ENVIRONMENTAL AND SOCIAL PERFORMANCE

ANNUAL MONITORING REPORT (AMR)

MONTANA EXPLORADORA DE GUATEMALA, S. A.
MARLIN MINE

REPORTING PERIOD: 2006

AMR COMPLETION DATE: APRIL 1, 2007

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1.0 INTRODUCTION AND BACKGROUND

This 2006 Annual Monitoring Report (AMR) has been prepared to confirm compliance of the Marlin Mine with the applicable Guatemalan requirements, IFC/Equator Principle environmental guidelines and social policies, and the Environmental and Social Impact Study approved for the mine. 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.

- A description of sustainable development programs and activities conducted during the year.

- A discussion of the Marlin Mine's contributions towards alleviating poverty in neighboring communities.

- 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

Montana Exploradora de Guatemala, S. A.
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Guatemala, Guatemala
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The 2006 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 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 Mine during this reporting period, 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 MINE STATUS

The Marlin Mine was commissioned in 2005; 2006 was the first full year of commercial production.

2.1 Mining

Mining activities occurred at both surface and underground mining locations during 2006.

Surface Mine

A total of 3,921,716 tonnes of material was mined by the surface mine fleet during 2006; 1,031,585 tonnes were ore, at an average grade of 3.75 g/t vs. the 3.84 g/t budgeted grade. Additionally, 2,355,239 tonnes of waste were mined from the Marlin Pit and 534,892 tonnes of non-production rock were mined for construction purposes. Table 1 summarizes the material movement from the pit in 2006

Table 1. Marlin Mine 2006 Surface Mine Production & Material Movement

	Actual	Plan	Variance
Ore Tonnes Mined	1,031,585	1,273,895	(242,310)
Grade Au (g/t)	3.75	3.84	(0.09)
Grade Ag (g/t)	40.83	35.14	5.69
Cont. Oz Au.	124,428	157,261	(32,833)
Cont. Oz. Ag	1,354,188	1,439,062	(84,874)
Waste Tonnes Mined	2,355,239	3,061,398	(706,159)
Non Production Tonnes	534,892	0	534,892
Total Material Movement	**3,921,716**	**4,335,293**	**(413,577)**

Underground

A total of 176,709 tonnes of ore were mined from the Underground Mine, with an average gold grade of 14.2 g/t and 302.4 g/t of silver. A total of 161,062 tonnes of waste were also mined in 2006 and 54,777 M^3 of backfill placed in mined-out stopes. Advance in lineal meters in ore was 2,924 meters and 2,355 lineal meters in waste. Table 2 summarizes the material movement from the Underground Mine in 2006.

Table 2. Marlin Mine 2006 Underground Mine Production & Material Movement

	Actual	Plan	Variance
Ore (Tonnes)	176,709	275,451	(98,742)
Au (gpt)	14.2	16.4	(2.3)
Ag (gpt)	302.4	324.7	(22.3)
Au (Ounces)	80,618	145,629	(65,011)
Ag (Ounces)	1,717,755	2,875,303	(1,157,547)
Waste (Tonnes)	161,062	227,432	(66,370)
Ore Advance (M.)	2,924	6,250	(3,326)
Waste Advance (M.)	2,355	4,844	(2,489)
Backfill Cu.M	54,777	100,382	(45,605)
Material Movement*	**337,771**	**502,883**	**-165,112**

*Excludes backfill

2.2 Production

- A total of 1,088,847 tonnes of ore were processed during 2006, at an average gold grade of 4.92 g/t and 74.94 g/t of silver.

- A total of 160,934 ounces of gold and 1,598,516 ounces of silver were produced during the year.

2.3 Ongoing Construction

Construction of the process facilities, offices and other ancillary buildings was completed in 2005; a handful of construction projects, as well as upgrading of some of the facilities continued during 2006:

- Construction of Phase II of the Tailings Facility continued throughout 2006 as planned; no discharges of process water into the environment occurred during the year. During the first three quarters of 2006, tailings facility construction management and oversight was performed by Marlin Engineering Consultants and construction was performed by Sococo. Construction after the third quarter continued using Marlin Mine's equipment and personnel.

- Authorization for full electric line power usage was obtained in 2006 and Aggreko (the electric power contractor) demobilized.

- Marlin residential facilities were expanded during 2006 to accommodate the extra technical personnel needed at the mine. The expansion was accomplished by constructing two dormitory buildings (one 10-room and one 4-room) and by purchasing and installing 18 travel trailers.

- The permanent fuel storage area was completed with the installation of the automatic fire suppression foam system. However, this fuel storage area was not used until 2007.

- Improvements to the Process Plant included the addition of a feed system that bypasses the crusher, improvement of the containment areas at the grinding area, and the replacement of the Cyanide Neutralization Tank Agitator with a more efficient model.

2.4 Exploration

During 2006, Montana continued drilling in areas of geological interest. A total of 47 core holes totaling 15,346 meters in depth were drilled on property owned by the company and on privately-owned property. Drilling was accomplished using Montana-owned man-portable Hydrocore Gopher drills to minimize surface disturbance. These portable drills are hand carried to four-meter square drill sites, eliminating the need for access roads, minimizing drill-site disturbance and reducing reclamation times. Exploration drilling with man-portable rigs generates more local jobs than drilling with track or truck-mounted drills, averaging 40 jobs for local residents near exploration areas.

Exploration wells were drilled in four different localities: Agel and El Salitre in the municipality of San Miguel Ixtahuacàn and Cancil and Salem in the municipality of Sipacapa. Geological mapping and soil and rock sampling occurred in Agel prior to drilling to identify new areas of interest.

In the La Hamaca project area, located near the community of El Salitre, five wells of different depths were drilled during 2006, to better define the mineral structure identified in previous drilling programs.

Two exploratory wells were drilled in the community of Salem, and exploration continued in the community of Cancil with the definition and extension of the West Vero zone, located approximately one kilometer south of the Marlin Mine. This zone has previously undergone drilling, mapping and rock and soil sampling activities.

Montana has conducted some mineral activities in other municipalities where it has exploration licenses. Land-owner permission is always obtained before exploration work commences on privately-owned property, including sampling, mapping, construction of paths and platforms. When roads and platforms are required on privately-owned property, the land owner is compensated based on the amount of land that is disturbed. Entry agreements with private land owners always include reclamation provisions, and local residents remain employed by Montana for several weeks following each drilling campaign to reclaim disturbance by re-contouring drill sites, reseeding disturbed areas and planting trees.

In order to strengthen the relationship between the exploration department and the communities in which it operates, the department has contributed to some community development projects as outlined in Table 3.In addition to these projects, the Exploration Department has coordinated with the Sustainable Development Department to work on community development projects in areas of interest.

Table 3. Community Development Projects Completed By The Marlin Mine Exploration Department During 2006

Community	Project	Cost Q.	Cost $
Cancil, Sipacapa	Electrical plant repairs	950	125
Cancil, Sipacapa	Donation of Doors, windows and balconies for the Deputy Mayor's Meeting Hall	15,080	1,984
San Antonio La Cruz, Sipacapa	Soccer field improvements	17,500	2,303
Nueva Victoria, Sipacapa	50 bags of cement fro construction of a retaining wall	2,500	329
Los Chocoyos, Sipacapa	Donation of food (corn and rice)	9,800	1,289
TOTAL		**Q 45,830**	**$6,030**

2.5 Reforestation (Forest Incentives Program)

The Marlin Mine reforestation campaign is part of the Forestry Management Plan approved by the Guatemalan INAB (Instituto Nacional del Bosque). Reforestation was described in this Plan as compensation for the direct impact of tree cutting within the mine area footprint. Additionally, the Fundación Sierra Madre, with support from Montana, conducts community environmental awareness, agroforestry and reforestation activities, which are described in a subsequent section of this AMR.

Reforestation during 2006 occurred both within the mine property and in the surrounding municipalities of San Miguel Ixtahuacán and Sipacapa under the *Incentivos Forestales* (Forestry Incentives) program. While reforestation is a requirement under Guatemalan law, the *Incentivos Forestales* program is a voluntary program initiated by Montana to assure that planted trees reach maturity. Under this program, private landowners are paid incentives for planting and caring for trees. The incentives are paid for five years. In addition to cash incentives, participating landowners receive technical assistance from the company for ground preparation, fertilizers, plague control, etc. for the first five years, after that period the land owner is completely responsible for the care of the trees.

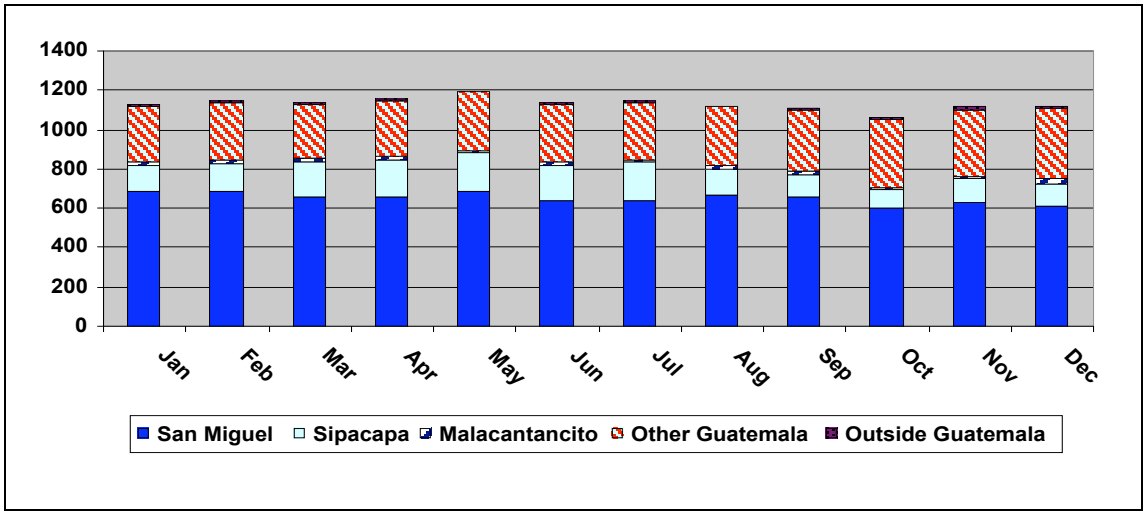
This year (2006) was the third reforestation year and 12 hectares were reforested. In 2006 Montana paid private land owners Q163,617 (US$21,528) in forestry incentives. Since the inception of the *Incentivos Forestales* program, Montana has paid over Q455,104 (US$59,882) to a total of 135 families for planting and caring for trees on their land. The *Incentivos Forestales* program is described in detail in Section 10.5 of this AMR.

In addition to the *Incentivos Forestales* program, Montana donated 5,000 fruit trees to AMAC (the local community environmental monitoring committee) for distribution to neighboring communities. An additional 500 fruit trees were donated to Marlin mine employees. The fruit trees are not part of the reforestation commitment with INAB since it applies only to pine species native to the area.

2.6 Employment

Total Marlin Mine employment averaged 1,132 workers during 2006. Figure 1 displays monthly employment for the Marlin Mine by employee place of residence when hired

Figure 1. Marlin Mine Employees By Place Of Residence When Hired: January – December 2006



During 2006, four types of workers were employed at the Marlin Mine: 1) salaried Montana employees who worked directly for the company; 2) employees of mine contractors; 3) Montana contract employees who were temporarily employed by the company to perform a variety of construction or maintenance tasks; and 4) Montana rotational employees who were employed by the company in two shifts, each shift working one week at a time. The rotational system was implemented in response to requests from local officials for the company to provide employment

for a greater number of local area residents. Montana employed an average of 215 rotational workers per month during 2006. Rotational employees work on a variety of maintenance, environmental restoration, community improvement and road construction/maintenance tasks.

Figure 2 displays annual average employment by employee place of residence when hired data for 2006. An average of 99 percent of all workers employed at the Marlin Mine were Guatemalan residents; 58 percent were from the municipality of San Miguel Ixtahuacán (San Miguel), 13 percent were from the municipality of Sipacapa and 1 percent were from the municipality of Malacantancito, which the mine access road crosses. Virtually all of the workers from San Miguel and Sipacapa were indigenous.

Figure 2. Marlin Mine Employees By Place Of Residence When Hired: 2006 Average

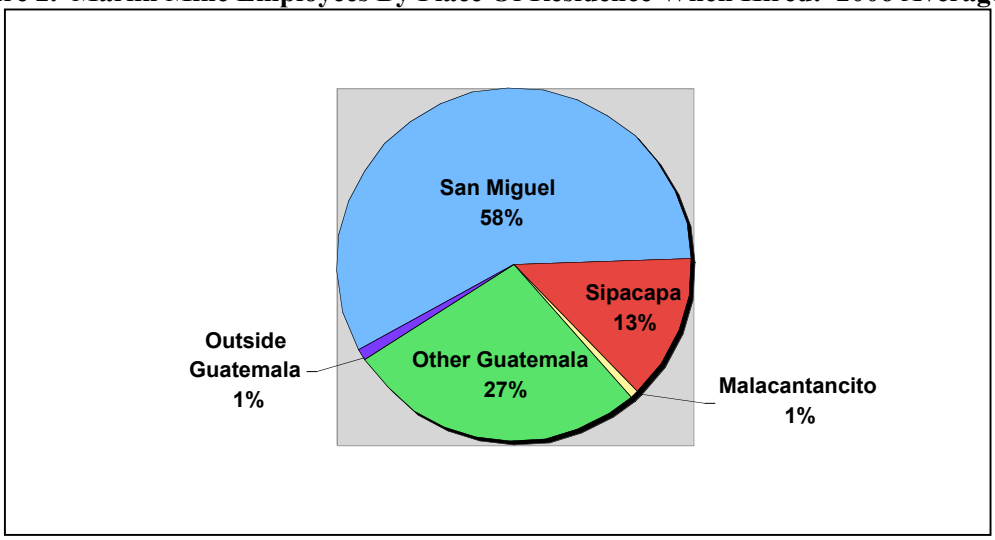
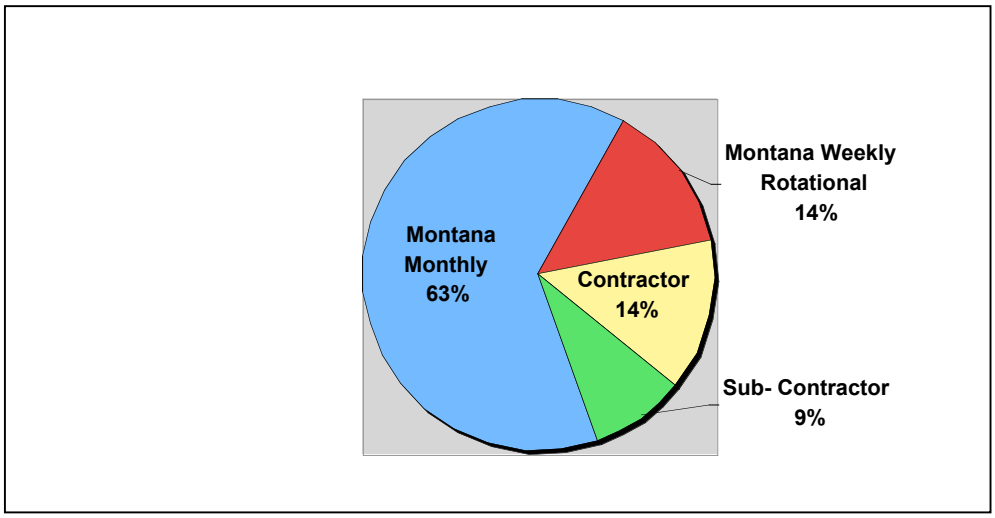


Figure 3 displays Marlin Mine workforce by type of employment. During 2006, an average of 63 percent all Marlin Mine workers were Montana direct monthly employees, 14 percent were employed by construction contractors, 14 percent were weekly rotational workers, 9 percent were other contract workers**.**

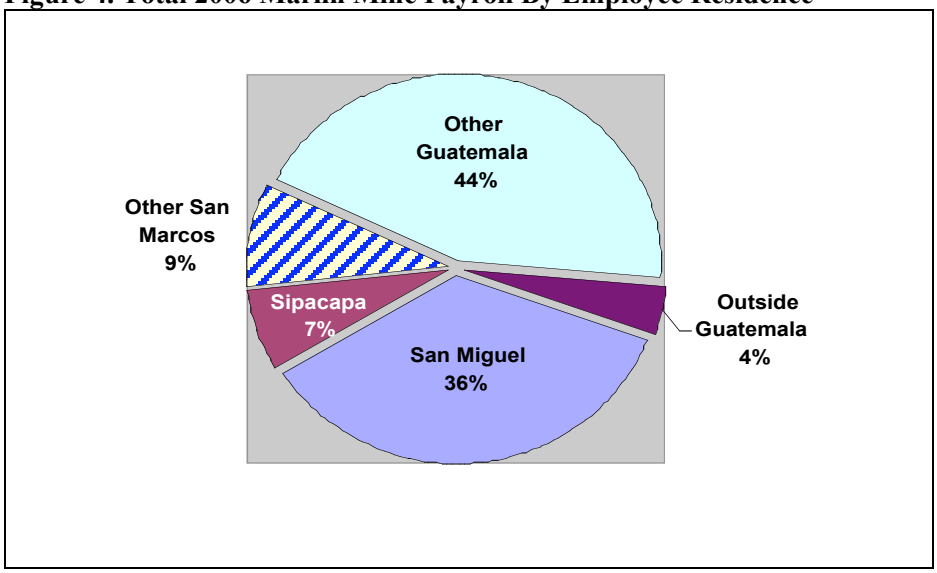
Figure 3. Marlin Mine Employees By Employment Type: December 2000



2.7 Payroll

The 2006 payroll (all worker types) for the Marlin Mine totaled US$8,558,993. Of that amount, 96% percent (over $8.5 million) was paid to Guatemalan employees, 36 percent ($3.2 million) was paid to employees from San Miguel and 7 percent ($0.6 million) was paid to employees from Sipacapa (see Figure 4).

Figure 4. Total 2006 Marlin Mine Payroll By Employee Residence



2.8 Employee Benefits

Montana full-time direct employees receive the benefits listed below. Rotating employees[1] and their families receive health care treatment at the company health clinic, as do all residents of communities near the mine, but they do not receive life, medical or dismemberment insurance. Temporary employees are paid on a daily basis and receive no benefits.

- Health insurance for Montana employees and their families.
- Health care: Marlin Mine 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.

[1] Montana hired an average of 215 workers/month on a rotating basis during 2006. Rotation, in which an employee works for several weeks/month, allows Montana to employee more local residents of communities.

- 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 daily from San Miguel, Sipacapa, San José Nueva Esperanza, San Antonio, Máquivil, and Huehuetenango.
- Safety equipment: all Marlin Mine workers are provided with the safety equipment required for their particular job.

2.9 Montana Employee's Solidarity Association

In November of 2005, the employees of Montana Exploradora de Guatemala, S.A formed the Asociación Solidarista de Trabajadores de Montana (ASOTRAMÓN), which seeks to improve the quality of life for Montana employees, their families and communities. The association intends to promote social, sporting and economic activities to promote and strengthen relations of solidarity and goodwill between employees and the company.

ASOTRAMÓN has the following objectives:

- Stimulate employee savings
- Facilitate acquisition of credit
- Provide access to basic goods at affordable prices
- Retirement planning
- Promote an entrepreneurial spirit

As of the end of 2006, ASOTRAMÓN had 300 members and total; savings of Q2,000,000 (US$263,158).

2.10 Employee Training

The Marlin Mine provides a variety of training for all employees. Table 4 displays training received during 2006, excluding social and environmental training, which are reported under subsequent sections this AMR. In addition to this training, all Marlin employees attend a one-half hour industrial safety meeting on a weekly basis normally held in the industrial safety meeting room. Additionally, a five-minute safety talk is held with all workers at the beginning of each shift. New employees receive 24 hours of initial training with exception of the underground mine employees who receive 40 hours initial training.

Table 4. Marlin Mine Employee Training: 2006

Job Classification	Number Trained				Training Description	Certification
	Male	Female	Indigenous	Total		
Manager	1			1	Internal Auditor /Occupational Health and Safety Systems	Y
Administrative Personnel	1		1	1	Internal Auditor /Occupational Health and Safety Systems	Y
Supervisor	1			1	Industrial Hygiene	
Supervisors	2	1		3	Water Monitoring	Y
Supervisors	5			5	Introduction to ARCGIS I &	

Table 4. Marlin Mine Employee Training: 2006						
Job Classification	Number Trained				Training Description	Certification
	Male	Female	Indigenous	Total		
Manager	1			1	Internal Auditor /Occupational Health and Safety Systems	Y
					II	
Administrative Personnel RRCC	15		10	15	Integration of Fruits	
Administrative Personnel RRCC	16		10	16	Effective Planting	
School Teachers	29		29	29	Use and Management of Water	
School Teachers	32		32	32	New Theories of Learning	
School Teachers	25		25	25	Mining Processes	

2.11 Purchasing

Marlin Mine purchasing is divided into two categories: contract services and operations purchasing for materials equipment and supplies. During 2006 Montana spent over $8 million for contract services. Of this amount, 37 percent or $3 million was spent in Guatemala (see Table 5).

Table 5. Marlin Mine Construction Costs: 2006				
	San Marcos Department	Elsewhere in Guatemala	Outside Guatemala	Total
Montana Construction Contracts	$138,227	$2,865,391	$5,126,607	$8,130,223
Percent	2%	35%	63%	100%

Montana spent $53,771,289 for materials, equipment and supplies for operations of the Marlin Mine during 2006. Of the total, over $19.6 million (80 percent) was spent within Guatemala including 4 percent in San Miguel and 0.3 percent in Sipacapa (see Table 6).

Table 6. Marlin Mine Operations Purchasing For Materials, Equipment And Supplies: 2006						
	Vendor Location					
	San Miguel	Sipacapa	Total in San Marcos	Total in Guatemala	Outside Guatemala	Total
Marlin Mine Purchases	$2,029,116	$210,988	$2,891,648	$34,162,009	$19,609,280	$53,771,289
Percent	**4%**	**0.3%**	**5%**	**64%**	**36%**	**100%**

2.12 Land Acquisition

Marlin Mine

During 2006, Montana acquired an additional 340 cuerdas (approximately 37 acres) of land for the Marlin Mine. Although Montana has previously acquired all land necessary for the mine, the company continues to purchase selected parcels from willing landowners to expand the buffer area. The 2006 purchases involved 14 separate parcels of land purchased from a total of 9 owners, 2 of whom were women. Parcel sizes ranged from 1 cuerda to 140 cuerdas; the average parcel size was 24 cuerdas. Montana paid a total of Q1,360,000 ($178,947) for these parcels, or Q4000/cuerda ($4,873/acre). The average amount paid per parcel was $12,782.

Table 7. Marlin Mine 2006 Land Acquisitions

Number of Parcels Purchased	Number of Owners	Number of Women Owners	Total Area	Average Parcel Size in Cuerdas	Total Paid in Quetzals	Total Paid in Dollars
14	14	2	340 cuerdas 36.7 acres	24.29	Q1,360,000	$176,529

La Hamaca

Over the past three years Montana has acquired land for the proposed La Hamaca expansion of the Marlin Mine. Montana acquired 106 parcels from 75 separate owners for the La Hamaca expansion, or a total of 1,903 cuerdas (205 acres). Montana paid Q7,612,000 (Q4,000/cuerda) for the land or about $1,001,579. La Hamaca land purchase during 2006 totaled 162 cuerdas for which Montana paid Q694,000 0r US$91,315.

Table 8. La Hamaca Expansion Land Acquisitions

Number of Parcels Purchased	Number of Owners	Number of Women Owners	Total Area	Average Parcel Size in Cuerdas	Total Paid in Quetzals	Total Paid in Dollars
106	75	18	1,903 Cuerdas 205 Acres	25	Q7,612,000	$1,001,578.9

Homes and Improvements

Montana paid for improvements on 14 parcels purchased for the Marlin Mine and La Hamaca expansion during 2006 (see Table 9). 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. Montana also assisted with construction of new houses in some cases. Although a number of the properties purchased by Montana during 2006 included houses, none were primary residences; they were all used only occasionally, generally during planting and harvesting of crops.

Table 9. Marlin Mine Land Acquisition: Properties With Improvements			
Number of Parcels w/ Improvements	**Number of Women Owners**	**Total Paid in Quetzals**	**Total Paid in Dollars**
14	2	Q1,222,500	$160,855

3.0 TAX AND ROYALTY PAYMENTS

During 2006, Montana paid over $6,937,000 in taxes and royalties for the Marlin Mine. Table 10 provides information on specific taxes and payments.

Table 10. 2006 Marlin Mine Tax And Royalty Payments				
Guatemalan Tax or Royalty	**2006 Marlin Mine Tax/Royalty Payment**		**Tax/Royalty Type**	**Comments**
	Quetzals	**Dollars**		
Income Tax	25,842,699	3,399,750	Tax on gross income	
IVA (crédito fiscal)	29,124,816	$3,832,213	Value Added Tax (VAT) – 12% on all purchases	Montana is due a refund of the VAT attributable to export production
IUSI	213,006	97,764	Tax on land	Can accrue to the municipality where the land is located under certain conditions
Derechos Ancelarios	314,136	41,314	Import tax	Paid on certain non-exempt imported items
Regalias	9,882,138	1,298,762	Royalties on production	50% distributed to the municipality where the ore is mined
IGSS Patronal	5,790,737	761,939	Social security tax (employer's share)	Funds health care and hospitals
Total	**Q71,167,532**	**$9,431,742.00**		
Montana payment of employee share of IGSS	Q1,322,648	$169,570	Social Security tax (employee's share)	Montana pays employee's share of IGSS taxes

Montana was scheduled to begin paying income tax in 2008 but voluntarily began paying the tax in July of 2006. Because of this decision, the government of Guatemala will likely receive an additional Q/100,000,000 (over US$13million) over the course of the two-year period, depending on production and the price of gold.

4.0 SIGNIFICANT EVENTS

The following significant events occurred during 2006:

- January 27: The Marlin Mine completed one million hours worked without an accident.
- February 1: The Marlin Mine made its first payment of royalties to the municipality of San Miguel Ixtahuacán.
- February 8: The first of three training sessions conducted during the year was held for teachers whose salaries were funded by Montana.
- February 18 & 19: AMAC, the local community environmental monitoring committee, conducted its first quarterly water sampling fieldwork. Marlin Mine environmental staff also collected samples at the same location to facilitate comparison. AMAC conducted a total of four training sessions during 2006.
- March 25 & 26: AMAC conducted its first review of results from February water testing.
- April 6: The Mayors of Sipacapa and San Miguel, along with their municipal colleagues and the Governor of San Marcos, came to the Marlin Mine. The group delineated the line between the two municipalities as it passes through the Marlin Mine. Marlin personnel provided support with global positioning equipment (GPS) to document the delineation.
- July 11: The US Ambassador visited the Marlin Mine.
- July 12: Montana announced that the Marlin Mine had produced its first one million ounces of gold.
- August 10: Pro-Mining groups and organizations conducted a march in Guatemala City.
- September 12: The British Ambassador visited the Marlin Mine.
- October 27: The final version of the GETSA Health baseline study was approved by the Guatemala Ministry of Health.
- November 6: Goldcorp Inc. acquired Glamis Gold, Ltd. The Marlin Mine and Montana Exploradora de Guatemala became part of Goldcorp. This had no material effect on the Marlin Mine's day-to-day operations.
- Undated: Montana's parent company posted the Marlin Mine 2005 IFC Annual Monitoring Report on its website. The voluntarily release of the AMR is an ongoing effort to provide information and transparency with respect to Montana's activities in Guatemala. This is the second Annual Monitoring Report and both the 2004 and the 2005 reports are available on the Goldcorp website.
- Undated: Some members of neighboring communities believed that cracks in their houses were due to the mine's use of explosives. Government agencies, AMAC and community members participated in three different activities during the year to show that the cracks in their houses were not due to mining activities. A report by an independent expert was commissioned and will be completed in 2007.
- Various dates: Montana held a series of continuing meetings with the communities along the road from Marlin to the Pan American Highway to support them in their efforts to have the road included in the national inventory and make it eligible for improvement by the national government.
- Ongoing: Montana hired a risk manager and continued work on the implementation of the Voluntary Principles on Security and Human Rights.
- Ongoing: Montana continued its efforts to secure a mining license for the La Hamaca extension of the Marlin Mine.

5.0 LIAISON WITH EXTERNAL PARTIES

5.1 Guatemalan Monitoring Requirements for the Marlin Mine

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 Mine and the recommendations specified by MARN in its resolution 779-2003/CRMM/EM (this includes the monitoring proposed in the EIA&S).

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 Mine 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 mine 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 mine area every 2 years,
- Socioeconomics in the communities near the mine area every 3 months, and
- Opinion of the nearby communities every year.

Most of the monitoring parameters are compared to World Bank Guidelines[2], except for potable water, which is compared to the values determined by the Guatemalan Standards Commission

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

(COGUANOR). The results of the monitoring program must be presented to the regulatory agencies every 3 months.

Other Requirements

No other Guatemalan institutions require monitoring for the Marlin Mine; 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.

5.2 Ongoing Public Consultation and Disclosure

Montana has an ongoing Public Consultation and Disclosure Program (PCDP) for the Marlin Mine. 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.

Community Relations Unit

One of the key elements of the PCDP is the Community Relations Unit of the Sustainable Development Department, 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 Unit has been trained to provide information about the mine 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 Unit has been expanded over time to include many other communities in the municipalities of San Miguel and Sipacapa. The Community Relations Unit also meets with communities in the Departments of Huehuetenango and Quetzaltenango that are along the access road to the Marlin Mine from the Pan American Highway.

During 2006, the Marlin Mine Community Relations Unit made 727 visits to individual communities and held a total of 1,921 meetings within those communities, which were attended by a total of 10,722 people. As shown in Table 12, during 2006 a total of 459 people also toured the Marlin mine.

Table 11. Summary Of Public Consultation Activities Of The Community Relations Unit

Consultation Type	Number of Consultations			
	2003/2004	2005	2006	TOTAL
Community Visits	179	163	727	1069
Number of persons attending meetings	11,609	4,357	10,722	26,688
Number of Persons visiting the mine	3,389	2,414	459	6,262

Also during 2006, a total of 1,639 people visited Montana's offices in San Miguel and Sipacapa. Montana held 3 workshops for teachers, which were attended by a total of 87 teachers and 26 workshops for community leaders, which were attended by a total of 295 community leaders.

Staff Contacts

In addition to these visits, a variety of Montana personnel held numerous formal, informal and ad hoc meetings with community, departmental and national officials, NGOs and individuals. These meetings occurred frequently and addressed a variety of topics.

Public Communications

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

- *Periódico Horizontes:* This publication changed during 2006, from a locally distributed newsletter to a magazine format distributed to interested audiences, primarily in Guatemala City. *Horizontes* was published in August and November of 2006 with a circulation of 500 copies.

- *Volantes Informativos (Flyers):* These are short papers (often one page) on specific topics that are widely distributed in communities near the Marlin mine. During 2006, they were used to provide timely information on topics such as mine events and milestones, community and sustainable development programs and royalty payments to local and national governments. Three separate fliers were distributed during 2006 with a circulation of 2,000 for each flier.

- *Boletín El Ingieniero:* Formerly an internal newsletter, *El Ingieniero* became the Marlin Mine's major medium for ongoing communications with neighboring communities during 2006. The decision to extend the circulation of *El Ingieniero* to the communities was made in recognition of the fact that the majority of Montana employees are also local community members. Consolidation of communications mediums for the two audiences was therefore a natural progression in the Marlin communication program. *El Ingieniero* provides in-depth articles on mine and community events and milestones, community projects, aspects of mining, profiles of mine employees, and occupational health, safety and environmental programs. Three issues of *El Ingieniero* with a circulation of 2,000 each were distributed during 2006.

- *Folletos (Pamphlets)*: Illustrated pamphlets are used to provide more detailed information about the Marlin Mine, such as the phases of mining, mining benefits, environmental protection and social responsibility. These pamphlets are available at the various Marlin Mine offices and at Montana's offices in Guatemala City.

- *Radio Announcements:* Announcements are made on a variety of local, regional and national radio stations covering topics such as technical, environmental, social, economic and legal aspects of the Marlin Mine. During 2006, monthly radio announcements communicated the payment of royalties to national and local governments, the payment of reforestation incentives and Montana's response to unsubstantiated allegations by interest groups and organizations.

- *Newspaper Announcements:* Announcements are published in local, regional and national newspapers to communicate significant events and technical, environmental, social, economic and legal aspects of the Marlin Mine that might not be otherwise covered by the press. As with the radio announcements, the 2006 newspaper announcement focused

on payment of royalties to national and local governments, the payment of reforestation incentives and Montana's response to unsubstantiated allegations by interest groups and organizations

- *Issue/Briefing Documents:* Montana prepares and circulates documents on a variety of aspects of mining in general and the Marlin Mine in specific. These documents are circulated to interested government and private sector representatives.

- *Video presentations:* Montana has developed a number of video presentations on aspects of the Marlin Mine. These presentations are circulated to television stations and other interested groups and individuals in DVD format.

- *Briefings:* Montana has held a number of briefings for representatives of the banking, commerce, industrial and governmental sectors.

Another method for communicating with the public is through the Goldcorp website, which contains information on the Marlin Mine including Goldcorp press releases. Goldcorp also publishes Marlin Mine annual monitoring reports on the website; the 2004 and 2005 Annual Monitoring Reports for the Marlin Mine are available to the public on the Goldcorp website.

In addition to Montana's communication programs, Fundación Sierra Madre (FSM), publishes the *Sierra Madre Development News,* printed in both Spanish and English. This newsletter was published four times during 2006. It highlights events and activities of the Foundation's health care, vocational training and environmental education programs. The newsletter also features local participants in these programs.

Grievance Redress

Montana has established responsibility and resources for addressing grievances within the Marlin Mine Sustainable Development Department. In 2006, a draft Grievance Management System was approved and is planned for implementation during the first half of 2007. The institutional grievance system will allow for improved tracking and documentation of local inquiries, grievances and complaints.

Community Environmental Monitoring and Contingency Committee (AMAC)

Asociación de Monitoreo Ambiental Comunitario or AMAC was established in late 2005. Although it is completely independent from Montana Exploradora, it is included in the AMR due to the importance of local third-party monitoring and verification. AMAC was formed to conduct an independent community-based environmental monitoring program. The committee's current membership includes representatives of the communities of San José Ixcaniche, Salitre, Agel, San José Nueva Esperanza, Siete Platos and a representative of the Catholic Church, all from the municipality of San Miguel Ixtahuacán, and a representative from the community of Salem in the municipality of Sipacapa. The community of Carrizal from Sipacapa was invited to join in February 2006 and representatives from the Evangelical Church and the two municipalities of San Miguel and Sipacapa were also invited to integrate into the Association but have not yet sent representatives to the meetings. AMAC is supported by two technical representatives; one mining engineer from the Faculty of Engineering of the University of San Carlos in Guatemala and one environmental scientist/hydro-geologist.

- Legal Status and Decision Making

AMAC is independent and community-based; each of the participating communities chose their representative in a community assembly. AMAC is in the final stages of obtaining its registered legal status. During 2006 the association established internal regulations that require decisions to be taken in assemblies that follow local traditions, under the direction of the association committee that includes a president, vice president, secretary and treasurer. When AMAC receives its legal authorization the committee will begin to record minutes of meetings as required by Guatemalan law.

- Funding

  AMAC has an agreement with FUNSIN (Foundation for the Advancement of Engineering - a foundation with headquarters in the Guatemala School of Engineering) for the management of funds. FUNSIN will manage funds obtained from any source to enable AMAC to retain its independent status. To date the IFC and Montana have contributed funds to AMAC for funding AMAC's activities.

- Training

  AMAC members have participated in 10 training sessions, including training in conflict resolution, communication and negotiation, water sampling procedures and techniques, introduction to cyanide, introduction to the chemistry, concepts and practical examples of variables analyzed in surface and groundwater sampling, and in the uses, applications and toxicity of metals and non-metals. In the latter part of 2006, at the request of AMAC members, the technical support team provided in-depth training on the chemistry of the elements and components contained in the laboratory analysis of the water samples. AMAC also conducted an elaboration of its water sampling training program, including explanation of the role of preservatives, the selection of the location of sampling points, comparison of laboratory sampling results with World Bank water quality standards, and revision of the sampling protocols.

- Water Sampling

  AMAC collected water samples four times during 2006, during the months of February, May, August and November. Samples were taken at five different sampling points during each session. During 2006 AMAC collected a total of 157 water samples from stations located in the rivers adjacent to the Marlin mine, from 3 wells, and from 1 station located at the return point of the tailings dam filtration system, in accordance with the AMAC sampling protocol. The samples obtained were sent to a laboratory chosen by AMAC (ALS Laboratory Group in Canada, an internationally certified laboratory).

- Analysis of Laboratory Results

  Laboratory results are returned to AMAC approximately five weeks after each sampling session, which allows time for additional verification of the samples, if needed. AMAC then compares the laboratory results with World Bank water quality standards and with the results of samples taken by the Marlin mine. This analysis occurs in a joint meeting of AMAC and Marlin mine environmental staff so that action plans can be developed if differing laboratory results are returned. The laboratory results from all samples taken during 2006 by both AMAC and the mine were confirmed by AMAC to indicate there is no mining related contamination in the rivers around the mine.

- Communications

  AMAC has developed a plan for communicating its activities to the participating communities and to external groups. Shortly after it obtains and reviews the laboratory results, association members visit every participating community to present the results. AMAC members also visit or communicate with the Catholic and Evangelical churches, other local municipalities, Mayan groups, the Guatemalan Ministry of Energy and Mines, selected embassies and other Guatemala City-based agencies and organizations. During 2006, AMAC made 26 presentations to communities and 11 presentations to other interested organizations.

Fundación Sierra Madre Community Advisory Councils

FSM has established Community Advisory Councils (CADEC) in the municipalities of San Miguel, Sipacapa and Máquivil, and has developed rules, procedures and structures for the CADEC. The CADEC are intended to engage the communities in the formulation and implementation of the Foundation's plans and strategies.

In 2006, FSM continued to focus on the organization and strengthening of the CADEC. Members of the three councils signed Letters of Commitment to dedicate themselves to the strengthening and development of FSM as a community organization. Apart from continuing the quarterly CADEC meetings, FSM also encouraged council members to participate more actively in other FSM activities. During 2006, CADEC members were involved in an institutional Strength, Weakness, Opportunities and Threats (SWOT) analysis, initial design of the 2007 Operational Plan, the FSM/APROSAMI health fairs, the IV Annual Enterprise Fair, the visit of the American Ambassador and the visit of Canadian Council for International Cooperation.

To address challenges in maintaining strong councils in each community FSM introduced a leadership training component during the Sipacapa quarterly meeting in July. This training will be consolidated and implemented in both CADECs as part of the CADEC Incorporation Plan to be created in 2007.

6.0 SCHOOLS

School enrollment information is collected from schools in each directly affected community. Table 13 displays 2002 and 2006 enrollment for schools in villages near the mine site.

Table 12. Enrollment In Schools Near The Marlin Mine: 2002 - 2006

Community/ School	2002 Ending Enrollment	2006 Beginning Enrollment	2006 Ending Enrollment	Change in Number From 2002	Percent Change From 2002
Agel	208	257	257	49	24%
San José Ixcaniche	97	146	146	49	51%
San Jose Nueva Esperanza	57	97	86	29	51%
Salitre	208	373	356	148	71%
Siete Platos	129	164	154	25	19%
Salem	58	82	80	22	38%

Note: The Siete Platos enrollment number is from 2004. The 2002 enrollment was not available

School enrollment increased substantially between 2002 and 2006 in every community near the mine site. Fewer families are traveling to the coast for work and more children are completing the school year. It is also clear from discussions with teachers that fewer children are dropping out of school each year.

7.0 HEALTH

GETSA (Gestión y Tecnología en Salud) has completed the health baseline phase of a longitudinal health study that includes the municipalities of San Miguel and Sipacapa. The Health Baseline Study has been reviewed and approved by the Ministry of Health of Guatemala effective October 27, 2006. The Ministry is currently developing a plan for sharing the results of the study with federal and local officials, participating communities and other interested parties.

The results of the Health Baseline study provide information about the health conditions and services prior to the operation of the Marlin Mine. It will also provide 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 Mine. Additionally, the Study is intended to identify and measure any causality between the mineral extraction process and health related problems in the area of influence of the Marlin Mine.

The information developed in the study has also justified a higher level of health care and the development of a Level I health center in San Miguel. The Ministry of Health, Montana and other interested parties are currently developing a plan for constructing and staffing the health center. Montana and the Ministry of Health developed a draft agreement on 1) the sharing of results from the Health Baseline study, 2) a joint effort to implement a health monitoring program to build on the Health Baseline study and 3) the improvement of the San Miguel Health Center to a provide 24 hour a day integrated health care. This agreement will be finalized and signed in January 2007.

Montana contributes to health care services in communities surrounding the Marlin Mine through two channels. Fundación Sierra Madre, with financial support from Montana and other sources, operates health centers and provides health care and training programs in communities near the Marlin Mine as described in Section 9.2 of this AMR. The clinic at the Marlin mine also treats both mine employees and residents of the surrounding villages. During 2006, the clinic treated 3,246 ailments for a total of 2,478 patients. Of those, 1,942 or 79 percent were employees of Montana and its contractors; 536 or 21 percent were residents of surrounding communities.

8.0 MARLIN MINE 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 Mine Social and Community Development Programs, described in the *Indigenous Peoples Development Plan* submitted as part of the IFC loan application, include activities intended to ensure that residents of communities near the mine site will share in the benefits of the mine in a manner that substantially reduces poverty and improves their lives. This section of the AMR demonstrates Marlin Mine progress in achieving that goal.

In February of 2003, the World Bank released "*Poverty in Guatemala*,[3]" 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.[4]

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*.

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.[5]

The following provides brief highlights of Marlin Mine 2006 social and community development activities and outcomes that correspond to each of the GUAPA priority actions for poverty reduction. Each aspect of the Marlin Mine and its Sustainable/Community Development Program is presented in detail in other sections of this AMR.

[3] Poverty in Guatemala, Report No. 24221-GU. World Bank. February 20, 2003.
[4] Ibid, Executive Summary, p.i.
[5] Ibid, Executive Summary, pp.x – xiii

1. Promoting Economic Growth

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

a. **Payroll**: The 2006 payroll for the Marlin Mine totaled US$8,922,125. Of that amount, 96% percent (over $8.5 million) was paid to Guatemalan employees, 36 percent ($3.2 million) was paid to employees from San Miguel and 7 percent ($0.6 million) was paid to employees from Sipacapa. Employees from San Miguel and Sipacapa are virtually all indigenous and were virtually all in poverty at the time of hire.

b. **Purchasing**: During 2006, the Marlin Mine spent over $2 million on goods in services in San Miguel and over $0.2 million in Sipacapa.

c. **Land Acquisition**: During 2006, Montana paid Q3,276,500 ($431,118) for land and improvements for the Marlin Mine and La Hamaca extension. Virtually all of the landowners who received payments are indigenous.

d. **Training**: Montana has provided vocational and technical training to many local indigenous residents to qualify them for technical jobs at the mine. In 2006, Over 25 employees received vocational training for operations jobs, not including the annual health and safety training.

e. **Fundación Sierra Madre** (FSM, described in a subsequent section of this AMR) has aligned with the Guatemalan government vocational training agency, INTECAP, to provide vocational training for a variety of MSME enterprises. During 2006, over 350 local residents attended FSM-sponsored training sessions and workshops. Virtually all of these attendees were indigenous and at least half were women.

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

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

a. During 2006 Montana funded salaries, benefits and supplies for 37 teachers in San Miguel and Sipacapa.

b. Montana funded three training sessions for the new teachers

c. The 2006 Marlin Community Development program included substantial funding for construction or improvements for schools in 12 communities, including Siete Platos, Agel, Cucal, Chuen, Màquivil, San Antonio, El Triunfo, Sacchilom, Palimope, San Miguel and La Cal.

d. Montana provided funding for student transportation from the community of La Cal, located along the mine access road in the municipality of Malacatancito, in the Department of Huehueteanango, to the school in Canoj, which is nearby but located in the municipality of Sipacapa in San Marcos Department.

Perhaps the most significant contribution to education in communities near the Marlin Mine has been the stability provided by mine and mine-induced secondary employment, which has allowed families to keep children in school. Since 2002, both school enrollment and the number of students who remain in school for the entire school year has increased substantially in communities near the mine as described in Section 6.0 of this AMR.

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

   Marlin Mine health care activities include the following:

   a. During 2006 FSM and APROSAMI provided basic health services and training to 2,752 people in communities surrounding the Marlin Mine.

   b. Three health fairs were held in communities near the mine site, which offered consultations, health screenings (PAP, ultra-sound, Eye Exams, family planning, Lab work and EKG) and health education.

   c. During 2006, the Marlin mine health clinic treated 3,246 ailments for a total of 2,478 patients. Of those, 1,942 or 79 percent were employees of Montana and its contractors; 536 or 21 percent were residents of surrounding communities.

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

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

      1. FSM's Family Nutrition Pilot Project teaches women about better nutrition for their families and provides training on vegetable garden cultivation. In 2006, the project had 55 participating indigenous women. The project will recommence at the start of the 2007 rainy season.

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

   a. During 2004, Montana built a bridge and developed a road that leads from the Marlin Mine to Highway CA1, also known as the Pan American Highway. The bridge has been formally given to the municipality of San Miguel Ixtahuacán to allay any fear that the company would remove this bridge after mine closure. In the aftermath of Hurricane Stan, this road and bridge provided the only access to many communities in the area surrounding the mine. Similarly, a bridge constructed by Montana to provide access to Sipacapa withstood the hurricane and provided the only access for Sipacapa to Montana's access road and the rest of the country after the storm. Additionally the primary access road to Tejutla was damaged by the storm and Montana reconstructed and reopened the road to provide access to and from that community.

b. In response to a request from the Guatemalan Government and the Mayor of San Miguel, Montana is investing approximately US$5 million to significantly upgrade and pave 20 kilometers of road providing access between San Miguel Ixtahuacán and the road that connects Concepción Tutuapa and Tejutla and eventually San Marcos. This important road is used to move people and products throughout the region. The improvement and paving of this road will substantially reduce travel time from San Miguel to San Marcos, the departmental capital, provide access to the road from a number of communities not currently served, reduce wear and tear on vehicles and most importantly, provide a much safer roadway for local residents.

   In addition to the 20 kilometers of road between Concepción Tutuapa and Tejutla that will be paved, there are a number of communities off to one side of the road that insisted that a loop road connecting their communities also be paved. The national government and the mayor of San Miguel Ixtahuacán negotiated with them and agreed to include this as part of the project. The additional cost is being paid for by the national government in part and also by the San Miguel Ixtahuacán municipality which is dedicating a portion of the royalties it receives from the Marlin Mine to the project.

   The road paving project is currently underway after having been inaugurated in September of 2005 by Guatemalan President Oscar Berger, San Miguel Ixtahuacán Mayor Oswaldo Avila Perez and Glamis Gold Ltd. President and CEO Kevin McArthur. Construction is underway for the asphalt plant near the community of Siete Platos.

   It should be noted that this road is not needed for access to the Marlin Mine. Montana's participation in the road project is part of the company's commitment to community development and social and economic sustainability, and to ensuring that local residents share in the benefits of the mine.

c. Montana's Community Development program has provided funds for road improvement and maintenance projects in 19 communities including Salitre, Llano Grande, El Zapote, Chilive, Chiniguitz, Chúmbel, Ixcaíl, Talshanal, Mulebàc, Xeabaj, Exial, Cabajchún, Chiquilalá, Chinascolja, Salem, Puente Blanco, La Peña, Siete Platos and Chuena. Montana has also repaired 19 culverts in the Agel village area.

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

Montana's contribution to improving governance and the effectiveness of the public sector has proceeded on two fronts.

a. Montana has promoted transparency by communicating the Marlin Mine tax and royalty payments in newspaper and radio announcements and on a large billboard in front of the Marlin Mine entrance.

b. Montana was scheduled to begin paying income tax in 2008, but voluntarily began paying the tax in July of 2006. Because of this decision, the government of Guatemala will receive substantial additional Q/100,000,000 (over US$13 million) over the course of the two-year period.

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

Montana's achievements in this area include:

a. During 2006, an average of 657 indigenous residents of local communities worked at the Marlin Mine, 58 percent of the total workforce.

b. The more than 2,750 residents of the area around the Marlin Mine who received health care services from FSM/APROSAMI in 2006 were virtually all indigenous and a large percentage were women who received prenatal and maternal care and training.

c. The 350 participants of FSM vocational training courses in 2006 were virtually all indigenous and many were women.

d. The Marlin Mine, through FSM/FAFIDESS, supported 24 communal banks and 3 solidarity groups during 2006, which had a total of 401 members, all of whom are indigenous women. The program ended the year with Q1,799,672 (US$236,798) in loans and a combined total of Q200,503 (US$26,381) in savings. Along with the micro-credit program, training in leadership and management of the communal banks has led to greater participation of indigenous women in commercial activities in the area.

9.0 COMMUNITY/SUSTAINABLE DEVELOPMENT

9.1 Community Development Projects and Emergency Assistance

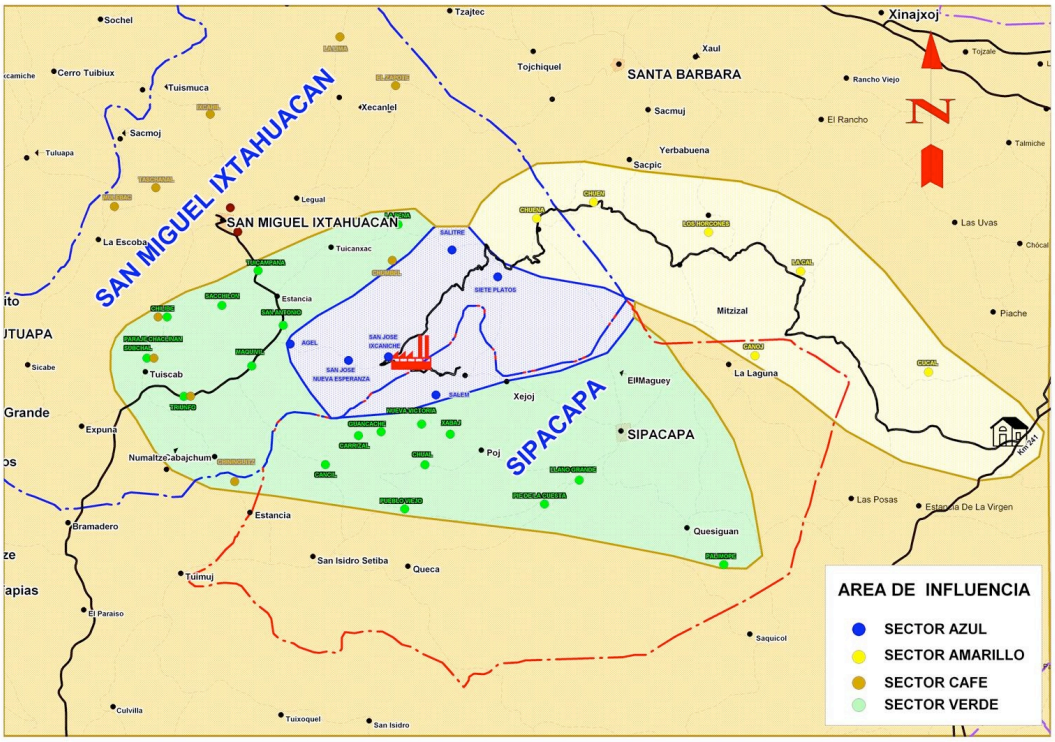
Montana funds selected Community Development initiatives near the Marlin Mine, through the Organizational Development Unit of the Sustainable Development Department. During 2006, Montana provided reconstruction assistance to communities with facilities damaged by hurricane Stan.

Marlin Organizational Development Unit and Community Development Funding

During 2006 the Marlin Organizational Development Unit conducted its first community grant cycle. Established in 2005, the unit is intended to engage communities in the identification, prioritization and implementation of community development projects in the context of available resources including those from the Marlin Mine.

Montana developed a geographic strategy for supporting community development projects based on the intensity and types of potential impacts. Additionally, Montana has the capacity to consider emerging and urgent community development projects as the need arises. The organizational unit identified four zones of potential impact and color-coded each zone on a map as shown in Figure 5.

Figure 5. Marlin Mine Zones of Potential Impact



- The Blue Zone, the area of direct influence, includes six communities that are located adjacent to the Marlin mine and its activities: Agel, San Jose Nueva Esperanza, San Jose Ixcaniche, Salitre and Siete Platos in the municipality of San Miguel Ixtahuacán and Salem in the municipality of Sipacapa. These communities receive 40 percent of the annual community development budget for this geographic strategy.

- The Green Zone includes a second ring of communities located around the Marlin Mine that are indirectly affected by the mine and its activities. These communities receive 30 percent of the annual community development budget for the geographic strategy.

- The Yellow Zone includes communities located along the transportation route between the Marlin mine and the Pan American Highway. These communities receive 20 percent of the annual community development budget for the geographic strategy.

- The Brown Zone includes the remaining communities in the municipalities of San Miguel Ixtahuacán and Sipacapa that may or may not be affected by the Marlin Mine and its activities. Development needs in these communities will be identified in coordination with the municipal government. These communities receive 10 percent of the annual community development budget for the geographic strategy. In 2006 Brown Zone projects were identified in talks between the Organizational Development Unit and the municipality of San Miguel Ixtahuacán. In Sipacapa, Brown Zone funding was redirected to the Green Zone for 2006.

During 2006 Montana met with communities in the Blue, Yellow and Green zones to get input on the community organizational development process. The elements of the process include:

- The COCODES (local development councils) and auxiliary mayors of each community identify, prioritize and select community projects.
- General guidelines establish the types of development projects Montana will fund.
- The community organizational development program is ongoing and phased multi-year projects are allowed and encouraged.
- Montana provides a set amount of funding each year for community development. It is up to the COCODES and Auxiliary Mayors to determine the distribution of that funding. Communities are encouraged to use Marlin Mine funding to leverage additional funding from the municipality and other sources. The funding level for the 2006 program is $300,000 for all zones. Additional community development funds are separately allocated.

The community organizational development process is intended to foster sustainable community development by strengthening local community planning, financing and implementation capacities. In the initial round, the communities identified a set of projects that would cost more than the available funding for 2006. Through internal negotiations between communities, one community agreed to scale back its project to the first phase of a school building on the promise that the other communities would give first priority status to the second phase during the 2007 funding cycle.

Table 13 displays 2006 community development projects selected by the COCODES and auxiliary mayors and funded by Montana.

Table 13. Marlin Mine 2006 Community Development Projects

No.	Community	Project Type	Status	%
Blue Zone Projects				
1	Siete Platos, SMI	Primary school construction	Under construction	70%
2	El Salitre, SMI	Maintenance of 2 km. Road	Completed	100%
3	Agel, SMI	Primary school construction	Under construction	20%
Yellow Zone Projects				
4	Cùcal, SMI	Primary school construction	Completed	100%
5	Canoj, SMI	Communal parlor construction	Completed	100%
6	La Cal, SMI	Cemetery circulation	Completed	100%
7	Horcones, SMI	Communal kitchen construction	Completed	100%
8	Chuen, SMI	Primary school circulation	Completed	100%
9	Chuena, SMI	Communal kitchen construction	Completed	100%
Green Zone Projects				
10	Màquivil, SMI	Primary school construction	Completed	100%
11	Tui Campana, SMI	Football field stairs construction	Completed	100%
12	San Antonio, SMI	Primary school improvements	Completed	100%
13	El Triunfo, SMI	Primary school bathrooms	Completed	100%
14	La Peña, SMI	Drainage construction	Project cancelled for	100%

Table 13. Marlin Mine 2006 Community Development Projects				
No.	**Community**	**Project Type**	**Status**	**%**
			this year; other activities took place	
15	Chilive, SMI	Sports field stairs construction	Completed	100%
16	Sacchilom, SMI	School store room construction	Completed	100%
17	Chacliná, Subchal, SMI	Water system study	Completed	100%
18	Palimope, Sipacapa	Primary school circulation	Completed	100%
19	Pié de La Cuesta, Sipacapa	Water tanks construction	Completed	100%
20	Llano Grande, Sipacapa	Pedestrian bridge construction	Completed	100%
21	Xeabaj, Sipacapa	Water system reconstruction	Completed	100%
22	Carrizal, Sipacapa	Auxiliary Mayor's bldg construction	Completed	100%
23	Chual, Sipacapa	Auxiliary Mayor's bldg construction	Completed	100%
24	Pueblo Viejo, Sipacapa	Auxiliary Mayor's bldg construction	Under construction	90%
25	Guancache, Sipacapa	Foot Ball field construction	Completed	100%
26	Cancil, Sipacapa	Improvements in the urban center	Completed	100%
27	Nueva Victoria, Sipacapa	Auxiliary Mayor's bldg construction	Completed	100%
Brown Zone Projects				
28	La Lima	Communal kitchen construction	Under construction	80%
29	Cabecera Municipal	Pluvial drainage reconstruction	Completed	100%
30	Casco urbano	Sanitary drainage reconstruction	Under construction	60%
31	El Zapote	Materials for a peatonal bridge	Completed	100%
32	Chílive	Buy a road material deposit	Completed	100%
33	Chininguitz	Buy a road material deposit	Completed	100%
34	El Triunfo	Buy a road material deposit	Completed	100%
35	Chúmbel	Buy a road material deposit	Completed	100%
36	Ixcaíl	Materials for a road wall	Completed	100%
37	Talshanal	Materials for a road drainage	Under construction	80%
38	Chininguitz	Metal structures for a church	Under construction	80%
39	Plan Subchal	Potable water study support	Under construction	80%
40	Mulebàc	Construction of road drainages	Under construction	70%

Hurricane Stan Disaster Reconstruction and Other Urgent Projects

In October 2005, Hurricane Stan hit Guatemala, devastating the county and destroying or damaging many communities and homes and causing extensive loss of life and injury. In the communities surrounding the Marlin Mine, most major roadways and bridges were washed out leaving residents without access to food, medical care and emergency aid. For many of the

communities near the mine, the Marlin Mine access road and bridge across the Rio Cuilco River, which withstood the hurricane, was the only access to the Pan American Highway and the rest of the country.

In response to the emergency, Montana joined with local municipalities, the Guatemalan Red Cross and other emergency aid organizations to transport medicine and emergency medical personnel by air and ground to stranded communities in San Miguel and Sipacapa and to the neighboring municipality of Tejutla, which was particularly hard hit. As noted in a Guatemalan newspaper, in the beginning Montana was the only entity providing aid to many communities.[6]

During 2006, Montana has continued to assist communities affected by Hurricane Stan by providing funding for reconstruction efforts as shown in Table 14. Montana has also helped fund other urgent needs such as reconstruction of a community water system that was vandalized by mine opponents.

Table 14: Hurricane Stan Disaster Reconstruction And Other Urgent Projects

No.	Community	Type of Donation	Execution Status	%
Hurricane Stan Disaster Reconstruction				
1	Cancil, Sipacapa	Reconstruction of potable water system	Completed	100%
2	Xeabaj, Sipacapa	Reconstruction of a "concrete river crossing	Completed	100%
3	Siete Platos, SMI	Reconstruction of potable water system	Completed	100%
4	Paraje Polimonte, aldea El Salitre, SMI	Reconstruction of potable water system	Completed	100%
5	Caserío Chuena, aldea El Salitre, SMI	Reconstruction of potable water system	Completed	100%
6	Paraje Los Domingo, Chílive village, SMI	Removal of a landslide at the new school	Under construction	70%
Other Urgent Projects				
7	Aldea El Salitre, SMI	Donation for legal costs, water system sabotage	Delivered	100%
8	Communities of Exial, Cabajchún and Chiningúitz, SMI	Repairs and rehabilitation of bridge and 14 km. road between SMI and Sipacapa.	Completed	100%
9	Instituto Básico por Cooperativa, San Miguel Municipality	Construction of a sports field and 2 classrooms	Completed	100%
10	Chiquililá and Chinascolja caseríos, aldea El	Road repair on 2.5 km. road	Completed	100%

[6] "Nueva Esperanza, donde nadie ha llegado," *Prensa Libre*, Guatemala, October 18, 2005.

Table 14: Hurricane Stan Disaster Reconstruction And Other Urgent Projects				
No.	**Community**	**Type of Donation**	**Execution Status**	**%**
	Salitre, SMI			
11	Caserío Salem, Sipacapa	Road realignment to avoid football field	Completed	100%
12	Paraje Los Hernández, San José Ixaniche village, SMI.	Donation of materials for water system repairs.	Delivered and Completed	100%
13	Caserío Puente Blanco, Sipacapa	Road reconstruction	Completed	100%
14	San Antonio La Cruz, Sipacapa	Donation of 90, 12" roof tiles to the Pentecostal church "Camino al Cielo".	Delivered and installed	100%
15	La Cal village, Malacatancito, Huehuetenango	Donation for student transportation	Delivered	100%
16	La Cal village, Malacatancito, Huehuetenango	Construction of latrines in La Cal primary school	Completed	100%
17	Agel village, SMI	Reconstruction of 19 culverts	Completed	100%
18	Caserío La Peña, SMI	Rock works in the road from Chiquililá	Completed	100%
19	Tui Campana village, SMI	Catholic Church grading/site preparation of land for construction	Completed	100%
20	Aldea El Salitre, Siete Platos y Chuena, SMI	Construction of the Cantzlup bridge	Under construction	90%

2006 Education Funding

Montana also participates in education initiatives in communities near the Marlin Mine. In 2006, Montana funded the salaries and benefits of 37 teachers (25 in the Municipality of San Miguel and 12 in the Municipality of Sipacapa). This ongoing initiative was initiated during 2006 in response to request from the mayors of San Miguel and Sipacapa, who are using municipal funds to pay for additional teachers.

Table 15. 2006 Montana Teacher Funding			
Municipality	**Number of Teachers**	**Montana Contributions/ Quetzals**	**Montana Contributions/ Dollars**
San Miguel Ixtahuacán	25	602,735	79,307
Sipacapa	12	289,313	38,068
Total	**37**	**892,048**	**117,375**

9.2 Sustainable Development: Fundación Sierra Madre[7]

In July 2003, Glamis Gold, now part of Goldcorp, – 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 Mine. 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 (FSM), 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 and also has an office 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 Ixtahuacán), a San Miguel-based community health organization;
- INTECAP (Instituto Técnico de Capacitación y Productividad), a state-run entity that offers vocational trainings; and
- 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 have continued through 2006, were created as a way to bring an integrated strategy to program implementation while maximizing the results of each program component.

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.

A results matrix for FSM goals and achievements is presented in Attachment A. During 2006, FSM conducted the following activities:

Health Care

During 2006 FSM emphasized regular, monthly visits by trained personnel to the 14 communities of strategic interest around Marlin Mine. Immunization services were offered jointly with the San

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

Miguel Health Center with initial support from Proyecto Desarrollo Comunitario (Community Development Project or PRODEC). This consistent delivery of services plus the organization of health fairs allowed FSM to link and coordinate activities with the multiple organizations providing healthcare in the area, to enrich the available human capital, to strengthen inter-institutional relationships, and to reflect on some lessons learned in the challenge of providing quality services.

Unique to this year, through the FSM contact at the Sipacapa Health Center, the first coordinated health activities in four Sipacapa communities were begun. All four of the Health Days planned for the communities were carried out and each included a health education component. More than 200 young people were informed about sexual and reproductive health through FSM coordination with the local school system as a way to introduce health education into the formal education system. FSM's continued participation in the Municipal and Departmental Health Councils strengthened its links with health departmental authorities and furthered communication among local institutions.

FSM held two health fairs in the final quarter of 2006 bringing the total to three fairs for the year. FSM, working jointly with its partners APROSAMI, APROFAM, PCI, PRODEC and the San Miguel Health Center, took the opportunity offered by the fairs to begin building the sustainability of the improved healthcare offerings in the area by charging for services in order to encourage a culture accustomed to paying for quality health services. Most fair attendees were willing to pay for the services they requested or required. This indicates that FSM's message of the importance of one's health and making an investment in it is being absorbed. The results for each of the three fairs are displayed in Table 16.

Table 16. 2006 FSM/APROSAMI Health Fair Services And Patients Seen

Location	Date	Consultations		PAP*	USG*	Eye Exam	AQV *	Lab Work	EKG *	Health Ed Talks **
		Adult	Pediatric							
San Miguel Ixtahuacán	May 23/24	40	44	34	25	42	11	9	-	200
San Josè Ixcaniche	Nov 14	92	20	13	17	28	0	15	-	300
San Miguel Ixtahuacán	Dec 6	117	21	49	15	50	5	*11*	*8*	*150*
Total		**249**	**85**	**96**	**57**	**120**	**16**	**35**	**8**	**650**

Note: * PAP=Pap Smear; USG=Ultrasound; AQV=Permanent surgical method for family planning; EKG=Electrocardiogram.

** The educational talks addressed varied health issues, based on the diseases prevalent in the area. Other services were also available, such as medicinal plants, immunization, pregnancy tests, and pharmaceutical sales.

During 2006, APROSAMI delivered 2,752 individual health services. Table 17 displays a list of FSM/APROSAMI health activities in 2006 and the number of people served. APROSAMI also completed 100 percent of its planned promotion and summoning activities for health care activities.

Table 17. 2006 APROSAMI Services		
Health Activity	**2006 Total**	**Observations**
Consultation to infants under 1 year of age	236	Morbidity: Diarrhea, common cold, pneumonia and healthy child
Consultation to children 1 year of age to <5 years	470	Morbidity: Diarrhea, pneumonia, skin infections and intestinal parasites
Consultations to >5 years	1,556	Children and adults
2nd visits for >5 years of age	30	
Prenatal consultations	320	By technical personnel
Prenatal 2nd visits	30	
Consultations to post-partum women	99	By technical personnel
High risk pregnancy cases	11	This case was attended locally
TOTAL	**2,752**	

FSM's Family Nutrition Pilot Project teaches women about better nutrition for their families and provides training on vegetable garden cultivation. In 2006, the project achieved the following

- Two weeks of technical assistance in vegetable gardens by INTECAP trainers;
- The planting of four family vegetable gardens in the villages of Agel, Kiakjul and San Antonio;
- Five APROSAMI Community Facilitators trained in the Basic Environmental Education Program Series (PEBA) Vegetable Garden Module and able to train new project members.
- 55 women are participating in the project, which will recommence again at the start of the 2007 rainy season.

Vocational Education

A total of 414 residents of communities surrounding the Marlin Mine participated in a vocational course during 2006, a large percentage of which were women as shown in Table 18.

Table 18. FSM 2006 Vocational Training Classes				
Course	**Location**	**Dates**	**Duration**	**Participants**
Technical Assistance in Development of Marketing Plans	Montaña Blanca Training Center, Máquivil Village, San Miguel Ixtahuacán	February 20 – 24, March 06 – 10	80 hours	9 entrepreneurs from San Miguel and Sipacapa
Technical Assistance, Management of Deciduous Fruit Trees	Tierra Colorada Hamlet, San Miguel Ixtahuacán	March 20 y 21	12 hours	2 people
	Guancache Hamlet, Sipacapa	March 22 and 23	12 hours	10 people
Seminar on Deciduous Fruit Trees	Parrish Hall, San Miguel Ixtahuacián	March 24	5 hours	40 people

Table 18. FSM 2006 Vocational Training Classes				
Course	**Location**	**Dates**	**Duration**	**Participants**
Technical Assistance Production of Forest Tree Nurseries	Montaña BlancaTree Nursery, Máquivil Village, San Miguel Ixtahuacán.	March 06 - 17	60 hours	4 people
Training on Growing of Trees, Glowers and Vegetable Gardens	Llano Grande, Pie de la Cuesta Village, Sipacapa	March 20 – 31	50 hours	14 women
Technical Assistance on Vegetable Gardens for Exportation	Subchal Village and Tierra Colorada Hamlet, San Miguel Ixtahuacán;	April 03 - 07	40 hours	8 farmers
First Enterprise Motivational Workshop Seminar	Parish Hall, San Miguel Ixtahuacán	April 28	5 hours	50 people
Training in Traditional Weaving with Pedal Weaving Machine	Las Minas Hamlet, Quequesiguán Village, Sipacapa	April 17 – June 08	240 hours	9 men and 1 woman
Training on Cultivation and Care of Forest Tree Farms	Caserío San Antonio, aldea Máquivil,	May 11 – 25	80 horas	15 people
	Agel Village and Kiakjul Hamlet,	June 05 – 16	80 hours	20 people
	Chaquiviltzaj Hamlet, La Estancia.	June 19 – 29	72 hours	20 people
Training in Bakery Product Diversification (2 groups)	House of Mario Bautista Ambrocio, Municipal capital city, Sipacapa	June 10 – 21	40 hours per group	22 people
Lecture on Advantages and Disadvantages of Free Trade Agreement	Municipal Hall, Sipacapa	August 1	5 hours	24 people
	Parrish Hall, San Miguel Ixtahuacán	August 2	5 hours	52 people
Second Seminar on Enterprise Motivation	Parrish Hall, San Miguel Ixtahuacán	August 11	5 hours	20 people
Traditional Sausage Making	Chílive Village, San Miguel Ixtahuacán (from 08:00 to 12:00 hours)	August 21 – September 01	40 hours	13 women from Communal Banks of Chílive and Subchal
	Máquivil Village, San Miguel Ixtahuacán (From 14:00 to 18:00 hours)		40 hours	12 women from Communal Banks of Máquivil
Training on Working Windows and Basic Office	Computer Center, Basic Cooperative Education Institute, Sipacapa	September 04 – 25, 2006	42 hours per group	24 people

Table 18. FSM 2006 Vocational Training Classes				
Course	**Location**	**Dates**	**Duration**	**Participants**
(two groups)				
First Phase: Technical Assistance on Men's Coat Tailoring (two groups)	House of Efraín Aguilar, Máquivil Village, from 08:00 to 12:00 hours.	October 02 – 13, 2006	40 hours	4 men
	Health for All, Meeting Hall, Municipal Capital City, San Miguel Ixtahuacán, 17 to 20 hours		30 hours	4 men, 1 woman
Technical Assistance in Flower Production in Greenhouses	La Inmortal Tree Nursery, Agel Village, San Miguel Ixtahuacán	November 6,13,14, 15 & 16	40 hours	1 person
Training on Basic MS Windows and Office (two groups)	IPECI & C Computer Center, Municipal Capital City, San Miguel Ixtahuacán (14:00 to 18:00 hrs)	November 06 – 29	48 hours	2 men and 10 women
	IPECI & C Computer Center, Municipal Capital City, San Miguel Ixtahuacán (18:00 to 22:00 hrs.)		48 hours	6 men and 3 women
Training on Men's Trousers and Shirt Tailoring	FSM Training Center, Municipal Capital City, Sipacapa (09:00 to 15:00 hours)	November 20 – December 16	144 hours	9 women
Second Phase: Technical Assistance on Men's Coat Tailoring	House of Efraín Aguilar, Máquivil Village, de 08:00 to 16:30 hrs.	December 11 – 15	40 hours	5 men

Analysis of the results of training courses conducted in previous years has shown that few participants that enroll in a FSM-planned training use what they learn to generate income through production, commerce or rendering of services. However, people who request support to begin a specific kind of business or to improve one they already have generally do apply the learned training. With this in mind, in 2006 FSM utilized a three-pronged approach to offering and conducting trainings.

Training was made a key component of the Enterprise Development Program, explaining that an entrepreneurial attitude and training or basic business skills development are important elements of success. Along this line, FSM offered informational courses for community members that were not directly related to a productive activity but rather to their development as entrepreneurs e.g. the Central American Free Trade Agreement and developing an entrepreneurial mindset.

Training responsibilities were viewed as going beyond economic development and as a fundamental part of achieving positive results in other areas in which FSM and its partners work. The development of basic knowledge and abilities is essential in health, environment, commerce, agricultural and livestock production. In this spirit, activities to support health, economic

development and the environment were coordinated. Vocational training continued to be an important element of FSM's visibility and connection to the community.

This crosscutting approach to training supports actions of all the ICDP components: Health, Enterprise Development, Environmental Awareness and Institutional Strengthening. Additionally it provides opportunities to engage new communities.

Forest Nursery Training

With funding from IFC's Corporate Citizenship Facility (CCF), FSM developed and implemented the *Seeds for Development* forest nursery training project during 2004. The purpose of the project is to develop tree nurseries for reforestation projects, including the Marlin Mine 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.

In 2006, the indigenous-owned Montaña Blanca Tree Nursery continued to fill its contracted order for 35,500 trees of different species to the "Bosques para la Concordia" Program (Forests for Harmony). As the goal of FSM is to facilitate the development of enterprises that are independent of Montana and that are sustainable following the eventual closure of the Marlin Mine, this contract is significant not only for its size but for the fact that it is not a Montana contract.

Enterprise Development Program

Early in 2006, EDP was initiated when FSM began identifying entrepreneurs who would benefit most from the training entitled 'Developing a Business Plan' given by an INTECAP instructor. Nine entrepreneurs participated in this process. All nine completed a business diagnostic at the beginning of the process and five of the nine finished the process with their own business plan.

Under the new, formalized process implemented at the end of 2006, an initial diagnostic including economic, social, and business indicators is performed with each entrepreneur that is interested in the Enterprise Development Program. Then the training and technical assistance begins and is followed up with individual assistance and continued support to the clients. Even as this system evolves, EDP has been successful in attracting entrepreneurs throughout the year. It ends the year having identified 23 potential clients and running an enterprise diagnostics on 30 established businesses.

On December 6th, the Fourth Annual Enterprise Fair of Life, Color and Taste took place in San Miguel Ixtahuacán. The planning and organization of the fair allowed for the interaction of different sectors of the community including entrepreneurs, institutions, communities, suppliers, the media and others.

A total of 47 businesses participated in the fair and when surveyed at the end of the day, the business owners reported total sales of Q41,000 (US $5,430.00). Among the 47 businesses present, there were a substantial percentage of female business owners including 11 female entrepreneurs who had been working over the year with DIFAM; they sold vegetables, rice in milk, *chuchitos*, *atoles* and others specialties. This success highlights three important aspects of the FSM/EDP:

1. FSM has trained entrepreneurs and built the capacity of established local businesses in the target communities to the level where a profitable enterprise fair can be held.
2. FSM has built the capacity to conduct monitoring and evaluation of the participating businesses – capturing the fair sales and following up with the entrepreneurs after the event.
3. The potential impact of EDP and its ability to spread economic development in the target communities.

Micro-Lending, Communal Banks and Solidarity Groups

FSM/FAFIDESS Communal Banks and Solidarity Groups have facilitated and supported the entrepreneurial efforts of 401 indigenous women. As illustrated in Table 19, 2006 closed with Q1,799,672.00 ($238,367.00 USD) in loans distributed among 24 Communal Banks and three solidarity groups. These banks and solidarity groups have a combined total of Q200,502.74 ($26,556.65 USD) in savings. Along with the micro-credit program, training in leadership and management of the communal banks has led to greater participation of women in commercial activities in the area.

Table 19. FAFIDESS Micro-Lending: 2006 Clients, Loans & Savings

	2004	2005	2006	Increase	% Increase
Participants	273	332	401	128	47%
Loans	Q736,000	Q1,188,500	Q1,799,672	Q1,063,672	145%
Savings	Q69,402	Q137,884	Q200,502	Q131,100	53%

During 2006 FAFIDESS conducted an assessment of the impact of access to micro-credit on its clients. FAFIDESS interviewed 30% (118 members) of its clients chosen at random and observed the following results:

- The majority of members are over 40 years of age, mothers, married, illiterate, and contribute to the family income;
- The loans are invested in animal husbandry, agriculture, and commerce;
- Profit is used primarily for food, then for interest payments on the loan, and finally savings;
- 14% of interviewees have bought furniture and/or equipment and have invested in home improvement;
- 44% now have emergency savings, 94% separate the loan money from the profit;
- 66% have invested in a product(s) that generate(s) greater profits than before the loan;
- 100% were able to invest in healthcare through access to medicines, medical attention or travel to specialized centers;
- 90% of interviewed women attended between 1 and 3 vocational trainings to learn how to better use the loan.

The impact assessment evidences a strong correlation between the amount that FAFIDESS clients dedicate themselves to productive activities and the investments in education and health they are able to make. Organization into Communal Banks and Solidarity Groups has led to their participation in technical training and personal growth events making them viable economic participants in their families, which in many cases has given them a greater voice and more power in their homes and communities.

During the past year, follow-up training was provided to strengthen economic activity of the bank members who support themselves through animal husbandry. A total of 176 members

participated in some kind of training: 145 received technical assistance and 31 had one or more home visits. Nine particularly strong participants were trained as Livestock Promoters who will support future activities of the members of their communities multiplying the impact of the trainings ensuring that the knowledge can be passed on after FAFIDESS is no longer in the area.

Environmental Awareness

The Basic Environmental Education Program Series (PEBA) has become a vital relationship building tool for FSM with its partners and the target communities. Due to the PEBA's success, FSM has trained facilitators in other institutions on the series. This has multiplied the impact beyond the capacity of FSM and beyond FSM's impact area.

In 2006, the following training results were achieved:

- The fourth Module "Let Us Care for the Planet, Our Larger Home" was taught to a total of 30 facilitators; six completed all four activity modules, 24 completed at least one of the activity modules and will finish the rest in 2007.
    - Through facilitators and the foundation, the PEBA Series reached 189 people from 7 institutions and 19 communities.
    - 89 completed the entire fourth module, 100 participated in one or two activity modules;
- A total of 73 APROSAMI Community Facilitators for the 14 APROSAMI communities completed training on the fourth PEBA module.

During the fourth quarter, the "Trash, A Problem We Can Handle" activity of the "Let Us Care for the Planet, Our Larger Home" Module was taught per the request of the Rural Coed School of Shanshegual, San Miguel Ixtahuacán. Two teachers and thirty 5^{th} and 6^{th} grade elementary students participated in the training. Beyond the importance of educating and engaging youth on the topic of a clean environment, this activity was important as it furthered FSM's strategy to work with the formal education sector. FSM will follow-up on this opportunity and coordinate with other area schools in 2007.

Community Environmental Education

FSM supported several events and activities as part of community environmental education:

- An Environment Day was held this quarter with 360 students and teachers from the regional Minerva School of San Miguel Ixtahuacán, the Municipal Forest Office and Montaña Blanca Tree Nursery;
- Coordination with the "La Unión" farmers group from Subchal, and the Chemical Agricultural Group Association (AGREQUIMA) to gather agro-chemical containers in the community of Subchal for their destruction and recycling;
- Regular messages on the radio on how to care for the environment, and
- Trash collection, mainly during the San Miguel Fair parades in September.

ONIL Stoves

In 2005 FSM launched an ONIL or "closed stoves" project in collaboration with Helps International to begin to address the health, economic and environmental problems associated with traditional open stoves used by most families in the project area. This project was implemented with three basic objectives:

1. to reduce the use of energy resources (wood);
2. to improve health conditions (decrease exposure to smoke); and
3. to persuade the community to take responsibility for supporting the implementation of this initiative.

For this pilot project, 25 families in each of the communities of Subchal in the municipality of San Miguel and Xeabaj in the municipality of Sipacapa were provided ONIL stoves at a discounted price. During 2006 the final visits of the ONIL stove project were performed with HELPS, International to six kitchens where ONIL Stoves had been installed.[8]

The Fundación tabulated and shared the results of the whole project – 50 kitchens total – and carried out a situational analysis. Table 20 presents the results of that analysis. Initial results revealed that 52% of participating families use the stoves for their daily activities in one way or another while 48% of participating families do not.

Table 20 : FSM ONIL Stoves Pilot Project Evaluation

MEASURING PARAMETERS	XEABAJ		SUBCHAL		TOTAL	
	No. of Kitchens	%	No. of Kitchens	%	No. of Kitchens	%
Uses both stoves – Inside Grill and Nixtamalera outdoor stove	6	24	1	4	7	14
Uses only the grill	8	32	2	8	10	20
Uses only the Nixtamalera, occasionally	1	4	2	8	3	6
Uses the grill occasionally and has another alternative stove in the same kitchen	0	0	6	24	6	12
Does not use any of the stoves – Grill or Nixtamalera	10	40	14	56	24	48

The advantages of the stove, as indicated by participating families, are (1) savings in wood use and (2) absence of smoke. Generally, small families, young couples, and people in a temperate climate such as the one at Xeabaj have adopted the stove. The reported factors that limit its use are:

- the necessary thickness and size of the wood;
- the inconsistent availability of dry wood;
- the low amount of heat generated by the stove; and
- the stove's small size.

Further examining ways to overcome these disadvantages represent a potential follow-up project for the future.

[8]The unavailability of an apparatus to measure air quality inside the kitchens where the stoves are being used made the assessment of the decrease or increase of carbon monoxide very difficult. The possibility of revisiting this program again in 2007 will be evaluated with HELPS, International technicians.

FSM feels that although the results of the project were mixed, it was still a worthwhile endeavor. Participating families learned about the importance of the forest, the potential deterioration of their health when continuously exposed to smoke, and the severity of these issues when amplified at the community level. These are lessons that they can pass on to their community and urge others to heed.

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.

Also in terms of visibility, FSM continued to run radio Public Service Announcements. On December 7, FSM hosted the 3rd Annual *Feria de la Vida, del Color y del Sabor* which drew over 500 people to the San Miguel town square.

Community Advisory Councils

In 2006, FSM continued to focus on the organization and strengthening of the Community Advisory Councils (CADEC). CADEC activities are described in detail in Section 5.2 Ongoing Public Consultation and Disclosure.

Mine Closure, Marlin Properties and Installations

- Glamis and Montana Exploradora have committed publicly to donating the Marlin Mine lands to the Sierra Madre Foundation as part of the mine closure.
- While the process plant and tanks will be removed, the electrical line to the property, the offices, workshops, cafeteria and housing on the Marlin Mine property will be given to the Sierra Madre Foundation.
- Consideration and planning with the peoples of Sipacapa and San Miguel Ixtahuacán as to how best use the installations will take place well in advance of the mine closure.

10.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT CAPABILITY

10.1 Environmental and Social Management Systems

Marlin Mine Environmental Management System

The Marlin Mine is currently implementing an Environmental Management System (EMS) intended to promote continuous improvement in the environmental management of the Marlin Mine. The EMS is concentrated into four phases including:

1. Policy & Planning,
2. Implementation,
3. Evaluation, and
4. Review & Improvement.

Phase I

Phase I of the Marlin EMS has been completed and includes a Policy Statement signed by the General Manager, as well as development of various environmental management plans (EMPs). EMPs for the following subjects have been completed:

1. Flora,
2. Fauna,
3. Surface Water (including sediment & erosion control),
4. Dust Control,
5. Materials and Waste Management, and
6. Environmental Monitoring.

Phase II

Phase II of the Marlin EMS has been completed. The Policy Statement has been clearly posted in the applicable areas of the mine. This statement was reviewed and approved by the management team. Additionally, drafts of the various EMPs were submitted to the affected area managers for their comments. After addressing the comments, the EMPs were finalized and distributed to the management team. The EMPs have become part of the contract documents for significant work that will be done at Marlin by third parties. Third parties are expected to comply with the EMPs, as is stated in the standard contract language.

Employee training on the EMPs and their implementation was conducted in 2006. All area managers and employees have been trained on their responsibilities to comply with the EMPs.

Phase III

An internal inspection system was implemented to review each operating area for compliance with the EMPs. These inspection reports are signed and kept on file within the Environmental Department. Additionally, the third party auditors from MFG, Inc. reviewed the EMPs and the mine's compliance with the EMPs.

Phase IV

Phase IV of the Marlin EMS will be implemented in 2007. This will include regular meeting of the Senior Environment Committee to review environmental monitoring data and issues/ concerns. Discussions will be conducted concerning areas and methods of improvement.

Upon completion of this phase, a third party auditor will be contracted to review the EMS. This is anticipated for late 2007 or early 2008. The auditor will identify and define any elements of the EMS requiring further development or improvement and suggest actions to further develop or improve these elements.

Montana will discuss these suggestions and their implementation for the year 2008.

<u>Marlin Mine Sustainable Development Management System</u>

Montana is currently implementing a Social/Sustainable Development Management System (SDMS) intended to promote continuous improvement in the social and sustainable development

efforts of the Marlin Mine. The SDMS is concentrated into four phases including:

1. Policy & Planning
2. Implementation
3. Monitoring
4. Evaluation, Review & Improvement.

Phase I

Phase I of the Marlin SDMS is under draft. It will include a Policy Statement signed by the General Manager. The sustainable development management plans (SDMPs) are under preparation. SDMPs for the following subjects will be prepared:

1. Community Relations,
2. Organizational Development (Community Projects),
3. Liaison with the Sierra Madre Foundation,
4. Liaison with external organizations: i.e. national & international non-governmental organizations, national & foreign governmental agencies, etc.

Phase II

The Policy Statement will be signed and clearly posted in the applicable areas of the mine. This statement will be reviewed and approved by the management team. Additionally, drafts of the various SDMPs will be submitted to the area managers and supervisors for their comments. After addressing the comments, the SDMPs will be finalized and distributed to the management team. The SDMPs will become part of the commitment of Montana to the surrounding communities. Works undertaken by contractors for the Sustainable Development Department will be expected to comply with the SDMPs as is stated in the standard contract language.

Phase III

Phase III of the Marlin SDMP will be implemented in 2007.

Phase IV

Phase IV of the Marlin SDMP will be implemented in the fourth quarter 2007. This will include regular meetings of the senior management to review sustainable development performance and issues/concerns. Discussions will be conducted concerning areas and methods of improvement.

Both during and after the completion of the four phases, the Sustainable Development Department will consult with local community leaders and independent consultants on the performance of the Sustainable Development Department. It is anticipated that the SDMPs will undergo continuous development and improvement over the life of the Marlin Mine.

10.2 Marlin Mine Environmental and Sustainable Development Staffing

Environmental Department Staffing

The 2006 status of the Marlin Environmental Department staff is shown in Table 21.

TABLE 21. 2006 MARLIN MINE ENVIRONMENTAL DEPARTMENT STAFF		
Position	**Individual**	**Reports To**
Environmental Manager – Guatemala	Lisa Wade	General Manager, Marlin Mine
Environmental Coordinator	Gustavo Gomez	Env Manager
Environmental Coordinator	Eversson Ordonez	Env Manager
Environmental Supervisor	Alejandra Chupina	Env Manager
Environmental Supervisor	Oliver Cano	Env Coordinator
Environmental Technician	Werner Valiente	Env Supervisor
Environmental Technician	Cesar Gonzalez	Env Manager
Environmental Assistant	Marvin Mejia	Env Coordinator

Sustainable Development Department Staffing

The 2006 status of the professional staff within Marlin's Sustainable Development shown in Table 22.

Table 22. 2006 Marlin Mine Sustainable Development Department Staff		
Position	**Individual**	**Reports To**
Sustainable Development Department		
Sustainable Development Manager – Guatemala	James Schenck	General Manager, Marlin Mine & Executive Director for Central America
Community Relations Unit Coordinator	Wilson Castañeda/ (currently vacant)	Sus. Dev. Manager.
Organizational Development Unit Coordinator	Alan Ovalle	Sus Dev Manager
Infrastructure Supervisor	Jorge Mario Godinez	Org Dev Coordinator
Organizational Development Supervisor	Fausto Rodriguez	Com Relations Unit Coordinator
Media Technician	Tito Gómez	Com Relations Unit Coordinator
Administrative Assistant	Griselda Villatorio	Sus Dev Manager
Community Relations Supervisor – Sipacapa	Misael de León/Francisco Ambrosio	Com Relations Unit Coordinator
Community Relations Supervisor – San Miguel Ixtahuacán	Nelson Mejia	Com Relations Unit Coordinator
Municipal Office Promoters Sipacapa & San Miguel Ixtahuacán	Two Persons	Com Relations Supervisors
Community Relations Promoters	Six Persons	Com Relations Unit Coordinator

10.3 Sustainable Development Department Training

Table 23 displays Marlin Mine 2006 Sustainable Development Department staff training.

Table 23. 2006 Marlin Mine Sustainable Development Department Staff Training		
Date	**Subject**	**Attendees**
February	How to make presentations based on principal themes	Community Relations General Coordinator, Municipal Coordinators (2).
April	Marlin Community Development Organizational Plan	Municipal Coordinators (6) and Municipal Officials (2)
September	Effective Communication	Community Relations General Coordinator, Municipal Coordinators (2).
October	Planning and Time Management	Community Relations Assistant, Municipal Coordinators (2), Community Relations Promoters (6).
November	How to make presentations based on principal themes	Community Relations Assistant, Municipal Coordinators (2), Community Relations Promoters (6).

11.0 ENVIRONMENTAL PROGRAM MONITORING

11.1 2006 Marlin Mine Environmental Overview

The following overview discusses environmental activities which occurred at Marlin during the 2006 reporting year

Audit

Two audits were conducted during 2006 at Marlin. A third party follow-up audit was conducted by MFG, Inc. in March 2006, and the final report was issued the same month. The audit report is attached in Attachment B. Follow up on all audit findings was completed during 2006.

Additionally in 2006, an internal environmental audit was conducted with corporate representatives reviewing the Marlin Mine for compliance with corporate policies. Two approved cyanide code auditors from Golder Associates Inc. also participated to provide preliminary comments on cyanide code compliance items. This audit was conducted in December, 2006 and follow up activities will be completed during the first quarter of 2007.

11.2 Current Environmental Permit Status and Organizational Status

The current status of Marlin permits are shown in Table 24, the permit status has not changed since the 2005 AMR.

Table 24: Status of Marlin Mine Permits		
Description	**Ministry**	**Approval Date**
EIA&S (Res. No. 779-2003/CRMM/EM)	MARN	September, 2003
Exploitation License (Res. No. 3329)	MEM	November, 2003

Table 24: Status of Marlin Mine Permits		
Description	**Ministry**	**Approval Date**
Forestry License (No. DR-VI-016-M-2006)	INAB	May, 2006
Forestry License for Powerline (No. DR-VI-070-Cu-2006)	INAB	May, 2006
EIA for Hydrocarbon Storage Tanks (Res. No. 1215-2006/MAGC/LL)	MARN	May, 2006
Construction & Operation of the Electrical Substation (Res. No. 1191-2006/MAGC/GO)	MARN	May, 2006
Importation of Cyanide (Res. No. 1790-2006/MAGC/KC)	MARN	July, 2006
Operation of 11 Generators (Res. No. 2326-2006/MAGC/LP)	MARN	August, 2006
Transport, Use & Storage of Explosives (Oficio No. 6259)	Defense Ministry	September, 2006
Hydrocarbon Use License (No. 003032)	MEM	October, 2006
EIA for Powerline Project (Res. No. 1133-2006/MAGC/EM)	MARN	October, 2006
Powerline Commission Approval (Res. CNEE-120-2006)	National Energy Commission	October, 2006
Use of Radioactive Equipment License (Res. No. 663-2006)	MEM	November, 2006
Environmental License (No. 0002-06/DIGARN)	MARN	Jan, 2006

11.3 Report of Significant Events and Issues

Environmental incidents, typically spills and/or animal mortalities, are reported internally and maintained on file by the Environmental Department. Table 25 displays significant environmental incidents in 2006.

Table 25. Significant Environmental Incidents Occurring During 2006			
Incident	Date	Subject	Response
Spill	02/02/06	110 gals oil	Skimming of oil out of process solution
Animal Mortality	03/20/06	Bird flew into the fence	Report
Other	03/27/06	90 m^3 tailings seepage	Maintain the pump in automatic mode
Spill	04/05/06	52 gals diesel	Soil clean up to bioremediation cell, discussion with operator
Other	04/11/06	200 gals tailings seepage	Adjust flowmeter
Spill	07/22/06	177 gals diesel	Soil clean up, improved tank filling procedures
Other	09/05/06	3 gals process solution	Area neutralized using hydrogen peroxide, and repairs to the leaking pipe were made
Other	09/05/06	Tails seepage	Install level controls in tank
Animal Mortality	09/06/06	Dog drowning in the raw water pond	Reported, and additional fencing placed around the area
Other	09/24/06	500 kg process solution/slurry	Solution pumped /siphoned back into mill containment area

Table 25. Significant Environmental Incidents Occurring During 2006			
Incident	Date	Subject	Response
Other	10/11/06	20 m^3 slurry	Slurry was cleaned up and re-introduced back into the mill. Pump maintenance practices were improved, and a design for added containment was approved
Other	10/24/06	0.1 liter process solution	Contaminated soil neutralized with hydrogen peroxide
Animal Mortality	11/05/06	Snake run over by 777 truck going to crusher	Report
Other	11/15/06	Tailings seepage	Review the electric system
Other	11/22/06	1 liter process solution	Soil recovered and re-introduced back into the mill
Other	12/12/06	10 kgs slurry from detox tank	Soil recovered and re-introduced back into the plant. Operator training
Animal Mortality	12/29/06	Two bird mortalities, likely due to ingestion of process solution in the leaching area. Pump repaired.	Reported, and birds buried. Investigate option of fake owls in leaching area.

The 20m^3 slurry spill on October 11 was reported externally to the IFC, MEM, and MARN as it was considered significant. Corrective actions were undertaken immediately as indicated. Construction of the added containment area will be completed prior to the end of the first quarter 2007.

11.4 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 quarterly monitoring of the following aspects: air quality, ambient noise, surface water quality, ground water quality, and aquatic life (biannually for aquatic life). This is as indicated in Chapter 10 of the EIA&S. The location of monitoring stations for air quality, aquatic biology, surface water quality, and ground water quality are indicated in Attachment C-1. Monitoring measurements for aquatic biology, surface water quality, and ground water quality are indicated in Attachment C. Marlin submits the monitoring results in regular quarterly reports to the MARN with a copy to the MEM.

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 from mining operations result from fugitive dust emissions from the roads, occurring primarily during the dry season (Nov-Apr). Marlin conducts an aggressive dust suppression program (road watering and dust suppression additives) 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, on a quarterly basis. Most of the stations are monitored more frequently than quarterly. Additionally, visual inspections are performed to ensure that management practices are implemented to minimize fugitive dust emissions.

Table 26 summarizes the PM_{10} ambient air quality monitoring data for 2006. All monitoring results at both the upwind and downwind stations were below the IFC guideline of 500 _g/m^3 for the 24 hour maximum and 100 _g/m^3 for the annual arithmetic mean.

Table 26. Marlin Mine 2006 PM_{10} Monitoring Data

PM10 (ug/m^3) - Marlin 2006

Monitoring Stations			Month, 2006												Annual Arithmetic Mean
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Area and Wind Location		IFC Guideline	500 ug/m^3 (24 hour maximum) & 100 ug/m3 (annual arithmetic mean)												
		EPA Standard	150 ug/m^3 (24 hour maximum) & 50 ug/m^3 (annual arithmetic mean)												
Marlin	Downwind	AQ1 (Agel)	37	40		101		21	13	4		13	17	9	28
	Downwind	AQ2 (San José NE)	18	39		61			40			26			37
	Downwind	AQ4 (San José Ixcaniche)	13	40				39	20			30	45	76	38
	Upwind	AQ7 (Carrizal)				78		42	19			25	15	21	33
	Upwind	AQ9 (Salem)	13	19		19			13			11			15
Road to Marlin	Not Applicable	AQ12 (Chuena)		20		60				22		59			60

Ambient Noise

Ambient noise was monitored in the same locations as ambient air quality during 2006. The ambient noise levels in decibels were compared to those recorded as baseline values and no significant differences were noted. The baseline and 2006 ambient noise levels are included in the following tables.

Ambient Noise Levels, 2006

		AQ1	AQ2	AQ4	AQ7	AQ9	AQ12
		Agel	SJNE	SJIx	Carrizal	Salem	Chuena
Average First Quarter 06	LEQ	46.2	39.1	57.0		51.7	58.5
	LDN	51.7	46.9	61.8		58.6	67.1
Average Second Quarter 06	LEQ	43.0	57.0	58.0	54.0	54.0	58.0
	LDN	47.1	59.1	62.2	57.2	59.7	63.5
Average Third Quarter 06	LEQ	46.6	57.5	56.2	54.0	51.4	60.7
	LDN	52.1	60.4	57.8	55.3	56.5	62.8
Average Fourth Quarter 06	LEQ	46.2	54.7	66.6	50.5	49.5	49.2
	LDN	52.3	58.6	70.4	52.7	54.3	54.6

Ambient Noise Levels, Baseline

		AQ1	AQ2	AQ4	AQ7	AQ9	AQ12
		Agel	SJNE	SJIx	Carrizal	Salem	Chuena
First Quarter 04 (Baseline)	LEQ	60.4	58.8	62.8	NS	NS	NS
	LDN	65.7	62.6	66.9	NS	NS	NS
Second Quarter 03 (Baseline)	LEQ	NS	63.3	63.1	NS	NS	NS
	LDN	NS	63.3	63.1	NS	NS	NS
Third Quarter 03 (Baseline)	LEQ	NS	36.6	54.3	52.6	NS	NS
	LDN	NS	39.4	56.8	56.3	NS	NS
Fourth Quarter 03 (Baseline)	LEQ	NS	45.1	57.9	55.1	NS	NS
	LDN	NS	49.5	45.3	57.4	NS	NS

Notes:

LEQ	24 hour average, decibels measures in scale A.
LDN	Average Day/Night, averaged by factors every hour of measurement in decibel scale A.
NS	Not Sampled

Groundwater

Marlin conducted ground water quality monitoring at five locations and submitted the data to both MEM and MARN in the regular quarterly reports for 2006. Ground water quality monitoring is required on a quarterly schedule by the EIA&S, however, the wells were often sampled more frequently to establish baseline and/or background groundwater quality. The monitoring wells included in the sampling program and their location descriptions are listed in Table 27.

Table 27. Monitoring Wells & Well Locations

Groundwater Quality Monitoring Point	Location Description
MW2	Southwest of the TSF (upgradient)
MW3B	North/Northeast of the TSF (downgradient)
MW4	Northwest of the TSF (downgradient)
MW5/PSA-1	Production Well – South of Marlin Pit, near Rio Tzala (upgradient)
G11	North of the TSF dam (downgradient)

MW2

Monitor well MW2, upgradient and southwest of the TSF, was sampled during the first two quarters of 2006. Subsequent to the second quarter, the well was no longer functional for monitoring. The casing broke at some depth in the well, precluding future sampling of this well. The sampling instruments could not successfully be passed beyond the location of the broken casing. A replacement upgradient well was installed near Agel and will be monitored quarterly beginning in 2007.

No unusual or problematic results were noted in well MW2 during 2006. The monitoring data for well MW2 during 2006 is shown in Attachment C.

Well MW3B is downgradient of the TSF and is monitored on a monthly basis to establish one year of monthly water quality data. After one year of monthly data has been collected, the well will be monitored on a quarterly basis. Monitoring of the well began in March, 2006. Water quality data from MW3B is shown in Attachment C; no unusual or problematic results were noted.

MW4

Well MW4 was dry on all sampling occasions and the well has been abandoned.

MW5

Well MW5 is the production well (PSA-1) and is sampled on a monthly basis for the life of the mine. There were some high iron values in MW5 in the middle of the year, however, the values dropped off at the end of the year. These values were likely related to the well itself, rather than the actual groundwater. This well water is used for makeup water for the process plant, supply to the mine camp and administration buildings, and for the underground mining equipment. It is not considered potable water. The water quality data for MW5 is included in Attachment C.

G11

This well is located very near to the toe of the tailings dam, adjacent to the seepage return tank. A dedicated pump was installed in the well to facilitate monthly sampling. The depth to water in

this well is very shallow. No unusual or problematic results were noted in the water quality during 2006 at G11, the data is attached in Attachment C.

PWs

In addition to the ground water quality monitoring, there are five wells along the east embankment of the TSF. These PW wells were installed as part of the geotechnical and hydrogeological assessment of the Marlin Mine's TSF, and were completed on the east abutment ridge of the impoundment. The wells were primarily installed to allow insitu measurement of the permeability of the materials comprising the abutment. The abutment consists of a low permeability pyroclastic/ash unit underlain by a volcanoclastic unit. The wells penetrated the contact between these units and were completed with well screen over approximately the lowest 40m of the wells. Depths to water in the wells were generally at the contact level and ranged from approximately 60m in PW12 (the shallowest well) to 90m in PW5.

Design analysis of the potential seepage through the east abutment during operation of the TSF suggested that seepage rates would be low; however, the potential was identified for an increase in the phreatic surface in the abutment which could potentially result in seepage daylighting in the drainage to the east. In order to mitigate this potential impact, the installation of seepage recovery/dewatering pumps in the wells was proposed. In the event significant increases in water levels in the wells are measured, pumping could be performed and, if indicated, additional wells could be installed.

Monitoring procedures for the PW wells are included in the "Marlin Tailings Facility Monitoring Plan", MEC, dated November 2004, issued as part of the TSF design documentation. The objective is to perform water level monitoring to determine whether the water level in the wells is increasing such that sampling and potential pumping of the wells would be necessary. This would also trigger water quality sampling.

Water level monitoring has been periodically taken since the TSF was commissioned in early October 2005. The historical water level information in the PW wells is shown in Table 28. No significant changes in the water levels have occurred to date.

Table 28. Historical Water Levels in PW Wells

Depth to Water in PW wells, east embankment of TSF

Well	PW-1	PW-3	PW-5	PW-7	PW-12
Date	Depth to Water (m)				
4/1/2004	86.27	82.26	92.60	77.01	57.30
9/1/2005	83.66	82.30	91.81	76.86	60.00
1/31/2006	83.26	82.28	92.06	76.51	Dry
2/6/2006	83.28	82.30	92.08	76.53	Dry
2/10/2006	83.33	82.30	92.05	76.54	Dry
2/23/2006	83.25	82.30	92.06	76.46	Dry
3/3/2006	83.24	82.29	92.06	76.45	Dry
3/11/2006	83.24	82.30	92.06	76.43	Dry
3/18/2006	83.25	82.30	92.06	76.46	Dry
3/26/2006	83.25	82.31	92.06	76.46	Dry
04-Abr-06	83.26	82.29	92.05	76.25	Dry
4/10/2006	83.21	82.28	92.05	76.45	Dry
4/17/2006	83.23	82.31	92.06	76.42	Dry
4/23/2006	83.22	82.63	92.07	76.45	Dry
5/1/2006	83.22	82.30	92.06	76.46	Dry
5/8/2006	83.22	82.30	92.06	76.46	Dry
5/15/2006	83.22	82.30	92.06	76.46	Dry
5/22/2006	83.23	82.31	92.07	76.45	Dry
5/31/2006	83.24	82.31	92.06	76.44	59.56
6/5/2006	83.23	82.30	92.07	76.43	59.63
6/11/2006	83.18	82.28	92.06	76.40	59.20
6/19/2006	83.23	82.31	92.07	76.44	59.24
6/26/2006	83.22	82.31	92.06	76.43	59.55
7/3/2006	83.22	82.31	92.08	76.77	59.27
7/9/2006	83.21	82.31	92.08	76.43	59.33
7/17/2006	83.10	82.30	92.08	76.42	59.40
7/24/2006	83.21	82.43	92.07	76.41	59.44
7/31/2006	83.21	82.31	92.06	76.41	59.50
8/8/2006	83.21	82.32	92.08	76.40	59.56
8/14/2006	83.21	82.31	92.08	76.43	59.61
8/26/2006	83.20	82.31	92.08	76.40	59.38
9/9/2006	83.17	82.31	92.07	76.38	59.00
9/12/2006	83.16	82.38	92.09	76.36	59.00
9/18/2006	83.17	82.20	92.08	76.37	60.11
9/28/2006	83.17	82.32	92.08	76.39	59.12
10/3/2006	83.17	82.32	92.08	76.39	59.17
10/10/2006	83.19	82.32	92.11	76.07	59.14
10/17/2006	82.30	82.30	91.88	76.11	59.00
10/27/2006	83.15	82.32	92.10	76.36	59.02
10/30/2006	83.15	82.38	92.16	76.27	59.05
11/12/2006	83.50	83.23	91.46	76.31	60.36
11/24/2006	83.15	82.20	91.85	76.27	59.26

Operational Monitoring

Tailings deposition into the TSF began late in October, 2005.

Operational monitoring points are discussed in Section 5.4.3 of the Marlin Mine Environmental Monitoring Plan. These points were derived from the EIA&S, the TSF design report, and any additional environmental data that can aid in operational decision making processes. As operations commenced in late 2006, the only two applicable points were water collected from the underground, and water from the supernatant pond in the TSF. The monitoring points included in the 2006 sampling program and their location descriptions are listed in Table 29. The additional points mentioned in Section 5.4.3 of the Marlin Mine Environmental Monitoring Plan will be monitored beginning in 2006, and as they become applicable thereafter (when flow or discharge is noted).

Table 29. Monitoring Points: Underground Mine & Supernatant Pond

Operational Monitoring Point	Location Description
D1	Water Collected from the Underground
D4	Supernatant within TSF

D1

Monitoring point D1 is water collected from the underground mine, which ultimately reports to the TSF. However, to clearly understand water quality for all sources entering the TSF, a separate monitoring point was recommended for this water. This point is monitored monthly when there is flow. The underground mine typically encounters small areas which temporarily produce drainage into the mine for short periods of time. When this occurs, a monthly sample is taken. These drainages are low flow and typically dry up within a few weeks. In addition to the water encountered in the mine, fresh water is pumped to the underground mine equipment, specifically the bolters and the jumbos. The water is used in the equipment, then ejected onto the floor of the mine where it mixes with the groundwater encountered. The water discharging from the underground mine is a mix of these two sources.

All underground water is gravity discharged to the large volume supernatant pond within the TSF. The water from the underground contains very high suspended sediment loads, and some high levels of total metals such as iron which was noted beginning in September. The water also contains nitrates which can be produced as byproducts from the blasting products. The volume that this water contributes to the TSF supernatant pond is extremely small and the water quality in the TSF is not significantly affected by the underground water.

The data is discussed below and presented in detail in Attachment C.

D4

Monitoring point D4 is collected from the supernatant pond within the TSF, near to the dam discharge structure. This point is monitored monthly. Pre-operational studies at Marlin indicated that the water stored in the TSF would meet the IFC effluent standards. Monthly monitoring of this point is to confirm this assumption prior to the need for discharge from the TSF to the environment. No discharge of process water from the TSF occurred in 2006. The first discharge from the TSF to the environment will occur late in the 2007 rainy season, or during the 2008 rainy season, depending on the precipitation and storm intensity in 2007, as well as the construction schedule for the dam. While the water is stored in the TSF, the applicable IFC

guideline is that the cyanide concentration must not exceed 50 ppm for the protection of wildlife such as migratory birds that may be exposed to the water for finite periods of time. The water in the supernatant pond was well below the 50 ppm guideline during 2006.

The water quality of D4 is also compared to the IFC effluent guidelines to ensure compliance prior to the need to discharge. The twelve months of monitoring in 2006 indicate the following parameters of interest: pH, total cyanide, WAD cyanide, copper, and mercury. These parameters could require further treatment prior to this water being discharged to the environment. Improvements to the INCO cyanide reduction system are currently underway to ensure compliance with the cyanide guidelines. pH reduction will be required but will be minimal and easily achieved with small amounts of lime or caustic addition. The copper and mercury will be treated simultaneously. Three tests for metals reduction are currently underway and include: carbon adsorption, "aquasil" reagent addition, and "metalsorb" reagent addition. The results from the tests are pending. Upon review of the results the most effective treatment system would be selected as necessary, then designed and constructed prior to the occurrence of any discharge to the environment.

The 2006 data for D4 is shown in Attachment C.

Surface Water Monitoring

Marlin conducts representative surface water monitoring from upstream and downstream surface water locations. Surface water sampling is conducted quarterly at a minimum, and reported to both the MARN and the MEM. Surface water sampling locations are listed in Table 30.

Table 30. Surface Water Sampling Locations

Surface Water Monitoring Point	Location Description
SW1	Upstream Monitoring – Rio Tzala
SW1-2	Between SW1 and SW2
SW2	Downstream Monitoring – Rio Tzala
SW3	Riachuelo Quivichil – downstream of the TSF
SW4	Upstream – Rio Cuilco (upstream of Quivichil confluence)
SW5	Downstream – Rio Cuilco (downstream of Quivichil confluence)
SW8	Quebrada Seca - Downstream of TSF, upstream of SW3
SW11	Upstream – Rio Cuilco (upstream of Tzala confluence)
SW12	Downstream – Rio Cuilco (downstream of Tzala confluence)

All points have perennial flow with the exception of SW8, which is within the upper, ephemeral reaches of the drainage below the TSF. Point SW8 is in the same drainage as SW3, but further upstream.

Review of surface water data includes a comparison between upstream and downstream parameters, as well as a review for trends in water quality. There were no concerns with the surface water quality data for 2006. The surface water quality data for 2006 is shown in Attachment C

AMAC

AMAC, the independent community environmental monitoring and contingency committee, began quarterly water quality sampling in ground water and surface water in 2006. Samples were taken with Montana personnel together with AMAC members four times in 2006. AMAC samples were sent for analysis to ALS in Canada which is certified compliant with ISO/IEC 17025-1999 requirements for laboratories. Montana samples were sent to ACZ in the US which is also certified compliant with ISO/IEC 17025-1999 requirements. On all four occasions the laboratory data from the two labs was reviewed with Montana personnel and AMAC members together, and no significant differences in the data occurred.

Liquid Effluent Discharges

The Marlin Mine was not discharging mining effluents during 2006. The first mining effluent discharge is expected from the TSF late in the 2007 rainy season, or during the rainy season of 2008 if the embankment height of the tailings dam is raised ahead of the current schedule. During discharge events, water quality and flow monitoring will be conducted regularly and reported quarterly to both the MARN and the MEM.

Aquatic Life Monitoring

In addition to water quality monitoring, Montana is required to conduct aquatic biology monitoring twice per year, corresponding to the dry and rainy seasons. This monitoring occurs in the Rio Tzala at points SW1 and SW2, the Riachuelo Quivichil at point SW3, and the Rio Cuilco at points SW4 and SW5. All aquatic monitoring was conducted as required in 2006.

As of the end of 2006, four rainy season sampling events had occurred, beginning with the baseline monitoring in third quarter of 2002; and three dry season sampling events had occurred, beginning with the baseline monitoring in the first quarter of 2003.

The fish populations in the dry season appear to be fluctuating in a natural way, and do not show any concerning trends. The fish populations in the rainy season however show a decreasing trend in the Riachuelo Quivichil below the TSF, and in the Rio Cuilco both above and below the confluence with the Riachuelo Quivichil. The rainy season trends may be a result of runoff containing sediment loads. Decreasing fish populations in the Cuilco are indicated both upstream and downstream of TSF influences from the Quivichil. A large aggregate extraction project is taking place in the Cuilco upstream of the confluence with the Quivichil. This is a government project for road building in the area. The excavations directly from the river bed are most likely causing the impacts to the fish population in the Cuilco. Additionally, mine construction in the TSF area may also be causing temporary impacts to the fish population in the Quivichil due to sediment loads in the rainy season. Improved practices during construction were made in 2006, and there was no further decrease in the fish population from 2005 to 2006. Further improvements and reclamation of some disturbance areas in 2007 should cause gradual increases in the fish population in the Quivichil.

There are no trends in fish populations in the Rio Tzala.

Results of the sampling are shown in the following tables and figures.

Table 31. Fish Survey Summary: Marlin Dry Season

Fish Survey Summary - Marlin Dry Season (Nov-Apr)

Station	Family	Species	Number of Individuals			IBI		
			Feb, 2003	Mar, 2005	Mar, 2006	Mar, 2003	Mar, 2005	Mar, 2006
SW1	Profundulidae	*Profundulus spp.*	12	no access	56	22	no access	19.5
SW2	Profundulidae	*Profundulus spp.*	26	3	31	31	17	17.5
SW3	Profundulidae	*Profundulus spp.*	78	27	256	63	32	35.5
SW4	Profundulidae	*Profundulus spp.*	24	20	33	45	27	17.6
SW5	Profundulidae	*Profundulus spp.*	45	46	22	58	43	16.8

Table 32. Fish Survey Summary: Marlin Rainy Season

Fish Survey Summary - Marlin Rainy Season (May - Oct)

Station	Family	Species	Number of Individuals				IBI			
			Jul, 2002	Sep, 2004	Sep, 2005	Sep, 2006	Jul, 2002	Sep, 2004	Sep, 2005	Sep, 2006
SW1	Profundulidae	*Profundulus spp.*	0	0	0	0	0	0	0	0
SW2	Profundulidae	*Profundulus spp.*	0	0	1	0	0	0	15	0
SW3	Profundulidae	*Profundulus spp.*	62	14	7	9	20	16	16	16
SW4	Profundulidae	*Profundulus spp.*	21	30	261	1	17	17	36	15
SW5	Profundulidae	*Profundulus spp.*	14	47	31	5	31	19	32	15
	Pimelodidae	*Rhamdia, sp.*	0	0	1	0				

Notes:

IBI	Index of Biotic Integrity
SW1	Rio Tzala - upstream of pit & road disturbance
SW2	Rio Tzala - downstream of pit & road disturbance
SW3	Riachuelo Quivichil - downstream of tailings construction
SW4	Rio Cuilco - upstream of confluence with Riachuelo Quivichil
SW5	Rio Cuilco - downstream of confluence with Riachuelo Quivichil

Figure 6. Marlin Dry Season Fish Count

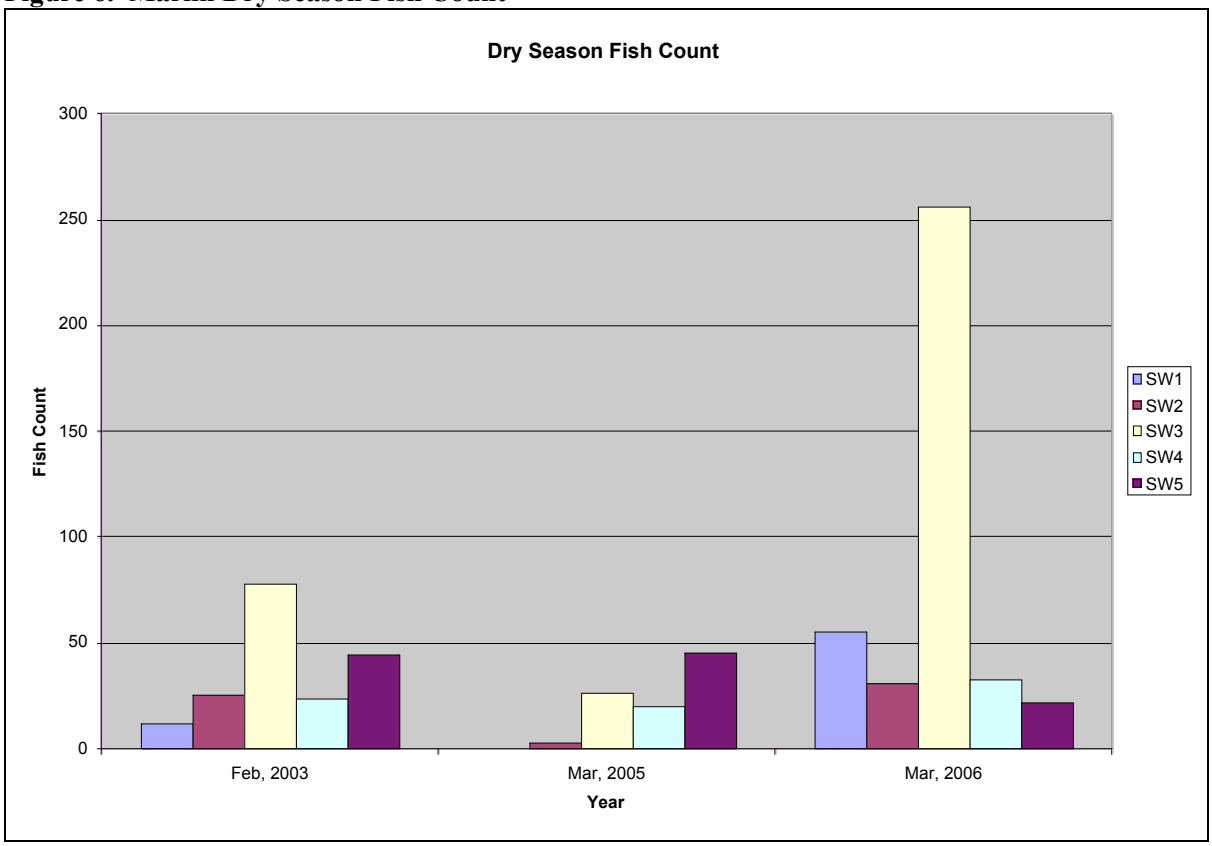
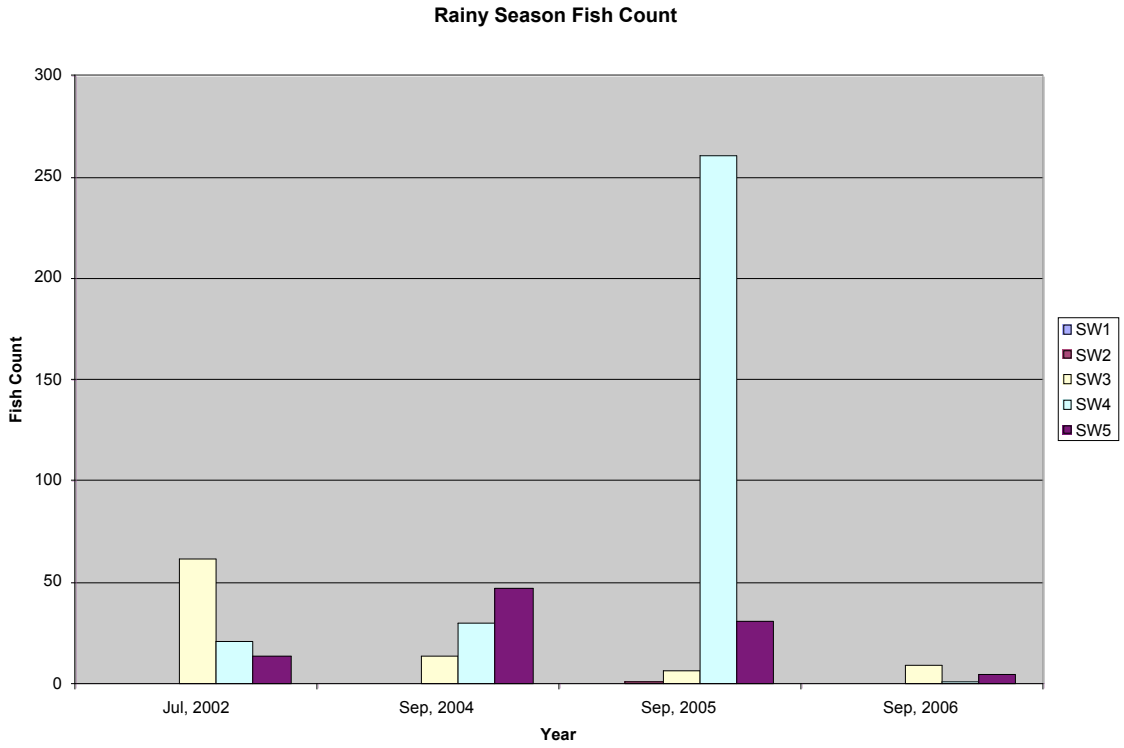


Figure 7. Marlin Rainy Season Fish Count



Water Treatment Plants

The Marlin Mine does not currently have a water treatment plant. The only point source discharge location will be the metered discharge from the TSF to the environment, anticipated to begin in late 2007, or during the rainy season of 2008. Monitoring within the TSF water currently indicates water treatment prior to discharge may be required for copper, mercury, and cyanide to comply with the IFC effluent guidelines and the 2006 MARN effluent standards for Guatemala. This is discussed in the *Operational Monitoring* section of this report.

11.5 Reforestation/Revegetation Monitoring

The reforestation campaign is part of the Forestry Management Plan presented to and approved by INAB (Instituto Nacional de Bosques). Reforestation was described in this Plan as compensation for the direct impact of tree cutting within the mine property footprint. Impacts and subsequent reforestation as per the Forestry Management Plan are divided into three years: 2004, 2005, and 2006. The reforestation requirement was 189 hectares. 114 hectares were reforested in 2004, and 85.5 hectares were reforested in 2005 for a total of 199.5 hectares reforested, approximately ten hectares more than the requirement. During 2006, an additional 12 hectares were reforested, although this was done in addition to the requirement from INAB. Marlin's goal is to voluntarily reforest an additional 10-15 hectares each year for the life of the mine.

Reforestation occurred both within the mine property and in the surrounding municipalities of San Miguel Ixtahuacán and Sipacapa. Reforestation that occurs on land owned by individuals includes payment of forestry incentives per area reforested to the land owner. This incentive is paid for five years, at such time that the landowner is assumed to receive other benefits from the reforested land. 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 completely responsible.

The total amount in quetzals of forestry incentives paid to the local landowners is as follows:

2004 – 111,162.00 quetzals,
2005 – 180,325.00 quetzals, and
2006 – 163,617.00 quetzals.

In addition to the *Incentivos Forestales* program, Montana donated 5,000 fruit trees to AMAC for distribution to neighboring communities. An additional 500 fruit trees were donated to Marlin mine employees. The fruit trees are not part of the reforestation commitment with INAB since it applies only to pine species native to the area.

Figure 8. Forest Incentives Payments 2006.

Photo in San Miguel during payment of 2006 reforestation incentives to landowners

Extensive revegetation for runoff and erosion control was conducted at Marlin in 2006. The majority of this work was concentrated in the construction zones. This included:

1. Road fill slopes,
2. The Salitre quarry
3. The camp and office areas, and
4. The north face of the Area 5 waste rock storage facility.

The total area revegetated in 2006 was approximately 14 hectares. The grass species used to do the revegetation were *Bracchiaria decumbens*, a self seeding annual grass species, bermuda grass, native sod collected from pit stripping areas, and native seeds collected from local plants.

In addition to revegetation, some additional runoff and sediment control measures were implemented including:

1. Minimization of disturbance where possible,
2. Implementation of drainage channels and sediment control BMPs,
3. Minimization of cut and fill slope angles where possible,
4. Placement of silt fences,
5. Placement of jute-net type material on the face of steep slopes, and
6. Crowning or sloping of roads to direct flow to drainage channels where possible.

11.6 Waste Management

Marlin currently maintains one landfill facility for non-hazardous, solid waste which mainly includes office and construction waste. This landfill is located near the lower platform of the process plant. The landfill was constructed to be used until a base on the main waste dump is established. At that time, non-hazardous, solid waste will be disposed of in the waste dump. Cells will be opened, filled, and closed dynamically as the waste dump expands.

Organic wastes are disposed of in a compost cell to be later used as fertilizer in revegetation or reforestation areas. Petroleum contaminated soil (PCS) is transported to the bioremediation cell where it undergoes aeration, watering and fertilizing until the Total Petroleum Hydrocarbon (TPH) level is below 1000 ppm.

Chemicals are used consumptively at Marlin. Chemical contaminated wastes such as empty cyanide bags and boxes are incinerated daily at Marlin. The ash from the incinerator was analyzed and based on the results classified as a non-hazardous waste. The ash is disposed of within the waste dump.

Another special waste generated by Marlin is lead-contaminated wastes from the fire assay process. This is comprised of potentially lead contaminated cupels, crucibles, and slag. These wastes are re-introduced into the process circuit at the SAG mill.

Two significant waste streams are recycled at Marlin; used oil and scrap metal. The used oil at Marlin is collected by an approved company who then sells it to *Cementos Progresos* for use in their cement kiln. The scrap metal is also collected by an approved company and typically sold to a metal foundry for re-melt.

11.7 Dam Safety

Tailings from the process are treated by the INCO plant for cyanide destruction prior to deposition in the TSF which is formed by a cross valley dam consisting of a rockfill shell and a low permeability core. The TSF will be raised progressively during the early years of the mine life to an 80m ultimate height using mine waste rock placed in downstream staged raises. Phase I of the TSF was completed in 2005 and the facility began accepting tailings in late October, 2005.

Montana 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. A Tailings Dam Review Board is required to review the development of the dam design, construction and initial dam filling. In this case, Dr. Andy Robertson of Robertson Geoconsultants, Inc., constitutes the Review Board under the terms of this OP. Although this Board is comprised of one individual, this Board was

authorized by Montana Exploradora de Guatemala, S. A. to consult with independent technical specialists as needed.

Dr. Robertson was on site in February conducting the 2006 annual review of the facility. The report is attached in Attachment D. All findings in the report have been addressed.

11.8 Waste Rock Handling

The Marlin open pit mine initiated waste stripping in July of 2005, with ore production following in August. Previous tests have shown some rock types to be potentially acid generating. This section is a summary of the procedures implemented in 2006, as well as future plans to prevent acid rock drainage at the Marlin mine.

Rock Analysis Procedures

Throughout 2006, all blastholes in waste zones were sampled and analyzed for total sulfur and total carbon content by the site SGS lab using their LECO furnace. These values are then used to calculate the acid generating potential (AGP) and acid neutralizing potential (ANP) of the rock type sampled. The ratio of ANP:AGP is then used to characterize the waste as follows:

1. Non Acid Generating (NAG): Rock with ANP/AGP > 2 and/or S< 0.1%,
2. Potentially Acid Generating (PAG): Rock with ANP/AGP < 2 and >1 and NP < 20kg/t CaCO3, and
3. Acid Generating (AG): Rock with ANP/AGP < 1 and S> 0.1%.

Once each blasthole has been categorized accordingly, blocks of NAG and AG waste are mapped out, flagged in the mine, and managed accordingly by the mine operations department. The PAG and AG wastes are treated equally, and hauled to areas for encapsulation.

There are areas where it is impractical to separate small areas of PAG waste from NAG waste. In these cases, the PAG rock is blended with surrounding NAG rock in the waste dump. This only occurs when there is reason to believe the surrounding rock will neutralize the small amount of sulfides present, or when there is no geological evidence of sulfides (pyrite).

Conversely, if an area appears during mining that was mapped as NAG, but appears to be PAG (visible pyrite and distinct gray or green color), and there is low neutralization potential in the area, it will be marked in the field and carried to the appropriate AG encapsulation area.

2006 Waste Rock Data

The Marlin open pit mine produced approximately 2,355,239 tons of waste rock. The table below shows the distribution of the waste rock placement.

Table 33. Marlin Open Pit Waste Rock - 2006

Non-PAG	Waste Dump	1,808,835
Clay Waste	Dam Construction	275,380
Clay Waste	Area 5	70,238
Rock	Dam Construction	102,694
Rock	Backfill Plant	26,866
PAG	Area 5	71,226

The underground mine produced approximately 161,062 tons of waste rock during 2006. All waste rock from the underground is classified as PAG to be conservative. Approximately 80%, or 128,850 tons, of waste rock from the underground was placed in the Area 5 dump, which is designed to handle PAG material. Approximately 20%, or 32,212 tons, of waste rock was used as cemented backfill for the underground. Future years will use almost all waste rock generated from the underground to be placed back into the stopes and a small portion of the accesses as cemented backfill.

Field Geochemical Testing

During 2006 field tests with four different rock types were set up near the raw water pond. The purpose of this test is to determine long term acid generation/neutralization potential, and long term metals leachability of the dominant rock types. Weekly samples are taken of rainfall that passes through the rock samples for field parameters (pH, conductivity, redox potential, etc.). Also during the rainy season a monthly sample will be taken for a full suite of analytes, this will begin during the rainy season of 2007. The testwork began late in the 2006 rainy season and will be continued through the life of the mine. No significant changes in the weekly field parameters were noted during the early testing conducted in 2006. The weekly data is shown in the tables below.

Table 34. Marlin Mine 2006 Weekly Field Column Test Data

Marlin Mine Field Column Test Data 2006

Underground, PD-PAG-Tv-001-a, 2006									
Week	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Dates	**1-6 Sep**	**7-14 Sep**	**15-22 Sep**	**23-30 Sep**	**1-7 Oct**	**8-14 Oct**	**15-21 Oct**	**22-31 Oct**	**1-4 Nov**
Sample Date	NS	12-Sep	22-Sep	NS	NS	14-Oct	NS	30-Oct	NS
Rainfall (mm)	113.1	90.4	38.9	12.6	0.4	102.6	37.9	67.4	7.3
Volume (Lt)		5.85	3.30			4.10		3.60	
Water Temp (°C)		19.68	20.42			24.20		25.46	
Conductivity (uS/cm)		1,839	1,633			1,547		4,141	
Dissolved Oxygen (ppm)		4.58	5.58			7.00		4.76	
pH		7.23	8.03			7.40		8.11	
Redox (mV)		49.6	65.9			NA?		NA?	

Underground, PD-PAG-Tv-002-a, 2006									
Week	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Dates	**1-6 Sep**	**7-14 Sep**	**15-22 Sep**	**23-30 Sep**	**1-7 Oct**	**8-14 Oct**	**15-21 Oct**	**22-31 Oct**	**1-4 Nov**
Sample Date	NS	12-Sep	22-Sep	NS	NS	14-Oct	NS	30-Oct	NS
Rainfall (mm)	113.1	90.4	38.9	12.6	0.4	102.6	37.9	67.4	7.3
Volume (Lt)		5.40	3.00			3.05		3.00	
Water Temp (°C)		19.41	20.12			22.00		22.68	
Conductivity (uS/cm)		886	1,083			874		2,274	
Dissolved Oxygen (ppm)		3.96	5.52			8.60		4.73	
pH		7.26	7.93			7.14		8.33	
Redox (mV)		38.9	23.4			NA?		NA?	

Pit, PAG-Tmbx-002-a, 2006									
Week	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Dates	**1-6 Sep**	**7-14 Sep**	**15-22 Sep**	**23-30 Sep**	**1-7 Oct**	**8-14 Oct**	**15-21 Oct**	**22-31 Oct**	**1-4 Nov**
Sample Date	NS	12-Sep	22-Sep	NS	NS	14-Oct	NS	30-Oct	NS
Rainfall (mm)	113.1	90.4	38.9	12.6	0.4	102.6	37.9	67.4	7.3
Volume (Lt)		3.90	2.77			3.00		4.45	
Water Temp (°C)		18.56	23.00			23.80		25.53	
Conductivity (uS/cm)		87	76			72		186	
Dissolved Oxygen (ppm)		5.83	5.06			8.70		4.66	
pH		7.94	7.80			7.31		8.35	
Redox (mV)		33	6			NA?		NA?	

Pit, PAG-Tmbx-005-a, 2006									
Week	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Dates	**1-6 Sep**	**7-14 Sep**	**15-22 Sep**	**23-30 Sep**	**1-7 Oct**	**8-14 Oct**	**15-21 Oct**	**22-31 Oct**	**1-4 Nov**
Sample Date	NS	12-Sep	22-Sep	NS	NS	14-Oct	NS	30-Oct	NS
Rainfall (mm)	113.1	90.4	38.9	12.6	0.4	102.6	37.9	67.4	7.3
Volume (Lt)		3.30	2.40			4.03		1.35	
Water Temp (°C)		19.29	21.60			24.90		25.01	
Conductivity (uS/cm)		39	38			42		84	
Dissolved Oxygen (ppm)		5.25	5.24			8.30		4.11	
pH		7.84	8.23			6.33		8.33	
Redox (mV)		21.1	20.7			NA?		NA?	

12.0 HEALTH AND SAFETY MONITORING

Montana strives to provide a healthy and safe work environment, free of accidents and occupational health risks, focused on the control and prevention of all loss of human resources, company property and the environment. It is the philosophy and belief of the company that accidental loss can be controlled through the implementation and administration of an effective loss control program, which requires the active participation of all the employees. To this end, all employees are provided health, safety and loss prevention instruction and training to help them carry out their duties and responsibilities according to the rules, policies and practices established by the company. Montana has an internal committee to perform monthly environmental and health and safety inspections.

12.1 Occupational Health and Safety

During 2006, the Marlin Mine had a total of 144 lost-work days resulting from five lost-time accidents (see Tables 35 and 36).

Table 35. Marlin Mine Health And Safety Incident Statistics: 2006

Occupational Health and Safety Incidents	Number of Incidents	Details
Fatalities	0	
Total Lost Time Accidents	5	See Table 46 for a description of lost time accidents
Total number of lost work hours resulting from incidents	1,152	
Total man hours worked	2,519,099	2006 Incidence: IFC 0.0004573

Table 36. Details Of Marlin Mine 2006 Lost Time Accidents

Accident Description	Date	Causes	Corrective or Preventative Measures
Two drilling assistant working on bore 80C on the western ramp of level 2000 were attempting to separate two sections of drilling pipe using a Stilson wrench when the drill operator activated the drill causing the Stilson wrench to strike one of the assistants in his body resulting in blunt force trauma. The assistant received first aid and 8 stitches on the wound at the medical clinic. He also	Feb. 3. @ 23:30	Operator error and failure to follow operating procedures.	All workers involved in the accident were required to review procedures for operating the drilling equipment.

Table 36. Details Of Marlin Mine 2006 Lost Time Accidents			
Accident Description	**Date**	**Causes**	**Corrective or Preventative Measures**
required medical leave for two days.			
A mechanic dismantled the security mechanism on cyclone pump #2 and attempted to remove it manually with assistance from three other workers. He strained his back and was transferred to the clinic where he was diagnosed with lower back trauma and subsequently transferred to the hospital in Huehuetenango. He received a 14 day medical suspension.	March 25 @ 11:30	The security mechanism is very heavy and located in small work area that does not accommodate a block and tackle and is inaccessible for a forklift.	Installed a support beam and block and tackle in the work area.
A worker in the Environmental Department was clearing dirt and rock from beneath a conveyor belt when he accidentally touched the conveyor belt, which grabbed his hand and took it past a roller, cutting his fingers. He was transported to the medical clinic and given first aid. He suffered wounds on his fingers and thumb including partial detachment of the nail on the index finger and laceration of the thumb of the right hand. He was given a four-day medical suspension.	June 21 @10:20	The worker was inexperienced in this work area, working without security gloves and not taking proper care.	The person was given training for this work area and machinery. Procedures were modified to ensure that environmental personnel and other workers receive training for areas of risk before working in that area and are provided the proper protective gear.
At level 1920, a worker was standing about 2 meters from another worker who was filling a bore hole with ANFO using a pneumatic hose. The ANFO hose operator finished filling the hole and turned off the pneumatic hose, causing it to fill with compressed air and bounce up, hitting the by-standing worker in the left eye. The worker was	June 23 @17:45	Failure to wear safety glasses on the part of the by standing worker and inattention on the part of the ANFO operator	Assigned and trained two specific people in each group to operate the ANFO mechanism and to utilize all necessary personal protection when setting explosive charges.

Table 36. Details Of Marlin Mine 2006 Lost Time Accidents			
Accident Description	**Date**	**Causes**	**Corrective or Preventative Measures**
immediately transferred to the Medical Clinic where he was diagnosed with trauma to the left eye and lacerations to the face. The worker was then sent to an ophthalmologist in Quetzaltenango for evaluation, where he was found to have a temporary conjunctive hemorrhage in his eye. He received a two day medical suspension.			
Two mechanics were installing an axle in tank number 2 when the crane hydraulic system failed. One of the mechanics was wounded when he was struck by the falling motor and gearbox after the crane failure. His injuries required a 122-day medical suspension.	July 22 @ 16:00	Failure of the telescoping crane arm hydraulic system. Not following safety procedures and working under a suspended load without reinforcements or cargo security.	Reinforced the policy against working underneath suspended loads. Reinforced the procedures for securing suspension systems and cargo. Re-trained workers on the use of back-up systems when using suspension in work areas.

12.2 Training

Table 37 below details the Marlin Mine introductory and refresher Industrial Health and Safety training courses provided during 2006. All Montana and contractor employees receive industrial health and safety training shortly after they are employed and 48 hours of specialized and refresher training on an annual basis.

Table 37. Marlin Mine Health And Safety Training: 2006	
Course	**Number of Employees Trained**
Introduction to Industrial Health and Safety	All employees
Annual Health and Safety Training	All company and contractor employees throughout the year

In addition to this training, all Marlin employees attend a one-half hour industrial safety meeting on a weekly basis, normally held in the industrial safety meeting room. Additionally, a five-minute safety talk is held with all workers at the beginning of each shift.

The following outlines the content of the introductory and annual refresher courses.

Introduction to Industrial Health and Safety

Each employee is given a one-day long introductory course on the industrial health and safety rights and responsibilities for miners including:

- Company health and safety policies, standards and procedures
- Industrial health and safety overview
- Rules of safety and general conduct
- Risk prevention
- Environmental preservation
- Emergency transportation and communication procedures
- Safety procedures and care of the work environment
- Emergency evacuation and escape plans
- Personal protection equipment
- Introduction to First Aid
- Land control issues
- Industrial health, safety and hygiene
- Electrical safety
- Safe use and management of explosives
- Safe use and management of chemical products
- Fire extinguisher use

Annual Refresher Training

Each employee is required to attend an annual safety refresher training course. Topics include the following:

- Contingency committee organization and training
- Emergency action plan
- Operating contingency manual of Contingencies
- Evacuation
- Earthquakes
- Fire prevention and suppression
- Fire suppression teams
- First aid
- Use and management of emergency equipment
- Use and management of chemical products

Emergency Response Contingency Team

During 2006 the Marlin Mine OH&S Department developed a 24-member Emergency Response Contingency Team. The team has received specialized training for a variety of emergency rescue situations and emergency medical response techniques.

12.3 Employee Workplace Monitoring

Noise and Air Monitoring

Workplace monitoring was conducted by CTA in compliance with the Department of Energy and Mines (MEM) requirement specified in the report SCDM-INF-EXTNo. 236-2004f

For the assessment, field sampling results are compared against MSHA for air quality in underground mines and against OSHA for surface locations. The field work consisted of in situ sampling which occurred quarterly during 2006.

Underground Mine Noise Exposure Levels

Audio measurements were conducted inside the underground mine tunnel. OSHA dosimeter parameters used for the sampling are described below:

- Peak Weighting — Un-weighted
- Detector Rate — Show
- Level of change — 5 dB
- Level Threshold — 80 dB
- Criterion Level — 90 dB
- Criteria Time — 8 hours

The results obtained from the audio dosimetry sampling shows that sound levels in the underground mine tunnels are above OSHA standards for unprotected exposure. These include a time weighted average (TWA) of 97.3 dB (>90 dB), exposure level of 58.0% and a projected eight hour exposure level equal to 274.5% (>100%). Consequently, auditory protection devices must be worn inside the underground mine at all times.

Underground Mine Air Quality

This report presents the results of the measurement of oxygen (O_2)[9], carbon monoxide (CO) and carbon dioxide (CO_2) monitoring carried out quarterly during 2006 in the underground mine tunnel and refinery. For air quality monitoring purposes, nine monitoring stations were established in side the Marlin under ground mine at 150 meter intervals, measured from the mine entrance, including stations at 1,50, 300, 450, 600, 750, 900, 1050, 1200 and 1350 meters. Table 50 presents monitoring results for oxygen and carbon dioxide.

According to CTA's monitoring results, oxygen levels in the Marlin tunnel were above the MSHA standard contained in 30 CFR 57.5015 at every sampling station, which indicates that the ventilation system is adequately sized and functioning properly.

[9] % O_2 refers to the percentage in volume of oxygen in the air within the tunnel.

12.4 Fire Safety Monitoring

Table 38 below presents Marlin Mine fire safety monitoring data for 2006.

Table 38. Marlin Mine 2006 Fire Safety Activities

Fire Safety Verification Activities	Number Performed
Fire Drills	4
Fire safety inspections	261
Portable Fire Extinguisher Inspections	All fire extinguishers are inspected monthly
Portable Fire Extinguisher Recharging	All fire extinguishers requiring recharge are serviced bi-monthly