INTERNATIONAL FINANCE CORPORATION

ENVIRONMENTAL AND SOCIAL PERFORMANCE

ANNUAL MONITORING REPORT (AMR)

MONTANA EXPLORADORA DE GUATEMALA, S. A.
MARLIN PROJECT

REPORTING PERIOD: 2004

AMR COMPLETION DATE: MARCH 31, 2005

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1.0 INTRODUCTION AND BACKGROUND

The 2004 Annual Monitoring Report (AMR) is prepared pursuant to conditions of the Loan Agreement between Montana Exploradora de Guatemala, S. A. (Marlin) and the International Finance Corporation (IFC) (Investment Number 21766, June 30, 2004). Schedule 9 of the Loan Agreement specifies the terms and conditions of the AMR relating to Environmental (including social impacts and community development) and Health and Safety matters.

The AMR has been prepared to confirm compliance of the Marlin Project (currently in the construction phase) with the applicable national and local requirements, IFC environmental guidelines and social policies, and the Environmental and Social Impact Study approved for the Marlin Project. Specific components of the AMR are presented below:

- A description of all significant health & safety, environmental and social activities and events that occurred during the reporting period.

- Provision of additional information about activities (i.e., status of permits or other approvals, ongoing public consultation during operations, etc.).

- Quantitative performance monitoring data summaries in comparison to appropriate World Bank Group (WBG) and International Finance Corporation (IFC) guidelines and national requirements.

- An explanation of any cases of non-compliance with WBG/IFC guidelines or applicable regulatory limits that have occurred, identifying the cause and the corresponding corrective measures planned or underway to prevent future occurrences.

1.1 Annual Monitoring Report Certification

AMR Certification

IFC Project Identification: Marlin Project
IFC Project Sponsor: Glamis Gold Ltd.
IFC Investment Numbers: 21766
AMR reporting period: 01/01/2004 – 12/31/2004
Montana Exploradora de Guatemala, S. A. authorized representative: Milton Estuardo Saravia

Montana Exploradora de Guatemala, S. A. office physical address:
20 Calle 24-60 Zona 10, Oficina #20,
Guatemala, Guatemala
Telephone: 502 2385-6647
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The 2004 AMR was prepared by Blankenship Consulting LLC, an independent consulting firm. The social portions were based on information provided by Montana Exploradora de Guatemala, S.A. and Fundación Sierra Madre. The community update section was based on information contained in the *Censos Nacionales XI de la Población y VI de Habitación, 2002*, published by the Guatemalan National Institute of Statistics, and a key informant survey conducted by Certeza Consulting, an independent Guatemalan consulting firm. The environmental sections were prepared from information provided by Montana and from environmental monitoring reports prepared by Consultoría y Tecnología Ambiental, S.A., an independent environmental consulting firm.

The undersigned certify that the data contained in this AMR completely and accurately represent environmental and social issues for the Marlin Project during this reporting period, as per the Loan Agreement for IFC's investment number 21766, and further certify that analytical data summaries incorporated into this report are based upon data collected and analyzed in a manner consistent with the World Bank Group's *Pollution Prevention and Abatement Handbook*, *Monitoring*.

Montana Exploradora de Guatemala, S. A., *Milton Estuardo Saravia*	*Signature/Date*
Blankenship Consulting LLC *George Blankenship*	*Signature/Date*
Consultoría y Tecnología Ambienta, S. A.l *Dr.- Ing. Adrián Juárez Pineda*	*Signature/Date*

2.0 PROJECT STATUS

2.1 Brief History

Montana Exploradora de Guatemala, S.A. began mineral exploration activities in Guatemala during 1996, the year the Guatemalan government, through the Ministry of Energy and Mines, invited both domestic and foreign interests to conduct mineral exploration activities in the country. Although the majority of companies that accepted the invitation focused on mineral deposits in the eastern portion of the country, Montana took an interest in the structural geology and features in the western portion of Guatemala, including the volcanic chain and the Cuilco-Chixoy-Polochic fault, which they believed favored the formation of metallic mineral deposits.

Guatemalan mining law provides for three types of licenses for the exploration and extraction of minerals: Licencia de Reconocimiento (preliminary exploration), Licencia de Exploración (exploration) y Licencia de Explotación (exploitation).

In 1996, Montana began preliminary exploration and conducted extensive geological exploration activities (collection of rocks, soil and sediment, geologic mapping, etc.), in a variety of areas in the country, and on December 8, 1998 the deposit that became the Marlin Project was discovered. The name "Marlin" is derived from the name of a friend of the two Guatemalan geologists who discovered the deposit.

After the discovery and receipt of an exploration license, Montana began to explore the Marlin deposit more intensively, collecting more surface samples, digging and sampling trenches and studying the geophysical characteristics of the site. Montana also initiated discussions with the adjacent communities, informing them of their plans, and began to acquire land for a subsequent exploration drilling program to delineate the size and form of the deposit. The first 14-well exploration drilling program commenced in mid-2000 and Montana conducted a Q50 million ($6.3 million) exploration program. The Ministry of Energy and Mines issued an exploitation license for development and operation of the Marlin Project on November 27, 2003.

Montana Exploradora de Guatemala, S.A was founded by Montana Gold Corp of Canada with private capital, and was subsequently acquired by Francisco Gold Corp. in 2000, and again by Glamis Gold Ltd in 2002, both also Canadian companies.

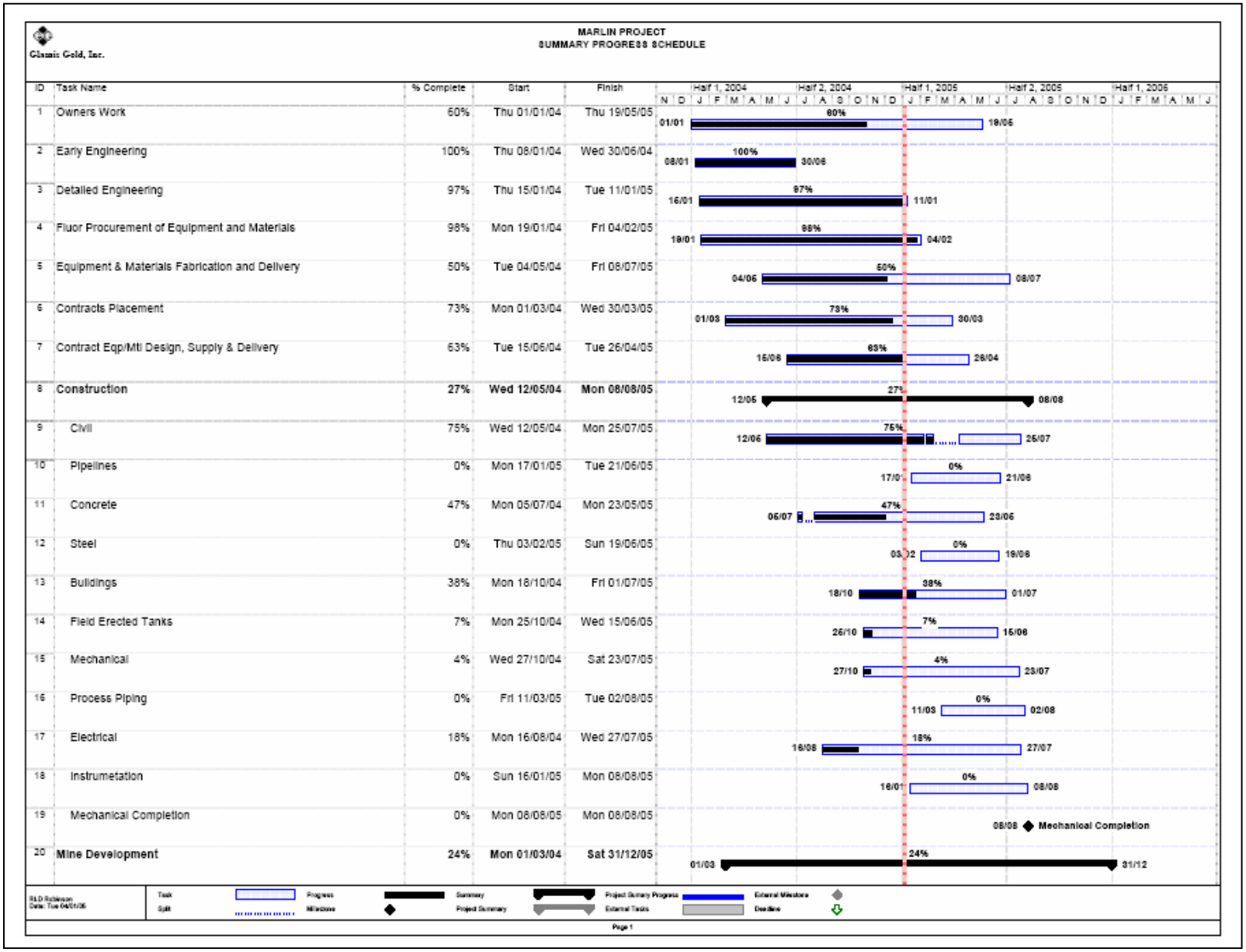
2.2 Current Project Status

The Marlin Project entered the construction phase during the second quarter of 2004. Mine commissioning activities are scheduled to begin in August 2005. As of the end of December, construction as a whole was 27 percent complete. Figure 1 displays Marlin Project construction status by task. The following present some construction highlights:

- Engineering and procurement were nearing completion at the end of 2004. All major equipment was on order.

FIGURE 1. SUMMARY PROJECT SCHEDULE: DECEMBER 2004

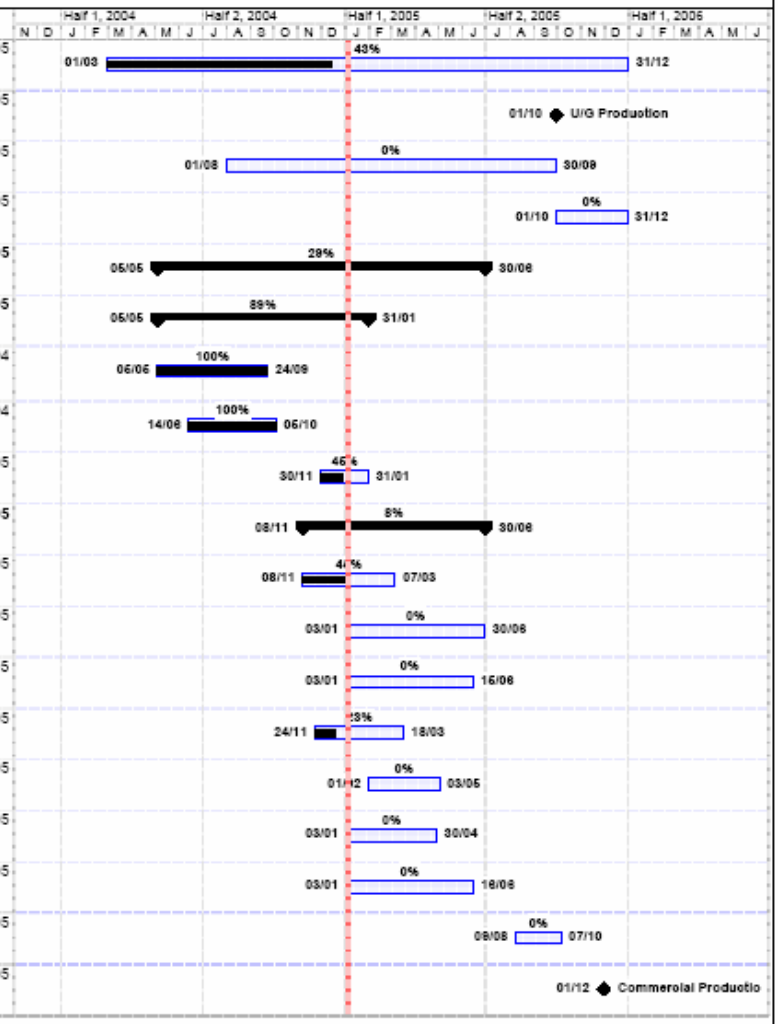
See next page for Figure 1 (pages 5 through 7).


Glamis Gold, Inc.
MARLIN PROJECT
SUMMARY PROGRESS SCHEDULE
Half 1, 2004
Half 2, 2004
Half 1, 2005
Half 2, 2005
Half 1, 2006
N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J
ID Task Name % Complete Start Finish
1 Owners Work 60% Thu 01/01/04 Thu 19/05/05
2 Early Engineering 100% Thu 08/01/04 Wed 30/06/04
3 Detailed Engineering 97% Thu 15/01/04 Tue 11/01/05
4 Fluor Procurement of Equipment and Materials 98% Mon 19/01/04 Fri 04/02/05
5 Equipment & Materials Fabrication and Delivery 50% Tue 04/05/04 Fri 08/07/05
6 Contracts Placement 73% Mon 01/03/04 Wed 30/03/05
7 Contract Eqp/Mtl Design, Supply & Delivery 63% Tue 15/06/04 Tue 26/04/05
8 Construction 27% Wed 12/05/04 Mon 08/08/05
9 Civil 75% Wed 12/05/04 Mon 25/07/05
10 Pipelines 0% Mon 17/01/05 Tue 21/06/05
11 Concrete 47% Mon 05/07/04 Mon 23/05/05
12 Steel 0% Thu 03/02/05 Sun 19/06/05
13 Buildings 38% Mon 18/10/04 Fri 01/07/05
14 Field Erected Tanks 7% Mon 25/10/04 Wed 15/06/05
15 Mechanical 4% Wed 27/10/04 Sat 23/07/05
16 Process Piping 0% Fri 11/03/05 Tue 02/08/05
17 Electrical 18% Mon 16/08/04 Wed 27/07/05
18 Instrumetation 0% Sun 16/01/05 Mon 08/08/05
19 Mechanical Completion 0% Mon 08/08/05 Mon 08/08/05
08/08 Mechanical Completion
20 Mine Development 24% Mon 01/03/04 Sat 31/12/05
Task
Split
Progress
Milestone
Summary
Project Summary
Project Summary Progress
External Tasks
External Milestone
Deadline
Page 1

Glamis Gold, Inc.

MARLIN PROJECT
SUMMARY PROGRESS SCHEDULE

ID	Task Name	% Complete	Start	Finish
21	U/G Development	43%	Mon 01/03/04	Sat 31/12/05
22	U/G Production	0%	Sat 01/10/05	Sat 01/10/05
23	Open Pit Development	0%	Sun 01/08/04	Fri 30/09/05
24	Open Pit Production	0%	Sat 01/10/05	Sat 31/12/05
25	**Tailings Dam**	**29%**	**Wed 05/05/04**	**Thu 30/06/05**
26	**Coffer Dam & Grout Curtain**	**89%**	**Wed 05/05/04**	**Mon 31/01/05**
27	Cut off Trench / Coffer Dam Construction	100%	Wed 05/05/04	Fri 24/09/04
28	Grout Curtain Construction (CPTR 13 to CPTR 11+30)	100%	Mon 14/06/04	Tue 05/10/04
29	Grout Curtain Construction (CPTR 11+30 to CPTR 1)	45%	Tue 30/11/04	Mon 31/01/05
30	**Phase 1 Tailings Embankment Construction**	**8%**	**Mon 08/11/04**	**Thu 30/06/05**
31	Foundation Preparation	45%	Mon 08/11/04	Mon 07/03/05
32	Embankment	0%	Mon 03/01/05	Thu 30/06/05
33	Embankment Instrumentation	0%	Mon 03/01/05	Wed 15/06/05
34	Impoundment and Access	23%	Wed 24/11/04	Fri 18/03/05
35	Seepage Collection System	0%	Tue 01/02/05	Tue 03/05/05
36	Low Level Outlet System	0%	Mon 03/01/05	Sat 30/04/05
37	Decant System	0%	Mon 03/01/05	Thu 16/06/05
38	Commissioning & Start-up	0%	Tue 09/08/05	Fri 07/10/05
39	Commercial Production	0%	Thu 01/12/05	Thu 01/12/05



RLD Robinson
Date: Tue 04/01/05

Task · Progress · Summary · Project Summary Progress · External Milestone
Split · Milestone · Project Summary · External Tasks · Deadline

Page 2

Glamis Gold, Inc.

MARLIN PROJECT
SUMMARY PROGRESS SCHEDULE

1 **Owners Work**
Some significant progress has been made with the owners earth works and we expect to catch up with the plan.

6 **Contracts Placement**

The contract period starts when Luis Lira (Contracts manager) receives sow specs & docs & dwgs to prepare paperwork to go out for bid.

9 **Civil**

Civil includes the following

- Rough Grading = 92%
- Final Grading = 0%
- Piping outside of Process Area = 0%

21 **U/G Development**
This taks includes the FW Ramp and shows as a percentage of planned footage. This works is currently slightly behind plan.

23 **Open Pit Development**
Includes the expansion of the stock pile, haul road construction and pre stripping.

24 **Open Pit Production**
Scheduled to begin just before commissioning of process plant, but we are giving earlier dates.

29 **Grout Curtain Construction (CPTR 13 to CPTR 11138)**
Minor delay, not anticipated to change planned completion date.

39 **Phase 1 Tailings Embankment Construction**
Substantial completion 13 June 2005, Final Payment 30 June 2005.

- Construction of the access road to the site was completed. The new bridge across the Río Cuilco was complete and accepting traffic. This bridge has been formally turned over to the Municipality of San Miguel Ixtahuacán. Construction of the access road inside Montana's property boundary had been pioneered at the end of 2004.

- The underground mine tunnel had advanced to 767 meters.

- Contract earthworks activities were 95 percent complete.

- Concrete installation was approximately 51% complete.

- Mobilization of the mechanical installation contractor was completed.

- Earthworks continued on the run of mine (ROM) stockpile area by company mobile equipment. The office/shop area earthworks were completed in December as well using company equipment.

- The east embankment area grout tests indicated some re-grouting was required. This has been completed and was tested in January. Grouting on the west embankment continued into 2005.

- The ANFO magazine building was completed.

- The permanent camp and construction warehouse facilities were substantially complete at the end of 2004, including water supply and sewage disposal systems.

- Construction of the 4.16 kV distribution systems was in progress at the end of 2004, with 67 out of a total of 77 poles installed. Stringing of the power cables commenced on November 25th 2004.

- The power line contractor received a letter from the Ministerio de Medio Ambiente approving the EIA (Estudio de Impacto Ambiental) for the power line. This letter allowed the contractor to begin construction of the 69kV power line.

- The acquisition of the right of way for the 25 km 69 kV power (171 towers) is virtually complete.

- Montana was negotiating a delivery contract with INDE to allow INDE to issue a construction permit for work in the Tejutla substation.

- The purchase order for pre-engineered buildings (truck shop/warehouse, MC/refinery, mill maintenance, reagent storage, and underground maintenance shop) was awarded and a contract for the installation of the buildings was issued. Installation will include structural, plumbing, HVAC and electrical.

2.3 Employment

At the end of December 2004, 1,527 workers were employed for the construction phase of the Marlin Project. As shown in Table 1 and Figure 2, 84 percent of all workers were Guatemalan residents; 57 percent were from the municipalities of San Miguel Ixtahuacán (San Miguel) and Sipacapa, where the project is located. Virtually all of the workers from San Miguel and Sipacapa were indigenous.

TABLE 1. YEAR –END MARLIN PROJECT EMPLOYMENT BY PLACE OF RESIDENCE					
	Place of Residence When Hired				
	San Miguel & Sipacapa	Elsewhere in San Marcos Department	Elsewhere in Guatemala	Outside Guatemala	Total
Montana	314	10	76	15	415
Montana Temporary	109	0	5	0	114
Contractors	450	40	284	224	998
Total	873	50	365	239	1,527

FIGURE 2. PERCENT OF YEAR-END CONSTRUCTION WORKFORCE BY RESIDENCE

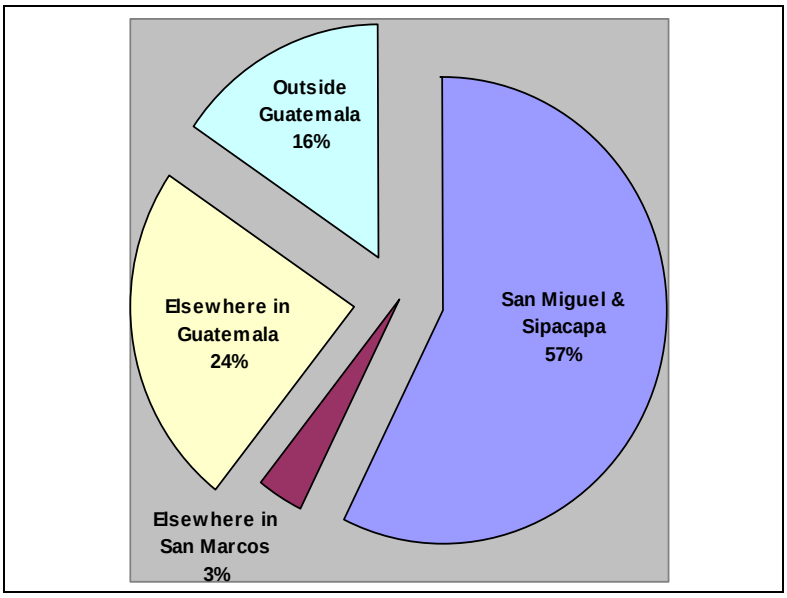
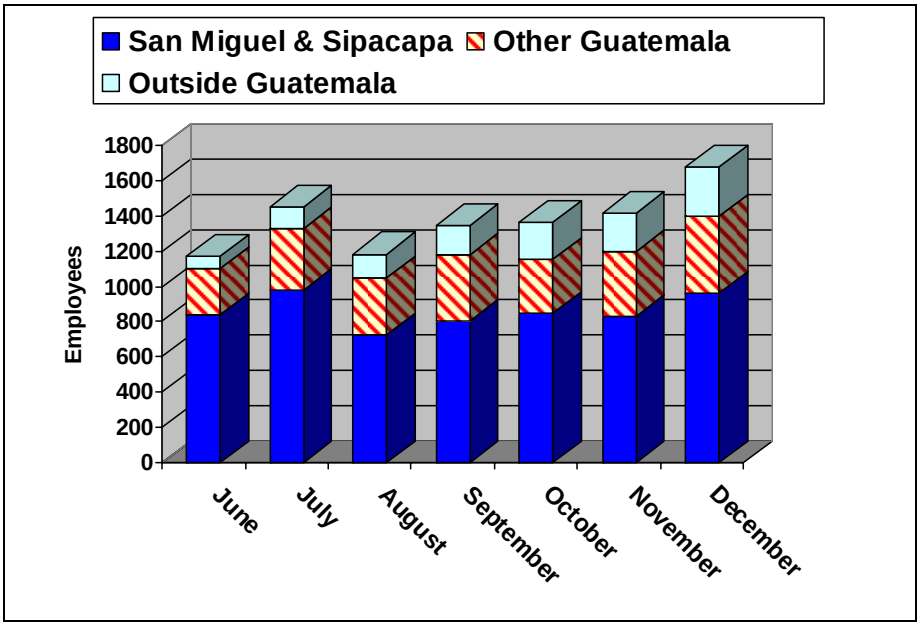


Figure 3 displays monthly employment statistics for June through December 2004, the period when construction activities began to peak. On average, 88 percent of the construction workforce was made up of Guatemalan workers, and 63 percent of all workers were from San Miguel and Sipacapa.

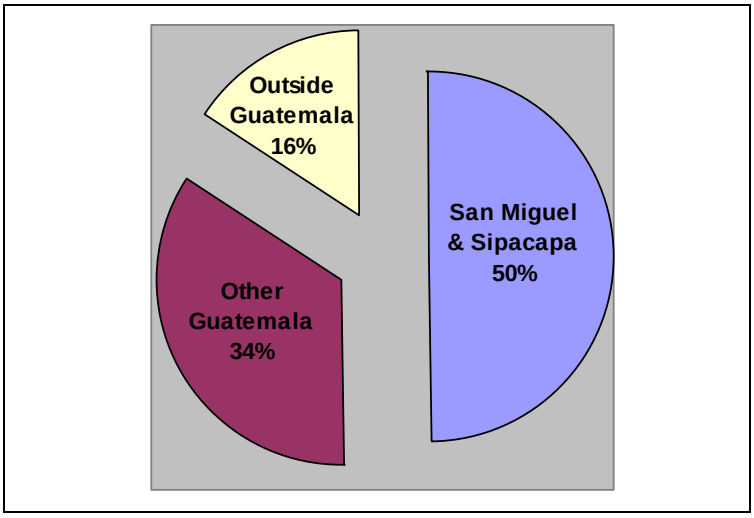
FIGURE 3. MARLIN PROJECT EMPLOYEES BY RESIDENCE: JUNE– DECEMBER 2004



2.4 Payroll

The 2004 payroll for the construction phase of the Marlin Project totaled Q38,705,944 or about US $4,868,000.[1] Of that amount, 84 percent ($4,097,000) was paid to Guatemalan employees, and 50 percent ($2,422,000) was paid to employees from San Miguel and Sipacapa (see Figure 4).

FIGURE 4. TOTAL 2004 PAYROLL BY EMPLOYEE'S PLACE OF RESIDENCE



2.5 Employee Benefits

Montana full-time direct employees receive the benefits listed below. Rotating employees[2] and their families receive health care treatment at the company health clinic, as do all residents of communities

[1] 2004 annual average exchange rate of Q7.95/$.
[2] Montana hired approximately 150 persons on a rotating basis in December 2004. Rotation, in which an employee works for several weeks/month, allows Montana to employ more local residents of communities.

near the project, but they do not receive life, medical or dismemberment insurance. Temporary employees are paid daily and receive no benefits.

- Health insurance for employees and their families.
- Health care: Marlin Project employees and their families can receive treatment at the health clinic located at the mine site.
- Life insurance.
- Accidental death and dismemberment insurance.
- Overtime pay.
- 14th salary bonus: a bonus equal to one month's salary for employees that have worked a full year (prorated for those that have worked for less than one year).
- Christmas bonus: also a bonus equal to one month's salary for employees that have worked a full year (prorated for those that have worked for less than one year), calculated from December 1 through November 30.
- 15 days vacation/year.
- Social Security.
- IRTRA (Instituto de Recreación de Trabajadores de la Empresa Privada de Guatemala), an institution which provides recreation facilities for employees of private entities.
- Transportation is provided to and from the mine site from a number of neighboring communities.
- Safety equipment: all Marlin Project workers are provided with the safety equipment required for their particular job.

2.6 Employee Training

The Marlin Project provides a variety of training for all employees. Table 2 displays training received during 2004, excluding environmental training, which is reported under Section 8.3 and health and safety training (received by all employees), which is reported under Section 10.2 of this AMR.

TABLE 2. MARLIN PROJECT TRAINING AND CERTIFICATIONS: 2004				
Division	**Number Trained**		**Training Description**	**Certification**
	Male	**Female**		
Operations	4	1	Caterpillar 777D 100-Ton Haul Truck Operations	Yes
Operations	3		16H Earthmover Operations	Yes
Operations	2		Bulldozer Operations	Yes
Operations	4		Front-end Loader Operations	Yes
Underground Mining	23		Underground Mining Operations	Yes
Human Resources		1	Labor Rights Refresher Course	Yes
Human Resources	1	1	Introduction to Visual basic	No
Accounting	7		Tax Refresher Course	No
Accounting	1		Refresher Course Decree 28-29	Yes
Accounting	1		Export and Assembly Refresher Course	Yes
Accounting	1		VAT Fiscal Credit Seminar	Yes
Purchasing	3		Tax Refresher Course	No

2.7 Purchasing

During 2004 Montana spent Q2,145,614 ($270,000) on goods and services in the area that includes San Marcos, Huehuetenango and Quezaltenango, and Q797,628 ($100,309) in San Miguel and Sipacapa. Both Montana and Fundación Sierra Madre are actively working with local businesses and residents to increase their capacity to provide goods and services to the project (see Sections 7.2.2 through 7.2.4).

2.8 Land Acquisition

Montana has acquired the land necessary to construct the Marlin Project. Montana purchased 392 separate parcels of land from a total of 254 owners, 60 of whom were women. The total surface area acquired was 18,035 cuerdas[3] or 1,947 acres. Parcel sizes ranged from 1 cuerda to 501 cuerdas[4]; the average parcel size was 46 cuerdas. Montana paid a total of Q72,138,307 ($9,092,168) for these parcels, or Q4000/cuerda ($4,671/acre). The average amount paid per parcel was $23,194.

TABLE 3. MARLIN PROJECT LAND STATUS						
Number of Parcels Purchased	**Number of Owners**	**Number of Women Owners**	**Total Area**	**Average Parcel Size in Cuerdas**	**Total Paid in Quetzales**	**Total Paid in Dollars**
392	254	60	18,035 cuerdas 788 hectares 1,947 acres	46	Q72,138,307	$9,092,168

Area not adjusted for slope.

[3] A cuerda equals 436.7 square meters or 0.108 acres.
[4] All land purchase dollar amounts are based on 2003 – 2004 average exchange rate of 7.93 quetzales/dollar.

2.8.1 Homes and Improvements

Montana paid for improvements on 125 of the parcels purchased for the Marlin Project. Improvements included crops, coffee, fruit trees, wells and water, houses and other structures. In some cases owners harvested crops after the sales occurred and in some cases owners dismantled improvements and took them when they moved.

TABLE 4. MARLIN PROJECT LAND ACQUISITION: PROPERTIES WITH IMPROVEMENTS

Number of Parcels w/ Improvements	Number of Owners	Number of Women Owners	Total Paid in Quetzales	Total Paid in Dollars
125	89	12	Q2,599,192	$327,597

There were 40 homes which served as primary residences for their owners on the land purchased by Montana. There were also some primary residences on land purchased by the Marlin Project's previous owner (see below). Of the 40 landowners with primary residences, 29 (73 percent) built or moved to other homes within the same community where their original land was located; 11 (27 percent) moved to other communities. Four homeowners exchanged their residences for those in the housing development built by Montana. Consequently, Montana's land acquisition has not resulted in widespread dislocation of local residents.

TABLE 5. PRIMARY RESIDENCES PURCHASED BY MONTANA

Number of Primary Residences	Number that Stayed within the Same Community	Percent	Number that Moved to a Different Community	Percent
40	29	73%	11	27%

Of the 40 primary residences purchased by Montana (or exchanged for houses in the development), 24 (60 percent) were located in San José Ixcaniche, 9 (22.5 percent) were located in San José Nueva Esperanza, 4 (10 percent) were located in Agel and 3 (7.5 percent) were located in Salem.

TABLE 6. LOCATION OF PRIMARY RESIDENCES PURCHASED OR EXCHANGED BY MONTANA

Number of Primary Residences	Primary Residences Located In			
	Agel	San José Nueva Esperanza	San José Ixcaniche	Salem
40	4	9	24	3

2.8.2 Compensation for Houses on Properties Purchased by Francisco Gold

Francisco Gold purchased 638 cuerdas for the Marlin Project before selling the concession to Montana. During the latter part of 2004, a group of land owners who sold land to Francisco Gold approached Montana with claims that Francisco Gold had promised to compensate them for their improvements. Although they had no credible documentation of these claims, Montana decided to honor them, and compensated them for the houses that were located on their property. In all there were 26 landowners who claimed that they had houses on the parcels sold to Francisco Gold; 16 were adobe houses with straw or metal roofs and dirt floors for which Montana paid Q80,000 ($10,061) each. The remaining 10 were ranchitos, essentially temporary houses constructed of poles and planks with straw roofs and dirt floors, for which Montana paid varying lesser amounts. Only 10 of the

houses were used as primary residences. All of these properties and houses were located in San Jose Nueva Esperanza and all owners of primary residences moved to other communities.

TABLE 7. MONTANA COMPENSATION FOR RESIDENCES ON PROPERTIES PURCHASED BY FRANCISCO GOLD

Number of Properties*	Casa Formal	Ranchos	Total Paid in Quetzales	Total Paid in Dollars
36	16	10	Q1,550,000	$195, 359

*All properties located in San Jose Nueva Esperanza.

2.8.3 Montana Housing Development

Montana constructed a housing development of 11 houses on company-owned land in San Jose Ixcaniche. The purpose was to provide housing for people who could not or preferred not to find or build housing on their own. Seven of the homes in the development have been purchased by landowners who sold their primary residences to Montana and 4 homes were exchanged with homeowners who had primary residences on land that Montana purchased.

3.0 SIGNIFICANT EVENTS

The following significant events occurred during 2004:

- July 19 through July 21, Montana Exploradora de Guatemala held a seminar program on mining in Guatemala City for the Guatemalan Ministry of Energy and Mines, the Ministry of Natural Resources and Environment, various universities and CALAS (a Guatemalan environmental non-governmental organization).

- September 26 through 28, Montana Exploradora de Guatemala and the Sierra Madre Foundation participated in an Inter-American Development Bank sponsored conference in Mexico City on corporate social responsibility. Montana's Project Manager was a presenter at one of the sessions.

- The Guatemalan Ministry of Energy and Mines held a two day mining forum in December 2004 that was attended by international experts in the field. The forum appears to have been very successful, and allowed varied groups to voice their concerns about mining in general. Anti-development groups held an "Alternative Forum" during one of the days.

- After the issuance of the Marlin Project exploitation license, a group led by several individuals from the Municipality of Sipacapa voiced opposition to the project. The group, many of whom live in communities not directly affected by the project, denounced the public consultation processes conducted by the Guatemalan government and Montana as inadequate, even though these processes are well documented and have been reviewed by the IFC and others.

  This group has linked with national and international anti-mining groups to disseminate information that highlights problems associated with mining projects that have not been operated, closed or reclaimed to today's international standards and ignores mining projects that have been operated in an environmentally and socially responsible manner. The group has also disseminated unsubstantiated assertions

about the Marlin project and its environmental and social impacts that are counter to the findings disclosed in the EIA&S and other documents submitted to and approved by the Guatemalan government and reviewed by independent experts and the IFC.

Since these individuals and groups have expressed their opinions in the press and, in some cases, in direct communications with Montana and the IFC, they are not presented in the AMR. However, it is important to say that Montana looks forward to continued constructive engagement with the Guatemalan environmental, human rights and indigenous communities and hopes that mechanisms such as the recent national mining forum and the newly appointed *Commission de Vigilancia Independiente de la Mineria,* which includes representatives from the major universities in Guatemala as well as a representative of ASOREMA, the association of environmental NGOs in Guatemala, will yield productive results for all participants.

- The ball mill shell left Puerto Quetzal on November 29 for a 7 day transit along the Pan American Highway and other routes to the project site. The transportation contractor had obtained all necessary permits to dismantle phone and electrical lines that needed to be disconnected to allow passage of this over-height load. The contractor had also obtained permission to dismantle two pedestrian overpasses that were too low to allow the shell to pass. When the truck approached the first overpass at Los Encuentros, a community approximately 100 kilometers by road from the Marlin Project site, the transportation company stopped to temporarily dismantle a pedestrian overpass to allow the truck to pass. A crowd of demonstrators appeared forcing the transportation company to stop work on the pedestrian overpass. One support vehicle was set on fire and four employees were injured, one with a broken jaw which required hospital treatment. The contractor removed his tractor and left the mill shell on the trailer at the side of the road several kilometers outside of Los Encuentros. Attempts were made to move the mill over the next days but each time the crowd returned. The mill shell was still at Los Encuentros at the end of this reporting period, however, the situation was resolved by the Guatemalan government in January of 2005. To the best of Montana's knowledge, the incident was the result of false information spread by one or more anti-mining groups that convinced local residents that the transported equipment was for an illegal mining operation near their community that would result in the sterilization of their agricultural lands and the drying up on their water sources including Lake Atitlan. Apparently, this incident led to one fatality in January of 2005, but there is no clear evidence that it resulted from the confrontation between police and demonstrators.

- December 14, Montana Exploradora made its first payment of forestry incentives which was warmly received and resulted in increased community interest in reforestation.

4.0 LAISON WITH EXTERNAL PARTIES

4.1 Guatemalan Monitoring Requirements for the Marlin Project

4.1.1 Ministry of Energy and Mines (MEM) Requirements

According to article 31 of the Mining Law, the exploitation license holder is required to prepare and submit an Environmental and Social Impact Statement (EIA&S) for proposed projects. Upon project approval, the license holder is required to comply with the recommendations contained in the EIA&S. Montana is required to comply with the terms of the approved EIA&S for the Marlin Project and the recommendations specified by MARN in its resolution 779-2003/CRMM/EM (this includes the monitoring proposed in the EIA&S).

4.1.2 Ministry of Environment and Natural Resources (MARN) Requirements

Resolution 779-2003/CRMM/EM of MARN requires that Montana fulfill the following:

1. Comply with all the indications and recommendations described in the EIA&S (this includes the monitoring proposed in the EIA&S),
2. Comply with all the requirements of the law and other institutions in regards to this project,
3. Control noise when it exceeds 90 dB(A) in the work areas, and
4. Allow MARN's Dirección General de Gestión Ambiental y Recursos Naturales to conduct environmental inspections and/or monitoring at any time.

The Marlin Project EIA&S proposed an environmental monitoring program which included the following parameters:

- Controlled discharges and liquid effluents from the process will be monitored every 3 months,
- Noise levels in the receptors closest to the Project will be monitored every 3 months,
- Ambient air quality (PM10) in eight (8) sampling stations will be monitored every 3 months,
- Water quality will be monitored every 3 months,
    - Surface water and sediment in rivers in five (5) sampling stations, underground water in three (3) sampling stations and springs,
    - Potable water,
- Aquatic biological resources in 3 sampling stations (Quivichil Creek, Cuilco and Tzalá Rivers) every 6 months,
- Terrestrial biological resources in three plots once a year,
- Forest coverage in the Project area every 2 years,
- Socioeconomics in the communities near the Project area every 3 months, and
- Opinion of the nearby communities every year.

Most of the monitoring parameters are compared to World Bank Guidelines[5], except for potable water which is compared to the values determined by the Guatemalan Standards Commission (COGUANOR). The results of the monitoring program must be presented to the regulatory agencies every 3 months, beginning with the construction phase of the Project.

4.1.3 Other Requirements

No other Guatemalan institutions require monitoring for the Marlin Project; however, the Ministry of Public Health and Social Assistance (MSPAS) is authorized to conduct water quality audits and the National Institute of Forests (INAB) may conduct field inspections to assess the implementation of the Forest Management Plan.

4.2 Ongoing Public Consultation and Disclosure

Montana has an ongoing Public Consultation and Disclosure Program for the Marlin Project. The objectives and elements of the program are described in the *Marlin Mining Project Public Consultation and Disclosure Plan*, which was submitted to IFC as a supporting document for the original loan application.

[5] World Bank Group, 1998. Pollution Prevention and Abatement Handbook.

4.2.1 Community Relations Group

One of the key elements of the PCDP is the *Community Relations Group*, made up of Mam and Sipakapense-speaking residents of the municipalities of San Miguel Ixtahuacán and Sipacapa and headed by a community relations specialist. The Community Relations Group has been trained to provide information about the project and to conduct meetings and facilitate participation of indigenous peoples at the community, organization and individual level. The initial focus was on the directly affected communities, but the public consultation and disclosure work of the Community Relations Group has been expanded over time to include many other communities in the municipalities of San Miguel and Sipacapa.

During 2004, the Marlin Project Community Relations Group held 100 discussions with a total of 6,400 persons. Most discussions were with communities and organizations within San Miguel and Sipacapa, although a small number were with organizations outside the affected municipalities. As shown in Table 8, during 2004 the Community Relations Group conducted 150 tours of the project for a total of 2,574 persons.

TABLE 8. SUMMARY OF PUBLIC CONSULTATION ACTIVITIES OF THE COMMUNITY RELATIONS GROUP

Consultation Type	Number of Consultations		
	2003	2004	TOTAL
Community Visits	79	100	179
Number of Persons	5,209	6,400	11,609
Visits to the Project	40	150	190
Number of Persons	815	2,574	3,389
Project Open House Days	2	0	2

The community visits and visits to the projects are documented in Excel spreadsheets with the following information:

- Date of the visit,
- Name of the community, organization or individuals that attended,
- Number of attendees,
- Reason for the meeting and/or comments about major topics discussed in the meetings.

These spreadsheets are available for review by IFC upon request.

4.2.2 Visits to the San Martin Mine in Honduras

Montana conducted 14 tours to the San Martin mine in Honduras during 2003and 2004. In addition to Marlin project staff, participants on these tours included:

- mayors of San Miguel and Sipacapa,
- various deputy mayors, community officials and committee members from communities in San Miguel and Sipacapa,
- officials of the Catholic Church,
- various Guatemalan ministry officials and staff,
- the Governor of San Marcos Department and various departmental officials and staff,
- local school officials and teachers,
- local health care officials and teachers,
- an official of an Indigenous organization,
- officials from other areas within Guatemala,
- business persons and community members from communities near the project site.

In all, 126 Guatemalan officials and local community members were given tours of the San Martin mine, not including Marlin Project employees, some of whom were also members of local communities. The tours provided participants the opportunity to see a working mine and to discuss community effects with local officials in a community adjacent the mine site.

4.2.3 Staff Contacts

In addition to these visits, a variety of Marlin Project personnel held numerous formal, informal and ad hoc meetings with community, departmental and national officials, NGOs and individuals. These meetings occur almost daily and address a variety of topics.

4.2.4 Public Communications

Montana has an ongoing public communications program that includes the following elements:

- *Periódico Horizontes:* An external newsletter with a circulation of 3,000, delivered by hand to households in communities near the project. Starting in September of 2003, six issues of Periódico Horizontes have been published. The newsletter includes articles on a variety of topics, including aspects of the Marlin Project, Fundación Sierra Madre programs and activities, community news, sports and an invitation to contact and consult with Marlin Project staff.

- *Volante (Flyers)s:* Short papers on a specific topic, which are widely distributed in communities near the project. They are used to provide timely information on topics such as job opportunities, the mining process and cyanide use and safety. Some flyers are in the form of animated drawings and one has been used to contest misinformation that was circulated in the community.

- *Boletín El Ingieniero:* An internal newsletter with a circulation of 1,000 focusing aspects of the Marlin Project, including progress, administrative issues, occupational health and safety, environmental programs and a request for opinions and recommendations. To date, three issues of El Ingieniero has been published, beginning in April 2004.

- *Folletos (Pamphlets)*: Illustrated pamphlets used to provide more detailed information about the Marlin Project, such as the phases of mining, mining benefits, environmental protection and social responsibility.

- *Videos*: Video taped presentations on a particular topic such as social contract, environmental responsibility, technical aspects of mining and opinions from leaders of communities near a Glamis mine in Honduras. So far four videos have been produced and circulated or shown to a variety of local and national audiences.

- *Newspaper ads*: Paid ads produced and circulated in national newspapers. Montana has produced a total of ten full page newspaper ads covering such topics as environmental responsibility, project benefits, social responsibility, indigenous and women's employment and sustainable development.

- *Radio spots:* Advertisements placed on a variety of radio stations covering topics such as technical, environmental, social, economic and legal aspects of the Marlin Project. To date, 10 spots have been purchased, and each spot was aired 8 times.

- *Sierra Madre Development News:* A monthly publication of Fundación Sierra Madre (FSM), printed in both Spanish and English, which highlights events and activities of the

Foundation's health care, vocational training and sustainable development programs. The newsletter features local participants in the Foundation's programs.

A list of topics of newsletters and other public communication methods and content is included in Attachment A. Copies of newsletters and ads are available on request.

4.2.5 Charitable Requests and Grievance Redress

Montana has established responsibility and resources for addressing charitable requests and grievances within the Community Relations Department.

4.2.6 Environmental Monitoring and Contingency Committees.

An Environmental Monitoring and Contingency Planning Committee was initiated in September of 2003 and the committee conducted several informational and training sessions. Committee membership included officials from local communities near the Project. However, when several officials left office after municipal elections, they also resigned from the committee. There were some questions as to what enforcement powers the group would have at its disposal. Another issue was the paying of per diems which is necessary but not acceptable as coming directly from the company. A second attempt to re-form the group was undertaken but key members were never named. Consequently the committee is currently inactive.

The IFC requested that Montana refrain from undertaking an independent consultancy to re-activate this group as it was felt this should be a sub-product of a larger scale stakeholder's process. The IFC has been negotiating with the World Bank and the Guatemalan Ministry of Mining to establish an independent environmental and social monitoring committee as part of a country-wide stakeholder's process. Given that funding has been delayed for this process, other options are being examined.

4.2.7 Fundación Sierra Madre Community Advisory Councils

FSM planned to establish Community Advisory Councils (CAC) during 2004, but because of time and resource constraints, the formation of the councils will occur during 2005. The CAC's will involve the communities, through representative councils, in the formulation of the Foundation's plans and strategies.

5.0 COMMUNITY CONDITIONS UPDATE

Some of the population and housing statistics used in the Marlin Project Environmental and Social Impact Assessment and in supporting documents for the IFC loan application were obtained from the 1994 Guatemalan census of population and housing. Since that time, 2002 village-level census data has become available. This section provides an update of population and housing statistics, with a discussion of changes which have occurred since 2002. Information about the changes was obtained from key informant interviews conducted with a variety of local officials and community members in each community during February 2005.

5.1 Population

Table 9 displays 2002 census population and ethnicity information for the two municipalities and their *cabecera municipales* (municipal seats) and for the smaller villages located near the Marlin Project.

The 2002 census information reflects baseline conditions, about a year before mine construction began. San Miguel Ixtahuacán, the municipality where the majority of the project is located, had a population of almost 30,000 people, 98 percent of whom were Mam-Mayan. A small portion of the Marlin Project is located in the village of Salem, which is in Sipacapa, the municipality located on the

southeastern boundary of San Miguel. Sipacapa had a 2002 population of just over 14,000, about 77 percent of whom were either Sipakapense-Mayan or Mam-Mayan.

The population in the six smaller communities near the Marlin Project (excluding the municipal seats of San Miguel and Sipacapa, which are located some distance from the project), was 2,978, according to the 2002 census. As shown in the table, a large percentage of the non-indigenous population in each municipality lived in the municipal seat. In the villages near the project site, the percentage of indigenous peoples was between 98 and 100 percent in 2002.

TABLE 9. POPULATION IN COMMUNITIES NEAR THE MARLIN MINING PROJECT

Community	Category	2002 Population	Ethnicity		
			Indigenous	Non-Indigenous	Percent Indigenous
San Miguel Ixtahuacán	**Municipality**	**29,658**	**29,036**	**622**	**98%**
San Miguel Ixtahuacán	Cabecera Municipal	2,559	2,209	350	86%
Agel	Aldea	659	659	0	100%
San José Ixcaniche	Caserío	491	491	0	100%
San Jose Nueva Esperanza	Caserío	429	415	14	98%
Salitre	Aldea	522	518	4	99%
Siete Platos	Caserío	594	594	0	100%
Sipacapa	**Municipality**	**14,043**	**10,845**	**3,198**	**77%**
Sipacapa	Cabecera Municipal	623	322	301	52%
Salem	Caserío	283	280	3	99%

Source: Republica de Guatemala, Instituto Nacional de Estadística, Censos Nacionales XI de la Población y VI de Habitación, 2002

Based on information obtained from key informant interviews, there has apparently been little population change during the past two years. A few people who sold land with primary residences to Montana have moved to other communities, but most remained within their original community.

Although population appears to have remained stable, the key informant interviews indicated that many people in the four communities that border the project (Agel, San José Ixcaniche, San José Nueva Esperanza and Salem) who typically took their families to the coast for the coffee or sugar cane harvests have remained at home year-round, as a result of employment and economic opportunities associated with the Marlin Project.

5.2 Housing

Table 10 displays census housing counts for communities near the Marlin Project and for the municipalities and pueblos of San Miguel and Sipacapa.

TABLE 10. HOUSING BY COMMUNITY BY TYPE: 2002

Municipality/Community	Community Classification	Total	Housing Type		
			Casa Formal	Rancho	Other
San Miguel Ixtahuacán	**Municipality**	7,054	6,499	205	350
San Miguel Ixtahuacán	Cabecera Municipal	654	328	29	297
Agel	Aldea	197	195	2	0
San José Ixcaniche	Caserío	126	123	3	0
San Jose Nueva Esperanza	Caserío	118	0	0	0
Salitre	Aldea	152	147	4	1
Siete Platos	Caserío	155	143	12	0
Sipacapa	**Municipality**	3,366	3,225	129	12
Sipacapa	Cabecera Municipal	208	207	0	1
Salem	Caserío	74	70	4	0

Source: Republica de Guatemala, Instituto Nacional de Estadística, Censos Nacionales XI de la Población y VI de Habitación, 2002

Table 11 displays the number of new houses in selected communities near the mine site. Information for the table was collected in key informant interviews and corroborated by observations of the Marlin Project Community Relations Group, who are members of the affected communities.

TABLE 11. NEW HOUSES CONSTRUCTED IN SELECTED COMMUNITIES

Community	2002 Census Total Houses	New Houses 2004	Marlin Project Related				
			Houses Built by People Who Sold Land* to Montana	Houses Built by Montana for People Who Sold Land w/ Houses	Houses Built by Marlin Project Workers	Total Marlin Project Related	Percent Project Related New Houses of 2002 Total Houses
Agel	197	21	10	0	11	21	11%
San Jose Ixcaniche	126	46	29	11	6	46	37%
San Jose Nueva Esperanza	118	20	8	0	6	14	12%
Salitre	152	32	14	0	0	14	9%
Siete Platos	155	4	4	0	0	4	3%
Salem	74	12	12	0	0	12	16%
TOTAL	**822**	**135**	**77**	**11**	**23**	**111**	**13.5%**

*Note that some who sold land to Montana also work for the company; these are not double counted. Also some landowners who sold land to Montana have built homes in communities more distant from the project area, which are not included in this table.

A total of 111 new houses are directly related to the Marlin Project. In San José Ixcaniche, project-related new houses amounted to 37 percent of 2002 housing stock.

5.3 Basic Utilities

Table 12 presents information about houses served with basic utilities (water, sewage facilities and electricity) in towns near the project area and in the municipal pueblos of San Miguel and Sipacapa.

According to the 2002 census, the percentage of houses that had water service ranged from 50 percent in the pueblo of Sipacapa to a low of 14 percent in Siete Platos. Very few houses had sewage facilities; 23 percent in Sipacapa and 17 percent in San Miguel. The percentage of houses with sewage facilities in the smaller communities near the project site ranged from zero to two percent. Electricity was more prevalent, ranging from a high of 84 percent in San Miguel to a low of 52 percent in Agel.

Montana has upgraded basic utilities in some communities, including:

- chlorination systems in the municipal water systems of San Miguel and Sipacapa and training for water system operators;
- piping and accessories to improve the water distribution system in San Jose Ixcaniche,
- earthwork for improvements to the Agel water system; and,
- both Montana and FSM have provided latrines in a number of the smaller communities.

TABLE 12. HOUSES WITH BASIC UTILITIES, BY COMMUNITY

Municipality/ Community	Category	Total Houses	Utilities							
			Water		Sewage		Electricity		Total Dwellings w/ Utilities	
			#	%	#	%	#	%	#	%
San Miguel Ixtahuacán	**Municipality**	7,054	3,342	47%	150	2%	3,029	43%	4,644	66%
San Miguel Ixtahuacán	Cabecera Municipal	654	243	37%	110	17%	487	74%	550	84%
Agel	Aldea	197	76	39%	1	1%	47	24%	102	52%
San José Ixcaniche	Caserío	126	62	49%	0	0%	5	4%	77	61%
San Jose Nueva Esperanza	Caserío	118	57	48%	0	0%	37	31%	68	58%
Salitre	Aldea	152	66	43%	3	2%	72	47%	89	59%
Siete Platos	Caserío	155	21	14%	1	1%	8	5%	90	58%
Sipacapa	**Municipality**	3,366	1,557	46%	54	2%	1,045	31%	2,246	67%
Sipacapa	Cabecera Municipal	208	103	50%	48	23%	89	43%	112	54%
Salem	Caserío	74	28	38%	0	0%	6	8%	43	58%

Source: Republica de Guatemala, Instituto Nacional de Estadística, Censos Nacionales XI de la Población y VI de Habitación, 2002

5.4 New Businesses

Based on information obtained during the February 2005 key informant survey, 49 businesses have been started or expanded in communities near the Marlin Project (see Table 13). Of these, 17 (37 percent) have a direct connection to the Marlin Project, i.e., the business provides goods or services to the project or the owner sold land to the project or works for the project. However, it is likely that all business, new and old, benefit to varying degree from the increased economic activity generated by the project.

TABLE 13. NEW AND EXPANDED BUSINESS IN SELECTED COMMUNITIES NEAR THE PROJECT SITE

Community	New Business Type	Number
San Miguel Ixtahuacán	Hotel	1
	Expansion of Cooperative	1
	Café	3
	Branch Bank	1
	Expansion of Grocery Store	3
	Taverns	5
Agel	Store	2
	Sales of Goods to Project	3
	Bicycle Store	1
San Jose Ixcaniche	Store	6
	Store Expansion	1
San Jose Nueva Esperanza	Store	2
	Hardware Store	1
	Store Expansion	2
	Café	1
	Tavern	1
Salitre	Store	1
	Brick Making	2
Sipacapa	Store	6
	Expansion of Cooperative	1
	Gasoline Sales	1
Salem	Store	3
	Gasoline Sales	1
TOTAL		49

5.5 Schools

Information about school enrollment was collected from schools in each community. Table 14 displays 2002 and 2004 enrollment for schools in villages near the project site.

TABLE 14. ENROLLMENT IN SCHOOLS NEAR THE MARLIN PROJECT: 2002 & 2004

Community/School	2002 Ending Enrollment	2004 Ending Enrollment	Difference	Percent Difference
San Miguel Ixtahuacán				
Agel	208	205	(3)	-1%
San José Ixcaniche	97	127	30	31%
San Jose Nueva Esperanza	57	69	12	21%
Salitre	208	261	53	25%
Siete Platos	N/A	129	n/a	n/a
Sipacapa				
Salem	58	66	8	14%

School enrollment increased substantially during the two year period in every community near the project site except for Agel,[6] which experienced a slight decrease, and possibly in Siete Platos,[7] which did not have 2002 enrollment data available. Although a detailed analysis has not been conducted, information from key informant interviews indicates that the increase in enrollment is in large part due to fewer families traveling to the coast for work, as a consequence of mine-related employment and income. Perhaps more important is that children are completing the school year and not leaving due to labor migration.

5.6 Health Care

Montana is in the process of developing a comprehensive health baseline for the municipalities of San Miguel and Sipacapa. Currently, a consistent set of health care indicators is not available for all villages near the project. Also, because of limitations in the provision and coverage of health care services, the isolation of many parts of the area, and the high level of poverty, many people do not seek health care and therefore some illnesses and traumas are unreported.

The health baseline is proceeding on two fronts. FSM/APROSAMI conducted a health census in 2003 and is currently finalizing a health census for some villages in Sipacapa.

Montana is finalizing plans with GETSA (Gestión y Tecnología en Salud) to carry out a longitudinal health study that will include a health baseline for the municipalities of San Miguel and Sipacapa. The Health Baseline Study is been coordinated and validated by the Ministry of Health of Guatemala and by international and national experts.

The results of the Health Baseline study will provide information about the health conditions and services prior to the operation of the Marlin Mining Project. It will also provide both technical information to better plan Montana's support of the local health system in coordination with the Ministry of Health, and a platform to implement a health monitoring system that will be useful for Montana and the Ministry of Health during the life of the Marlin Project. The Study is also intended to identify and measure any causality between the mineral extraction process and health related

[6] Agel school officials believe that some children transferred to a new school that opened nearby.
[7] Siete Platos officials remarked that like other communities, more families stayed in the community in recent years, so that enrollment may have increased in that community as well.

problems in the area of influence of the Marlin Project. It is anticipated that the information developed in the study will justify a higher level of health care and development of a Level I health center in San Miguel.

The survey conducted for the Health Baseline may also include a broader range of questions, including some key social indicators, some attitudinal indicators regarding the Marlin Project, and some consumption indicators to measure poverty reduction. Montana is currently consulting with IFC to determine the final scope of the survey portion of the study.

6.0 MARLIN PROJECT ROLE IN POVERTY REDUCTION

The IFC's mission is to "*promote sustainable private sector investment in developing countries, helping to reduce poverty and improve people's lives*." The Marlin Project Social and Community Development Programs, described in the *Indigenous Peoples Development Plan* submitted as part of the IFC loan application, includes activities intended to ensure that residents of communities near the project site will share in the benefits of the project in a manner that substantially reduces poverty and improves their lives. This section of the AMR demonstrates Marlin Project progress in achieving that goal.

In February of 2003, the World Bank released "*Poverty in Guatemala*" [8] a five-year comprehensive analysis of poverty in Guatemala conducted through the Guatemala Poverty Assessment Program (GUAPA). The study's three main objectives were to 1) conduct a multi-dimensional analysis of poverty in Guatemala using both quantitative and qualitative data; 2) examine the policies of government spending and policies on the poor; and 3) use the empirical findings of the report to identify options and priorities for poverty reduction in the future.[9]

The Priority Actions for poverty reduction contained in the study include the following:

1. *Promoting economic growth*: The study notes that "In this context, the main engine of growth is likely to come from the private sector" and that priority actions should include "promoting growth with special emphasis on sectors that are likely to generate substantial employment for the poor." Activities which could support growth in non–farm activities in rural areas include:

    a. increasing and improving the targeting of investments in education and technical training;

    b. increasing investments in transport and basic infrastructure, which are crucial for the diversification, growth and inclusion of the poor in the rural economy; and,

    c. policies that promote micro-, small- and medium-enterprises (MSMEs), a segment of the private sector that tends to generate a lot of employment.

2. *Investing in education*, *with priority actions to improve quality and access to pre-primary and primary education.*

3. *Investing in health*, *with an emphasis on expanding access and usage using both supply- and demand-side interventions.*

4. *Integrating actions to reduce malnutrition into the basic health-care package*.

5. *Reducing isolation and improving communications by investing in rural transport and roads*.

[8] Poverty in Guatemala, Report No. 24221-GU. World Bank. February 20, 2003.
[9] Ibid, Executive Summary, p.i.

6. Improving governance and the effectiveness of the public sector.

The study also identifies priority target groups for poverty reduction, including (a) poor and malnourished children; (b) poor women and girls; (c) poor indigenous households; (d) the rural poor; and (e) specific geographic areas including the Department of San Marcos.[10]

The following provides brief highlights of Marlin Project social and community development activities and outcomes which correspond to each of the GUAPA priority actions for poverty reduction. Each aspect of the Marlin Project Social/Community Development Program is presented in detail in subsequent sections of this AMR.

1. Promoting Economic Growth

The Marlin Project has promoted economic growth in the following ways:

a. **Payroll**: The 2004 total payroll for the Marlin Project totaled Q38,705,944 or about US $5,007,000.[11] Of that amount, 84 percent was paid to Guatemalan employees, and 50 percent has been paid to employees from San Miguel and Sipacapa, virtually all of whom are indigenous and poor.

b. **Purchasing**: During 2004, the Marlin Project spent over Q798,000 ($100,000) in San Miguel and Sipacapa. Montana has identified local and regional suppliers for many purchases and has actively worked with some contractors and vendors to increase their capacity for contracting with the mine.

c. **Land Acquisition**: To date, Montana has paid Q72,138,307 ($9,092,168) for land and improvements. In general landowners received about eight times the going rate for comparable land. Virtually all of the landowners who received payments have been indigenous and 16 percent have been women. The average payment (not including payments for improvements) has been Q184,026 or $23,000. In some cases landowners have replaced the largely unproductive land in the project area with land better suited for agriculture, other landowners have built or improved houses and a number have started new business enterprises.

d. **Training**: Montana has provided vocational and technical training to a number of local indigenous residents to qualify them for technical jobs at the mine. In 2004, 52 employees received vocational training for operations jobs, not including health and safety, first aid and accounting courses. Fundación Sierra Madre (FSM, described in Section 7.2) has aligned with a Guatemalan government vocational training agency, INTECAP, to provide vocational training both for potential workers at the Marlin Project and for a variety of MSME enterprises which may contract with the mine, or supply goods and services to other local or regional markets. In 2004, FSM coordinated 19 training courses with 231 participants, 72% of which (167) were indigenous women.

2. *Investing in education, with priority actions to improve quality and access to pre-primary and primary education.*

The Marlin Project has contributed to education in the following ways:

[10] Ibid, Executive Summary, pp.x – xiii
[11] 02/16/05 exchange rate of 0.129366

a. Montana has funded salaries for teachers at nine schools, performed improvements on eight schools and provided construction materials for four schools in communities near the project in 2004. Funding for teacher salaries has significantly increased in 2005 due, in part, to the Ministry of Education's inability to contract the necessary number of teachers.

b. School enrollment increased substantially in 4 of the 6 communities nearest the project site between 2002 and 2004, showing increases of 14 to 31 percent over the two year period. Although a detailed assessment has not yet been performed, key informant interviews indicate that the primary reason for this increase is that fewer people traveled to the coast for work, in large part because of employment and economic opportunity associated with the Marlin Project.

3. *Investing in health, with an emphasis on expanding access and usage using both supply- and demand-side interventions*.

   Marlin Project health care activities include the following:

   a. FSM, in conjunction with its partner APROSAMI, has renovated 12 health care centers and 9 medicine supply stores in the small villages near the project site.

   b. FSM and APROSAMI provided basic health services and training to more than 10,000 people in 14 communities surrounding the Marlin Project.

   c. Health fairs have been held in both San Miguel Ixtahuacán and Sipacapa.

   d. During 2004 FSM/APROSAMI added one doctor and a nurse's aide to its health care staff.

   e. Montana installed chlorination systems in the municipal water supplies of San Miguel and Sipacapa, and trained municipal staff in their use.

   f. Montana and FSM installed a total of 23 latrines in the small villages near the mine site.

4. *Integrating actions to reduce malnutrition into the basic health-care package*.

   FSM and APROSAMI have given a number of classes on prenatal care and prevention of childhood illnesses, which have included segments on nutrition.

5. *Reducing isolation and improving communications by investing in rural transport and roads*.

   a. Montana built a bridge and developed a road that leads from the project area to Highway CA1, also known as the Pan American Highway, which provides primary access from northwestern Guatemala to major commerce centers such as Huehuetenango, Quezaltenango and Guatemala City. These road improvements substantially reduce the time it takes to travel to these commercial centers from communities in the Marlin Project area and the bridge allows year-round access (previously, the river could not be crossed during periods of high flow). Most important, the new road provides access for a number of previously isolated villages.

b. Montana also improved and constructed a bridge on a non-project road, which now provides direct access between Sipacapa and San Miguel Ixtahuacán. Ready access to the larger market in San Miguel was frequently cited as one of the primary benefits of the project to date during Sipacapa key informant interviews.

c. A number of local residents have used proceeds from land sales to buy trucks and buses and enter the transportation business. Moving people and goods from communities near the mine to markets and major cities is currently much easier and less expensive than before the mine arrived.

6. *Improving governance and the effectiveness of the public sector.*

   FSM/CDC provided a CDC Volunteer Advisor (VA) to the municipality of San Miguel Ixtahuacán to assist the municipality in its ability to implement short- and long-term plans. The main product of the VA assignment was a needs-assessment of the municipal government, with a list of practical, hands-on recommendations and implementation strategies, divided into four categories: municipal administration; finance; community participation; and environment. Many of the recommendations focused on implementing the *Ley de los Consejos de Desarrollo Urbano y Rural*, a law that was drafted during Guatemala's most recent peace process to promote decentralization and local participation in political matters.

7. *Priority target groups for poverty reduction, including indigenous households and women.*

   Montana's achievements in this area include:

   a. As of the end of December, 58 percent of Montana's workforce or 873 workers were indigenous residents of local communities.

   b. The more than 10,000 residents of the project area who received health care services from FSM/APROSAMI in 2004 were virtually all indigenous and a large percentage were women who received prenatal and maternal care and training.

   c. The 231 participants of FSM training courses in 2004 were virtually all indigenous and 72 percent (167) were women.

   d. FSM/FAFIDESS inaugurated 17 communal banks with 311 members in 2004, all of whom are indigenous women.

7.0 COMMUNITY/SUSTAINABLE DEVELOPMENT

7.1 Marlin Project Community Development/Small Grants Program

Community Development/Small Grant projects are administered by the Marlin Project Community Relations Director. During 2003 and 2004, Montana participated in 108 separate community development projects in San Miguel Ixtahuacán, and 41 in Sipacapa (see Table 15).

TABLE 15. MONTANA COMMUNITY DEVELOPMENT PROJECTS: 2003 – 2004

Municipality	Number of Projects	Value of Projects/ Quetzales	Value of Projects/ Dollars*
San Miguel Ixtahuacán	108	4,394,215	553,838
Sipacapa	41	1,492,332	188,091
Total	149	Q 5,886,547	$741,929

*2003 -2004 average exchange rate of Q7.93/$

Montana contributed Q5,887,547 ($742,000) to these projects. Contributions included cash, equipment, materials, supplies and use of vehicles and heavy equipment. Types of projects included improvements to roads and construction of a bridge (non-project related), improvements to municipal, school and church facilities, funding for teachers and school supplies, the provision of materials for village improvement projects, and a variety of charitable contributions. A complete list of projects is provided in Attachment B.

7.2 Sustainable Development: Fundación Sierra Madre[12]

In July 2003, Glamis Gold – through its Guatemalan subsidiary, Montana Exploradora – hired Citizens Development Corps (CDC) to design and implement an integrated community development program (ICDP) for the communities adjoining the Marlin Project. The primary goal of the ICDP program is to create the foundation for sustainable multi-sectoral development that will improve the quality of life of these communities in the immediate future and beyond the life of the mine.

The ICDP is managed by CDC and implemented through the Fundación Sierra Madre, a Guatemalan NGO set up specifically to help create local ownership for the program. Since FSM is managed by Guatemalans, it is part of the local community and plays an integral role in building local capacity and promoting program sustainability. FSM is based in San Miguel Ixtahuacán; during 2004 a Foundation office was established in Sipacapa.

CDC has forged partnerships with other organizations in order to execute specific objectives of the ICDP. The main ICDP partners include:

- APROSAMI (Asociación de Promotores de Salud de San Miguel Ixtahuacan), a San Miguel-based community health organization;[13]
- INTECAP (Instituto Técnico de Capacitación y Productividad), a state-run entity that offers vocational trainings; and

[12] Much of the information in this section is excerpted from CDC/FSM quarterly reports and other foundation documents.

[13] Project Concern International (PCI) was brought on to develop health activities, alongside its local Guatemalan counterpart, APROSAMI. During 2004, FSM and APROSAMI signed a Memorandum of Understanding, and the foundation hired a physician and began monitoring and overseeing the APROSAMI-led health activities directly.

- FAFIDESS (Fundación de Asesoría Financiera a Instituciones de Desarrollo y Servicio Social), a Guatemalan micro-finance institution (MFI) that coordinates the program's communal banks.

These partnerships, which were formalized in 2004 and will continue through 2005, were created as a way to bring an integrated strategy to program implementation while maximizing the results of each program component.[14]

The Integrated Community Development Program (ICDP) has four main objectives:

1. Improve access to and quality of health services for men, women and children.

2. Increase economic opportunities by strengthening family/micro economic production.

3. Promote environmental awareness.

4. Develop institutional capacity and visibility of Foundation Sierra Madre, its partners and strategic public institutions.

Another important ICDP strategy has been to leverage additional funding to complement program objectives. In 2004, the program received grants from two outside sources – AGEXPRONT/USAID and IFC/CCF – which increased programmatic results, especially in the area of economic development.

A results matrix for FSM goals and achievements is presented in Attachment C. During 2004, FSM conducted the following activities:

7.2.1 Health Care

FSM and APROSAMI provided basic health services and training to more than 10,000 people in 14 communities surrounding the Marlin Project, through the community health centers it renovated at the end of 2003. Services and key events included the following:

- FSM/APROSAMI presented the results of their 2003 San Miguel Ixtahuacán Health Baseline study to community leaders and other program stakeholders.

- FSM renovated 12 health centers and 9 small medicine shops in the villages adjoining the Marlin Project. These facilities will allow local residents to seek basic medical attention and obtain medicine without having to travel to San Miguel.

- FSM installed 23 latrines in villages near the project area.

- APROSAMI organized a min-health fair in Máquivil village, at which 160 people received medical treatment, including 74 children treated at the pediatric clinic.

- FSM/APROSAMI organized and held a Health Fair in San Miguel Ixtahuacán on May 18-19. The Fair provided medical services to more than 500 local residents from 25 villages and towns. Many local organizations helped the *Fundación Sierra Madre* to promote and administer the event, including the Health Center of San Miguel, *Casa Materna* of Huehuetenango (a women's health clinic run by PCI), *Intervida* (a local health organization

[14] CDC/FSM 2005 Work Plan

that "donated" a dentist for the first day of the Fair) and health volunteers from local communities. The Marlin Project provided transportation services to and from the health fair, which enabled many people who usually only come to San Miguel for the Sunday market to make the special trip.

- *FSM* organized two health fairs in October and December. The first, a woman's health fair held on October 6-7 in San Miguel and the nearby villages of Sícabe and El Triunfo, provided general health consultations to more than 300 people, as well as OB/GYN services to approximately 187 women. The *Feria de la Vida, el Color y el Sabor*, held in Sipacapa on December 17, brought together several health organizations, such as APROFAM, PCI, Intervida and APROSAMI, whose medical personnel conducted 112 medical consultations, among other services.

- On May 1, APROSAMI hired a nurse's aide, thereby increasing its capacity to deliver services to the ICDP communities. The aide is helping APROSAMI's senior nurse treat patients in the newly renovated community health centers, and is also responsible for conducting the pap-smear exams.

- In June, APROSAMI trained its five community facilitators in education and prevention of diarrhea, including solar disinfection as a water purifying method (known as SODIS in Spanish). This training was in response to the baseline study findings released last quarter, which confirmed that diarrhea is one of the biggest medicals problems of the region.

- In June, FSM hired a physician to oversee and coordinate the health program's activities. One of the physician's first activities was to conduct a health diagnostic in San Miguel Ixtahuacán and Sipacapa.

- One of the FSM physician's first service delivery decisions was to integrate APROSAMI into the municipal-wide vaccination campaign by equipping the two APROSAMI nurses with vaccine kits, which they administered to the 14 communities during the planned November and December outreach visits.

- In December, the Foundation coordinated a municipal-wide health census in Sipacapa, the results of which will help guide the program's health strategy and service delivery in that region in 2005.

Table 16 displays a list of FSM/APROSAMI health activities in 2004 and the number of people served.

TABLE 16. FSM/APROSAMI HEALTH ACTIVITIES DURING 2004

HEALTH ACTIVITY	2004 TOTAL
Direct Health Service and Family Planning	
Pre-natal consultations conducted	397
Referrals of HRP made	12
Newborns receiving treatment	516
Children < 6 years-old receiving treatment	1324
Cases of diarrhea in children < 6 years detected	183
Cases of ARI in children < 6 years	376
Cases of pneumonia detected	85
General consultations conducted	3636
High-risk cases detected and referred	71
Minor surgery	94
Emergencies detected	24
Information, Education, Communication	
Talks on pre-natal care	177
Talks on HIV/AIDS	89
Talks on breast-feeding	343
Talks on family planning	492
Talks on preventing childhood illnesses	242
Counseling on breast-feeding	545
Mothers Trained In…	
Reproductive health	160
Childhood illnesses	410
Other Activities	
Coordination meetings with health sector	75
Supervision of midwives (# of midwives) *	120
Training of health volunteers (same # trained monthly)	413
Coordination meetings with education sector	50
Coordination meetings with local government	167
Coordination meeting with community leaders	102
Mini-health fairs conducted	2
Health fairs conducted	2

7.2.2 Vocational Education

In 2004 the ICDP coordinated 19 training courses with 231 participants, 72% of which (167) were women (see Table 17). Two focuses of the vocational training classes were commercial food preparation and commercial sewing, because of their low entry cost and the immediate economic opportunities in the area associated with these activities.

TABLE 17. FSM 2004 VOCATIONAL TRAIN CLASSES

COURSE	LOCATION	PARTICIPANTS	DATES
Chicken Farming	Pueblo Viejo, Sipacapa	4 men; 12 women	Feb 9 - 27
Chicken Farming	Legual, San Miguel	3 men; 9 women	Mar 1 - 18
Food Preparation	Máquivil, San Miguel	18 women	Mar 8 - 23
Snacks Preparation	Máquivil, San Miguel	(same people as above)	Mar 24 - Apr 15
Forest Nursery	Máquivil, San Miguel	10 men; 6 women	Mar 8 - 19
Reforesting	Máquivil, San Miguel	(same people as above)	Mar 22 - Apr 2
Forest Fire Control	Máquivil, San Miguel	(same people as above)	Apr 12 - 17
Bread Making	Sipacapa Town	6 men; 10 women	Mar 22 - May 26
Carpentry	Poj, Sipacapa	24 men	Mar 31 - Aug 6
Nurseries/Reforesting/Fire Control	Máquivil, San Miguel	15 men; 6 women	Mar 8 - Apr 17
Cooking /Snacks Preparation	Máquivil, San Miguel	12 women	Mar 8 - Apr 15
Bread-Making	Sipacapa Town	4 men; 15 women	Mar 22 - May 26
Carpentry	Poj, Sipacapa	18 men	Mar 31 - Jul 29
Food/ Snacks Preparation	San José Ixcaniche, San Miguel	12 women	Apr 19 - May 14
Pastry-Making	Sipacapa Town	3 men; 13 women	May 27 - Jun 11
Gardening	Tres Cruces, Sipacapa	5 men; 12 women	May 24 - Jun 17
Cooking/ Snacks Preparation	San Miguel Ixtahuacán	10 (+ 8) women	May 18 - Jun 4
Sewing	Sipacapa Town	1 men; 9 women	May 31 - Sep 29
Sewing	Llano Grande, Sipacapa	2 men; 10 women	May 31 - Sep 29
Traditional Weaving	Tuicampana, San Miguel	20 women	Jul 1 - 24
Sewing	Sipacapa Town	1 man; 9 women	May 31 - Oct 29
Sewing	Llano Grande, Sipacapa	2 men; 10 women	May 31 - Oct 29
Traditional Weaving	Chilil, Sipacapa	16 women	Sep 20 - Nov 5
Sewing	Sipacapa Town	11 women	May 31 - Oct 29
Sewing	Llano Grande, Sipacapa	9 women; 1 man	May 31 - Oct 29
Traditional Weaving	Chilil, Sipacapa	13 women	Sep 20 - Nov 12
Traditional Weaving	Sipacapa Town	10 women; 4 men	Nov 10 - Feb 2
Sewing	Sipacapa Town	6 women; 10 men	Nov 13 - Feb 10

7.2.3 Forest Nursery Training

With funding from Corporate Citizenship Facility (CCF) FSM developed and implemented the *Seeds for Development* forest nursery training project. The purpose of the project is to develop tree nurseries for reforestation projects, including the Marlin Project and other public and private sector development projects and to help counter the deforestation of the area resulting from illegal logging and domestic firewood gathering.

The participants came primarily from Máquivil village where a group called the *Unión de Desarrollo Mixto de Máquivil* had requested training from the Foundation. In addition 11 employees of the *Montaña Blanca* Forest Nursery participated in the Vegetable Gardening module.

TABLE 18. FOREST NURSERY PROJECT

Module	Participants		Total
	Men	Women	
Vegetable Gardening	05	06	11
Forest Nurseries	06	06	12
Fruit Planting*	11	23	34
		Total	57*

** 12 participants in the Fruit Planting module also participated in the Forest Nursery module. Thus, while there were 57 participants for all the modules, only 45 individual people received training.*

7.2.4 FSM- Supported New Businesses

Upon completing vocational trainings, many people have been seeking help from the Foundation to start their own businesses. FSM provided technical assistance to a group of women and one man who, after participating in previous sewing courses, started to supply the Marlin Project with hand-sewn rock bags for its geologists. The Foundation also lent seed capital and provided technical assistance to participants of a chicken-raising course so they could raise and sell chickens. The tables below detail these results.

TABLE 19. FSM-SUPPORTED NEW BUSINESS: ROCK BAGS

Community	Participants	Bags Made	Amount Earned (Q)
San José Ixcaniche	5	1,567	Q3,134.00
Agel	5	1,237	Q2,474.00
TOTAL	**10**	**2,804**	**Q5,608.00**

TABLE 20. FSM-SUPPORTED NEW BUSINESS: CHICKEN FARMS

Participants	Chicken Farms	Chickens	Participants' Investment	FSM Investment*	Total Investment
5	5	180	Q2,092.76	Q2,092.76	Q4,185.52

* The investment (loan) made by the *Fundación Sierra Madre* was paid back by the five participants on June 30.

One of the ICDP's most successful ventures to date has been the forest nursery project. *Montaña Blanca,* the pilot nursery, sold Q234,956 ($29,548) to Montana for reforesting purposes in 2004. FSM also continued to provide technical assistance, such as cost calculations and training on agro-foresting, to the nursery's owner and his workers. In addition, FSM is now officially providing support and technical assistance to a second forest nursery, *Corazón de mi Pueblo*, also located in Máquivil village. Montana was directly assisting this nursery, which counts among its members 34 people, including 18 women. The company asked the Foundation to take over to unify the type of support being given. Although it is smaller than *Montaña Blanca,* it serves an important function in the community.

7.2.5 Communal Banks

In 2004 FSM/FAFIDESS inaugurated 17 communal banks with 311 members, exceeding its goal of 15 communal banks by two banks. The communal banks lent a total of Q832,500 ($104,6940). All bank members are indigenous women. The last quarter of 2004 saw the repayment of one loan cycle and the initiation of a new cycle for an additional four banks, and the closure of three banks, after the members paid their loans in full and decided not to continue for another cycle. Details of all the banks operating in San Miguel and Sipacapa are shown in the following table.

TABLE 21. COMMUNAL BANKS INAUGURATED IN 2005

Nº	COMMUNAL BANK	DATE OF INAUGURATION OR CHANGE OF CYCLE	AMOUNT LENT	Nº MEMBERS
1	Máquivil	September 24, 2004	Q76,000	24
2	El Centro de Máquivil	November 25, 2004	Q64,000	26
3	Nuevo Amanecer	December 14, 2004	Q38,000	18
4	Mujeres de Legual	December 14, 2004	Q35,500	14
5	Shanshegual	December 27, 2004	Q37,500	13
6	Las Maravillas	July 20, 2004	Q52,500	21
7	La Peña	August 4, 2004	Q57,500	21
8	La Florida	August 18, 2004	Q55,000	23
9	Mirando al Futuro	September 2, 2004	Q45,000	16
10	Sienega	September 16, 2004	Q47,000	16
11	Mujeres de Sibinal	October 12, 2004	Q42,500	15
12	La Patria	October 14, 2004	Q43,000	15
13	Pueblo Viejo	December 16, 2004	Q52,000	18
14	Socias de Cantzela	July 20, 2004	Q44,000	17
15	El Centro de la Lima	August 17, 2004	Q53,000	21
16	El Arenal	August 24, 2004	Q49,000	18
17	Socias de Chilive	October 6, 2004	Q41,000	15
		TOTAL	**Q832,500**	**311**
		Total in Dollars	**$104,694**	

FAFIDESS has two staff working in its San Miguel Ixtahuacán office; both speak Mam, the local language. The inauguration of each bank is preceded by a series of activities such as introductory meetings with the communities, organization and preparation, training for the potential members and monitoring and evaluation visits to ensure that the women are ready to receive their first loan.

In November and December, FAFIDESS conducted several technical assistance and training activities with the bank members, on topics ranging from business skills to social/health issues, shown in the following table.

TABLE 22. TRAINING PROVIDED TO COMMUNAL BANK MEMBERS			
N°	**COMMUNAL BANK**	**TRAINING**	**N° PARTICIPANTS**
1	Socias de Chilive	Successful Businesses	15
2	Socias de Cantzela	Solidarity	13
3	Las Maravillas	Successful Businesses	21
4	El Centro de la Lima	Hygiene	19
5	Mujeres de Sibinal	Business Administration	14
6	El Arenal	Solidarity	15
7	El Matasano	Solidarity	12
8	Mujeres Asociadas	Business Responsibility	10
9	Nuevo Amanecer	Business Responsibility	28
10	La Florida	Business Responsibility	21
11	Pueblo Viejo	Pre-Credit	22
12	La Patria	Solidarity	16
13	La Cienega	Solidarity	21
14	La Peña	Family Economy	21
15	Mirando al Futuro	Business Responsibility	12
16	Shanshegual	Solidarity	13
17	Mujeres de Legual	Solidarity	15
18	Socias de Chilive	Solidarity	15
19	Socias de Cantzela	Business Administration	14
20	Las Maravillas	Commerce	20
21	El Centro de la Lima	Solidarity	19
22	Mujeres de Sibinal	Econ Development	15
23	El Arenal	Business Responsibility	16
24	Máquivil	Business Responsibility	24
25	Nuevo Amanecer	Business Responsibility	28
26	La Florida	Self-Esteem	21
27	El Centro de Máquivil	Leadership	19
28	La Patria	Women's Rights	16
29	La Cienega	Business Responsibility	21
30	La Peña	Business Responsibility	21
31	Mirando al Futuro	Business Responsibility	12
32	Shanshegual	Solidarity	13
33	Mujeres de Legual	Solidarity	15
34	Pueblo Viejo	Solidarity	18
		TOTAL	**595**

7.2.6 Environmental Awareness

A number of the items discussed under the Health and Vocational Training topics are also part of the FSM Environmental Awareness strategy. Specifically, the installation of latrines, the development of forest nurseries and the training of local residents in reforestation and forest fire control all contribute to the Environmental Awareness objective.

Additionally, an environmental training module for residents and stakeholders was developed and refined during 2004. However, because of time and resource constraints, the Environmental Awareness module was not presented to community members and stakeholders and has been rescheduled for early 2005.

7.2.7 Communications

CDC and FSM publish *Sierra Madre Development News*, the ICDP monthly newsletter printed in both English and Spanish, which is distributed to a wide audience that includes the IFC, members of the private sector, academia, media, donor agencies, multi-lateral institutions and NGOs. The newsletter has become an effective and easily recognized communications tool for the program, to highlight achievements and keep interested stakeholders informed of ongoing activities.

7.2.8 Community Advisory Councils

FSM planned to establish Community Advisory Councils (CAC) during 2004 but because of time and resource constraints, the formation of the councils will occur during 2005. The CAC's will involve the communities, through a representative council, in the formulation of the Foundation's plans and strategies.

During 2005, FSM intends to establish three CACs, made up of representatives from the villages of Máquivil, Sipacapa and San Miguel (places where there has been a large ICDP presence). The representatives will be people who have participated in an ICDP activity such as a communal bank, vocational training or health campaign, and who have demonstrated initiative and interest in being more involved with the program. They will meet once a quarter to review the ICDP's programmatic results and, most importantly, share their thoughts and opinions about the program.

7.2.9 Additional Funding

During 2004, CDC secured two additional funding opportunities that leverage the support given by Glamis Gold to ICDP and increase the program's impact in the communities.

- On May 31, Fundación Sierra Madre signed a sub-agreement with the Guatemala Non-Traditional Products Exporters' Association (AGEXPRONT) and USAID to help local producers in and around the ICDP region increase their capacities and output, thus stimulating regional economic growth. This agreement, which is worth approximately $40,000, had as its first activity a survey of the regional economic landscape in and around the municipalities affected by the Marlin Project. The survey, titled *"Estudio de la Economía de Cinco Municípios del Altiplano del Departmento San Marcus"* was conducted by the Guatemalan consulting firm ASIES. With the results of this survey, CDC and the Foundation were able to draw general conclusions about the economic potential and challenges inherent to the region. Most importantly, the survey is being used to design specific interventions to help local economic actors increase their productivity, specifically through improved sales and job creation.

- Another grant to the Fundación Sierra Madre was obtained from the Corporate Citizenship Facility (CCF), a division of the International Finance Corporation (IFC). The grant will provide approximately $89,000 in funds directly to the Foundation. The grant is being used to enhance the economic opportunities of communities around the Marlin Project by creating/supporting forest nurseries (described above) to supply the reforestation needs of the mine as well as engage in other socially and environmentally responsible commercial initiatives. One of the main accomplishments during 2004 was the completion of a forest diagnostic report called *"Diagnóstico Forestal de los Municipios de San Miguel Ixtahuacán y Sipacapa, Departmento de San Marcos, Guatemala,"* which will help FSM determine what forest products with economic potential would thrive in the region.

In addition to securing these new funding opportunities, ICDP received a budget increase of approximately $84,000 from Montana to fund a formal expansion into Sipacapa municipality. CDC used this extra funding to open an office in Sipacapa, hire additional staff and implement health activities in the municipality as needed.

7.2.10 Capacity Building in Local Municipalities

During 2004, the ICDP provided a CDC Volunteer Advisor (VA) to the municipality of San Miguel Ixtahuacán. The VA, an experienced manager and consultant to municipal governments, traveled from Austin, Texas, to assist the municipality in its ability to implement short- and long-term plans.

The main product of the VA assignment was a needs-assessment of the municipal government, with a list of practical, hands-on recommendations and implementation strategies, divided into four categories: municipal administration; finance; community participation; and environment. Many of the recommendations focused on implementing the *Ley de los Consejos de Desarrollo Urbano y Rural*, a law that was drafted during Guatemala's most recent peace process to promote decentralization and local participation in political matters. If implemented correctly, this law can help local governments create the mechanisms for valuable citizen participation. Given the importance of this law, the UNDP has launched a technical assistance program in some parts of the country to promote its implementation, and fortunately, the UNDP Coordinator assigned to San Miguel was available to work with the VA during his assignment. A complete list of the CDC VA recommendations is presented in Attachment D.

8.0 MANAGEMENT CAPABILITY

8.1 Environmental and Social Management System

Montana is currently developing an environmental and social management system that is intended to be in place when the mine becomes operational in 2005.

8.2 Marlin Project Environmental, Social and Health and Safety Staff

The current status of the professional staff within Marlin's Environmental, Sustainable Development and Industrial Safety Departments is shown in Table 23.

TABLE 23. CURRENT MARLIN ENVIRONMENTAL, SOCIAL AND INDUSTRIAL SAFETY STAFF

Position	Individual	Reports To
Environmental Department		
Environmental Manager – Guatemala	Lisa Wade	Project Manager
Environmental Coordinator	Gustavo Gómez	Env. Manager
Forestry Engineer	Oliver Cano	Env. Coordinator
Forestry Engineer	César Gonzalez	Env. Coordinator
Monitoring Technician	Marvin Mejía	Env. Coordinator
Sustainable Development Department		
Sustainable Development Manager - Guatemala	James Schenck	Project Manager
General Coordinator Community Relations Group	Keneth Müller	Sus. Dev. Manager.
Coordinator – San Miguel Ixtahuacán	Isaías Pérez	Gen Coord. CR Grp
Coordinator – Sipacapa	Josías de León	Gen Coord. CR Grp
Community Relations Promoters and other staff	7 Total	Gen Coord. CR Grp
Industrial Safety Department		
Industrial Safety Manager - Marlin Project	Víctor Flores	Mine Manager
Field Security Assistant	Ismael González	Ind. Safety Manager
Administrative Assistant	Marina Molina	Ind. Safety Manager
Watchmen	39 Total	Ind. Safety Manager

8.3 Environmental and Social Training

8.3.1 Environmental Training

Table 24 displays environmental training courses given to Marlin Project employees during 2004.

TABLE 24. MARLIN PROJECT ENVIRONMENTALTRAINING AND CERTIFICATION: 2004

Division	Number Trained	Training Description	Certification
Environmental Management	16	Reforestation	Yes

8.3.2 Social Training

Immediately after its inception, the Marlin Project Community Relations Group, made up of indigenous Mam and Sipakapense speakers of communities near the project site, began an intensive training program in both theoretical and practical aspects of community relations. Topics covered during this program included:

- Public speaking techniques;
- Organization and management of community audiences;
- Learning to listen to community residents;
- How to work effectively with community leaders and decision makers;
- Managing central messages in relation to the audience.

Refresher courses were given more or less each six months during 2003 and 2004, focusing more intensively on one of the above topics. The topic that was reviewed with more frequency was the management of central messages for the audience, particularly as there were adjustments to company messages and strategies.

During 2004, the General Coordinator Community Relations Group and the Community Coordinator for San Miguel Ixtahuacán, a local resident, took an intensive public speaking course, along with other Montana officials.

9.0 ENVIRONMENTAL PROGRAM MONITORING

9.1 2004 Marlin Project Environmental Overview

The following overview discusses environmental activities which occurred at Marlin during the 2004 reporting year; including some activities in 2003 to provide general knowledge.

9.1.1 EIA&S Approval

The Environmental and Social Impact Statement (EIA&S) was approved by the *Direccion de Gestion Ambiental y Recursos Naturales* (Directorship) of the *Ministerio de Ambiente y Recursos Naturales* (MARN) in Resolution No. 779-2003/CRMM/EM on September 29, 2003.

9.1.2 Environmental Management Plans

Development of the various Environmental Management Plans (EMPs) referenced in the EIA&S began. The EMPs will be completed prior to startup of mining operations.

9.1.3 Third Party Audit

A third party Environmental Audit and Review (Audit) was conducted by Dorey & Associates in late October and early November, 2004 with the final report issued in January, 2005. A supplemental site visit was conducted in January, 2005 to follow up on progress. Additionally, the site has developed an action plan and schedule to address the audit recommendations. The audit report and the site's action plan are attached as Attachment E.

9.1.4 Footprint Optimization

The affected area that was described in the approved EIA&S was reduced. The original plan included a waste dump and tailings storage facility (TSF) in two separate sub-watersheds. The footprint of the TSF was 50 hectares and the footprint of the waste dump was approximately 150 hectares. However, during the detailed engineering phase, the disturbance area was optimized to include a total footprint of approximately 150 hectares occupied by both the waste dump and the TSF. This optimization reduced the following potential impacts: the number of trees requiring removal, the area of exposed ground and subsequent sediment control and erosion impacts, the potential dust emissions, and the visual impact. Both the waste dump and the TSF will be located in the same sub-watershed. Figures 5 and 6 show the original and optimized footprints.

FIGURE 5. MARLIN PROJECT ORIGINAL FOOTPRINT

FIGURE 6. MARLIN PROJECT OPTIMIZED FOOTPRINT

9.1.5 Production Well

A groundwater production well (MW5) was installed approximately 300 meters southeast of the main camp, in the Rio Tzala watershed. The well depth is approximately 305 meters with an initial depth to water of 174 meters. Depth to water will be monitored regularly to track any drawdown in the area. The following table demonstrates the average pumping rate from this well in various units. The average pumping rate will be approximately 15% of Marlin's total water use.

TABLE 25. AVERAGE PUMPING RATE FROM PRODUCTION WELL	
Units	**Average Pumping Rate**
Liters/Second (L/s)	10
Liters/Hour (L/hr)	37,000
Liters/Day (L/d)	881,000
Cubic Meters/Day (m^3/d)	881
Gallons/Minute (gpm)	180

This well has a very deep, geothermal water source that is not connected to the base flow in the Rio Tzala. Further hydrogeological investigations are ongoing to better define this deep, geothermal source for the well. Any drawdown in this source from pumping the well will not affect the baseflow in the Rio Tzala, and thus will not affect the water available in the river for use by the community.

9.1.6 Road Improvements

The main service road into the site was improved along a 25 kilometer distance from an average width of 5.5 meters to 11 meters. Additionally, installation of small, concrete roadside ditches was conducted in certain areas near the project to improve roadside drainage. Montana also constructed a bridge crossing the Rio Cuilco in the area of the Siete Platos community. Prior to construction of this bridge, the public could only cross at this point during low flow periods.

9.2 Current Environmental Permit Status and Organizational Status

The status of Marlin permits as of the end of 2004 is shown in Table 26.

TABLE 26. CURRENT MARLIN PROJECT PERMIT STATUS		
Description	**Ministry**	**Approval Date**
EIA&S (Res. No. 779-2003/CRMM/EM)	MARN	September, 2003
Exploitation License (Res. No. 3329)	MEM	November, 2003
Forestry License (No. DR-VI-016-M-2004)	INAB	May, 2004
Hydrocarbon Use License (No. 003032)	MEM	October, 2004
EIA for Hydrocarbon Storage Tanks	MEM	Pending
EIA for Power line Project (Res. No. 1133-2004/MAGC/EM)	MARN	October, 2004
Power line Commission Approval	INDE Council	Pending
Forestry Permit for Power line	INAB	Pending
Explosives Storage & Use Permit	Defense Ministry	Pending
Use of Radioactive Equipment License	MEM	Pending

9.3 Report of Significant Events and Issues

An environmental incident log was instituted in September, 2004 and is maintained by the Environmental Department. It includes: any regulatory compliance issues and their follow up, environmental incidents, and any corrective actions that were implemented as a result of internal or external notifications. Following is a summary of the main item noted in the incident log from September, 2004 to December, 2004.

9.3.1 Sediment Control

In October, 2004 it was noted that sediment from the TSF construction area was reporting to the downstream drainage. An action plan was subsequently formulated by the earthworks contractor, and

approved by Montana personnel. The items are to be addressed prior to the coming rainy season beginning in May, 2005.

9.4 Sampling and Measurement Reports

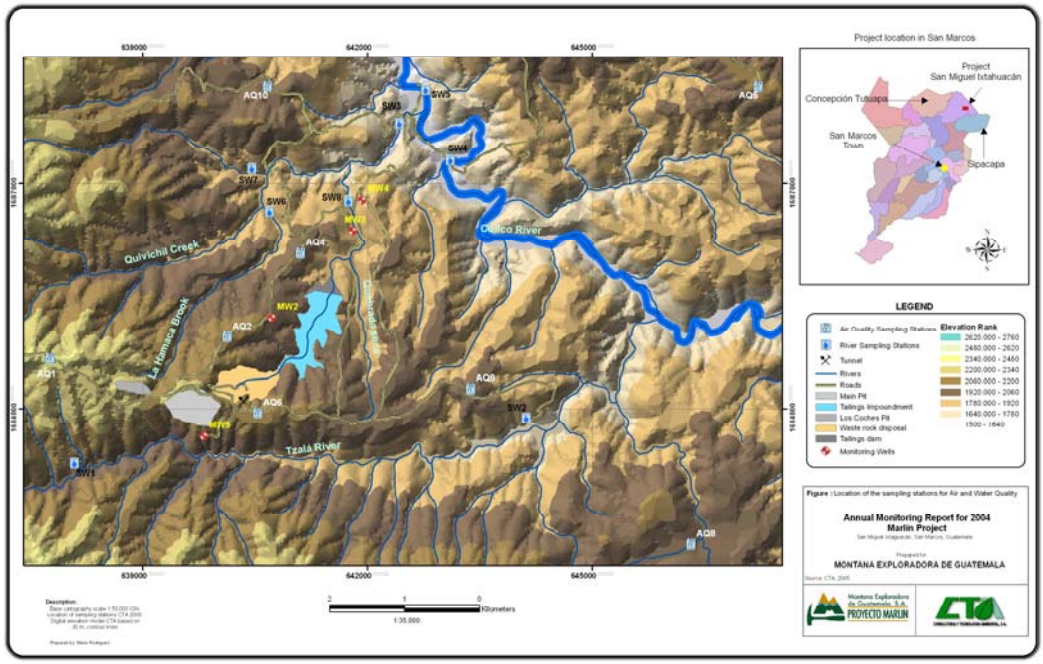
The following sections present specific environmental sampling and measurement reports as required under the IFC agreement. The Marlin environmental monitoring program includes the following aspects: air quality, surface water quality, and ground water quality. Monitoring points are located below on the map in Figure 9.3. Marlin submits the results in a quarterly report to the MARN with a copy to the MEM. Regular monthly monitoring began in April, 2004 and is ongoing.

As discussed in Chapter 10 of the EIA&S, the following was required within the monitoring program:

- Quarterly Monitoring of Discharge Points compared to World Bank effluent guidelines;
- Quarterly Monitoring of Ambient Air Quality compared to World Bank guidelines;
- Quarterly Surface and Ground Water Monitoring as compared to baseline conditions.

The first bullet item listed above will begin once operations commence and there is any discharge to monitor. The other bullet items are summarized in this section.

FIGURE 7. SAMPLING LOCATIONS



9.4.1 Air Emissions

The EIA&S evaluated the potential for air quality impacts resulting from operations. Based on conclusions from the air quality study, it was determined that air quality impacts would not be significant. The most apparent potential air quality impacts during the current construction phase result from fugitive dust emissions from the roads, occurring primarily during the dry season (Nov-Apr). Marlin conducts an aggressive dust suppressant program (road watering) to mitigate potential

fugitive dust emissions. The ambient monitoring program calls for the measurement of particulate levels around the site using PM_{10} (particulate with mean aerodynamic diameter of 10 microns or less) monitoring stations. Visual inspection is done to ensure that management practices are implemented to minimize fugitive dust emissions.

Marlin conducted ambient air quality monitoring at nine PM_{10} monitoring locations during 2004. The data is compared to the IFC air quality guideline of 150 $\mu g/m^3$. Table 27 lists the PM_{10} monitoring locations, and Table 28 summarizes the PM_{10} air quality monitoring data. All monitoring results were within the IFC guideline of 150 $\mu g/m^3$.

TABLE 27. PM10 MONITORING LOCATIONS AT MARLIN PROJECT

Ambient Air Monitoring Point	Location Description
AQ-1	NE of project in Aldea Agel
AQ-2	NW of project in San Jose Nueva Esperanza
AQ-4	School in Aldea San Jose Ixcaniche, in project influence area
AQ-5	Aldea la Cal, in project influence area
AQ-6	SW of project in Aldea Ixcaniche
AQ-7	Aldea Poj
AQ-8	Sipacapa, near the health center
AQ-9	W of Project, Aldea Salem
AQ-10	N of Project, Aldea Salitre

TABLE 28. PM10 ($\mu g/m^3$) MONITORING RESULTS

Station	04/04	05/04	06/04	07/04	08/04	09/04	10/04	11/04	12/04
AQ-1	ND	ND	37	31	18	19	-	-	-
AQ-2	ND	ND	52	23	8	9	23	8	17
AQ-4	37	13	42	8	11	15	8	11	60
AQ-5	22	9	35	-	-	19	-	-	41
AQ-6	39	27	20	80	49	42	80	49	10
AQ-7	119	13	41	-	-	2	-	-	-
AQ-8	-	-	-	16	-	16	-	-	-
AQ-9	-	-	-	-	-	-	17	33	17
AQ-10	-	-	-	-	-	-	-	95	35

9.4.2 Groundwater

Marlin conducted ground water quality monitoring at three locations and submitted the data to both MEM and MARN in quarterly reports representing the second, third, and fourth quarters of 2004. The monitoring wells included in the sampling program and their location descriptions are listed in Table 29.

TABLE 29. GROUND WATER MONITORING LOCATIONS AT MARLIN PROJECT	
Groundwater Monitoring Point	**Location Description**
MW2	West of the TSF
MW3	North/Northeast of the TSF (downgradient)
MW5	Production Well – South of Marlin Pit, near Rio Tzala

A summary of groundwater monitoring data are presented in the following tables. Monitoring well MW2 was dry during the fourth quarter of 2004 and thus could not be sampled. This may have been related to the 2004 rainy season which had average precipitation with respect to total rainfall, but there were a few months that had less than average precipitation that could have affected groundwater recharge rates. MW2 will continue to be monitored in 2005.

MW3 was also dry during November and December, 2004. As explained above, this may be related to the rainfall distribution during the past rainy season and will continue to be monitored.

The new production well, MW5, was sampled in June and December of 2004, and will also be included in the regularly groundwater monitoring program in the future.

Marlin utilizes groundwater monitoring as a form of operational control to monitor performance of specific solution-related facilities (i.e., the TSF). This monitoring is achieved by assessing current data and trends relative to baseline or background data, where it was collected. The following tables summarize the results of the 2004 groundwater monitoring program for the current operations areas.

TABLE 30. MW2 2004 DATA SUMMARY												
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
pH	6.7	6.57	7.10	7.12	7.38	7.24	7.12	7.38	7.37	dry	dry	dry
As (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry	dry
Cd (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry	dry
Cu (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry	dry
Cr (Tot - mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry	dry
Fe (Tot - mg/L)	ND	0.311	0.256	ND	ND	0.023	ND	ND	ND	dry	dry	dry
Hg (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry	dry
Ag (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry	dry
Pb (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry	dry
Ni (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry	dry
Zn (mg/L)	0.05	ND	0.016	0.036	0.03	ND	0.005	ND	0.06	dry	dry	dry

TABLE 31. MW3 2004 DATA SUMMARY

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH	7.16	7.25	6.20	6.85	6.53	7.25	6.87	6.56	7.06	7.01	dry	dry
As	ND	0.013	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry
Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry
Cu	ND	ND	ND	ND	ND	ND	ND	ND	0.008	ND	dry	dry
Cr (Tot)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry
Fe (Total)	ND	ND	ND	ND	ND	0.017	ND	ND	ND	ND	dry	dry
Hg	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry
Ag	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry
Pb	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry
Ni	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	dry	dry
Zn	0.07	ND	0.018	0.025	0.01	ND	0.01	0.014	0.011	0.039	dry	dry

TABLE 32. MW5 2004 DATA SUMMARY

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH						7.06						7.72
As						ND						ND
Cd						ND						ND
Cu						ND						ND
Cr (Tot)						ND						ND
Fe (Total)						ND						ND
Hg						ND						ND
Ag						ND						ND
Pb						ND						ND
Ni						ND						ND
Zn						0.009						0.031

Notes:
1. ND - Below Detection Limit, VD - Value Discarded by Lab.
2. Metals are dissolved concentrations.

Metals detected regularly in MW2 were Iron and Zinc; however, these elements were not detected at any problematic levels. pH levels were within the neutral range for all samples.

Metals detected regularly in MW3 also included Iron and Zinc, however as in MW2, these elements were not detected at any problematic levels. pH levels were within the neutral range for all samples.

As the TSF is still not operational, and processing activities have not commenced at Marlin, these low level metals are not indicative of any processing concerns at Marlin.

Metals detected in MW5 included Iron and Zinc, as in the other wells. MW5 is upgradient of any of the processing facilities and is therefore not indicative of any water quality concerns related to the mine's processing system.

9.4.3 Operational Monitoring

The Marlin facility was in the construction phase during 2004; therefore, operational monitoring was not conducted. Upon commencement of the processing facilities, including the TSF, operational monitoring will be conducted. Data related to water quality of the discharge into the TSF, water

quality within the TSF, any future discharges from the TSF, and any seepage noted in the pump-back system will be collected regularly and reported.

9.4.4 Surface Water Monitoring

Marlin conducts representative surface water monitoring from upstream and downstream surface watercourses. Surface water sampling is conducted regularly and reported to both the MARN and the MEM quarterly. Surface water sampling locations are listed in Table 33.

TABLE 33. SURFACE WATER MONITORING LOCATIONS AT MARLIN PROJECT

Surface Water Monitoring Point	Location Description
SW1	Upstream Monitoring – Rio Tzala
SW2	Downstream Monitoring – Rio Tzala
SW3	Upstream tributary to Rio Cuilco – Riachuelo Quivichil
SW4	Upstream – Rio Cuilco
SW5	Downstream – Rio Cuilco
SW7	Upstream tributary to Riachuelo Quivichil - Riochuelo Xac
SW8	Downstream of TSF

A summary of surfacewater monitoring data are presented in the following tables. Surface water monitoring points SW1, SW2, and SW3 are monitored monthly. Monitoring points SW4 and SW5 are monitored quarterly. Monitoring points SW7 and SW8 were introduced during the second half of 2004. Point SW8 is of particular interest as it is immediately downstream of the planned TSF.

Marlin utilizes surfacewater monitoring as a form of operational control to monitor performance of mine facilities. This monitoring is achieved by assessing current data and trends relative to baseline or background data, where it was collected. The following tables summarize the results of the 2004 surfacewater monitoring program for the current operations areas.

TABLE 34. SW1 2004 DATA SUMMARY

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH	8.15	7.65	7.34	7.49	8.14	7.71	7.23	7.51	7.46	8.08	8.27	7.97
As (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cd (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	0.006	ND	ND	ND
Cr (Tot - mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fe (Tot - mg/L)	ND	0.289	0.256	0.233	0.3	ND	ND	ND	0.47	ND	0.24	0.344
Hg (mg/L)	VD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ag (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb (mg/L)	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn (mg/L)	0.025	0.017	0.022	0.007	ND	ND	ND	ND	0.115	ND	ND	0.004

TABLE 35. SW2 2004 DATA SUMMARY

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH	7.79	7.80	7.82	7.7	8.13	7.83	7.14	7.58	7.4	8.07	8.32	7.91
As	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cr (Tot)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fe (Total)	ND	0.244	ND	ND	ND	ND	ND	0.25	ND	ND	0.26	0.429
Hg	0.0006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ag	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn	0.04	0.016	0.012	0.007	0.03	ND	ND	0.007	0.021	0.068	ND	ND

TABLE 36. SW3 2004 DATA SUMMARY

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH	6.77	7.43		7.22	8.37	7.50	7.62	8.59	8.19	8.64	8.42	8.45
As	ND	0.01		ND	ND	ND	ND	ND	ND	ND	ND	ND
Cd	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND
Cu	ND	ND		ND	ND	ND	ND	ND	0.007	ND	ND	ND
Cr (Tot)	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND
Fe (Total)	ND	0.267		ND	ND	ND	ND	ND	2.38	0.260	0.27	0.411
Hg	0.0009	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ag	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND
Pb	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND
Ni	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND
Zn	0.012	0.017		0.01	0.03	ND	ND	0.013	0.042	ND	ND	0.015

TABLE 37. SW4 2004 DATA SUMMARY

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH			8.48			8.05			7.79			8.03
As			0.006			ND			ND			ND
Cd			ND			ND			ND			ND
Cu			ND			ND			ND			ND
Cr (Tot)			ND			ND			ND			ND
Fe (Total)			ND			0.075			0.81			0.280
Hg			ND			ND			ND			ND
Ag			ND			ND			ND			ND
Pb			ND			ND			0.011			ND
Ni			ND			ND			ND			ND
Zn			0.009			ND			0.052			ND

TABLE 38. SW5 2004 DATA SUMMARY												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH			8.42			8.20			7.95			8.05
As			ND			ND			ND			ND
Cd			ND			ND			ND			ND
Cu			ND			ND			0.021			ND
Cr (Tot)			ND			ND			ND			ND
Fe (Total)			ND			0.035			0.87			0.299
Hg			ND			ND			ND			ND
Ag			ND			ND			ND			ND
Pb			ND			ND			ND			ND
Ni			ND			ND			ND			ND
Zn			0.011			ND			0.044			ND

TABLE 39. SW7 2004 DATA SUMMARY												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH							7.43	8.34			8.35	8.00
As							ND	ND			ND	ND
Cd							ND	ND			ND	ND
Cu							ND	ND			ND	ND
Cr (Tot)							ND	ND			ND	ND
Fe (Total)							ND	ND			0.22	0.277
Hg							ND	ND			ND	ND
Ag							ND	ND			ND	ND
Pb							ND	ND			ND	ND
Ni							ND	ND			ND	ND
Zn							ND	0.006			ND	0.007

TABLE 40. SW8 2004 DATA SUMMARY												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH									7.87	8.76	8.43	8.73
As									ND	ND	ND	ND
Cd									ND	ND	ND	ND
Cu									0.006	ND	ND	ND
Cr (Tot)									ND	ND	ND	ND
Fe (Total)									1.6	ND	0.36	1.2
Hg									ND	ND	ND	ND
Ag									ND	ND	ND	ND
Pb									ND	ND	ND	0.002
Ni									ND	ND	ND	ND
Zn									0.051	ND	ND	0.149

Notes:
1. ND - Below Detection Limit, VD - Value Discarded by Lab.
2. Metals are dissolved concentrations.

Metals detected regularly in all surface water monitoring locations include Iron and Zinc. Iron was detected on one occasion at a concentration exceeding the World Bank Environmental Guidelines for

mine effluent at monitoring location SW3, which is an upgradient monitoring point and is not affected by mine activities.

pH ranges in all surface water monitoring locations are within the neutral range.

Copper and Mercury are detected occasionally in some sample locations, but are not at problematic levels.

9.4.5 Liquid Effluent Discharges

The Marlin project is currently in the construction phase and was not discharging mining effluents during 2004. The first mining effluent discharge is expected during the second year of operations from the TSF. During discharge events, water quality and flow monitoring will be conducted regularly and reported quarterly to both the MARN and the MEM, and annually to the IFC.

9.4.5.1 Water Treatment Plants

The Marlin project does not currently have a water treatment plant. The only point source discharge location in the future will be the metered discharge from the TSF to the environment, anticipated to begin in the second year of operation. The current program is to monitor the water quality within the TSF for one complete year to aid in the determination of the need for a water treatment plant. This field data will then be compared to the IFC mine effluent water quality guidelines, as well as any identified risk posed to downstream receptors, to determine the need for water treatment, and if required the design parameters for treatment.

9.5 Reforestation/Revegetation Monitoring

Revegetation during 2004 was limited due to the fact that most areas were under construction and not available for revegetation. However, some small areas were revegetated as a sediment control measure, mainly surrounding the camp upon completion of the construction in the area. Further revegetation in 2005 is anticipated as a sediment control measure and is expected to be more extensive than what was conducted in 2004.

Reforestation efforts in 2004 however, were extensive. Approximately 117 hectares of land were reforested in 2004, both within the project area and in the surrounding municipalities of San Miguel Ixtahuacán y Sipacapa. This reforestation effort did not cover mine related disturbance as most areas were in active construction during 2004. Areas surrounding the disturbance and in the outlying communities were selected for reforestation as was indicated in the Forestry Management Plan.

The reforestation campaign was part of the Forestry Management Plan presented to and approved by INAB (Instituto Nacional del Bosque). Reforestation was described in this Plan as compensation for the direct impact to the trees within the project footprint. The forested areas that were impacted by mine construction activity in 2004 totaled 50 hectares, and 117 hectares were reforested, as stated above.

The 2004 reforestation activities benefited 78 land owners, and included the planting of trees as well as payment of an “incentive” to use the land for reforestation. This incentive is paid for five years. These reforestation areas receive technical assistance from the company for: ground preparation, fertilizers, plague control, etc. for the first five years after which the land owner is responsible.

9.6 Waste Management

Marlin currently maintains one, temporary waste disposal facility for non-hazardous, solid waste which mainly includes office and construction waste. This temporary landfill is located near the

greenhouse and uses the same access, however the facility will be relocated during 2005 to a more permanent location. This location and the conceptual design for the landfill are currently under consideration. Additionally, a Waste Management Plan (WMP) is currently being developed to identify the various types of wastes that will be generated at the Marlin Project, and their preferred disposal practice. The WMP will identify best management practices for managing the various waste streams.

The existing, temporary landfill consists of several small pits. Solid wastes are disposed of in the landfill, as required, on a daily basis. Dirt cover is then placed regularly over the waste materials.

A primary source waste that will not be disposed of in the on site landfill is lead-contaminated wastes from the fire assay process. The optimum disposal method for this lead-contaminated waste is currently under evaluation.

Non-hazardous liquid wastes are generated from the maintenance area and mainly include used oil, used antifreeze, and used solvents. Marlin is currently assessing ways to avoid generating used antifreeze and used solvents.

Collection of used oil for off site recycling began in 2005. Liquid non-hazardous waste materials will typically be managed under the supply contract. For example, all used oil will be collected from the site by the contractor and shipped off-site for recycle. These materials will typically be recycled as a fuel source for a cement kiln, or brick kiln process and subsequently consumed through the combustion process.

9.7 Dam Safety

Tailings from the process will be treated with sulfur dioxide to achieve cyanide detoxification prior to deposition in the TSF formed by a 38 m high cross valley starter dam consisting of a rockfill shell and a low permeability core. The TSF is raised progressively during the 10-year mine life to an 80 m ultimate height, using mine waste rock placed in downstream staged raises. The starter dam is currently under construction with substantial completion anticipated by August, 2005.

Montana Exploradora de Guatemala, S. A. retained Robertson Geoconsultants, Inc. as an independent expert to perform a review of the TSF for the Marlin mine in compliance with the principles established in the IFC/World Bank guidance and operating principles OP 4.01 Annex D and OP 4.37.

Robertson Geoconsultants, Inc. reviewed the designs and analyses performed for the TSF and has completed two review reports summarizing the observations and the results of the reviews performed. The first review report was submitted to the IFC in March, 2004 and included review of the feasibility level documents and a site visit conducted in early January, 2004. The second report was recently completed in March, 2005 and is attached in Attachment F. Several review meetings, discussions, and exchanges of information occurred during the period between the issue of the two reports. The second report documents the results of the reviews performed:

- During a site visit from July 12 to 14, 2004;
- Of Detailed Design documentation received in October 2004;
- During a review meeting held November 13 and 14, 2004, in Denver, with the dam designers and Marlin mine representatives;
- During on-going discussions and reviews regarding seismic stability analyses; and
- During a site visit from February 21 to 24, 2005.

Three of the design documents (Attachments 1, 3 and 4 to Volume VI) have not yet been completed and will be reviewed and addressed in a subsequent review. These Attachments address: The

Operating Manual, Emergency Procedures Plan, and the Closure Plan. These will be completed prior to commencement of operations at the TSF.

This second review report includes ten findings. The majority of the items are comments from the review to ensure that diligence in current practices is maintained. The substantial comments can be summarized as:

- Ensure completion and submittal of the detailed design for Stages 2 and 3 (to be completed);
- Qualitatively assess the grout curtain performance (this will be conducted in the As-Build Construction Report);
- Ensure follow up on issues surrounding the waste rock facility upstream of the TSF (this will be done in the Waste Rock Management Plan).

Responses to all comments and findings contained in the Review Report will be performed, where applicable, prior to commencement of operation of the TSF.

10.0 HEALTH AND SAFETY MONITORING

The Marlin Project Health and Safety Department is currently staffed with a Health and Safety manager and an assistant. In December 2004, Montana formed an internal committee to perform monthly environmental and health and safety inspections.

10.1 Occupational Health and Safety

During 2004, the Marlin Project had no fatalities and a total of 445 lost-workdays resulting from five lost-time accidents (3 Montana and 2 contractor accidents) (see Tables 41 and 42).

TABLE 41. MARLIN PROJECT HEALTH AND SAFETY INCIDENT STATISTICS: 2004

Occupational Health and Safety Incidents	Number of Incidents	Details
Fatalities	0	
Total Lost Time Accidents	5	See Table 42 for a description of lost time accidents
Total number of lost workdays resulting from incidents	445	
Total man hours worked	659,111	Incidence: IFC = 0.0006751; US = 135.03037

TABLE 42. DETAILS OF MARLIN PROJECT 2004 LOST TIME ACCIDENTS

Accident Description	Date	Causes	Corrective or Preventative Measures
Slipped on stair and dislocated shoulder while installing drywall in a temporary office.	04/23/04	1. Failed to use adequate safety equipment 2. Inexperienced in construction work. 3. Lack of adequate supervision.	Provided construction personnel with instruction on safety measures, fall prevention and proper use of materials for installation of drywall.
Tree felling accident resulting in multiple traumas to the body.	05/11/2004	1. Lack of understanding of the risk associated with the work and failure to take proper precautions. 2. Inexperience in tree felling. 3. Work in difficult terrain.	1. Provided additional instruction on proper tree felling techniques, safe use of tools and proper safety equipment. 2. Ensured that all were equipped with proper safety equipment.
Fall while conducting reforestation operations on rough terrain resulting in fractured leg.	07/12/04	1. Rough terrain. 2. Inadequate footwear for the work.	1. Improved the paths in areas of reforestation. 2. Weekly evaluations of safety equipment.
SOCOCO (earthwork contractor) employee hurt when loader overturned	08/12/04	1. Unauthorized person who wanted to learn to drive loader got up into cab next to driver. 2. When loader overturned, passenger injured	1. Unauthorized passengers prohibited. 2. Training sessions with operators to avoid similar accident
Tunnel Tek (underground mine contractor) employee broke a leg	08/16/04	1. Right wall of tunnel fell and broke employee's leg.	1. Investigation showed that workers were in the area after a blast and before walls and ceiling had been bolted down. 2. Now prohibited for people to enter area until ceiling and walls are bolted.

10.2 Training

Table 43 below details Marlin Project Health and Safety training courses provided during 2004. All Marlin Project and contractor employees receive industrial health and safety training shortly after they are employed.

TABLE 43. MARLIN PROJECT HEALTH AND SAFETY TRAINING: 2004

Course	Number of Employees Trained
Industrial Health and Safety	669 Marlin Project Employees
	808 Contractor Employees
First Aid	96

10.3 Employee Workplace Monitoring

10.3.1 Air and Noise Monitoring

The Marlin Project is currently in the construction phase and there were no large enclosed workspaces which require workplace air monitoring; air emissions monitoring data are presented in Section 9.4.1. Table 44 below presents noise monitoring data. Employees who work on or near dust or noise producing equipment are required to wear personal protective gear.

TABLE 44. MARLIN PROJECT NOISE MONITORING

Required Workplace Monitoring Parameter	2004 Monitoring Frequency	WBG/IFC Maximum Threshold Limit Value	Host Country Regulatory Limits and Units	Performance in Host Country units Annual average
Workplace Noise	3 X	85 dBA	90 dBA	II Trim (exploration area): 86.2
				II Trim (TSF grout curtain): 30.3
				III Trim (tanks and deposits): 65
				III Trim (road work): 77
				III Trim (mixers area): 82
				III Trim (tailings dam): 84
				III Trim (mine fan): 84
				III Trim (Contractor encampment): 85
				IV Trim: (frontal loader): 93.2

Values are expressed as Time Weighted Average (TWA).

10.3.2 Fire Safety Monitoring

Table 45 below presents Marlin Project fire safety monitoring data for 2004.

TABLE 45. MARLIN PROJECT 2004 FIRE SAFETY ACTIVITIES

Fire Safety Verification Activities	Number Performed
Fire Drills*	2
Fire safety inspections	412
Portable Fire Extinguisher Inspections	48
Portable Fire Extinguisher Recharging	2

*The Marlin Project construction phase started mid-year; therefore only two of the required three fire drills were performed.

10.3.3 Environmental Health and Safety Monitoring

Table 46 displays environmental health and safety monitoring activities for the Marlin Project 2004. A total of 411 inspections were carried out during the year.

Montana held the first internal inspection with the committee formed by the Operations Manager in December. Several issues were raised and have been or are being addressed by the various departments.

10.3.4 External Monitoring

The Ministry of Energy and Mines, along with Ministry of Environment and Natural Resources and the Ministerio Publico conducted their second site inspection during December. No citations were issued and no serious problems encountered.

The newly appointed commission for monitoring mining in Guatemala (*Commission de Vigilancia Independiente de la Mineria*) visited the site during December for their first orientation of the project. The group includes representatives from the major universities in Guatemala as well as a representative of ASOREMA, the association of environmental NGOs in Guatemala. The visit went well, with some excellent questions asked by the group. Verbally, the commission has informed MEM that their first report will be positive concerning the project.

The Marlin Project received no citations for environmental, health or safety violations during 2004 and paid no fines.

TABLE 46. 2004 ENVIRONMENTAL HEALTH AND SAFETY INSPECTIONS

	Place of Inspections	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	Equipo pesado (Haulpaks, retroexcavadora, cargadoras, Moto-niveladora, Perforadoras, grúas, montacargas, Tractores de oruga, trituradoras y bandas transportadoras)	2	9	4	4	8	4	1	2	4	4	2	2	46
2	Equipo eléctrico (Generadores, Transformadores, Líneas de potencia, subestaciones de mando, y Tableros.)	6	4	4	2	2	2	3	1	0	0	1	0	25
3	Vehículos livianos y camiones de servicio	4	4	4	4	4	4	0	0	3	2	2	2	33
4	Equipo de protección personal	4	4	4	4	4	4	4	3	2	4	3	4	44
5	Materiales y Herramientas	0	4	4	4	2	4	4	3	1	1	2	1	30
6	Edificios de campamento (Áreas de Trabajo temporales)	4	4	4	4	4	4	4	3	4	4	3	3	45
7	Viveros, áreas de reforestación.	0	2	4	0	3	2	0	0	1	2	3	2	19
8	Mina subterránea	0	0	0	0	3	4	2	3	2	1	2	3	20
9	Bodegas	0	2	4	4	2	2	1	1	1	0	1	0	18
10	Área de construcción de planta de proceso, Movimiento de tierras	0	0	0	0	4	8	8	3	4	4	3	3	37
11	Represa de colas en construcción	0	0	0	0	2	2	4	2	2	2	1	0	15
12	Polvorín	0	0	0	0	2	2	1	1	2	0	0	0	8
13	Caminos vecinales y propios	0	0	0	0	4	4	8	3	4	3	3	3	32
14	Áreas de perforación	0	0	0	0	2	6	5	0	1	0	0	0	14
15	Construcción de cercas ciclón	0	0	0	0	0	0	0	1	0	2	0	1	4
16	Construcción de puente en río Cuilco	0	0	0	0	0	0	0	1	1	2	2	2	8
17	Área de perforación Geocimsa	0	0	0	0	0	0	0	3	4	1	1	1	10
18	Área de Perforación Los Coches R&R	0	0	0	0	0	0	0	0	0	2	1	0	3
	Total Inspections	**20**	**33**	**32**	**26**	**46**	**52**	**45**	**30**	**36**	**34**	**30**	**27**	**411**

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