Popayán, and Bogotá. Trade in the early colonial period was highly restricted, and all goods were required to pass through various customs houses and were subject to a multitude of taxes. These restrictions, coupled with inordinately high transport costs (*flete, acarreo*), meant that a bottle of *riaja* in Quito could sell for well over ten times its value in Spain. Profits were high, but so were risks. The highlands of Quito and Popayán were among the most notorious in all Spanish America for their travel difficulties, especially in the rainy season (which varied depending on latitude and proximity to neighboring lowlands). Trails which traversed certain mountain passes and those which dropped into the permanently wet Amazon and northern Pacific littoral were so rough that only human carriage was possible.

Along the *Camino Real* which linked the highland cities, part of it based on the pre-Columbian Inca Trail, mule traffic was common within a generation of conquest, although long-distance indigenous porters could still be found along its entire length in the eighteenth century. Unlike central Mexico and the River Plate provinces, only in very limited, local cases, such as the immediate hinterland of the cities of Quito or Popayán, was oxcart transport at all possible. On the lower Cauca and in the lowlands around Guayaquil large dugout canoes, manned by several African or indigenous polers, were the most common form of freight transport. The entire Quito-New Granada region, then as now, was marked by very high mountains, stunningly deep gorges, swift and treacherous rivers, often traversed by way of precarious braided-cord bridges and trails that could instantly be transformed from choking dust to gum-like mire.

As John Super has demonstrated, Quito's early merchant elite seems to have taken such geographical obstacles in stride, reaping profits of over 100% in the late sixteenth century.⁵²⁰ Although Super did not link these merchants to the substantial gold mining industry which flourished all over the audiencia during this time, he noted that most sales were conducted in pesos of *buen oro*. In fact, gold was the only item of significant exchange value found in the Audiencia of Quito at this time. Other commodities, which were traded regionally, included cheap cloth from highland obrajes (mostly baize, sackcloth, blankets, and the like), but also hats, cotton garments, sugar, and hardtack (*biscocho*). This last

1983), 4: 195-96. The shortage of coin in the late seventeenth and early eighteenth centuries was first emphasized by González Suárez (1931), whom Arias quotes at length.

⁵¹⁹ The clearest demonstration of this tendency is found in Tamara Estupiñán Viteri, "El mercado interno en la Real Audiencia de Quito, Siglos XVI y XVII," Master's thesis. FLACSO, 1996, 93. Large merchant exchanges noted in Quito's notarial records are shown to have shifted to silver from gold by the 1620s. Direct exchanges made with mined gold continued into the late eighteenth century, as evidenced by testimony from Zaruma (letter dated 22-vi-1789, in ANHQ Minas, caja 3 [22-iii-1783]).

⁵²⁰ John C. Super, "Partnership and Profit in the Early Andean Trade: The Experiences of Quito Merchants, 1580-1610," *Journal of Latin American Studies* 11-12 (Nov. 1979): 265-81.

item, as West has noted for the Antioquia region, was essential for Spanish subsistence in lowland mining zones, where wheat bread could neither be produced nor preserved.⁵²¹ Biscocho was also traded to the Pacific coast where it supplied soldiers and sailors engaged in maritime commerce and defense. Imports consisted largely of high-value luxury items aimed at wealthy Spanish consumers, such as fine fabrics, wine, spices, books, and so on, but also included expensive mining necessities, such as Vizcayan iron and steel, usually in raw ingots or bars, and African slaves.

Again, Super, unaware of the importance of the mining industry in early Quito, mistakenly attributed the success of Quito's merchant elite to the regional export of cheap textiles. The volume of gold flowing into Quito in the sixteenth century, and thence to Guayaquil and Spain, was simply too high to be ignored. This is not to suggest that trade in cheap local textiles, especially to the southern silver mines of Potosí, was not significant. Super points out that a *vara* (0.83 m) of second-rate Quito cloth, worth about 800 maravedis (just under two gold pesos) at the source, could sell in Arica, the Pacific gateway to Alto Perú, for more than twice as much.⁵²² A return of 100%, even before the cloth reached Potosí's retail market, appears highly attractive by modern standards, but after transport costs, especially those incurred between Quito and Guayaquil, this seemingly comfortable margin could easily have been reduced to zero. For the textile trade to have equaled the gold trade in value between 1580 and 1610 some 100,000 to 200,000 varas of *paños de Quito* would have had to have been produced and sold each year. Based on Super's own volume figures, and Tyrer's for the seventeenth and eighteenth centuries, this volume of textile output seems highly unlikely.

Perhaps more important than Potosí, as suggested above, was the hugely scattered market created by the gold mines to the north and more immediate south of Quito. Quito cloth was traded as far away as Antioquia, and later to the Chocó, almost exclusively in exchange for gold. The best evidence supporting the hypothesis that Popayán (along with other parts of New Granada) was at least as important as Potosí as a regional market are the fundición records for Quito. These books show that in the period studied by Super (1580-1610) up to 90% of all gold registered and taxed in Quito had originated in the Gobernación of Popayán. Quito produced few items besides cheap textiles that could be exchanged for this gold. It is also quite possible that as the seventeenth century progressed, and gold mining rebounded somewhat in the northern regions, this interdependency re-emerged as a central feature of the north Andean economy. As demonstrated above, the expansion of slave gangs in the various gold frontiers of Popayán led to the creation of new, dependent markets.⁵²³ Further research is needed to test this thesis, but it seems likely that cheap textiles were unloaded on indebted mine owners and their slaves, and more expensive Quito artisanry, such as fine sculptures and paintings, was sold to Popayán elites.

Merchants have always had a special relationship with miners in capitalist economies, even in ones as primitive as that of early colonial Quito. In general, itinerant merchants supplied miners with a wide variety of necessities and luxury items in exchange for raw gold. Since miners needed goods and money in order to begin producing, merchants often advanced necessities on credit, offsetting the risks of failure by charging high rates of interest. When miners failed to produce gold or to repay their debts for whatever reason, merchants engaged legal counsel and used the court system to seek compensation. Because of their strong connections to powerful persons in highland cities, merchants usually succeeded in enforcing the terms of these contract arrangements, often to the dismay of dispossessed mine owners.

In late sixteenth-century Quito, the oidor Auncibay was said to have disparaged the city's elites for acting "more [as] merchants than gentlemen."⁵²⁴ This statement reveals to some extent the sort of tension which colonial commercial opportunities created vis à vis traditional Iberian notions of wealth and status.

⁵²¹ West, *Colonial Placer Mining in Colombia*, 117.

⁵²² Super, "Partnership and Profit," 275. Hides were similarly marked up, from c. 500 maravedis in Quito to c. 1,000 in Arica.

⁵²³ Quito cloth was quite common in Popayán, as evidenced, for example, by an elite will from mid-seventeenth-century Cali (ACC Sig. 883, f.2, Rodrigo Arias). In 1651 Arias granted posthumous freedom to Juliana "morena," giving her "un faldellín (skirt) de paño de Quito azul." Arias also left swatches of less esteemed Pasto woolen and linen fabrics to other slaves. Blue Quito-cloth was dyed with indigo imported from the west coast of New Spain (see Juan and Ulloa, *A Voyage to South America*, 153).

⁵²⁴ Ortiz de la Tabla, *Los encomenderos de Quito*, 135. Remarking on a recent choice for Governor of the still-unconquered Esmeraldas Province, Auncibay claimed, "Porque si los caballeros soldados pierden los privilegios de la milicia por mercader porque los distraen y enagenan de lo que deben quanto menos vendrá a ser caballero gobernador quien toda su vida es mercader."

Associated as it was with so-called New Christians and other persons of dubious pedigree, commerce was in some ways seen as an ignoble occupation in the Old Country. In the colonies, however, opportunities for gain by way of commerce were too attractive (and essential to survival) to uphold such social stigmas. Ideally, if not in fact, the early elites of Quito, Cuenca, Loja, Pasto, and Popayán sought to emphasize their wealth in land and native retainers and wash their hands of commerce within a generation or two of arrival. The somewhat ambiguous position of merchants was further demonstrated by the fact that few factors of the Carrera de Indias in these cities achieved vecino status unless they married locally and put down roots.⁵²⁵ As noted in many parts of Spanish America, including such famous mining towns as Guanajuato (Mexico), tensions between creole elites and peninsular merchants would erupt into violent confrontation by the late eighteenth century.

As noted above, price inflation in mining zones was chronic due to distance from distribution centers, difficulty of transport, and other factors of relative advantage (such as abundance of gold and shortage of labor). Still, mine and mill owners and other local elites sought to control prices through legislation whenever possible. The cabildos of Quito and Cuenca, for instance, passed price fixing legislation throughout the sixteenth and seventeenth centuries. In the late 1550s Cuenca's town council set official rates for bread, biscuits, and lard, and in the early 1570s Quito's cabildo set rates for iron and steel.⁵²⁶

Iron (*hierro*) and steel (*acero*) were among the most essential commodities consumed in the mining districts, and as such were apparently subject to monopoly and speculation attempts in the 1570s. Merchant attempts to corner the early industrial metals market prompted the cabildo of Quito to set "just and moderate prices," twenty silver pesos for a quintal (c. 48 kg) of iron and one-half peso per pound of steel. In order to further restrict speculation the cabildo ordered that neither product be taken out of the city without license. These measures appear to have been effective for a time, but in the early 1600s the mine and mill owners of Zaruma complained of excessive iron prices and called upon the king to ensure a yearly quota of two hundred quintals of sheet iron (*planchas*) and pigs (*vergajones*, or cylindrical ingots) at some unstated but presumably lower markup.⁵²⁷ This was clearly not a free-, or self-regulating-market environment, especially when customs duties and other taxes were figured into the mix. Still, if the merchants' predatory instincts were somewhat moderated in the central highlands by official price-fixing legislation, such concessions were less evident in the distant mining camps, where merchant interests operated more freely.

In the lowland mines of the Zamora district prices for wheat, biscuit and beef could be double or triple their value in nearby Loja. Similar price inflation was said to be common in Zaruma and Yaguarsongo, a source of bitter complaints by mine owners, who cut corners in any way possible to maintain their cuadrillas. Indigenous food sources -- riverbank maize plantings in the case of Zamora and plantain groves near Zaruma -- were constantly exploited, and game animals were hunted extensively. Still, these alternative food sources were exhaustible, and dependency on the merchants only grew. Merchants claimed that high prices simply reflected high transport costs, but miners remained suspicious, especially during periods of low productivity, when they were most vulnerable to debt.⁵²⁸

In some cases merchants sought to enter into mining, but they were not always welcomed by established locals. As has been noted, in 1562 a merchant petitioning for a grant of two hundred indigenous mitayos to work the highland placers of Santa Bárbara was rebuffed by Cuenca's cabildo members. The newcomer, they claimed, "does not know mines...because he better understands

⁵²⁵ For a close examination of the shifting fortunes of Popayán's itinerant and permanent merchant communities in the seventeenth century, see Marzahl, *Town in the Empire*, 28-34.

⁵²⁶ *Libro I de Cabildos de Cuenca*, 146-47 (9-xii-1558), and *Libro VI de Cabildos de Quito*, 152 (19-iv-1574). Bread prices were again lowered in Cuenca in the 1560s, though this probably affected small bakers more than merchants. Only biscocho, which was also set at 1 peso per arroba in 1562, would probably have been traded to the mines (*Libro I de Cabildo de Cuenca*, 323 [13-x-1561], 397 [22-ix-1562]).

⁵²⁷ Anda Aguirre, *Zaruma en la Colonia*, 46 (the date of the document is mistakenly given as 10 June 1924; I have guessed that it was 1624).

⁵²⁸ Juan de Salinas claimed that prices of up to 5 pesos for a fanega of wheat in Zamora were due to freight costs ("y por ser caros los acarreos, lo es en el precio," *RHGQ* 1: 158). Quito's Oidor Auncibay claimed in 1592 that Zaruma remained dependent on Cuenca for both maize and native clothing (*mantas*), both of which fetched inordinately high prices (*RHGQ* 1: 534).

merchandise (*mercancías*) which is what he has traded (*tratado*).”⁵²⁹ As will be seen below in the case of Barbacoas Province, merchants were often wise to avoid entanglement in actual gold production, as their position of relative power as purveyors of necessary goods allowed for a more independent and flexible livelihood. Ideally, mine owners and their workers would bear the risks and uncertainties of gold production while highland agricultural producers bore similar risks in grain farming and cattle ranching. The position of the merchant, as perfect middleman, was ideal in that he only bore the risk of losing goods in transit. Liquid capital was certainly risked as credit to both agriculturalists and miners, but legal protection and high profit margins seem to have cushioned losses due to foreclosure or bankruptcy on the part of borrowers. Within the merchant sector, risk was distributed by the wholesalers based in Cartagena (*mercaderes de la carrera*) to factors in the highland cities and then onto itinerant peddlers selling various items on consignment in the mining camps.

As Colmenares and others have pointed out, the shifting marginality and rapid boom-and-bust nature of gold mining in the northern Andes was not conducive to the formation of macro-regional economic articulation of the sort found in northern Mexico and around Potosí by the turn of the seventeenth century.⁵³⁰ Still, long-distance trade managed to break the relative isolation of cities such as Popayán, Pasto, Quito, Cuenca, and Loja, providing especially the established creole elites with the accoutrements of gentle living after the peninsular European fashion. Luxury items from Europe and East Asia were eventually complemented by Peruvian and Chilean wines, olives, and preserved fruits. Local production of peninsular favorites such as ham, cheese, and wheat bread also allowed for an elite colonial cuisine at least reminiscent of the Peninsula. Slaves, another high value “commodity” traded by itinerant merchants, were also seen as a necessary addition to any elite extended household, especially as domestic servants or squires. As Colmenares has pointed out for the Popayán region, the trade in African slaves, though risky, yielded more profits than any other imported *mercancías*, even when prices began to fall in the eighteenth century. In a region where wealth derived from labor more directly than from land or even access to gold-bearing sands, nothing could match the value of an investment in permanent human chattels.

Like most merchandise offered by itinerant traders in early modern Quito, slaves were often purchased with gold dust. This was especially true during the boom years of circa 1550-1610, but trade in raw gold continued into the eighteenth century in regions close to mining frontiers, such as Cali and Pasto. In a region chronically short of silver coin but relatively flush with mined gold, transactions of all kinds could be carried on with oro en polvo, usually standardized for accounting purposes as 19 & 1/2k (for Quito trade), 20k (for Popayán-area trade) and 22 & 1/2k (the official crown rate). In Cartago in 1597, for example, a crown official purchased 230 head of cattle and five yoke of oxen for 500 pesos of 20-karat gold.⁵³¹ Bids for public office, *medias annatas* (official dues), taxes and salaries could also be paid in gold, though legally it was supposed to have first been smelted, quanted, and stamped. Audiencia and other public officials even received substantial salaries in gold until the mid-seventeenth century, a source of complaint among merchants in Spain.⁵³² In the late seventeenth century, though technically illegal by this time, land deals around Pasto were often settled, according to various testimonies, in “gold dust of the kind that circulates in Barbacoas.”⁵³³ This was not universally true, however, as evidenced by a 1664 sale of livestock property in the upper Patia valley, itself a gold-producing region. In this case a large tract of pasture was sold, including cattle, mules, horses, and slave ranch hands in “*reales de a ocho y de a cuatro en moneda de columnas*” (“four- and eight-real silver coins”).⁵³⁴

Native Andeans could occasionally accumulate enough gold to make purchases of their own, as in the case of the caciques of El Pueblo del Rey, near Popayán, who bought a tract of land in 1643 with gold taken from the mines of Chisquíó.⁵³⁵ Much more often, however, Spanish elites, whether mine owners, landholders or merchants, sought to dispossess indigenous persons of cash income of any kind. In

⁵²⁹ *Libro I de Cabildos de Cuenca*, 364-65 (10-vi-1562).

⁵³⁰ Germán Colmenares, “La formación de la economía colonial (1500-1740),” 45.

⁵³¹ ACC Sig. 765 (notarías, 21-xii-1597, cattle from El Hato de la Hoya).

⁵³² See, for example, the list of salaries from 1623 given by Dr. Morga in Ponce Leiva, *RHQQ* 2: 115-125. Between the 1570s and 1620s oidores received 2,000-3,000 gold pesos per year, and the president 4,000 to 6,000. An official doorman, or *portero*, by contrast, received only 178 pesos of buen oro per year.

⁵³³ ANHQ Popayán, caja 3 (1663). Lands for potato and barley culture, along with sheep pasturage, were sold among Pasto elites for amounts up to 4,500 pesos in gold dust.

⁵³⁴ ANHQ Popayán, caja 3 (8-v-1664).

⁵³⁵ ACC Sig. 1608 (5-vi-1643).

Barbacoas, as noted already, a local kind of ad hoc repartimiento de mercancías operated effectively by at least the 1660s. The 1668 mining ordinances set prices for various local and highland produce with the aim of de-monetarizing indigenous tributary and wage exchanges. Unlike the cases of early Cuenca and Quito, the prices laid out here by royal officials were not intended to protect consumers, native or otherwise, but rather to benefit merchants and highland producers. Prices for local produce, listed on the left below, were artificially tied to prices for highland goods, listed on the right.

Table 10. OFFICIAL PRICE LIST FOR THE BARBACOAS MINE DISTRICT, 1668

Prices for Barbacoas Tribute Items

1 arroba salt fish: 1.5 pesos buen oro (bAu)
 1 fanega maize: 2 pesos bAu
 4 racimos (bunches) plátanos: 1 tomín (1/8 peso)
 12 piñas (pineapples): 1 tomín bAu
 8 papayas: 1 tomín bAu
 1 almud yuca (4.6l manioc root): ½ tomín bAu
 1 arroba smoked fish: 1 peso bAu
 1 gallina (hen, possibly native): 1 tomín bAu
 1 pollo (chicken): 1 tomín bAu
 1 batea de lavar oro (wooden gold pan): 3 ts.
 1 canoa de lavar ropa (wooden wash basin): 4 ts.
 1 sabalo (shad fish): 1 tomín bAu

Prices for Highland/Hacienda Produce

1 vara *tocuyo* (coarse shirting): 1/2 peso bAu
 1 *camiseta* (plain undershirt): 1 peso bAu
 1 *murupacha grande* (blanket?): 1 peso bAu
 1 *murupacha pequeña*: 1/2 peso bAu
 1 *lloglla chacata* (wrap): 2 pesos bAu
 1 *pastusa* (Pasto baize): 1 peso bAu
 1 *manta blanca de 3 hilos de Pasto*: 2 pesos bAu
 1 *queso* (cheese): 3 tomines bAu
 1 *puerco* (swine): 3 pesos bAu
 1 arroba salt beef: 2 pesos bAu

*source ANHQ Popayán, caja 233

These amounts, given for the regional capital of Santa María del Puerto (raised by one tomín each for Santa Bárbara de la Isla del Gallo, further downriver), were said to be “going prices” (*precios corrientes*) for all tributary goods. It is much more likely that they were artificially set at rates disadvantageous to forced indigenous buyers and sellers.

The exact function of this highland-lowland exchange arrangement remains unclear, but those goods yielded by Barbacoas natives as tribute payment (in addition to gold mined) might be compensated with highland produce brought to the mines by merchants. These goods, which consisted of highland Indian produce from haciendas and obrajes, not needed by the lowland Indians, were repartitioned in place of crown-mandated cash wages. By this system, as has been noted, an indigenous miner, whose wages were officially listed as twelve gold pesos per year (of 312 work days, the so called *año de rayas*), could expect to receive a half-dozen unwanted wool blankets instead.⁵³⁶ Local tributes in kind would also be purchased at discount in order to suppress free indigenous participation in the market and to exploit native subsistence labor to the fullest. The most stunning aspect of this seventeenth-century system of equivalences, however, was the neat ecological symmetry it represented. Highland encomenderos forced sale of their Indians' produce to lowland encomienda Indians, and vice versa. The Indians of the gold districts were probably in a more prone position, given mining demands, but both highland and lowland indigenous workers were hugely exploited by this arrangement. By taking advantage of family encomienda connections in these widely disparate ecological zones, elites were able to create an interdependent local version of the notorious *repartimiento de mercancías*. As seen elsewhere in the audiencia until at least the turn of the eighteenth century, Indian labor essentially underwrote the primitive colonial gold economy. Here, to add insult to injury, Indians living in intermediate zones were drafted as *mita*, or rotational, porters for the merchants who plied the Pasto-Barbacoas trunk line.

Other types of merchandise entered the Pacific coast mining districts by sea. Customs records from the early 1680s show that European clothing and African slaves, along with Spanish wine, brandy,

⁵³⁶ Another Barbacoas testimony regarding jornales in the late 1690s claimed a work year of 277 days (ANHQ Popayán, caja 36 [4-v-1711]). Slave jornales by this time were said to be 1/2 peso gold (1 patacón) per day ('que es el jornal acostumbrado asi en las minas de la dha prova de Barbacoas como en las del Chocó escalsandose en cada un año ochenta y ocho dias de domingos y fiestas en que entran los tres de Semana Santa, Pascua, Corpus Christi, y Asención y quedan líquidos de trabajo 277 dias').

olive oil, iron and steel made their way to Santa María del Puerto from Panamá.⁵³⁷ Imports from points along the southern coast included a crucial staple of the region, namely salt 'mined' from the Salinas de Guayaquil, near Punta Santa Elena.⁵³⁸ This light, crusty sea salt was shipped in baskets, and in the early 1680s sold for two reales per fanega (1.5 bushels), or one-and-one-half gold pesos per arroba. As West has noted for the Chocó, salt was consumed in great quantities in lowland mining regions, and was used mostly in the curing of fish and meat. Wine and brandy from Peru and Chile entered Barbacoas in casks (*frasqueras*), and seems to have been consumed in quantity. The sale of alcoholic beverages to Indians and African slaves was technically illegal, but import volumes suggest that not only local Spanish elites were imbibing. Another item of uncertain origin was lead, used primarily for shot manufacture. Lead was often sent to coastal towns by Quito's hacienda officials during times of emergency, such as the buccaneer attacks of the late seventeenth century, but some may have also been sent by defense officials in Panamá, Guayaquil or Callao. Lead could be easily smelted from galena, a very common sulphide mineral often associated with silver and found at various sites in highland Quito and Popayán.

Mining districts consumed other crown monopoly items as well, among them gunpowder (*pólvara*) and playing cards (*naipes*). Gunpowder was produced at factories in the highlands near Bogotá and at Latacunga, south of Quito. The pirate scare of the late seventeenth century actually resulted in a price increase and plant expansion at the Latacunga facility, the remains of which can still be seen along the Panamerican highway. Aside from the expected needs of coastal defense and military drills, however, powder was used in prodigious quantities in fireworks displays (*artificios de fuego*), apparently an indispensable element of every religious and civic festival celebrated in the kingdom.⁵³⁹ Playing cards were initially produced in Spain, although some sixteenth-century Quito artisans were listed as 'card painters'. Whether local or European in origin, hand-painted *barajas españolas* were consumed in amazing quantities, especially in mining towns. Gambling and its social consequences will be discussed in more detail in the following chapter, but with regard to trade, playing cards were apparently also consumed by players of non-betting parlor games in the seventeenth-century. In the 1690s, for example, we find mention of an elite woman of Santa María del Puerto playing 'an entertainment of cards' with several friends.⁵⁴⁰ Because the decks were a strictly policed monopoly item, local officials, rather than private merchants, often manipulated prices for personal gain.

Tobacco was such a common and highly sought-after trade item in mining camps that it was considered a staple. Bundles, or *mazos de tabaco*, were carried overland from intermediary climate zones such as the middle Cauca, north of Cali, and the Macas area, east of Cuenca. High-quality tobacco was also grown in the Guayaquil region, although this industry seems to have developed rather late in the colonial period. In the eighteenth century tobacco became a crown monopoly, as did aguardiente, creating much tension in the mining districts and elsewhere. Slaves working the placers of the Pacific coast were said to be especially fond of tobacco and rum, among the few pleasures afforded them in an otherwise brutal work environment.⁵⁴¹ Price rises associated with the new monopolies led to violent revolts in Barbacoas in the 1760s and 1780s, a reflection of the importance of these items in everyday life. As is still

⁵³⁷ ACC Sig. 1099, ff.3v.-38. Olives, either from Spain or Peru, were mentioned in a Barbacoas miner's will in 1656 (ANHQ Popayán, caja 33 (1656), f.12v.). In this document a botija de aceitunas was valued at 3 gold pesos and a quintal of iron at 20 gold pesos. Steel was also shipped by canoe from Cartagena up the Cauca and overland between Popayán and Quito, as noted in a dispute between merchants and mule drovers (*arrieros*) in 1695 (ANHQ Popayán, caja 14 [17-iii-1695]). The dispute concerned the transport of 14 mule loads of steel, or 151 arrobas, worth some 60 pesos per quintal.

⁵³⁸ A full description of salt gathering by the evaporation process at Santa Elena is given in George Sheppard, *The Geology of Southwest Ecuador*, 31-37.

⁵³⁹ For a variety of late seventeenth-century petitions for powder, see ANHQ Fondo Especial, cajas 2-5. Powder was also requested occasionally for use against Indian uprisings in the Oriente.

⁵⁴⁰ ANHQ Popayán, caja 18 (24-x-1698), f.12.

⁵⁴¹ Sale of aguardiente to slaves was protested by some Barbacoas mine owners. See, for example, ANHQ Popayán, caja 32 (7-viii-1706). In this case a dueña de minas y cuadrillas named María Castro Rosales spoke out against a particular merchant, who also happened to be an *alcalde ordinario*, 'para que no se venda aguardiente en los Reales de minas que ay en la Prova de Barbacoas por los muchos daños que se causan embriagandose los Esclavos, y gente que trabajan en dhas minas, y robos que hazen para tener con que comprarlo'. The Audiencia of Quito agreed with Doña María and issued a real provisión banning said sales after 29-i-1706, even though they were already illegal under the 1668 ordinances.

true today, tobacco was smoked in many forms in colonial times, including cigars, cigarettes (*cigarillos de papel*) and in clay pipes (known as *cachimbos* in the wet littoral). Tobacco was apparently purchased by crown officials from small growers and then processed in factories in Quito, Cuenca and Guayaquil. Merchants then purchased these tobacco products in bulk and distributed them to consumers. Though denounced as a dangerously addictive drug today, tobacco in colonial times was revered for its medicinal properties outside of smoking, and was often applied in leaf or powder form to wounds, such as snake bites, in plasters.

A variety of other goods were peddled in the mining camps, including such items as eyeglasses and legal reference books, but as important as the types of goods available to buyers were the various means of payment. We have noted that many miners purchased goods from itinerant traders with gold dust, but we have not explored the nature of this relationship. In general, miners spent more than they earned, meaning that often they found themselves in debt to merchants who had advanced them tools, clothing and the like in order to get a mining operation going. Skilled mine administrators did exist, and some miners made fortunes in spite of significant credit obstacles. In general, however, even small-scale panners (*mazamorreros* and *playadores*) were entangled in debts for much of their working lives, always owing and often losing their mines and belongings to outside commercial creditors. Occasionally local miners and officials would favor their own interests over those of outside merchants, but even in these cases the Audiencia of Quito usually chose to reverse local decisions in favor of lenders on appeal.⁵⁴² Some church organizations, particularly convents in the highland cities, lent money to mine owners at favorable rates of interest, but this was rare. These so-called *censos*, charging a set five-percent interest rate and often held in perpetuity, were more often extended to agriculturalists in the highlands, and only rarely appear as mortgages (*hipotecas*) for purchases of mine properties and slaves.⁵⁴³ Because it was much riskier than agriculture as a rule, mining relied more heavily on mercantile credit, and was thus an inherently more costly enterprise.

Debts owed to merchants by miners in the Kingdom of Quito were as old as the mining economy itself. In Popayán, the expansion of African slavery in the seventeenth century expanded this debt relationship even further. Slaves cost more than mines in many cases, and a complete working *cuadrilla* could entail an investment of 10,000 pesos or more. Even the wealthiest individuals and families in Popayán lacked cash reserves of this kind, so nearly all pledged their urban and rural landholdings in order to buy mine slaves on credit (*en plazos*). Often such arrangements entailed a promise of a set share of the mine's produce until the principal and interest (often much more than the legal limit of five percent) were repaid. Default was not uncommon, and merchants spent a good deal of time and money pursuing their debtors in court. In 1694, for example, a case was still being fought over a Popayán miner's debt dating to 1629.⁵⁴⁴ In this case a mine owner had borrowed goods amounting to almost 1,400 gold pesos from two Popayán merchants who had formed a company (*compañía de mercaderes*). The debt was to be repaid in forty-peso installments every month for seven years, representing a total of 3,360 pesos (more than twice the principal, or about twenty percent interest per year). The miner, whose gold properties were apparently not yielding the expected results, defaulted on the loan in the 1630s, at which point the merchants took over the mine and hired a professional administrator (who subsequently failed to produce the expected rents). This form of repossession was a custom which would be followed all over the audiencia, but one which rarely helped to pay off creditors in a timely fashion.

By the 1660s, if not before, many miners in Barbacoas were deeply in debt because of poor mine yields and poor management. Payment on goods advanced on credit, including slaves, might only begin after several years of mine development. An inspection of the mines on the Telembí River in 1672 found

⁵⁴² See, for example, ANHQ Popayán, caja 10 (1689). Here a Barbacoas merchant sued for the return of the value of a quantity of merchandise. Some 420 pesos-worth of goods, including clothing, knives and a quantity of red cloth (*moropachas de cochinilla*) had been auctioned at half their market value in his absence based on a decision by a local *caudillo*, Don Bartolomé Estupiñán. The audiencia favored the merchant, stating that credit arrangements were to be protected by royal officials.

⁵⁴³ One such exceptional case involved an elite Pasto family who had purchased several African slaves (*negros bozales*) from merchants in Panamá for work in a Barbacoas gold mine (ANHQ Popayán, caja 12 [18-iii-1692]). The slaves had been purchased on an unspecified church censo in 1678, but the mine owners had defaulted on even these minimal payments by 1692. The contract was said to have been witnessed and signed, 'en la playa de vuelta de viaje' by 'personas de mucho crédito cristiandad y deporte'.

⁵⁴⁴ ANHQ Popayán, caja 14 [29-x-1694].

that most mine owners were in danger of having their slaves and pits repossessed, as they were all 'mortgaged with various letters of credit' (*hipotecados con varias escrituras*).⁵⁴⁵ In the early 1680s a few merchants had gained full possession of Barbacoas gold mines, but more commonly they travelled around collecting interest payments from mine owners, itinerant panners, Indians and slaves (a process called *rescate de oro*). As these traders left the town of Santa María del Puerto for Quito and other highland cities, they registered their gold income with customs officials, saying it was collected (*recogido*) from various debtors in the mines.⁵⁴⁶ Repossession was often an undesirable alternative to this periodic interest collection, even if it fell short of mandated quantities, as demonstrated by a case from 1690s Barbacoas. Here a mine owner defaulted on a loan of 1,455 pesos worth of gold dust, which he had used to purchase subsistence and other goods and to hire temporary laborers.⁵⁴⁷ The merchant lender pressed for repossession, which action was carried out, but after five years of working the mine with a salaried administrator the debt had still not been cleared. The mines were not unproductive--indeed they yielded several hundred pesos at each cleanup--but the administrator claimed that after expenses, including the quinto, his own salary, slave and other labor rents (*jornales*) and payments to various magistrates, scribes and town officials, nothing remained for the merchant. Having been completely cut out of his own mine's 'fruits' (*frutos*) for half a decade, the merchant appealed to the *audiencia* for a legal solution to his quandary in 1696. On occasion, due apparently to a somewhat justified distrust of outside merchants, miners borrowed money to buy slaves and other mine-related capital inputs from one another. These cases were rare, however, and often led to bitter, long-term disputes resembling family feuds.⁵⁴⁸

As the numerous examples above demonstrate, merchants were far more effective agents of gold extraction than the crown could ever hope to be. The mining industry, the crown's finance ministers repeatedly claimed, was fundamentally a royal concession to private individuals. Mineral-rich lands ultimately belonged to the crown, and thus the crown could always seize mines when severance taxes were not paid. In spite of the dangers of crown confiscation, however, mining entrepreneurs, both as private individuals and as corporations, consistently fought the notion of crown ownership by failing to pay quintos. In many areas, as will be seen, this generalized tax evasion was largely a result of the miners' private debts, usually to traveling merchants. Severance taxes, which in the seventeenth century averaged only five to seven-and-a-half percent of production, were seen as simply a nuisance when compared with these extensive private obligations. Only during official *visitas* were miners reminded of the crown's power to enforce 'nuisance' tax laws.

Mining required capital, and merchants were the only consistently willing lenders. Whether a mine was a relative success or a hopeless failure, borrowed capital had to be repaid. Protected as they were by binding contracts, merchants, even when hampered by difficulties of collection and harried by crown tax officials themselves, usually ended up the only winners in the gold districts. They were also the ones who ended up paying the quinto much of the time, to the crown's dismay. Indeed, revenue officials routinely expressed their fears that tax fraud was more common among merchants than among miners. As one review of mining operations in Barbacoas in the early eighteenth century revealed, miners often found themselves in a five-way struggle: 1) the crown demanded taxes; 2) merchants demanded payment for advanced food, clothing and tools; 3) laborers, free and enslaved, constantly struggled against exploitation and probably pocketed more than a few choice nuggets; 4) fellow miners fought with each other over land and water rights; and 5), the uncertainties of weather constantly altered river levels, making the mines unworkable for much of the year. As one *dueño de minas* in Barbacoas summed up the situation in 1744, the miner 'washes ten [pesos] and owes one hundred'.⁵⁴⁹

Gold taxes, now set at 7.5% (the *veintavo* + 2.5% assay fees), were in such decline that officials of the Tribunal de Cuentas in Santafé de Bogotá demanded to see the account books (*libros de sacas*) of Barbacoas's principal mine owners. Due to earlier irregularities in tax collection, dating to the 1650s, miners had been ordered to keep these account books to prove their production and payment of quintos

⁵⁴⁵ ACC Sig. 1774.

⁵⁴⁶ ACC Sig. 1888 (1685-86), ff.3v-7.

⁵⁴⁷ ANHQ Popayán, caja 12 (7-x-1692).

⁵⁴⁸ See, for example, ANHQ Popayán, caja 13 (17-v-1692). Here members of the Castro Rosales clan complained bitterly about debts owed to the Estupiñán-Jácome clan for 5,076 pesos borrowed to buy twelve 'piezas de esclavos' (avg. 423p/slave). These two families were extraordinarily litigious on other accounts, as well, including disputed *encomienda* holdings and mine boundaries.

⁵⁴⁹ ACC Sig. 4062, f.5v, Presb. Diego Valencia.

with precision. Had such books been kept with any kind of regularity we would know a great deal more about mining in early modern Barbacoas today. As it was, however, only a handful of libros de sacas were kept, and few of these have survived, so we must turn to the visitas for some explanation. The visita of 1744 is remarkable among these, as it offers us the testimonies--really the excuses--offered by the miners themselves. In explaining why it was that they had kept no account books for over twenty years, the Barbacoas mine owners inadvertently painted a fairly clear picture of their industry and its troubles. These testimonies must be approached with some caution since they were given in a context of royal inspection, but they do seem to point out the key features of the credit market and the bullion trade, items of particular interest here.

Twelve mine owners of varying fortunes, four of them women, testified that gold mining was an extremely risky business in the Province of Barbacoas, and that costs often exceeded profits. Fifty-six-year-old Josef Gómez de la Rúa claimed that it had been customary in the region for some time not to keep libros de sacas. The reason for this noncompliance with the law, he said, was that trying to keep precise numerical records of yields versus costs would only lead to confusion when highland hacienda officials arrived for inspection. Mining in the wet Pacific littoral was at best a hit or miss affair, and the crown wanted stable revenues. Just to bring a mine into full production required several years of improvements, such as clearing forest, building canals, digging holding tanks and constructing worker housing. Even then one could not be sure of a profitable gravel deposit--an initially promising bench seam might play out after just a few months of excavation. In these circumstances, miners, Gómez claimed, continued to borrow heavily from merchants in order to buy tools, clothing, slaves and other goods. By the time a mine began producing, its owner was so deeply in debt that his or her gold dust was immediately handed over to merchant creditors. These creditors paid the quinto on their way out of town, as seen in the Libros Reales, where they noted the names of the miners from whom they had collected.

This situation was not what the crown had had in mind when it set up the libros de sacas system of gold accounting in the 1650s. The original intention was to have miners collect fine sands containing gold, called *molinos*, for a set period of time. On an announced date, a circulating magistrate was to supervise the 'washing', or batea and possibly mercury cleanup of the molinos, marking in each miner's libro de sacas the amount yielded and the resulting tax collected. The geographical difficulties of Barbacoas, the unpredictability of mining yields and various other factors rendered this system a dead letter by as early as the 1680s. It was in these years, as we have seen, that the royal account books first showed merchants paying quintos on their *oro rescatado* on the way out of Santa María del Puerto. In 1744, miners like Gómez de la Rúa continued the noncompliant custom of handing over untaxed bullion to merchants, claiming that the ultimate objective, tax collection within the mining district itself, was being achieved, albeit by the traders rather than the producers. It is possible that miners sought to avoid dealing directly with crown revenue officials for fear of excessive taxation, but this practice of paying merchants directly with untaxed gold dust ended up working to the miners' distinct disadvantage. In essence, direct payment of debts in mined gold helped commodify and de-emphasize the monetary properties of gold. This shift in valorization was achieved by merchants who were able to use their position of relative advantage as creditors to discount raw gold as they saw fit.

If the tax was being collected as claimed, it was for reasons other than official zeal, as many miners explained. In fact, gold dust was said to be disdained by traders, especially those from the highlands. This disdain was obviously disingenuous, but an agreed-upon form of merchant pressure forced miners to sell their product at discount in exchange for silver coin, or its accounting equivalent. The merchants could rightly claim that gold dust was not trustworthy as general currency for two reasons: 1) its purity and hence absolute value was not easily determined by non-specialists, and 2) raw mine gold was illegal and hence subject to confiscation by royal officials outside mining centers. Merchants, along with the crown, were thus aided by these factors since they served as incentives to transport only officially marked bars or disks (*tejos*) which had passed through the hands of royal officials at the local casa de fundición. The merchants benefitted because they could set the terms of trade, especially the ratio of the value of gold to silver, with all merchandise values expressed in terms of the latter. As one miner explained, 'if one tries to buy two or three thirds of beef with a few ounces of gold dust, the merchant will refuse, saying that outside this jurisdiction gold [dust] is not traded at its true value'.⁵⁵⁰ In the absence of a mint, mine gold, though obviously more valuable than silver by weight, was treated as suspect and hence undervalued--at the expense of the dependent miner.

⁵⁵⁰ Ibid., ff.3v-4.

Miners in Barbacoas were unusually dependent on merchants, as one early eighteenth-century visitor noted, due to the remoteness and agricultural 'sterility' of the region.⁵⁵¹ Only plantains and a bit of maize were produced locally, while everything else was imported, paid for with gold dust. In a word, Barbacoas was a merchant's dream, a captive, non-self-sufficient market with only high-grade bullion (20k+) to offer in exchange. Due to this combination of factors, price inflation in these goldfields, as in those of the long extinct Zamora district, was inevitable, and price gouging was highly likely. Indeed, the line between provider and predator was routinely crossed by merchants, most of whom were based in Pasto, Popayán or Quito. The Quito link is of key importance here, as almost all the miners who testified in 1744 claimed that it was in this city that gold from Barbacoas received the best price. Traders told them that gold dust could only be traded at two patacones (2 silver pesos, or 16 reales) to one castellano (gold peso) in Barbacoas, and this before quintos. Marked bars, at a rate set by Quito buyers, traded at 19 & 3/4 reales (silver) per castellano. The difference, after quintos, was over half a silver peso per castellano, giving the the merchants something like a twenty-percent profit margin in this 'currency-commodity' exchange alone. For some reason, the miners seem to have resisted the idea of paying the quinto and smelting fees themselves, and hence avoiding this loss in exchange. Perhaps merchants monopolized this transaction by claiming not to trust smelted and marked gold offered by miners. More likely, miners feared that paying quintos would open the door to corrupt officials, who were liable to set unmeetable tax quotas. It is difficult to say, but clearly it was merchants, rather than the crown, who effected the transfer of gold away from mining centers and into the hands of highland elites. That much of Barbacoas's gold yield ended up in Quito, especially during a period of noted economic decline, reveals the continued buying power of this distant capital's merchant elites, who were still shipping large amounts of textiles into the mining country of New Granada. Juan and Ulloa, who visited Quito in the 1730s, went so far as to claim that the Barbacoas gold trade and textiles moving northward in general constituted the greater part of regional commerce in terms of value.⁵⁵²

The wholesale merchants, along with a variety of itinerant peddlars, supplied not only the mine owners of Barbacoas but also their workers with food, clothing and other necessities. The 1744 visita is perhaps most revealing in that the mine owners offered detailed descriptions of relations of production, which varied widely, in their mines. Although only twelve mine owners testified, none of their stories were quite alike. Surprisingly, although encomienda mine labor was by this time completely outlawed, none of the mineros claimed to have shifted to owning and managing large cuadrillas of slaves. Of the eight male mine owners, all had administered their own work gangs, usually made up of temporary hires or rented slaves, at one time or another. Not one of them was absent at the cleanup. All of the four female 'minerasy dueños [sic] de minas', along with a few of the wealthier males, employed salaried mine administrators, some owners making savings by entrusting this task to elder sons. The work gangs themselves were most interesting, consisting in only a couple of cases entirely of slaves. More often these cuadrillas were made up of a few owned slaves, a few rented slaves, and a mixed group of Indian and free Black or mulatto laborers (*peones concertados*). The minera or minero in such situations was required to supply the subsistence needs of owned slaves by purchasing goods from merchants, to pay a cash rent to other slave owners for set periods of work, and to pay an agreed-upon day-wage (*jornal*) to increasingly common, but much resented free workers. At times these contract laborers were so deeply in debt for their own subsistence goods that mine owners were required to pay wages directly to merchants, leading to a peculiar kind of gold-mine debt peonage by proxy. Slaves may have also accumulated small amounts of gold during off times for purchase of aguardiente, tobacco and other items, a pattern noted in the contemporary Chocó, but whether or not they were allowed to contract debts for these items is unclear. Added to these categories of potential debtors were the marginal playadores, or roving gold panners, who were usually free persons of color.

The complexity of these types of work arrangements is illustrated by the case of Diego Valencia, a mine owner in Barbacoas since 1734. Valencia claimed that he had not produced a surplus until 1739, when he employed one slave and eleven free peons in his mine at Punchará and in one belonging to an associate on the Telpí River. This latter, joint venture soon came to employ nineteen peons, when, in 1740,

⁵⁵¹ Dionisio Alsedo y Herrera, *Descripción Geográfica de la Real Audiencia de Quito* (Madrid: The Hispanic Society of America, 1915 [1747]), 20-22.

⁵⁵² Juan and Ulloa, *A Voyage to South America*, 153. Juan and Ulloa claimed that the gold brought southward from Barbacoas and Popayán was sent on to Lima, where it fetched even better prices, perhaps because of the relative abundance of silver there.

Valencia bought twelve slaves, male and female, all 'useful' mine workers (*esclavos útiles*). The number of peons employed dropped, but with the newly purchased slaves Valencia commanded a workforce 'of some twenty piezas between free [workers] and slaves of one sex or the other'.⁵⁵³ With this mixed *cuadrilla* Valencia and his associate gained control of five mines, three of which he purchased and two of which he established anew. None of these mines yielded as expected, so by the time of his testimony in 1744, Valencia claimed that he had been forced to move his work gang to mines owned by Josef Gómez de la Rua, whose troubles we have discussed above. The nature of this last arrangement appears to have been a kind of share-cropping, a common contract relationship found also in the hardrock mines of eighteenth-century Zaruma. Because of all these contingencies, Valencia claimed, the miner and his workers could not help becoming indebted to traders and merchants for subsistence and clothing, paying a substantial premium because, he said, echoing his creditors, 'freight (*acarreo*) is everything'.⁵⁵⁴ Here we see the merchants transferring yet another risk, the potential loss of goods in transit, onto the already disadvantaged miners.

Another mine owner and local magistrate, Manuel Rodríguez, also claimed some ten years experience in Barbacoas. He had always acted as his own administrator and chose to employ only free peons. Rodríguez claimed that 'whenever God has given me a small quantity of gold...most of it has gone to pay the peons or the merchants whom they owe for subsistence and clothing'.⁵⁵⁵ Gold mining, he said, was most often a losing business, as one was easily 'overtaken' (*alcanzado*) by high costs and 'the variability of lands one has'. Here, Rodríguez touched on the issue of geological uncertainty, noting that 'some pits (*ojos de tierra*, literally "eyes of earth") have gold and others have none, a thing which is not easy to comprehend until the end of the work'.⁵⁵⁶ Added to this uncertainty, Rodríguez noted that 'due to shifts in the weather one can not always work, as water may be short'. For these and other reasons, the kind of yearly production estimates called for by crown officials were impossible. Curiously, being the only miner to employ a completely free labor force, Rodríguez referred to his workers' reliability as yet another uncertainty, their whim akin to a force of nature. 'The peons, being free', he observed, 'go out to work some days, [and] others they do not'.⁵⁵⁷

Although Rodríguez's testimony shows him to have had some pre-rational-capitalist ideas (e.g., God as the giver of surplus), he also appears to have been the most able at describing the relations of various factors and variables of production from a local point of view. He claimed that the crown's accountants did not understand mining when they called for him to separate the cash value of day-wages (*jornales*) from the market value of fixed mine capital (*obras muertas*), including holding tanks, canals and pits, in his accounts. As Rodríguez described it, 'all that which is joined to the labor of the mine makes up one body (*cuervo*)', and hence the yield of the mine would be as dependent on the labor put into fixed capital as on that paid for actual ore processing or cleanup.⁵⁵⁸ Figuring profits and losses in an early modern 'proto-capitalist' mining economy, in short, was a tricky proposition, and Rodríguez's testimony shows why. Too many uncertainties, coupled with numerous market deformations, meant that mining costs were subjective, and could not be easily made to conform to a balance sheet; hence 'God' or 'fortune', rather than 'labor' or 'sweat' were credited with causing high or low yields. With some insight, Rodríguez suggested in closing that the only hope for miners was to smelt and market mine gold themselves. The problem, since most miners were not merchants, and hence lacked constant access to cash or goods, was what to pay the increasingly common free laborers with in the meantime.

At least one miner, Doña Luisa Rodríguez Portocarrero, seems to have been able to bridge 'the merchant breach'. Doña Luisa, a widow, claimed that she had had control of her mines for about eight years, all the while employing a salaried administrator. She too acknowledged the risks and uncertainties of mining, and claimed that were it not for her commercial activities she would have abandoned mining

⁵⁵³ ACC Sig. 4062, f.5. This is one of the only references I have found explicitly stating that female slaves worked directly in mine works alongside men, but indirect references abound. In the case of the early seventeenth-century Conceptionist work gang from Popayán (ANHQ Religiosos, caja 1 [1614]), thirty-three slaves were said to be 'de batea' (panners). Since the group had only twenty-five working-age males, at least eight women were directly engaged in mining.

⁵⁵⁴ *Ibid.*, f.5v.

⁵⁵⁵ *Ibid.*, f.8v.

⁵⁵⁶ *Ibid.*, f.8.

⁵⁵⁷ *Ibid.*

⁵⁵⁸ *Ibid.*, f.8v.

altogether. Her mining administrator was paid with trade income, 'because the mine yield alone is too short to maintain an administrator'.⁵⁵⁹ The mines, for Doña Luisa, were supplemental; she even claimed that she quinted more gold collected from debtors than that taken from her own mines. Like other merchants, she sold her gold in Quito, where it fetched the best price, and she rejected charges of contraband trade in gold dust, perhaps disingenuously claiming that, 'no one takes it that way because there is no profit'.⁵⁶⁰ Along with this supposedly natural market policing, Doña Luisa also attributed the suppression of the contraband gold trade with the highlands to the zeal of royal officials--just the sort of thing investigators wanted to hear--but she clearly favored the market explanation.

Like Rodríguez, the magistrate above, Doña Luisa, though not directly engaged in mine work herself, understood the industry's pitfalls intimately. In a remarkable passage, she described the debt cycle of miners as follows:

'due to the variability and indifference of the lands one cannot judge yields nor that which can be taken from working a cut (*corte*), so the miner goes about searching for a pit or piece of land which offers some gain (*provecho*), then spends for one or two years, depending on the people and work, running canals, looking for water and initiating the new cut, and once the [mining] work has begun, one has spent on maintenance and supplies that which cannot be repaid in two or three years, and then, the lands being uncertain and insecure, this deposit plays out, leaving the miner indebted and with the same need for good land to work as before, and having to pay for the same expenditures of initiation as before, which is why the miners that one finds here are in a state of continual need, anxiety and fatigue'.⁵⁶¹

Doña Luisa's solution to this problem of the mining trap was to engage in commerce. She immediately recognized that the preferable situation was that of the provider rather than the consumer of goods and credit. Why she continued to work her mines, pay a professional administrator and supply her slave gang for eight years in spite of this bleak assessment of the industry suggests that she still maintained some hope of striking it rich someday.

Indeed, if we may trust these miners' complaints even partially, we must ask why on earth one would continue to seek out and develop mines under such conditions? The testimony of another female mine owner and widow, Doña Rosa Ortíz de Gaviria, offers some insight. She claimed that in mining one had to be patient, spending one or two years 'raising waters, running canals, and building holding tanks without producing even the slightest fruit, no profit but that which is to come, not even a grain of gold'. With 'great luck' (*gran fortuna*), she suggested, one might locate 'a pit of good ore which when opened will free (*desempeñar*) its master'.⁵⁶² Doña Rosa Ortíz reminds us that no other activity in colonial Spanish America was quite like gold mining; it was part rational capitalism, part game of chance and part divine intervention. And it was financed by outsiders whose gold fever was restricted to the arena of circulation and rarely crossed over into that of production.

As in many other districts, the often predatory merchant creditors of Barbacoas controlled the gold market, and hence shifted much of the burden of risk (calculable, e.g., the value of a given deposit) and uncertainty (incalculable, e.g., unstable weather or labor) in production onto the miners. When possible, the mine owners shifted part of this burden onto their workers by lending them goods and cash and paying wages in any form besides mined gold or silver coin. This was extremely difficult in the case of Barbacoas, where free workers had become common by the early eighteenth century (recall that *encomienda* mine work was abolished in 1700). For precisely this reason, mine owners tried to create disadvantageous trade or 'wage' relationships with free people of color when possible, much as they had done in the seventeenth-century with *encomienda* Indians. Mining could only be profitable under these circumstances, however, if one commanded a large force of unfree workers, and this was the motive behind the expansion of gang slavery in Barbacoas after the mid-eighteenth century.

Since slaves represented a huge initial investment, the shift proved difficult and glacially slow. In an industry marked by monopoly trade arrangements and unpredictable and often low returns, miners could only control their dependency on merchants by minimizing market involvement. Mine owners sought to minimize cash outlay whenever possible, choosing to administer mines themselves or to employ their own

⁵⁵⁹ Ibid., f.15v.

⁵⁶⁰ Ibid., f.16.

⁵⁶¹ Ibid.

⁵⁶² Ibid., f.17.

children rather than pay a yearly salary to a professional. An alcalde named Manuel Ortíz chose as his administrator 'a slave captain of my confidence', thus bypassing the wage issue altogether.⁵⁶³ As for workers, mine owners always preferred slaves, but could not muster the capital to buy the substantial cuadrillas needed to make a mine productive. Instead, the dueñas and dueños de minas were forced to pay wages to free workers or enter into binding rent agreements with other slave owners. The preference for slaves over wage workers was still debatable since the vagaries of production meant that slaves had to be maintained regardless of output while wage workers could be dismissed when not needed. Owning slaves bore the disadvantages of high initial price and constant maintenance costs. Wage labor, on the other hand, bore the serious disadvantages of cash outlay in wages and lack of direct control over workers.

Ideally, if one could afford to buy mine slaves, which were valued at some 400-500 silver pesos each (ca. 200-250 castellanos) at this time, the investment could be returned both in direct mine income and in the form of rents. Entire cuadrillas, as well as individual slaves, were routinely rented to short-term mining ventures, some put together with pooled capital. Still, slave owning entailed new risks and uncertainties which could easily sink the mine owner in the debt trap once again. Slaves might run away (there were palenques nearby), they might die from disease or accident, or they might simply turn out to be poor gold miners. Worst of all, slaves, unless inherited, had to be purchased from merchants, usually on credit. Dependency on the market was very difficult to avoid, and understandably the situation of early eighteenth-century Barbacoas had some miners longing for a return of the Indian encomienda, the only genuine labor subsidy they had ever enjoyed.

In a sense, the crown had abandoned the gold miners of Barbacoas and the rest of Quito to extremely unkind market forces, and without a desperately needed labor subsidy the industry languished in obscurity. Similar restrictions of the mita in Zaruma had virtually killed production, causing mine and mill owners to cast about for criminals and vagabonds to fill the sandals of the much-missed Indian draftees. With not one significant technological advancement in mining techniques, and no significant new finds outside the distant Chocó, gold mining in early eighteenth-century Quito resembled a well running dry. New labor inputs were the only solution, and this shift, toward large-scale African slavery, would only be effected in Popayán, largely due to the increased volume of the slave trade through Cartagena under the asiento system. With time slave prices dropped, and mining cuadrillas conversely grew. Again, merchants would play an important role in the industry's expansion, both as predators and providers in the mining districts of eighteenth-century Popayán, but it was mine owners' continued hopes of striking it rich, in the face of daunting odds, which must be credited with keeping the industry alive. As we have seen, this enterprising spirit was kept alive at tremendous social cost.

In Zaruma, no 'slave solution' was forthcoming, and thus no comparable mining renaissance materialized. However, tax incentives introduced in 1777 were stimulus enough to generate an increase in the volume of commerce to Zaruma toward the end of the colonial period. The creation of a mining guild just before independence was also intended to reduce dependency on outside merchant lenders, but a chronic shortage of capital and constant bickering among members made pooling and credit union-type arrangements impossible. Zaruma's miners were still hooked on merchant credit, and the crown offered no solutions in the form of labor subsidies in spite of some excited but ultimately idle talk of reviving the Indian mita.

Perhaps the most significant coup for the eighteenth-century merchants was the complete commodification of gold dust. Whereas in the sixteenth and seventeenth centuries a substantial amount of trade, even in the highlands, was carried on with gold dust as the preferred instrument of exchange, by 1744 it was so devalued in the mining centers that immediate conversion to silver equivalent was unavoidable. The gold market was now such that miners were forced to sell their product below its true value in order to buy tools, clothing and food. In a period of less than fifty years, the crown, along with the merchant elite of the highlands, had seriously tightened the screws on miners in Barbacoas and elsewhere. The old labor subsidy, in the form of the encomienda, had been abolished in 1700, the circulation of gold dust had become highly restricted due to a combination of legal and market disincentives and, as if to add insult to injury, severance taxes were not reduced until the late eighteenth century. When these taxes were reduced, they benefited merchants more than miners once again.

Late Colonial Transport

⁵⁶³ Ibid., f.11.

Like mining technology, transport remained unchanged for most of the colonial period, and was so expensive and dangerous that it served as a major obstacle to economic growth, or even stability. When Juan and Ulloa visited the Quito-Popayán region in the early eighteenth century they found the local transport methods so incredibly primitive and treacherous that they commented on them at length.⁵⁶⁴ The visitors were stunned at every turn to see that human beings had managed to link the region's amazingly isolated highland valleys with the neighboring jungle lowlands of the Oriente and Pacific coast. River crossings, if they were possible at all, were often carried out by means of baskets connected to either shore by block-and-tackle apparatus (the so-called *tarabita*). Bridges were often fragile hanging affairs, made of braided agave fiber (*cabuya*) and a source of many accidental drownings, especially when crossed by persons on horseback. Travel between Quito and the port city of Guayaquil during the rainy months of January to May was virtually impossible due to mudslides and high water levels in lowland tributaries of the Río Daule. Aside from a few mining districts to the north of Popayán, virtually all gold found in the Kingdom of Quito was located in nearly inaccessible jungle lowlands (e.g., Zamora, Mocoa, Barbacoas) or in very high, wet páramos (e.g. Santa Bárbara, Shingata). As a result of these geographical contingencies, as the Barbacoas miner noted in 1744, freight was everything.

Goods were transported by mule in most regions, though the trails connecting the highlands to the Pacific lowlands and the Oriente were always notorious for sections in which only Indian carriers were used. An early nineteenth-century case regarding a shipment of crown subsidized mercury may serve to illustrate the problems of freight encountered by miners and merchants, even in the late colonial period. In 1815 a mine owner working silver deposits at Macuchi, west of Latacunga, was charged with a debt of over 1,200 pesos for some thirteen quintales of mercury purchased in 1803. The mercury had been shipped from Lima to Guayaquil, and thence to Latacunga via Babahoyo, Guaranda and Ambato. Since mercury mines were operative at Huancavelica, in the highlands east of Lima at this time, one would expect this mercury to have originated there. In fact it had not; rather, it was part of a much older shipment sent from the famous mines of Almadén, in central Spain, via Panamá. Since the mines of Zaruma were relatively moribund at this time, royal officials in Quito approved of the diversion of mercury to the silver mines of Macuchi.⁵⁶⁵ The mercury was said to have been packaged so long before that two of the thirty-four containers were found to be leaking badly when unladed at Guayaquil, and many others appeared suspect.

Transport of the mercury from Lima to Latacunga was difficult and expensive for a number of reasons: first, the boxes had to be packed in Lima, carried to the coast and loaded onto a coastal freighter. Then, after a journey of a week to ten days, the boat arrived at Isla Puná, off Guayaquil, where the heavy cargo (*cajones* of 1.5 quintales, or ca.70kg each) was unladed, provisionally wrapped and sent on to the customs house at Babahoyo in canoes. There the boxes were reopened and repaired before being shrouded in burlap, lashed with cord and loaded onto mules for the rough climb to Guaranda. At Guaranda the merchandise was inspected yet again for damage and loss, repackaged and loaded and sent on to Ambato over the high, desolate páramo west of Chimborazo. There local officials inspected the packages again before sending them on to Latacunga. When all these trip-legs, along with various damages, were assessed, 'freight' turned out to be no small matter. In this journey shipping costs amounted to nearly a third of the retail value of the mercury. At this time the crown distributed mercury cheaply in order to stimulate the mining industry, but a rate of 100 pesos per quintal was still considered high, especially for a mining operation which had yet to produce a saleable quantity of metal. Adding to the costs of shipping and handling were losses sustained in accidents, leakage and theft. The mercury came packaged both in bottles and sheepskin bags (*badanas*), and some of each had to be replaced during the journey. The costly contents of one entire box had leaked out by the time the mules reached Guaranda, either from a fall or from poor packing. Another box simply disappeared, apparently stolen by an arriero from Ambato, who was being hastily pursued by a magistrate.

In sum, even though the crown ended up footing much of the bill for the transport of the mercury, the costs involved made it a relatively unpopular product in the mining centers of colonial Quito. Even in Zaruma, where gold ores were most easily cleaned up by amalgamation, no huge market for mercury developed. In the Pacific lowlands, mercury was similarly expensive, whether brought down from the

⁵⁶⁴ Juan and Ulloa, *A Voyage to South America*. See, for example, their description of the difficult passage from Guayaquil to Quito (96-104).

⁵⁶⁵ ANHQ Real Hacienda, caja 32 (10-vii-1815), f.3v. ('los cortos minerales de Saruma donde hasta el presente se ha consumido en la mayor parte, pues es de muy corta consideración su expendio al Público para las batiojas y plateros').

highlands or taken upriver by canoe. In Barbacoas and the Chocó the crown had mandated the use of mercury in the cleanup in order to separate gold from then-worthless platinum in the early eighteenth century, yet records indicate that official sales in these districts were never large, even in the boom years of the 1780s. In the case of the silver mines of Macuchi, the promised results of amalgamation by the patio process failed to materialize. The mine owner defaulted on his loan and the crown recouped neither its initial outlay nor the much anticipated quintos on silver to be produced. In the case of products such as mercury, freight was everything, or nearly so; there was no such thing as a simple transport trip from Guayaquil to Latacunga or Quito, even at the very end of the colonial period. This route--still the only viable link between the coast and highlands--was so laden with obstacles and involved so many steps that one had to hire a scribe to keep track of them all.

Difficult terrain and generally high freight costs were simply a few of the factors which conspired to keep mining from returning to its sixteenth-century glory days. To begin with, for geological reasons the mining centers of the Audiencia of Quito never constituted principal economic hubs as in the case of the silver towns of northern Mexico and Alto Perú. The gold mines of the hot lowlands and remote highlands were important markets for various types of local and imported produce, especially foodstuffs and iron, but the shifting nature of the mostly gold-based economy prevented the establishment of stable and predictable trade patterns. Gold camps always offered a desired unit of exchange value, and always consumed important quantities of cloth, tobacco, wine and so on; still, they rarely survived long enough, or sustained high levels of production to draw more than the most adventurous, and often most rapacious merchants (not to mention crown officials). As a result of geographical isolation, thin competition among merchants and the generally monopolistic practices of the times, mine owners, as primary producers, were always disadvantaged in exchange relationships.

In paying inflated prices for their own subsistence and other basic needs, usually at interest, mine owners bore much of the risk involved in gold retrieval. As we have seen, when possible they passed this risk onto the backs of their workers, free and enslaved, but this could only be pushed so far. The situation was so critical that at some point gold mining in Zaruma and along the Upper Napo was deemed not worth the investment in spite of proven mineral deposits. Merchants were not the only ones to blame for this situation, but clearly trade and commercial credit structures bore a fair share of responsibility for the 'underdevelopment' of the mining industry. Since labor was the linchpin of the mining sector throughout the period, worker resistance must also be credited with braking production to the extent that it braked exploitation. As noted above, only in districts where forced labor regimes were dramatically expanded, as in the case of African gang slavery in Popayán after the seventeenth century, did gold production rise in a secular fashion. Here the role of predatory market structures was outweighed in the long term, but only by the introduction of still more predatory labor structures.

Conclusions

This study has concentrated on two main themes: 1) establishing the importance of gold in the economy of the early Audiencia of Quito, and 2) describing and analyzing the peculiar relations of production which obtained in Quito's widely scattered and ephemeral mining camps. In the first instance, we have seen how the city of Quito grew in importance immediately after conquest, not as a mining camp itself, but rather as a collection point for the mines of its vast hinterland. The second half of the sixteenth century and the first quarter of the seventeenth saw the influx of several million pesos of fine gold from as far north as Anserma and as far south as Jaén de Bracamoros. Extremely rich mines were also exploited in the hot lowlands of the upper Amazon Basin near Mocoa, Archidona, Macas, Zamora and Santiago de las Montañas. The mines ranged in type from river placers to underground veins, the gold from ten to twenty-four karat purity. All of these early mining camps were also characterized by coercive labor regimes, namely African slavery and the Indian *encomienda* and *mita*. Indian demographic collapse and concerted rebellion, along with the decreasing quality of easily worked ore deposits, led to a decadence in Quito's gold mining industry which would continue with few interruptions until independence. Only in districts which shifted to large-scale African slavery, such as the Gobernación of Popayán, did gold continue to flow in any substantial way, though never achieving sixteenth-century levels. After the gold economy revived somewhat in the late seventeenth century, Quito's merchants and textile producers sought to re-establish trade connections northward in order to draw bullion into the economically-beleaguered capital city. Through all this time, Quito attempted to 'mine' its own margins in order to maintain bureaucratic and commercial centrality.

Quito's Golden Age in Macro-Regional and World Historical Contexts

After recognizing that the Audiencia of Quito was an important mining region in colonial Spanish America, historians are faced with new problems of interpretation. How much gold was produced? How much was exported to Europe? What was the relationship between gold and silver during this time? How much gold stayed in the colonies? In Quito? Who mined it? This study has attempted to offer at least tentative answers to most of these questions, but clearly further research will be necessary before a general interpretation of the Quito 'gold cycle' can be put forth. Quantities of gold produced in the region, especially during the first century after conquest, were high enough to overshadow the value of all other exports. After the mid-seventeenth century, however, gold production fell to secondary or tertiary importance in the overall economy. In some new mining frontiers, such as the wet Pacific littoral, the gold industry boomed dramatically, creating new market opportunities for highland merchants and producers. A general scarcity of silver in colonial Quito, in coin or other forms, meant that gold was often the only available unit of currency in large exchanges. Thus, while the value of gold relative to silver rose with the explosive growth in production of the latter at places like Potosí, Quito's continued marginality and isolation from silver districts allowed gold to remain locally undervalued. As a result, a substantial flow of gold developed over time, linking Popayán's mining districts with Lima's powerful merchants via the Quito trade. Merchants in Quito traded locally produced textiles northward in exchange for gold, which they then exchanged southward for silver coin, Peruvian wines and luxury goods. Partially as a result of this trade pattern, Quito gold came to be transformed into an almost 'pure' commodity.

Trade with Peru was notable, but perhaps the most important questions we must ask of this evidence regard the importance and volume of gold exports from Quito to Spain. Conversely, how much gold was reinvested in the local economy? Clearly the crown was interested in siphoning off as much bullion as possible in order to finance its many and expensive wars. Still, official tax rates on mined gold were quite low when compared with those levied on silver, and only declined over time. Other means of revenue collection were devised, including the various *composiciones* of lands, foreigners and so on, and the supposedly voluntary *donativos graciosos*. Still, overall crown income in gold rarely exceeded twenty percent of registered production, even in the boom years. This general situation suggests that up to eighty percent of Quito's gold output circulated in other sectors of the colonial economy. We have already noted the trade in bullion between Lima and Quito, but we have no sense of the quantities involved. Given the consumption patterns of Quito's elites, I suspect that it was high. It was also not unusual for merchants to send caches of stamped ingots to Seville or Cádiz via Guayaquil and Panama. Again, we do not yet have a sense of the volumes involved, so any conclusions at this point remain hypothetical. Sorting out private

gold exports to Europe is in fact the next necessary step in resolving the question of whether or not Quito constituted a kind of colonial gold mining enclave, and this work is underway.

In lieu of positive evidence pointing one way or the other, we are left to respond based on little more than informed impressions. My feeling is that Quito, especially during the boom years of the late sixteenth and early seventeenth centuries, approached the status of export enclave. This was the case due to the region's dependency on merchants for both luxury and necessity items. Local textile and food production were crucial, to be sure, but imports, made enormously expensive due to transport difficulties and monopolistic trade practices, left Quito's miners at a severe disadvantage when purchasing wine, fine clothing, firearms and above all, iron. A careful study of import volumes and prices is certainly needed, but we may suggest with certainty that Spanish iron, wine and clothing were practically worth their weight in gold in the mining districts of early Quito. Furthermore, as we have suggested above, conspicuous consumption, rather than thrift and a more than passing interest in long-term mining yields, seem to have prevailed among Quito's leisure class. Credit arrangements, especially in the gold camps, were stretched so thin that mine owners often gave up their entire yearly yields to itinerant merchants who remained connected to the bullion siphon of the Carrera de Indias.

This general picture of the gold economy of the Audiencia of Quito may seem old-fashioned in that little evidence appears to suggest that the regional economy benefitted in some substantial way from the expansion of gold frontiers. Whereas Assadourian, Marchán and others have tried to link Quito, via the textile trade, to a supposedly articulated and internally vibrant macro-regional mining economy centered on Potosí, the present study suggests that Quito was in fact a quasi-independent mining region in its own right, but one which was essentially 'underdeveloped' in spite of its great wealth, partly resulting from disadvantageous market arrangements, and partly from elite patterns of consumption. In the larger Audiencia of Quito, a regional economy did obtain, and it was relatively vibrant in times of discovery and development of new gold sources. When gold cycles ended, as they were wont to do, Quito's initially notorious opulence could no longer be afforded. No amount of cheap textiles, especially given the low technology which marked this industry, coupled with high transport costs, could have revived the region's flagging economy. When new mining districts were opened in the backlands of Popayán in the late seventeenth century, merchants, highland elites and crown officials all flocked in to extract their share of the booty. This feverishly collected gold did not go toward capital improvements or expanded infrastructure, but rather into conspicuous but ultimately nonproductive expenditures. If gold remained in the local economy, it was in the retables and altars of the many fine churches of Quito and Popayán.

Indeed, only in Popayán do we find a concerted expansion of investment in mining capital. In this period, mining was no more technologically advanced than the textile trade, so increased investment in labor was the only available means of improving mining production. Though devastated by the same diseases which led to demographic crisis in the mines of southern Quito, Popayán's elites were relatively well-situated to take advantage of the growth of the African slave trade to Cartagena in the seventeenth century. Mining entrepreneurs invested in ever larger cuadrillas of skilled slaves, and then utilized these mobile 'companies' to take advantage of otherwise uneconomic and ephemeral gold deposits. Even so, the mining economy of Popayán was in essence extractive and dependent on outsiders for everything from food to iron to clothing. Merchants, whether based in Cartagena or Quito, again found themselves in a privileged position as suppliers of necessities, both real and imagined. Popayán's leisure class, for its part, was no less prone to conspicuous consumption than that of Quito, Cuenca, or Loja, and thus mine wealth, always fleeting in the best of times, rarely led to capital improvements beyond the purchase of more slaves. Highland food and cloth producers, especially around Pasto and Quito, were likewise preyed upon by traders. They were dependent on the gold zones as markets for their otherwise unexportable produce, yet the gold zones were never quite dependable. In a world in which nothing but death and quintos were certain, merchants could advance gold taken from the mines to needy hacendados and obraje owners at interest while simultaneously advancing food and clothing to the dueños and dueñas de minas in the lowlands. Thus virtually all the risks and uncertainties inherent in these three productive enterprises, mining, manufacture and agriculture, were borne entirely by the producers. In such circumstances, it is no wonder that Quito's leisure class sought to extract every available ounce of sweat from African and Indian workers in their charge. Simply put, the gold-mining economy of early modern Quito was inherently warped and exhaustive of labor power.

The ability of Spanish merchants to siphon off liquid capital from the mines and highland cities was clearly important in keeping the Kingdom of Quito in its position of economic marginality. In this region, and perhaps in the northern Andes generally, no sustained macro-regional articulation of markets

and productive centers developed until well after colonialism had ended. Largely due to the shifting and unpredictable nature of gold mining in colonial Quito, what Assadourian has called 'the cycle of circulation of mining capital in the Andean space' was never allowed to develop to the extent that it did in the southern Andes. Such circulation of gold mining capital was present, but it was successfully restricted by the gradual commodification of gold dust over time. As gold's original characteristics as money were negated in the exchange sphere in order to effect extraction, both by the crown and by the merchants, Quito's economy became increasingly dependent on credit in order to survive. Furthermore, in the absence of adequate coin or other forms of cash, miners and highland agriculturalists were forced to accept trade goods in exchange for their produce, always at a disadvantage. Fueled by pretensions of Old World-style glory and status, Quito's leisure class proved wondrously consumptive, even without money. As such, the lifestyles of the rich and famous in Popayán, Pasto, Barbacoas and Zaruma were almost directly financed by labor coercion--in this zero-sum game, only the mayordomo, and the Catholic Church, masked the relationship between the labor thief and his prey. Spanish merchants, in their privileged position as monopolists, were best poised to feed off of these elite pretensions and then return their winnings, laughing all the way at the foolish excesses of the creole elites, to Europe.

Quito, in the end, sadly conformed to the Spanish colonial model of bullion extraction described over sixty years ago by Earl Hamilton. Hamilton's basic findings were further supported by the work of the Chaunus in the 1950s, and have since been taken up by countless adherents of so-called dependency theory as evidence of the negative economic consequences of colonialism at the 'periphery' (or 'margins'). One would hope to uncover a challenging exception, and certainly they exist, but in early Quito we have found little evidence of local market articulation of any scale, and we have found few cases of exceptional entrepreneurs outside of the occasional wily predator. The preferred labor forms were everywhere coercive, even when 'free' peons prevailed. In short, the structures of colonialism in the Kingdom of Quito seem to have brought out the worst in the Spanish colonists and their creole progeny, and suppressed the best in the African, Indian and mixed working classes. This structured inequality made perfect economic sense under the circumstances, but as a long term means of organizing society for economic development, it was enormously wasteful and retrograde. The gold mines of colonial Quito, whether viewed in 1560 or 1820, appeared timeless, unchanged and hopelessly decadent. In all that time, neither the social nor the economic environment of the audiencia had been conducive to innovation or other forms of technical improvement. Indeed, what made gold mining in early modern Quito interesting, it seems to me, was not that it constituted a primitive form of export enclave--which it almost undoubtedly was--but that roving bands of miners managed to sustain this kind of exhaustive (and exhausting) activity, with few substantive changes, for almost three centuries. Even today, in the backlands of Ecuador and Colombia, mining gold from the margins continues in much the same way. And even with the passing of time, it is not entirely clear why.

Popayán Gold and Potosí Silver: Reorienting the Regional Economy

This study hints at an important and previously unrecognized feature of Quito's colonial economy, namely the central importance of gold mining and its resulting impact on trade in the north Andean region. Gold was the engine of this regional economy, which explicitly included the Gobernación of Popayán, between 1535 and about 1640, when decadence of almost all gold mining districts was compounded by drastic decline in Indian numbers. Later developments included the rise of marginal mining districts in the Popayán region, such as Barbacoas and later the Chocó, based largely on the expansion of African slavery in the seventeenth and eighteenth centuries. While attempting to provide the reader with a sense of the volume of gold produced in these key areas between 1660 and 1821, this study has not attempted to quantify the importance of this partial gold mining renaissance in terms of its impact on trade with the rest of the Audiencia of Quito. In both the earlier and later periods, however, it seems clear from the figures presented that gold, much of it originating in Popayán, was as much a *produit moteur* of the north Andean economy as Potosí silver.

Further studies comparing trade volumes between Popayán, Quito and Peru will certainly clarify, and perhaps even disprove this provocative thesis. For now, however, it seems that conceptions of Quito's position in the macro-regional economy of Spanish South America will have to be rethought. The assertion that Quito was simply a dependent satellite of Potosí for at least the first half of the colonial period seems doubtful now. Carlos Marchán, following Sempat Assadourian, has been the strongest supporter of the Potosí link, but his assertions have rested more firmly on anecdotal and theoretical rather than on

quantitative evidence.⁵⁶⁶ Szaszdi, who attempted an early estimate of Quito's sixteenth-century gold production, did not discover a strong link between Quito's merchants and Popayán's gold mines. Also, even in light of strong evidence of the importance of gold in Quito's early colonial economy, Szaszdi did not attempt to challenge the theory of Quito's supposed dependence on the Potosí market.⁵⁶⁷ Could such a productive gold district have been nothing more than a dependent satellite of this 'southern pole'?

The notion that Quito was always a textile supplier to the southern silver districts seems to stem from the continued influence of Robson Tyrer's ground-breaking 1976 Ph.D thesis, entitled "The Demographic and Economic History of the Audiencia of Quito, 1600-1800".⁵⁶⁸ Tyrer himself acknowledged the importance of gold mining in Quito before 1600, but his focus on the growing textile industry led many later readers to overemphasize the centrality of this economic activity, and even to project it back in time.⁵⁶⁹ Even John Super, who studied trade patterns among Quito's merchants between 1580 and 1610 (1979), credited conspicuous consumption among the audiencia's elites to high profit sales of Quito cloth to Potosí.⁵⁷⁰ As demonstrated above, this was precisely the period in which unprecedented amounts of gold--on the order of several millions of pesos--were flowing into Quito from surrounding mining districts. Was it not more likely that the region's merchants were profiting from trade in sumptuary and exotic goods to the internal mining market rather than the distant one of Potosí? It was Quito's gold, not cheap textiles, which accounted for huge sales of Rouen and Dutch linens, Chinese silks, damasks and taffetas, Spanish velvets and fine woolens, Peruvian wine, tableware and wax, European books, East Indian spices, Vizcayan raw steel and wrought tools and African slaves.

Quito's textiles were widely traded in Spanish South America, especially after 1600, but this industry has perhaps inordinately overshadowed other economic sectors, particularly the gold mining sector. Tyrer's work was foundational, but it is possible that his production figures overestimate the productivity of the so-called Sweatshop of the Andes. As he himself pointed out, the obraje complex was always seriously undercapitalized and very poorly situated for any kind of competitive long-distance trade. Only the relative demographic advantage of Quito, a factor which has come under recent scrutiny as well, allowed the distant audiencia to stay alive in a rapidly contracting macro-regional economy. One of the problems encountered when trying to gibe Tyrer's thesis with Marchán's is exactly how Quito's textile industry managed to expand during Potosí's seventeenth-century decline. This study suggests that even after the gold bust of the early seventeenth century, mining and trade in goods between Quito and Popayán was significant. It is even possible, though no more than conjectural at this point, that Popayán gold mining, which was expanding during this period, helped finance, and perhaps even underwrite Quito's undercapitalized and low-technology textile industry. Although not precisely quantified, Tyrer noted that in the second half of the seventeenth century a large volume of second-class Quito textiles were exported northward into New Granada, which, as we have shown, was then undergoing a mining revival and hence constituted an attractive, if de-centralized market.⁵⁷¹

It seems quite possible that Quito's economy, for all its problems, may have been less dependent on Potosí for its survival than previously thought. Important commercial and administrative ties had been established northward since very early times, and they continued to operate throughout the colonial period. This does not seem so exceptional given the fact that travel between the cities of Quito and Popayán,

⁵⁶⁶ Carlos Marchán, "Estudio Introductorio", in José María Vargas, *La economía política del Ecuador durante la Colonia*, Otavalo: Banco Central, 1981, pp.13-57, and in introductory remarks to an essay entitled "Economía y sociedad durante el Siglo XVIII", in Enrique Ayala Mora, *Nueva Historia del Ecuador*, vol.4, pp.233-59.

⁵⁶⁷ Adam Szászdi, "Preliminary Estimate of Gold and Silver Production in America", pp.151-223, and in his review essay entitled "The Economic History of the Diocese of Quito, 1616-1787", in *Latin American Research Review* 21:2 (1986): 266-75.

⁵⁶⁸ Tyrer's thesis, done at the University of California at Berkeley, was published in Spanish as *Historia demográfica y económica de la Audiencia de Quito, 1600-1800*, Quito: Banco Central, 1988.

⁵⁶⁹ *Ibid.*, p.85.

⁵⁷⁰ John Super, "Partnership and Profit in the Early Andean Trade: The Experience of Quito Merchants, 1580-1610", in *Journal of Latin American Studies* 11-12 (Nov. 1979): 265-81.

⁵⁷¹ Tyrer, *Historia demográfica y económica de la Audiencia de Quito*, p.147. Tyrer places the peak of Quito textile production at 1690, just before the wave of epidemics, droughts and earthquakes noted above, and right in the midst of Potosí's long decline (for tables showing Potosí silver production registered between 1550 and 1720, see Bakewell, *Silver and Entrepreneurship in Seventeenth-Century Potosí*, p.17).

though difficult, was easier than either the camino real linking Popayán to Santafé de Bogotá or the one linking Quito to Loja. As Germán Colmenares has reminded modern students of early modern north Andean history, we must always be careful not to impose twentieth-century conceptions of borders, distance, time and money onto such primitive, tiny and pre-capitalist (I would say 'early capitalist') systems as existed in sixteenth- and seventeenth-century Quito and Popayán.⁵⁷² Goods traveled amazing distances even in the early post-conquest period, to be sure, but this was not an era of export enclaves in the modern sense. Only in the precious metals mining sector, according to Colmenares, was there even an approximation of such an early extractive economy which may have 'underdeveloped' specific regions. Popayán, though it lacked a dense indigenous population, became an important new market for Quito's produce with the rise of African slavery and the consequent rise in gold production. This difference in labor allocation--the gold districts of southern Quito never developed a slave base after indigenous decline--would lead to a greater regional economic divergence and foster renewed interdependence between Popayán and Quito during the seventeenth and eighteenth centuries. The crucial role played by labor, both Indian and African, in the mining industries of Quito and Popayán is the subject of the following chapters.

⁵⁷² Colmenares, "La formación de la economía colonial (1500-1740)", in Ocampo, *Historia económica de Colombia*, pp.13-47.

Glossary of Mining and Related Terms

- Acequia*. Irrigation canal used to divert water to stampmills and gravel washing pits.
- Almocafre*. Hooked iron or steel handtool used for scraping up fine gold-bearing sands.
- Almud*. Dry measure approximately equal to 4.625 liters.
- Arroba*. Weight measure, approximately equal to 11kg (25 lbs.).
- Barra*. Solid iron excavation bar, sharpened and flattened at one end.
- Barretón*. Wood-handled version of barra, with a more spatulate steel blade.
- Batea*. Shallow wooden gold pan usually fashioned by indigenous persons from tropical hardwoods.
- Canalón* (or *Canelón*). Narrow ground sluice excavated to hardpan, used in placering.
- Capitán de Cuadrilla*. Head mining specialist in charge of directing work group, or cuadrilla. Originally referred to head Indian curicamayo (see below) but later applied to African slaves.
- Casa de Fundición*. Site of royal smeltry, initially found in highland administrative cities but later moved to permanent mining towns.
- Castellano*. Term used for 'peso de buen oro' (see below) after late seventeenth century.
- Curicamayo*. An Indian gold mining specialist, originally associated with Inca economic enclaves.
- Desmunte*. Excavation of oxidized surface ores and deep placer benches using iron hand tools and diverted water streams.
- Estanque*. Earthen reservoir for water used in mining and milling.
- Fanega*. Dry grain measure equal to approximately 40 liters (1.5 bushels).
- Ingenio de Agua*. Water-powered stampmill, as opposed to *ingenio de sangre*, or mill powered by human or animal power.
- Mineraje*. Fees paid to a professional mine specialist or administrator.
- Mita*. Indian labor draft adapted by Spanish from Inca *mit'a*. *Mitayos*, or Indian draftees, were rotated into service in mines, public works and other tasks.
- Peones Concertados*. Free wage workers, usually Indians and free persons of color, brought together to complete a set of mining tasks. Usually compensated in kind rather than coin.
- Peso de Buen Oro*. A measure of gold of 22½k purity (93.75 fine) weighing approximately 4.6g; worth two silver *patacones* (pieces of eight) after mid-seventeenth century.
- Piedra de Toque*. Touchstone, a black silicate stone used to test streak of gold and silver alloys; used in conjunction with calibrated touchneedles (*punzones*) to determine purity.
- Pila*. dam made from timber and earth, used to retain water for use in canalones.
- Playador*. Itinerant stream panner.

Quinto Real. Crown's share of mining production; literally 'Royal Fifth', but rarely applied at this high rate to gold mining. Actual royalties ranged from 3% to 20% of total production, with a 10% rate being most common until the mid-seventeenth century.

Rescatador de oro. Itinerant trader who bartered merchandise for gold dust.

Socavón. Horizontal drainage and carriage adit used in hardrock mining.

Zurrón. Hide- or agave-fiber bag used to carry ore from shafts to surface.

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Archives and Abbreviations: ACC: Archivo Central del Cauca (Popayán)
 AGI: Archivo General de Indias (Sevilla)
 AMQ: Archivo Municipal de Quito
 ANHQ: Archivo Nacional de Historia, Quito

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