

**Technical Report for the  
La Parrilla Silver Mine,  
State of Durango, México**

**Prepared for  
*First Majestic Silver Corp.***

**September 8, 2011**

**DE-00200**





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Prepared by

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## **1.0 SUMMARY**

### **1.1 *Property***

First Majestic Silver Corp. (FMS) retained Pincock, Allen and Holt (PAH) to prepare a Technical Report covering updated results and review of Pre-Feasibility studies for expansion of the operations at La Parrilla Silver Mine (La Parrilla) located in the Municipality of Nombre de Dios, Durango State, México. The objective of this Technical Report is to provide FMS with a report that will comply with existing regulations in Canada. This report meets the requirements for NI 43-101 and conforms to form 43-101F1 for technical reports according to the June 30, 2011, guidelines and regulations.

La Parrilla mine is owned and operated by First Majestic Plata, S.A. de C.V. (FMPlata) a wholly-owned subsidiary of FMS through its Mexican holding company, Corporación First Majestic, S.A. de C.V. (CFM).

La Parrilla Silver Mine consists of underground silver/lead/zinc mining operations, and cyanidation and flotation ore processing plants. La Parrilla operates in a mining district which was discovered in Colonial times (XVI – XVII centuries) and only partially developed from outcroppings by following mineralization on the structures.

FMS owns mining rights that cover 69,450.87 hectares (171,616.20 acres) including one concession under registration process. The duration of the mineral rights concessions is 50 years, renewable over similar time periods.

### **1.2 *Geology***

La Parrilla mining district is located in the physiographic sub-province of Sierras y Llanuras de Durango. La Parrilla consists of a mining complex made up of five separate mines which includes mineral deposits situated on the surrounding border of the geologic contact zone between a diorite intrusive stock and a sequence of Cretaceous sedimentary rocks.

The diorite stock caused structural conditions favorable for subsequent emplacement of mineralization along faults and breccia zones, as well as replacement and skarn deposits into bed and contact zones.

The La Parrilla diorite crops out as an elongated stock with its main axis in a NE 45° SW direction and an extension of about 2.8 km, by about 1.5 km in width. Numerous dikes and sills branch out from the stock into the sedimentary rocks.

The sedimentary rocks comprise a sequence of dark-gray limestone of the Cuesta del Cura Formation (Albian-Cenomanian). Overlaying this Formation a sequence of intercalated limestone and shale thin beds of the Indidura Formation (Upper Cretaceous) occurs.

The most important known deposits at La Parrilla occur as vein deposits that pinch and swell along strike, as well as downdip. These are enclosed by three main structural systems within the mining district:

- The first structural system appears to be related in orientation (striking NE 60° and dipping SW) nearly vertical to the regional intrusive stock.
- The second structural system occurs with a general orientation of N 45° to 75° W dipping approximately 50° to 85° to the NE. It encloses some of the most important mineral deposits in the area, such as Los Rosarios, El Carmen, San Cayetano, San José, etc.
- The third regional structural system is oriented north-south and dips to the E from 45° to vertical. It encloses important mineral concentrations, such as San Marcos, Quebradillas, Vacas and San Nicolás.

### **1.3 Mineralization**

La Parrilla district mineralization consists of concentrations of silver, lead, and zinc, associated with gangue minerals such as quartz, calcite, and other minor elements.

Primary sulfides mineralization follows downdip within the mineralized structures containing pyrite, galena, sphalerite, argentite, some chalcopyrite, and other silver sulfosalts associated with quartz and calcite as gangue minerals.

Weathering of the La Parrilla mineralization has caused oxidization and secondary enrichment zones containing sulfosalts (cerargyrite, pyrargirite, stephanite) and carbonates (cerussite, hydrozincite, hemimorphite), sulphates (anglesite, willemite), and iron oxides (hematite, limonite, etc.) that may reach depths of up to 150 m from the outcroppings.

Similar geologic characteristics are present in other mining districts within the region, such as San Martín (Grupo México), Sabinas (Peñoles), and La Colorada (Panamerican Silver) where mineralization still exists at depths greater than 700 m.

The main La Parrilla mineral deposits are the following:

- The Rosarios System
- Témiz – La Blanca
- San Marcos
- Vacas
- Quebradillas
- Víboras – Quebradillas
- El Recuerdo
- El Parián
- Quebradillas Breccia zone
- San Nicolás

- San José
- La Gloria
- Sacramento

## **1.4 History**

FMS's production from the La Parrilla area for the period of October 1, 2008 to June 30, 2011, amounts to 770,890 tonnes with a recovered average grade of 216 g/tonne Ag, 0.93 percent Pb, and 0.60 percent zinc. These are included in total production within the mining district of about 21.8 million ounces of silver equivalent at 2011 sales credits of 1 percent Pb = 39 g/t-Ag and 1 percent Zn = 2 g/t-Ag, and 5 g/t-Ag for gold credits.

## **1.5 Exploration**

FMS is focusing exploration efforts on large volume targets while preparing the mine for integration of all the area's mineral deposits. Based on positive results, FMS is developing the expansion of the processing plant from the current 850 tpd to 2,000 tpd.

FMS has carried out an aggressive exploration and development program that includes construction of access ramps, drifting and crosscutting into the old working areas of the Los Rosarios System. This program was based on the following premises:

- Consolidate production areas and increase operating capacity to take advantage of current high metal prices.
- Recover lower grade zones and consolidate mining blocks of reserves to support a reasonable production schedule.
- Increase La Parrilla Resource/Reserve base.
- Continue drilling deep holes from surface and underground sites.

FMS carried out geophysical investigations during the period of April to June 2007, to confirm previous studies within the areas of Quebradillas, Sacramento, Vacas, and Santa Paula (formerly Los Perros). These investigations have confirmed the presence of Induced Polarization and Resistivity anomalies including anomaly "A" which represents the Rosarios mineralized zone.

FMS continues development of an aggressive exploration program that includes underground workings, such as ramps for access, drifting and crosscutting into the old working areas of the Los Rosarios system including La Blanca, San Marcos, Quebradillas and Vacas areas. During the period of 2010 to June 30, 2011, FMS has developed 2,217 m in mine workings for exploration purposes for a total of 9,057 m since 2004, when FMS acquired the property.

Total drilling in La Parrilla since FMS took control of the property amounts to 87,212 m in 409 drill holes. The drilling program for the periods of 2011 and 2012 is budgeted at 20,000 meters, 10,000 meters for each year, from surface and underground sites in Los Rosarios, San Marcos, Vacas, Quebradillas and regional exploration.

In PAH's opinion the exploration programs developed by FMS within the La Parrilla district have been successful in testing exploration targets, increasing the mine's Reserve/Resource base and indicating new targets of exploration within the mining district. These exploration programs have been developed according to industry standards.

FMS Mineral Reserves and Resources are estimated in accordance to guidelines and regulations as established in NI 43-101 and CIM standards. These Mineral Reserves are classified into Proven and Probable and Resources are classified into Measured, Indicated and Inferred Resources for La Parrilla to June 30, 2011, and are summarized in Tables 1-1 and 1-2.

## **1.6 Mining**

La Parrilla operations include production from four different underground mines, and a small open pit. The underground operations are namely, Rosarios / La Blanca, San Marcos, Quebradillas and Vacas. An open pit has been developed on oxide ore situated atop the active Quebradillas underground mine, and is designated as the Quebradillas Pit. La Parrilla ore deposits consist mainly of veins and limestone replacement deposits with mineralization in oxides, sulfides mixed with oxides, and fresh sulfides; the main products from the mines are silver, lead and zinc, and small amounts of gold. The operation currently has an annual production rate of 330,000 tonne per year, or about 850 tonnes per day; 425 tonnes per day of oxide ore and 425 tonnes per day of sulfide ore.

The mining operations of La Parrilla are highly mechanized with liberal use of trackless, diesel-powered mobile mining equipment such as load-haul-dump (LHD) loaders, low and high profile dump trucks, electro-hydraulic drill jumbos, and ancillary mobile support equipment.

Mine development for La Parrilla is done with conventional drill-blast methods, and drilling with hand-held jackleg drills is being replaced with electro-hydraulic diesel-powered drill rigs. The development sequence is still drill-blast-muck, with mucking done with rubber-tired, diesel-powered LHD. Haulage of ore and waste is accomplished using both low-profile and highway type diesel dump trucks. Drifts and ramps require little ground support, and the operators are installing rock bolts with or without wire mesh, and also shotcrete in dubious ground of the backs and ribs of drifts and ramps, and also in stope backs. Most long and conventional raises are bored by contractors. Raises are largely unsupported with occasional rock bolting done where dubious ground conditions have been identified.

A considerable amount of mine development and exploration projects are required to sustain the ore resources and stope development at the levels required to maintain the required production rates for La Parrilla. The total development driven during the 18-month period of 2010 to June 2011 was 9,818 m while the budget called for 13,329 meters of development.

**TABLE 1-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Proven and Probable Mineral Reserves Estimated by FMPlata, as of June 30, 2011 (\*)**

UNDERGROUND RESERVES										
MINERAL RESERVES	Mineralization			Width	Grade				Recoverable Silver (1)	
Mine	Type	Category	Metric Tonnes	meters	Gold g/tonne	Silver g/tonne	Lead, %	Zinc, %	Silver Only (1)	Silver Equiv (2)
La Rosa-Rosarios-La Blanca	Oxides	Proven	174,241	2.50	0.00	205	0.85	0.12	747,000	765,200
San Marcos	Oxides	Proven	40,673	2.70	0.02	224	0.50	0.07	190,500	194,700
Quebradillas	Oxides	Proven	26,918	4.41	0.00	227	0.90	0.11	127,500	130,300
<b>Sub - Total</b>	<b>Oxides</b>	<b>Proven</b>	<b>241,800</b>	<b>2.75</b>	<b>0.00</b>	<b>210.72</b>	<b>0.80</b>	<b>0.11</b>	<b>1,065,000</b>	<b>1,090,200</b>
La Rosa-Rosarios-La Blanca	Oxides	Probable	156,528	2.67	0.00	204	0.80	0.13	667,800	684,100
San Marcos	Oxides	Probable	714,749	3.15	0.08	211	0.03	0.02	3,154,700	3,229,400
Quebradillas	Oxides	Probable	23,840	4.58	0.00	218	0.61	0.14	108,800	111,300
<b>Sub -Total</b>	<b>Oxides</b>	<b>Probable</b>	<b>895,100</b>	<b>3.11</b>	<b>0.06</b>	<b>210.16</b>	<b>0.18</b>	<b>0.04</b>	<b>3,931,300</b>	<b>4,024,800</b>
<b>Total</b>	<b>Oxides</b>	<b>Proven+Probable</b>	<b>1,136,900</b>	<b>3.03</b>	<b>0.05</b>	<b>210</b>	<b>0.31</b>	<b>0.06</b>	<b>4,996,300</b>	<b>5,115,000</b>
La Rosa-Rosarios-La Blanca	Sulfides	Proven	338,977	3.12	0.00	232	1.31	0.51	2,073,700	2,440,100
Quebradillas	Sulfides	Proven	58,822	2.92	0.00	336	4.04	3.53	521,300	584,900
<b>Sub - Total</b>	<b>Sulfides</b>	<b>Proven</b>	<b>397,800</b>	<b>3.09</b>	<b>0.00</b>	<b>247</b>	<b>1.71</b>	<b>0.96</b>	<b>2,595,000</b>	<b>3,025,000</b>
La Rosa-Rosarios-La Blanca	Sulfides	Probable	2,685,456	8.25	0.01	204	1.01	0.67	14,451,600	17,354,300
San Marcos	Sulfides	Probable	190,243	5.76	0.00	232	0.00	0.00	1,161,400	1,367,100
Quebradillas	Sulfides	Probable	184,545	4.91	0.00	199	3.04	3.05	966,000	1,165,400
Vacas (last 43-101)	Sulfides	Probable	667,002	8.18	0.02	148	2.47	6.92	2,596,700	5,002,300
<b>Sub - Total</b>	<b>Sulfides</b>	<b>Probable</b>	<b>3,727,200</b>	<b>7.94</b>	<b>0.01</b>	<b>195</b>	<b>1.32</b>	<b>1.87</b>	<b>19,175,700</b>	<b>24,889,100</b>
<b>Total</b>	<b>Sulfides</b>	<b>Proven+Probable</b>	<b>4,125,000</b>	<b>7.48</b>	<b>0.01</b>	<b>200</b>	<b>1.36</b>	<b>1.79</b>	<b>21,770,700</b>	<b>27,914,100</b>
<b>TOTAL RESERVES</b>	<b>Oxides + Sulfides</b>	<b>Proven+Probable</b>	<b>5,261,900</b>	<b>6.52</b>	<b>0.02</b>	<b>202</b>	<b>1.13</b>	<b>1.41</b>	<b>26,767,000</b>	<b>33,029,100</b>

Notes: Rounded totals

(1).-Recoverable Silver= Ag -Recovery (65%-oxides; 82%-sulfides)-S&R charges (Oxides=0.005%; Sulfides=0.05%); Payable Pb=39 g/t-Ag; Zn = 2 g/t-Ag.

(2).- Oxides = Silver(Met recov=65%)-Smelter & Ref (0.995) + Payable Gold=5 g/t-Ag

(2).-Sulfides = Recoveries Ag (82%; payable 95%); Payable Pb=39 g/t-Ag; Zn = 2 g/t-Ag (Vacas 97.8 g/t-Ag).

(\*) Reserves are exclusive of Resources

QUEBRADILLAS OPEN PIT										
Quebradillas TAJO	Oxides	Proven	505,600	3.50	0.00	114	0.00	0.00	1,196,200	1,277,400
Quebradillas TAJO	Oxides	Probable	1,268,600	3.50	0.00	98	0.00	0.00	2,583,600	2,787,500
<b>TOTAL OPEN PIT RESERVES</b>	<b>Oxides</b>	<b>Proven + Probable</b>	<b>1,774,200</b>	<b>3.50</b>	<b>0.00</b>	<b>102</b>	<b>0.00</b>	<b>0.00</b>	<b>3,779,800</b>	<b>4,064,900</b>

Notes: Rounded totals

(1).- Oxides = Silver(Met recov=65%)-Smelter & Ref (0.995) + Payable Gold=5g/t-Ag; Cutoff = 33 g/t-Ag only.

(\*) Reserves are exclusive of Resources

**TABLE 1-2**

**First Majestic Silver Corp.**

**La Parrilla Silver Mine**

**Measured and Indicated Mineral Resources Estimated by FMPlata, as of June 30, 2011 (\*)**

<b>UNDERGROUND RESOURCES</b>	<b>Metric Tonnes</b>	<b>Width (m)</b>	<b>Grade</b>				<b>Contained Silver "In Situ" (1)</b>	
			<b>Gold g/t</b>	<b>Silver g/t</b>	<b>Lead, %</b>	<b>Zinc, %</b>	<b>Silver only (1)</b>	<b>Silver equiv (2)</b>
<b>MEASURED AND INDICATED</b>								
<b>Sub - Total Oxides</b>	<b>250,000</b>	<b>9.28</b>	<b>0.01</b>	<b>153</b>	<b>1.91</b>	<b>1.49</b>	<b>1,229,000</b>	<b>1,269,100</b>
<b>Sub - Total Sulfides</b>	<b>837,100</b>	<b>8.43</b>	<b>0.03</b>	<b>143</b>	<b>1.88</b>	<b>5.46</b>	<b>3,860,500</b>	<b>6,807,500</b>
<b>TOTAL Resources</b>	<b>1,087,100</b>	<b>8.63</b>	<b>0.03</b>	<b>146</b>	<b>1.89</b>	<b>4.54</b>	<b>5,089,500</b>	<b>8,076,600</b>

Notes: Cutoff = Sulfides \$74.12/tonne (Ag only - 124g/t; Pb only - 3.96%; Zn only - 4.16%; Zn Vacas - 6.65%); Oxides Ag only = 87 g/t; Ag + Au = 82 g/t.

(1) Contained Silver "In Situ" only.

(1).-No recoveries are considered in the Resources. Rounded totals.

(2).-Contained Silver Equivalent "In Situ"= Oxides Ag + Payable Au=5 g/t-Ag. Sulfides = Payable Pb=39 g/t-Ag; Zn = 2 g/t-Ag (Vacas 97.8 g/t-Ag).

(\*) Resources are exclusive of Reserves

<b>UNDERGROUND INFERRED RESOURCES</b>								
Sub -Total Oxides	1,605,600	3.03	0.04	206	0.31	0.14	10,653,500	10,905,800
Sub - Total Sulfides	6,447,600	6.67	0.00	170	1.26	1.59	35,105,200	46,033,500
<b>TOTAL INFERRED RESOURCES</b>	<b>8,053,200</b>	<b>7.12</b>	<b>0.01</b>	<b>177</b>	<b>1.02</b>	<b>1.30</b>	<b>45,758,700</b>	<b>56,939,300</b>

Notes: Inferred Resources do not have economic value

(1) Contained Silver "In Situ" only. Rounded totals.

(1).-No recoveries are considered in the Resources

(2).-Contained Silver Equivalent "In Situ"= Oxides Ag + Payable Au=5 g/t-Ag. Sulfides = Payable Pb=39 g/t-Ag; Zn = 2 g/t-Ag (Vacas 97.8 g/t-Ag).

(\*) Inferred Resources are exclusive of Proven and Probable Reserves and Measured and Indicated Resources

<b>QUEBRADILLAS OPEN PIT INFERRED RESOURCES</b>								
QUEBRADILLAS OPEN PIT	1,293,600	0.00	0.00	99	0.00	0.00	4,100,400	4,308,300
<b>TOTAL OPEN PIT INFERRED RESOURCES</b>	<b>1,293,600</b>	<b>0.00</b>	<b>0.00</b>	<b>99</b>	<b>0.00</b>	<b>0.00</b>	<b>4,100,400</b>	<b>4,308,300</b>

Notes: Inferred Resources do not have economic value. Rounded figures.

(1) Contained Silver "In Situ" only. Rounded totals.

(1).-No recoveries are considered in the Resources

(2).-Contained Silver Equivalent "In Situ"= Oxides Ag + Credits Au=5 g/t-Ag. Cutoff grade Ag-33g/t only.

(\*) Inferred Resources are exclusive of Proven and Probable Reserves and Measured and Indicated Resources

The underground stoping method used for mining the near-vertical veins and orebodies of the La Parrilla operations is overhand cut and fill. Some longhole stoping was done in the recent past, but no longhole stopes are currently being mined. Stope cuts are currently drilled with hand-held pneumatic jackleg drills. Stoping is largely done using breast-mining techniques, although some back stoping is also done. Ore is mucked in the stopes utilizing diesel-powered LHD's, which have access to the stopes through crosscuts driven from ramps in the footwall of the stope. Once a stope back has been completely mined out the full length of the stope, backfilling is done using waste from development. The minimum mining width for all the mine operations is about 2 meters.

Most mine development and exploration, and production and support operations for La Parrilla, including the new Quebradillas Pit, are conducted by outside mining contract firms. The mill and process plant operation is operated exclusively with company personnel as are administrative and technical support functions. The total personnel on site are 879 people with 562 contract personnel and 317 company employees. About 244 contractors working in mine operations. Company staff, including management, supervision, safety, engineering, geology and administrative staff numbered 63 employees.

In 2010, mine and mill production from La Parrilla was about 1,807,829 equivalent ounces of silver from mining 148,943 tonnes of oxide and mixed ores and 154,868 tonnes of sulfide mineralization. FMS metal production was 806,953 equivalent ounces of silver during the first semester of 2011, obtained from 77,960 tonnes of oxides and mixed ores and 73,906 tonnes of sulfide ores.

Recently FMS have started up a small open pit in the Quebradillas area, and ore is now being trucked from this pit to the process plant. The ore consists mainly of oxidized near-surface mineralization of the Quebradillas system. The total reserve within the designed pit shell is about 1,774,200 tonnes of ore, at an average grade of 102 gpt Ag. The pit is expected to last until 2017.

The open pit has been designed as a conventional operation, with 6m high benches. Drilling is done with small wagon drills and loading and hauling by small rubber tired loaders. Ore and waste haulage is done with highway type 20t capacity dump trucks. When the pit is fully operational, production is expected to average about 675 tpd of ore and 1,560 tpd of waste (based on 330 operating days per year) with the waste to ore ratio at about 2.32:1.0. The pit is being developed and mined by a local mining contractor.

## **1.7        *Mine Expansion***

The current mill expansion program includes a significant upgrading and consolidation of the various mining operations of La Parrilla. Heretofore, the various mine operations had been somewhat autonomous with each mine having been developed as an independent trackless operation through declines, adits and/or shafts and winzes, and truck haulage of ore from mine to mill by contractors been employed for each mine.

A key component of mine planning for the expansion is the consolidation of all the mine operations by connecting all with a rail haulage drift at the elevation of the Rosario 11 level. In this manner all underground mines will be connected and ore haulage from each will be via trains, which will tram the



ore from ore-passes to a new shaft (San José), now under construction in the Rosa-Rosarios area. The 11 level haulage will ultimately extend under the San Marcos, Quebradillas and Vacas mine areas, as well as under the Rosa-Rosarios and La Blanca-San José areas. The principal advantage of the low level haulage drift, as stated above, is the consolidation of all the underground operations with ore haulage from all current operations to one main hoisting shaft and thence to the existing primary surface mill and process plant.

This system will also be useful for transporting personnel and supplies into the underground workings. Another of the many advantages of the low-level haulage drift is the exploration value for probing for new ore zones or ore zone extensions between the various mines.

A new shaft, the San José, which is currently under construction in the Rosa-Rosario mine, will be the main ore hoisting facility for all the operations, thus eliminating the surface ore haulage, and possibly the transport of personnel and some equipment and supplies from surface. It will have at least a 2,000 tpd rock hoisting capacity, but extra capacity may be needed for hoisting excess development waste from the various operations. The final detailed design of the shaft is currently in progress.

An accelerated mine development program is required to support and comply with the increased tonnage requirements of the expanded operations. The average development advance for 2010 was 643 meters per month, and for the expansion this increases to 898 meters per month in 2011 and as high as 1,151 meters per month in 2012. The LOM development plan compared to actual 2010 results is shown in Table 1-3.

The schedule for the expansion plan commenced during 2010 and the will be completed by year-end 2011. The last connections are planned for completion in 2014 for the outlying mine operations, Vacas and Quebradillas, to the 11 level haulage drift. A diagram of the schedule for the La Parrilla expansion project is shown in Figure 16-2.

FMS have constructed a Life-of-Mine (LOM) Production and Revenue Plan for the operations at La Parrilla. With the expanded production, the current ore Reserves will be depleted by 2024. However, the Reserve base has been continually improved over the past several years, and there is no doubt that the mine will last well beyond 2024, barring a complete collapse of metal prices. A summary of the LOM Production and Revenue Plan is shown in Table 1-4.

## **1.8 Ore Processing**

The ore processed from the La Parrilla mining district consists of two essential types: oxides and sulfides. Oxides are the in situ oxidation product of the sulfide ore. For both ore types the principal economic component is silver. The ores also contain significant amounts of lead and zinc, and minor amounts of gold. Oxide ores are processed by cyanide leaching to produce doré metal; sulfide ores are processed by differential flotation to produce a silver-rich lead concentrate and a zinc concentrate.

**TABLE 1-3**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Life-of-Mine (LOM) Plan - Mine Development**

Development Category	YEARS															TOTALS LOM Plan
	*2010 (actual)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
<b>Exploration (m)</b>	1,838	300	1,200	300	0	0	0	0	0	0	0	0	0	0	0	1,800
<b>Stope Development (m)</b>	4,446	7,858	9,254	6,546	4,610	3,841	3,220	2,150	1,900	1,670	982	148				42,179
<b>General Mine Development (m)</b>	1,491															
Mine Preparation (m)		1,545	2,630	1,890	1,730											7,795
Ventilation Boreholes (m)		459	730	1,030												2,219
Sn. José Shaft Boreholes (m)		614														614
<b>Sub-Total General Mine Dev. (m)</b>	1491	2,618	3,360	2,920	1,730											10,628
<b>Total All Expl. &amp; Dev. (m)</b>	<b>7,775</b>	<b>10,776</b>	<b>13,814</b>	<b>9,766</b>	<b>6,340</b>	<b>3,841</b>	<b>3,220</b>	<b>2,150</b>	<b>1,900</b>	<b>1,670</b>	<b>982</b>	<b>148</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>54,607</b>
<b>Average Advance Per Month (m)</b>	648	898	1,151	814	528	320	268	179	158	139	82	12	0	0	0	

**TABLE 1-4**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Projected Production and NSR Values**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>FLOTATION</b>														
Tonnes Milled	243,143	319,000	319,000	319,000	319,000	319,000	319,000	319,000	319,000	319,000	319,000	319,000	319,000	53,901
Au grade (gr/tonne)	0.05	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ag grade (gr/tonne)	233	230	212	204	196	192	197	197	197	203	184	185	195	192
Pb Grade (%)	0.9	1.2	1.2	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Zn Grade (%)	1.38	1.85	1.86	1.74	1.65	1.54	1.49	1.46	1.49	0.87	0.59	0.59	0.59	0.59
Ag recovery (%)	82	82	82	82	82	82	82	82	82	82	82	82	82	82
Pb recovery (%)	87	87	87	87	87	87	87	87	87	87	87	87	87	87
Zn recovery (%)	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Lead Con Tonnes	8,683.68	11,392.87	11,392.86	11,392.86	11,392.85	11,392.86	11,392.86	11,392.86	11,392.86	11,392.87	11,392.86	11,392.86	11,392.86	1,925.03
Zinc Con Tonnes	9,175.21	12,037.75	12,037.74	12,037.74	12,037.73	12,037.74	12,037.74	12,037.74	12,037.74	-	-	-	-	-
Silver Ounces	1,543,587	1,994,608	1,840,222	1,769,824	1,704,842	1,667,287	1,710,599	1,710,599	1,710,599	1,701,307	1,537,619	1,550,188	1,633,982	271,844
Eq Silver Ounces from Pb, Zn, Au	308,547	520,512	532,704	486,927	496,216	475,350	468,895	463,296	466,524	271,979	270,226	270,226	270,226	45,660
Total Ag Eq from flotation	1,852,135	2,515,120	2,372,926	2,256,751	2,201,057	2,142,637	2,179,495	2,173,896	2,177,123	1,973,287	1,807,844	1,820,414	1,904,208	317,504
Gross Revenue - Concentrates	44,960,410	61,342,999	57,971,069	55,097,455	53,746,362	52,282,322	53,134,210	52,984,120	53,074,679	47,404,290	43,456,296	43,756,069	45,754,554	7,629,777
Smelting/Refining Costs	9,930,799	12,984,865	12,761,473	12,659,616	12,565,592	12,511,258	12,573,926	12,573,926	12,573,926	7,827,435	7,581,899	7,600,752	7,726,443	1,299,155
Metal Deductions	1,511,103	2,299,661	2,279,933	2,159,259	2,119,985	2,039,753	2,023,562	2,007,002	2,020,586	778,205	776,004	776,004	776,004	131,120
NSR - Lead and Zinc Concentrate	33,518,509	46,058,473	42,929,663	40,278,580	39,060,785	37,731,311	38,536,722	38,403,193	38,480,167	38,798,650	35,098,394	35,379,313	37,252,107	6,199,502
<b>CYANIDATION</b>														
Tonnes Milled	141,337	319,000	319,000	319,000	319,000	319,000	319,000	319,000	319,000	217,768	-	-	-	-
Au grade (gr/tonne)	0.03	0.01	0.01	0.01	0.01	0.008	0.008	0.007	0.011	0.024	-	-	-	-
Ag grade (gr/tonne)	144	151	153	145	142	137	136	123	139	161	-	-	-	-
Ag recovery (%)	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Au recovery (%)	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Dore (TMS)	14.63	34.58	35.02	33.16	32.46	31.45	31.19	28.09	31.85	25.21	-	-	-	-
Silver Ounces	427,591	1,010,605	1,023,373	969,014	948,734	919,005	911,671	820,990	930,684	736,691	-	-	-	-
Ag Eq Ounces from Au	5,390	5,983	3,329	3,683	3,683	3,683	3,624	3,159	5,415	7,733	-	-	-	-
Total Eq Ounce of Silver	432,980	1,016,587	1,026,703	972,697	952,417	922,688	915,294	824,149	936,099	744,425	-	-	-	-
Gross Revenue - Dore	10,333,346	24,253,118	24,491,038	23,203,438	22,719,780	22,010,740	21,834,318	19,659,909	22,332,752	17,764,232	-	-	-	-
Smelting/Refining Costs	150,549	355,774	360,251	341,119	333,980	323,516	320,934	289,011	327,638	259,369	-	-	-	-
Metal Deductions	57,756	128,025	126,216	120,178	117,760	114,215	113,265	101,868	117,781	97,558	-	-	-	-
NSR - DORE	10,125,041	23,769,319	24,004,571	22,742,141	22,268,040	21,573,009	21,400,119	19,269,030	21,887,333	17,407,305	-	-	-	-
<b>TOTALS</b>														
<b>Total Tonnes Milled</b>	<b>384,480</b>	<b>638,000</b>	<b>638,000</b>	<b>638,000</b>	<b>638,000</b>	<b>638,000</b>	<b>638,000</b>	<b>638,000</b>	<b>638,000</b>	<b>536,768</b>	<b>319,000</b>	<b>319,000</b>	<b>319,000</b>	<b>53,901</b>
<b>Silver Ounces</b>	<b>1,971,178</b>	<b>3,005,213</b>	<b>2,863,595</b>	<b>2,738,837</b>	<b>2,653,576</b>	<b>2,586,292</b>	<b>2,622,270</b>	<b>2,531,589</b>	<b>2,641,283</b>	<b>2,437,999</b>	<b>1,537,619</b>	<b>1,550,188</b>	<b>1,633,982</b>	<b>271,844</b>
<b>Ag Eq Oz. from Gold</b>	<b>5,390</b>	<b>5,983</b>	<b>3,329</b>	<b>3,683</b>	<b>3,683</b>	<b>3,683</b>	<b>3,624</b>	<b>3,159</b>	<b>5,415</b>	<b>7,733</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Eq Silver Ounces from Pb, Zn, Au</b>	<b>308,547</b>	<b>520,512</b>	<b>532,704</b>	<b>486,927</b>	<b>496,216</b>	<b>475,350</b>	<b>468,895</b>	<b>463,296</b>	<b>466,524</b>	<b>271,979</b>	<b>270,226</b>	<b>270,226</b>	<b>270,226</b>	<b>45,660</b>
<b>Total Eq Ounces of Silver</b>	<b>2,285,115</b>	<b>3,531,707</b>	<b>3,399,629</b>	<b>3,229,447</b>	<b>3,153,475</b>	<b>3,065,325</b>	<b>3,094,789</b>	<b>2,998,044</b>	<b>3,113,222</b>	<b>2,717,711</b>	<b>1,807,844</b>	<b>1,820,414</b>	<b>1,904,208</b>	<b>317,504</b>
<b>Gross Revenues</b>	<b>55,293,756</b>	<b>85,596,117</b>	<b>82,462,107</b>	<b>78,300,893</b>	<b>76,466,142</b>	<b>74,293,062</b>	<b>74,968,528</b>	<b>72,644,029</b>	<b>75,407,431</b>	<b>65,168,522</b>	<b>43,456,296</b>	<b>43,756,069</b>	<b>45,754,554</b>	<b>7,629,777</b>
<b>Smelting/Refining Costs</b>	<b>10,081,348</b>	<b>13,340,639</b>	<b>13,121,724</b>	<b>13,000,735</b>	<b>12,899,572</b>	<b>12,834,774</b>	<b>12,894,860</b>	<b>12,862,937</b>	<b>12,901,564</b>	<b>8,086,804</b>	<b>7,581,899</b>	<b>7,600,752</b>	<b>7,726,443</b>	<b>1,299,155</b>
<b>Metal Deductions</b>	<b>57,756</b>	<b>128,025</b>	<b>126,216</b>	<b>120,178</b>	<b>117,760</b>	<b>114,215</b>	<b>113,265</b>	<b>101,868</b>	<b>117,781</b>	<b>97,558</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Net Smelter Revenue</b>	<b>43,643,550</b>	<b>69,827,792</b>	<b>66,934,234</b>	<b>63,020,721</b>	<b>61,328,825</b>	<b>59,304,320</b>	<b>59,936,841</b>	<b>57,672,222</b>	<b>60,367,500</b>	<b>56,205,955</b>	<b>35,098,394</b>	<b>35,379,313</b>	<b>37,252,107</b>	<b>6,199,502</b>

Metal recovery of silver in the cyanide leaching circuit is currently low by general industry standards, about 65 percent. Recovery of silver in the flotation circuit is good, amounting to about 82 percent into the lead flotation concentrate and 3 percent into the zinc flotation concentrate. Lead and zinc recoveries and concentrate grades are not particularly good. There is a likelihood of higher silver recovery in the cyanide leach circuit with longer leach times following the plant expansion currently in progress. The valuable mineral in the sulfide ore is essentially argentiferous galena. The mineralogy of the oxide ore is essentially the oxidation product of the sulfides. It is probable that most of the silver occurs as argentite.

Ore processed in the plant up to now has been mostly from the Rosa/Rosario and La Blanca veins with smaller amounts from the San Marcos and Quebradillas veins. Future ore will also include that from the Vacas deposit, the sulfide fraction of which has high zinc content.

The ore processing plant is currently being extensively expanded to double the capacity, to process 1,000 tonnes per day of oxide ore and 1,000 tonnes per day of sulfide ore, and replace much of the existing equipment with more modern and more efficient equipment. Expansion of the sulfide flotation section of the plant is projected to be complete by mid-2011 and the oxide cyanide leaching section by the end of 2011. Filings from both the cyanidation and flotation circuits will be filtered using plate-and-frame type pressure filters. Filter cake will be conveyed to the existing tailings containment and spread with a bulldozer.

In 2007, the tailings containment area was expanded by leasing land adjoining the old tailing dam and building a starter dike using borrowed material from within the dam area and also mine waste rock. The perimeter walls of the dam were raised by manually digging material from within the containment and building walls on the upstream side. The new containment covers an area of about 100,000 square meters and the elevation between the current level and dumping elevation is about 25 meters. Accordingly, capacity of the containment is about 2.5 million cubic meters or about 4.4 million tonnes at 1.75 tonnes per cubic meter, sufficient for the currently planned ore to be processed. Additional capacity could be provided by raising the containment above the dumping elevation.

## **1.9        *Economic Analysis***

An economic analysis of the expansion project for La Parrilla mining and metallurgical operation was presented by FMS in pre-feasibility study. This included the Mineral Reserve / Resource estimates for the La Parrilla Silver Mine, including Capital costs based on construction contracts in progress, purchase orders for some of the equipment, and on current operating costs.

The economic analysis included a cash flow exercise and sensitivity analysis for metal prices, recoveries and operating costs. The resulting Net Present Value at a 5 percent discount rate is \$78.6 million and Internal Rate of Return of 40 percent with a payback period of 3.20 years. The sensitivity analysis shows that the project is most sensitive to silver prices and metal recoveries, with lower impact by capital and operating costs. The project's positive economics confirm the Mineral Reserves statement for this Technical Report.

## **1.10 Conclusions**

FMS's exploration and development efforts and investments at La Parrilla have resulted in estimated Reserves and Resources for the operation as of June 30, 2011 containing 37.1 million ounces of silver equivalent in Proven and Probable Reserves, which represent a significant increment of more than 600 percent over previously reported estimates; 8.1 million ounces of silver equivalent contained in Measured and Indicated Resources, or a decrement of about 73 percent over the 2008 estimates due to high conversion of Resources to Reserves; and 61.2 million ounces contained in Inferred Resources, or 15.9 percent more than the previous estimate. The Reserve increment is due to the new long-term mine plan, continued exploration efforts, and conversion of Resources to Reserves.

FMS has completed Pre-Feasibility studies, and has nearly completed construction of an expansion of current processing facilities to a capacity of 2,000 tonnes per day. This will include, flotation, and cyanidation circuits to process sulfide and oxide ores.

FMS is conducting a mine consolidation program in which the current, independent workings will be connected and integrated into a single interconnected underground mine. The program will include development of a low-level rail haulage level providing access to the Los Rosarios, San Marcos, Quebradillas, and the Vacas mines at about the Los Rosarios Level 11. The rail haulage level will be used to haul ore to a new shaft, located in the Rosarios area; the shaft will be used to hoist ore to a mill level tunnel.

An integral part of the mine operations expansion is the development of a new open pit on the oxidized ores lying atop the Quebradillas area. This pit is currently in the early stages of production and when running fully will operate at a rate of about 600 ore tonnes per day. The life of the pit is through 2017.

Based on the current Ore Reserves for La Parrilla, a life of mine (LOM) production plan has been developed. The planned operation will last through the year 2024, based on the 2,000 tonnes per day production rate; however, the last oxide ore Reserves will be depleted in 2020, while the low-grade open pit oxides will be mined out in 2018. FMS have budgeted about \$3.0 million per year for exploration, in addition to \$6.6 million for 2011 and 2012, and given the excellent potential near the current mining areas and in La Parrilla mining district, PAH believes that significant mineral resources can be found and developed quickly. Obviously, additional resources will result in added mine life.

In PAH's opinion La Parrilla Mineral Reserves and Resources may not be materially affected by issues that may prevent their extraction and processing. The projected program of construction and development for the La Parrilla expansion project appears in PAH's opinion achievable. Cash flow analysis under the projected schedule and assumptions shows robust economics confirming this Technical Report's Reserve/Resource statement.

## 1.11 ***Recommendations***

FMS programs of exploration appear to have already shown positive results by indicating an important Reserve / Resource base for the mine. FMS has estimated an expenditure of \$6.6 million for the periods of 2011 and 2012. In PAH's opinion, this investment represents a reasonable budget for exploration of targets that show geologic potential and highly promising evidences of mineral concentrations within accessible areas of the mining district.

La Parrilla programmed capital expenditures for the period of 2011 to 2024, for a total of \$169.5 million, including sustaining capital costs, are scheduled to not only expand the operation from a nominal 850 tonnes per day to 2,000 tonnes per day, but also to consolidate the mines and improve the operation. PAH recommends continuing with this program.

Additionally, with success from the underground and surface exploration programs, the mine's Reserve and Resource base will be improved, and the mine life will, therefore, be extended. PAH recommends continuing evaluation of resource as they are found.

Other recommendations by PAH related to operating practices, for which no budget can be estimated are the following:

- Metallurgical accounting must be more accurate. FMS must closely control the ore flow and stockpiles for both La Parrilla and the ore from outside operations, such as Del Toro.
- The system of long-range planning by the mine engineering group at La Parrilla is now in place. Long-range plans are being constructed with much more detail than previously, and PAH recommends that FMS continue to develop this very useful tool.

## **2.0 INTRODUCTION**

### **2.1 *Technical Report***

First Majestic Silver Corp. (FMS), retained Pincock, Allen and Holt (PAH) to prepare a Technical Report (TR) covering updated operating results and review of Pre-Feasibility studies for expansion of operating capacity at the La Parrilla Silver Mine (La Parrilla) located in the municipality of Nombre de Dios, Durango state, México.

### **2.2 *Purpose of the Technical Report***

The purpose of this TR is to provide FMS with an updated report that will follow regulations in Canada. This report meets the new versions of National Instrument 43-101 Standards of Disclosure for Mineral Projects (the New Instrument), Form 43-101F1 (the New Form), and Companion Policy (the New Companion Policy) (together the New Mining Rule) to be implemented as of June 30, 2011, for technical reports.

### **2.3 *Sources of Information***

This report is an update of Technical Report for the La Parrilla Silver Mine, Durango state, México, Amended and Restated, prepared for FMS dated February 26, 2009, by Pincock, Allen & Holt, Inc., and published in SEDAR on the same date, and previous Technical Report for the La Parrilla Silver Mine, Durango state, México, dated January 25, 2008, and published in SEDAR in January 29, 2008, and Technical Report Amended dated March 18, 2008, and published in SEDAR in March 19, 2008, and they are referred to as Technical Reports herein.

### **2.4 *Participants in the Preparation of This Technical Report***

The principal author of this report is Leonel López (except for those sections prepared by Mr. Richard Addison, sections 13, 17, 18, and 19), a Certified Professional Geologist (AIPG-C.P.G.-08359), Registered Professional Geologist in the State of Wyoming (PG-2407), a Registered Professional Member of The Society of Mining Engineers (No.1943910) and a PAH Principal Geologist. Mr. López has visited the site during the periods of May 9-13, 2011, October 30 to November 1, 2008, May 15-18, 2007 and November 13-18, 2007, and in June 21, 2006, to review current status of the property.

Another team of PAH professionals visited La Parrilla to review environmental, mine, plant and safety issues during the period of April 13–15, 2007. Mr. López's prior visit to La Parrilla was as part of a PAH team of professionals to review the operations.

Mr. Richard Addison is co-author of this report and prepared the sections 13, 17, 18, and 19, of this Technical Report. Mr. Addison visited the property during the periods of May 9-13, 2011, and October 30 to November 1, 2008, to review available information on La Parrilla mine.

Other PAH members collaborated in the review of reserve estimates, mining operations and operating and capital costs for La Parrilla Silver Mine and operation.

The list of PAH participants and their subjects covered in this Technical Report is presented in Table 2-1.

**TABLE 2-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Contributors to This Technical Report**

<b>Qualified Person</b>	<b>Position</b>	<b>Employer</b>	<b>Date of Last Site Visit</b>	<b>Professional</b>	<b>Sections of Report</b>
Richard Addison	Principal Process Engineer	Pincock, Allen & Holt, Inc.	May 9 - 13, 2011	Principal Process Engineer, QP	Sections 13.0, 17.0, 18.0, 19.0, and parts of 1.0, 25.0, and 26.0
Leonel López	Principal Geologist, Project Manager	Pincock, Allen & Holt, Inc.	May 9 - 13, 2011	Geological Engineer, QP, AIPG, SME, CIM	Responsible for assembling the TR and preparation of Sections 1.0 to 12.0, 14.0, and 23.0, 24.0, and 27.0. Parts of other sections.
Jack Haptonstall	Principal Mine Engineer	Associate to Pincock, Allen & Holt, Inc.	May 9 - 13, 2011	Principal Mining Engineer, SME	Sections 15.0, 16.0, 21.0, 22.0, and parts of 1.0, 25.0, and 26.0
Ernie Bohnet	VP Mining and Geological Services	Pincock, Allen & Holt, Inc.	---	Mine Engineer, QP, SME	TR QA/QC



### **3.0 RELIANCE ON OTHER EXPERTS**

This report was prepared for First Majestic Silver Corp. (FMS), by the independent consulting firm Pincock, Allen & Holt, Inc. (“Consultant”), and is based primarily on information provided by First Majestic Plata, S.A. de C.V., (FMPlata) a wholly-owned subsidiary of Corporación First Majestic, S.A. de C.V. (CFM), which is a wholly-owned subsidiary of Vancouver-based FMS.

- Legal Opinion – First Majestic Plata, S.A. de C.V., La Parrilla Silver Mine, by México city-based FMS Corporate Legal Adviser, Todd y Asociados, S.C., Mr. Fernando Todd Dip, Partner, prepared on August 25, 2011.
  
- Information provided by FMS Corporate Manager of Environmental and Permitting, on Permits and Environmental Requirements compliance on behalf of the La Parrilla mining operation. This document of statement and list of permits and requirements was provided to PAH by FMS Corporate Manager of Environmental and Permitting, Mr. José Luis Hernández Santibañez, dated May 11, 2011.

PAH believes the above described documents and information regarding the property current status, legal title and environmental compliance for the La Parrilla mining – metallurgical operation to be accurate and current in legal standing.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

The La Parrilla mining rights are held by First Majestic Plata, S.A. de C.V. (FMPlata), a corporation owned by the Mexican holding company Corporación First Majestic, S.A. de C.V., which consolidates all shares and ownership of the Mexican operations through First Majestic Silver Corp. (FMS) of Vancouver, BC.

La Parrilla consists of mining concessions, underground mines for extraction of silver, lead, and zinc minerals contained in sulfides and oxides, processing plants by flotation and cyanidation, warehouses, maintenance shops, and camp facilities; and it has been in operation by FMS since 2004.

La Parrilla is located within the municipality of Nombre de Dios in the south-eastern part of the state of Durango, México. Figure 4-1 presents a general location map. Location coordinates to the approximate centre of La Parrilla mine area are as follows:

<u>Geographic</u>	<u>UTM</u>
North 23° 44' 16"	North 2,625,000
West 104° 06' 26"	East 591,500

### 4.1 *Property Coverage*


The La Parrilla property consists of 39 contiguous mining concessions covering a total of 69,439.87 hectares (171,589 acres or 694.40 km<sup>2</sup>). Additionally, FMS owns land surface rights through purchase and lease agreements covering a total of 531.5536 hectares (5.316 km<sup>2</sup> or 1,313.5 acres). La Parrilla installations, operating infrastructure, and some of the mines are located within these land holdings. All minerals below surface rights lie within the State; while surface rights are owned by communities ("ejidos") or private individuals, allowing them the right of access and use of their land.

La Parrilla area is located partly within the Ejido San José de la Parrilla and partly within private property. La Parrilla has made an agreement for the surface rights (60 hectares) from Ejido San José de La Parrilla for a period of 15 years which is renewable, under the provisions included in the Mexican Mining Law, to permit the use of surface rights for development of projects that are of general economic interest, including mining operations. FMS has purchased the rest of the land holdings from private land holders. Figure 4-2 shows the La Parrilla project general layout.

### 4.2 *Mineral Tenure*

FMS has acquired, through purchasing and direct staking, 39 mining claims, 38 of which are titled and registered in the Dirección General de Minas (National Mining Registry). The 39<sup>th</sup> claim has been registered and is in process of being titled. The mining concessions hold 50-year exploitation rights which are renewable for a similar period of time from the title's date. Table 4-1 shows a list of FMS's mining concessions.



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Drawing Provided by/Prepared for  
**First Majestic Silver Corp.**  
 Project Name  
 La Parrilla Parilla Project

**FIGURE 4-1**  
**General Location Map**

Date of Issue  
 Jan/2009  
 Drawing Name  
 Fig4-1.dwg

Project No.  
 90534



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Project No.  
 DE-00200

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Project Name  
 La Parilla Project

**FIGURE 4-2**  
**General Layout**

Date of Issue  
 Sept 2011

Drawing Name  
 Fig4-2.dwg

**TABLE 4-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Mining Concessions**

No.	Name	Title No.	Surface Hectares	Ownership
1	Protectora 2	169,302	32.3560	FMPlata
2	Extensión Rosa	169,303	6.0000	FMPlata
3	Rosa y Anexas	169,304	4.0000	FMPlata
4	Rosario	169,305	5.3670	FMPlata
5	El Salvador	169,306	1.0000	FMPlata
6	Ampliación Los Rosarios	169,307	4.0000	FMPlata
7	Los Michosos	169,308	15.9673	FMPlata
8	San José	169,309	6.0000	FMPlata
9	San Marcos	169,310	10.0000	FMPlata
10	La Protectora	169,311	83.8767	FMPlata
11	Ampliación del Rosario 2	169,312	7.5000	FMPlata
12	San Nicolás	169,313	95.4983	FMPlata
13	Los Rosarios	171,082	11.0000	FMPlata
14	La Encarnación	150,935	16.0000	FMPlata
15	San Ignacio Dos	158,205	8.9286	FMPlata
16	Parrilla II	203,302	16.0000	FMPlata (c)
17	Parrilla V	203,987	0.4088	FMPlata (c)
18	El Tecolote	121,256	20.0000	FMPlata (b)
19	Las Vacas	122,739	40.0000	FMPlata (b)
20	La Asunción de Quebradillas	124,290	12.0000	FMPlata (b)
21	El Socorro	136,808	15.3702	FMPlata (b)
22	Parrilla 18	210,061	9.2208	FMPlata (a)
23	Parrilla 16	214,003	44.4244	FMPlata (a)
24	Parrilla 19	214,557	30.0068	FMPlata (a)
25	Parrilla 21	216,554	26.8962	FMPlata (a)
26	Parrilla 20	216,723	9.0000	FMPlata (a)
27	Parrilla 22	219,888	53.9870	FMPlata (a)
28	Parrilla XIV	198,568	33.1581	FMPlata (a)
29	Parrilla Sur	198,569	874.6880	FMPlata (a)
30	Parrilla Norte	198,570	1,742.3879	FMPlata (a)
31	Parrilla III	204,357	32.5267	FMPlata (a)
32	Parrilla VI	204,358	10.0000	FMPlata (a)
33	Parrilla VII	204,520	20.8434	FMPlata (a)
34	Parrilla IV	211,943	38.1396	FMPlata (a)
35	Parrilla 15	212,351	8.9420	FMPlata (a)
36	La Zacatecana	217,646	88.0107	FMPlata (a)
37	Michis	230,602	31,350.0000	FMPlata
38	La Providencia	229,493	18,465.7120	FMPlata
40	Hueco	Pending	16,190.6577	FMPlata
	<b>Total Hectares</b>		<b>69,439.8742</b>	

(1) All concessions have been transferred to FMPlata

(a,b,c) Concessions with provisions to pay royalties: Grupo México:

- a. Industrial Minera México, S.A. de C.V.
- b. Minerales Metálicos del Norte, S.A.
- c. Mexicana del Arco, S.A. de C.V.

### 4.3 **Mining Concessions**

The mining concessions legal status was provided by a legal opinion dated August 25, 2011, from México city, prepared and executed by Mr. Fernando Todd Dip, Partner, of the México city-based General Legal Adviser for FMS in México Todd y Asociados, S.C. PAH also requested and received an updated review by FMS's Legal Advisor of the mining concessions current status showing that all mining claims are owned by FMS and are current in meeting the legal obligations and requirements by Mexican Mining and Environmental Laws and Regulations, including property taxes and operating permits for the period through December 31, 2011. Figure 4-3 shows a map of the mining concessions.

### 4.4 **Claims Boundaries and Mineralized Zones**

Most area of the La Parrilla mining district has been acquired by FMS, but few small claims owned by third parties remain valid within FMS's coverage.

All mineral deposits under exploitation, development or exploration by FMS are located within the company's claim boundaries. Other significant mineralized structures or outcropping zones that have been indicated by drilling or underground workings are also located within the property and will be subjected to future exploration programs. Figure 4-4 shows FMS concessions boundaries with the areas of interest.

### 4.5 **Royalties, Back-in Rights, Agreements, and Other Encumbrances**

FMS acquired some mining claims from Grupo México including mineral rights of the Quebradillas, Viboras and Vacas areas.

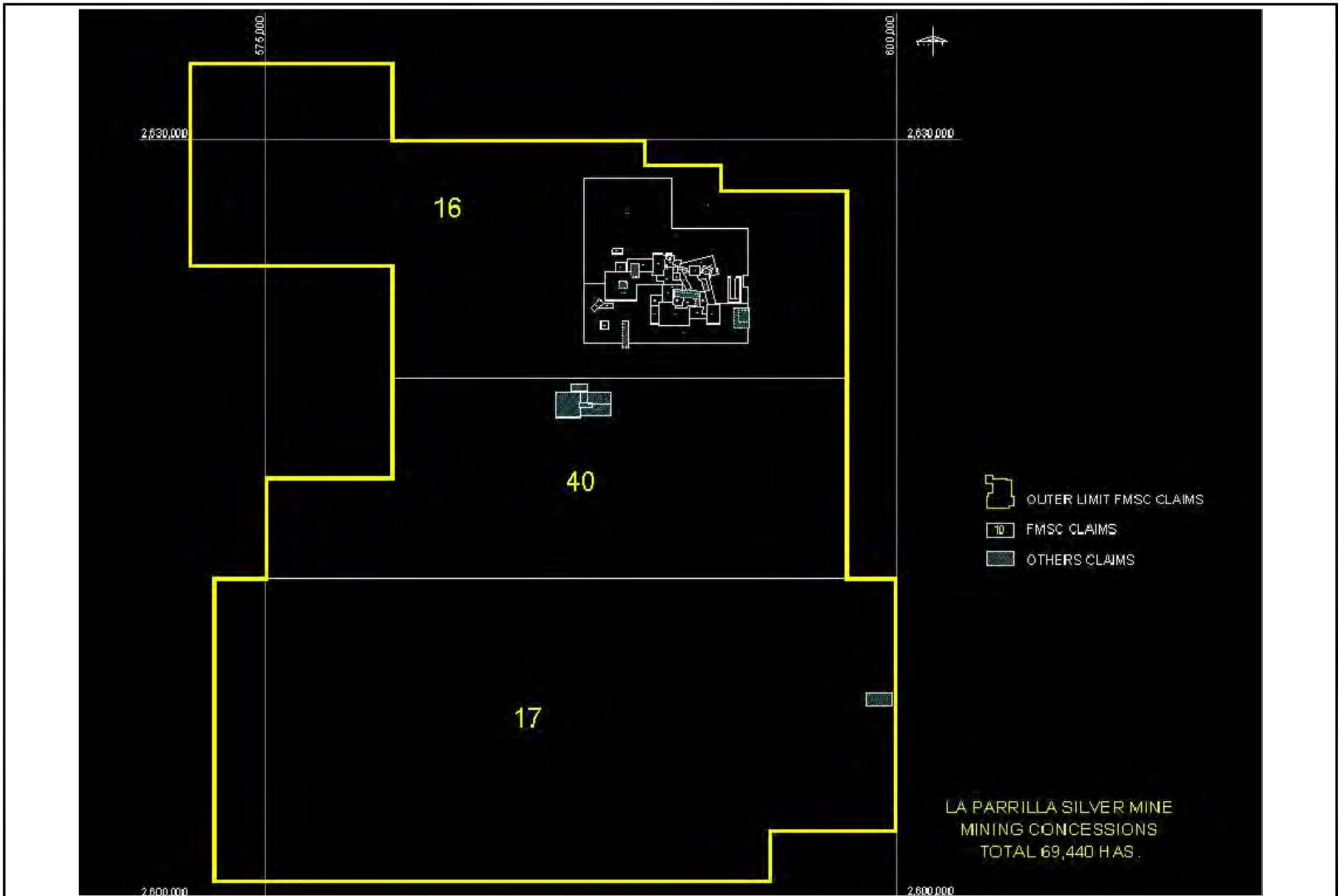
During FMS exploration programs and the associated mine preparation and development some minerals have been extracted from the Quebradillas and Vacas mines for which royalties are being paid to Grupo México. The royalties owned by FMPlata to Grupo México are to be paid at a rate of 1.5 percent, based on Net Smelter Return (NSR) up to a maximum of US\$2.5 million. These are being paid to Grupo México's wholly-owned subsidiaries as indicated in Table 4-2. Up to June 30, 2011, FMS has paid a total of \$311,454.72 to Grupo México. Table 4-2 shows FMS Royalties owed to Grupo México.

**TABLE 4-2**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Royalties Owned by FMPlata (\*)**


<b>To be Paid to:</b>	<b>Up to:</b>
Industrial Minera México (**)	\$ 1,125,000.00
Minerales Metálicos del Norte (**)	\$ 1,125,000.00
Mexicana del Arco (**)	\$ 250,000.00

(\*) Paid by FMPlata to June 30, 2011 = \$311,454.72

(\*\*) Wholly-owned subsidiary of Grupo México



LA PARRILLA SILVER MINE  
 MINING CONCESSIONS  
 TOTAL 69,440 HAS .

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Project No.  
 DE-00200

Drawing Provided by/Prepared for  
**First Majestic Silver Corp.**

Project Name  
 La Parilla Project

**FIGURE 4-3**  
**Mining Concessions Map**

Date of Issue  
 May 2011

Drawing Name  
 Fig4-3.dwg

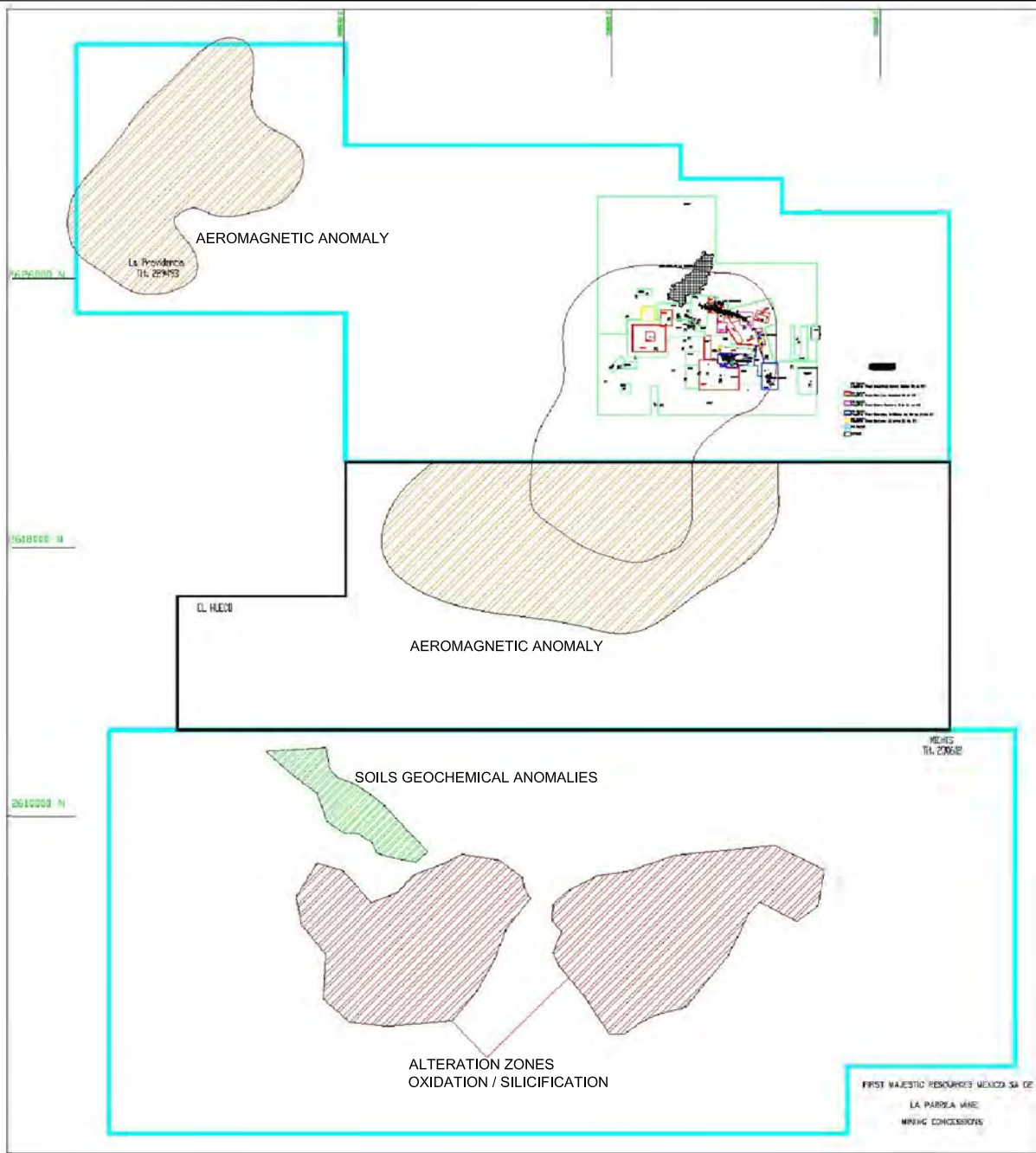


FIGURE 4-4  
 Areas of Interest in Mining Concessions



According to C.P. Francisco Garza FMS's Vice President Financial Administration, no other royalties, back-in rights, agreements, or encumbrances are owned by FMS relating to the La Parrilla properties.

#### **4.6 Environmental Status**

All mining and environmental activities in México are regulated by the Dirección General de Minas and by the SEMARNAT from México City, under the corresponding Laws and Regulations.

PAH is not aware of any pending environmental liabilities within the La Parrilla area of operations.

A list and statement of all operating permits and their current status was provided to PAH by FMS Corporate Manager of Environmental and Permitting relating to the La Parrilla operation; dated May 11, 2011, Mr. José Luis Hernández Santibañez. Environmental permits and requirements are current.

Mining operations in México operate under a unique environmental license (Licencia Ambiental Unica), as well as under special permits for certain new developments such as expansions, tailings dams, etc. This environmental license is issued after approval of the EIA.

According to Legal Opinion, FMS operates under the following permits:

- La Parrilla Unique Environmental License issued on March 16, 2005, under registration No. SG/130.2.1./000490.
- The La Parrilla Unique Environmental License updated on April 17, 2006, under registration No. SG/130.2.1./000578; and February 9, 2009 under registration No. SG/130.2.1./000222.
- On February 6, 2009, an environmental audit was completed awarding the La Parrilla a Certificate of Clean Industry with certificate No. PFPA/1/1S.3/0095/09.
- FMS presented an Environmental Impact Statement with Risk Analysis for construction of a new Tailings Storage Facility, which was authorized on April 16, 2007 under certificate No. SG/130.2.1.1./000987.
- FMS presented an Environmental Impact Statement regarding the Quebradillas Open Pit mine, which was authorized on February 8, 2011 under certificate No. SG/130.2.1.1/000233/11.
- An authorization for Plant Expansion to 2,000 tpd was presented to the corresponding authorities and its resolution is in progress.

According to legal opinion provided to PAH the La Parrilla mining operation is current in legal and environmental compliance.

## **4.7      *Permitting***

FMS is permitted according to mining, environmental, labor, tax and other Mexican regulations for operating the La Parrilla mining and metallurgical complex. Some of the related permits are indicated by legal opinion which is as follows:

1. Permit to operate as an enterprise with generation of dangerous substances, dated March 1, 2005 with Folio No. 10/GR-0013/03/05 and NRA: FMR141001611.
2. Certificate for Annual Operation, since 2005.
3. Environmental Impact Statement and change of the use of the land for the operation – Not applicable.
4. Risk Analysis of the Plant – Authorized on June 15, 2006, under certificate No. DGGIMAR.710/004497
5. Program for Prevention of Accidents. Authorized on June 15, 2006, under certificate No. DGGIMAR.710/004497
6. Declarations of Delivery, Transport and Reception of Dangerous Substances, since 2005.
7. Authorization for the Change of Land Use, dated April 27, 2007, under certificate SG/130.2.2/000979.
8. Concession for the Use of Underground Water awarded on September 18, 2006, under certificate No. 03DGO102200/11IMGE06 for the amount of 130,000 m<sup>3</sup> per year.
9. Title No. N|°03DGO102200/11IMDL10 of authorization for change of commercial denomination, dated December 14, 2010.
10. Permit for discharge of residual waters, not applicable.
11. Reporting according to guidelines for the Secretary of Labor and Social Prevention is applicable.
12. Categorization as Enterprise with generation of dangerous residues, authorization of December 17, 2007.
13. Budget for Mine Closure, in place since 2008.
14. Change of the use of land for the Quebradillas Open Pit mine, authorization of January 17, 2011, under certificate No. SG/130.2.2/000149/11.
15. Preventive Report for the Exploration Project with Diamond Drilling in the Areas of the La Rosa – San José mine, authorization as of April 28, 2011, with certificate No. SG/130.2.1.1/00785/11.

## 4.8 **Factors or Risks That May Affect the Property**

La Parrilla operated by FMS in the state of Durango, México, is located near the village of La Parrilla, which is a peaceful farming and mining community. FMS has established a security area around the plant and camp installations.

Excerpts from the Business News América's Intelligence Series of March 2011; are presented to indicate México's country risk, as follows:

*"According to the most recent Frazer Institute's Survey of Mining Companies 2010 – 2011, México ranks 15 out of 79 jurisdictions for its current mineral potential, assuming the land-use regulations and restrictions in effect today."*

*"In Latin América México ranks second after Chile, in the worldwide policy potential index, a measurement of the attractiveness of countries's mining policy. Globally it is ranked in 35<sup>th</sup> place".*

*"In 2010 México ranked 4<sup>th</sup> in the world, and 1<sup>st</sup> in Latin América with the largest exploration budget according to Metals Economics Group's (MEG) World Exploration Trends 2011 report".*

*"The companies surveyed by The Frazer Institute favourably noted a good level of certainty in México regarding environmental regulations and the strengthening of existing mining regulations in the country. In contrast, they thought that the increasing lack of security due to drug trafficking, trade union membership and uncertainty over territorial disputes are factors that are limiting investment".*

The La Parrilla was initiated by small scale mining operations which developed irregular underground mine workings. Since acquisition of the La Parrilla mine by FMS its preparation and development has been focused on larger mining production rates. The current plans for plant expansion require significant underground development to facilitate access and transportation of the mineralization from the different mines to the plant.

Underground development to access Quebradillas, Vacas, San Marcos, and Rosarios by shafts to the planned Level 11 of the Rosarios mine needs to be completed for feeding the plant at the planned expansion capacity. In PAH's opinion, without this mine development, there is a risk of insufficient ore to feed the expanded plant.

## **5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

La Parrilla is located in the south-eastern part of the state of Durango, about 60 km to the southeast from the capital city of Durango. It is located in the municipality of Nombre de Dios, at about 1 km to the southeast of the village of San José de la Parrilla.

Geographic coordinates for the central part of the La Parrilla area are as follows:

N – 2,625,000; E – 591,500

The area is located within the geologic map F13B23, of Dirección General de Geografía, 1:50,000, of the Instituto Nacional de Estadística, Geografía e Informática (INEGI).

La Parrilla district consists of numerous silver/gold/lead/zinc underground mines, specifically: Los Rosarios, La Rosa, San José, La Blanca, San Marcos, Vacas, Quebradillas, Las Víboras, San Marqueña, Sacramento, Cerro Santiago, Santa Paula and other small workings. FMS has consolidated the district into the La Parrilla operation.

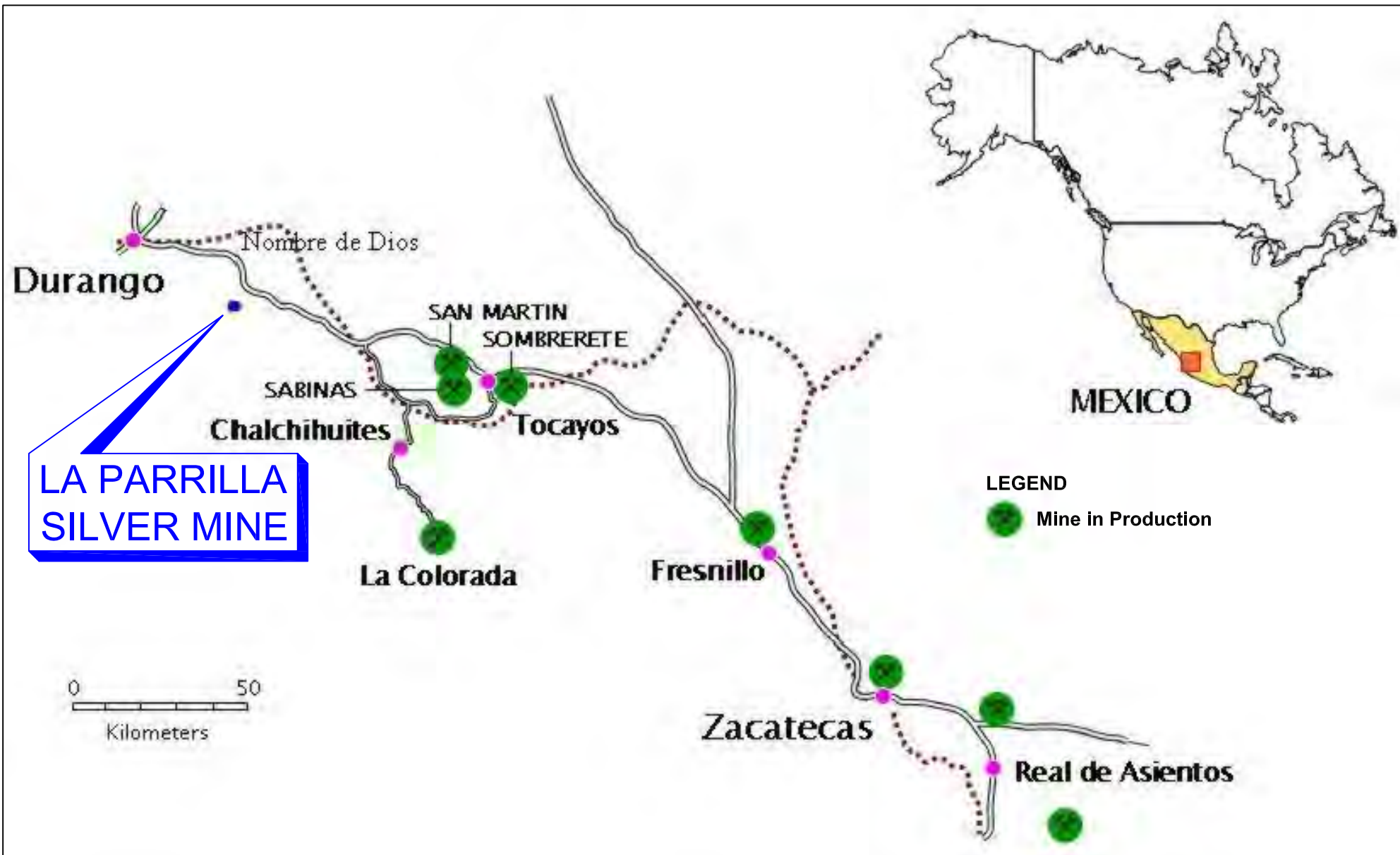
### **5.1 *Accessibility***

Access to the mine is by the Federal Highway No. 45 from Durango to Zacatecas cities. A 4 km detour at the 75 km marker leads to La Parrilla through the village of San José de la Parrilla and to the mine and processing plant. La Parrilla is connected to the San José de la Parrilla village by a 1 km dirt road. Driving time from Durango city to La Parrilla is approximately 1:00 hour. Airport with flights to major national and some international cities exists at Durango city. A project access map is shown in Figure 5-1.

### **5.2 *Climate and Vegetation***

Climate at La Parrilla is semi-dry with annual temperature that varies from 12°C to 26°C, with an average of about 18°C. Annual average rainfall is about 580 mm with most of the rain occurring during the summer months, with occasional rains during the winter. Occasional rain storms may partially interrupt the La Parrilla operations.

Vegetation in the area consists of desert bush and shrub, including small mesquite, cacti, and grasses. At higher elevations there are pine, cedar and oak trees. Farming is mostly developed in the neighboring Mesa Central flat-lands. Principal crops are corn, beans and some wheat. Apple and peach trees are also grown in the region. Fauna in the area consists of deer, coyotes, small reptiles, and small animals such as rabbits, jackrabbits and birds of prey.



**FIGURE 5-1**  
**Mining Districts Within**  
**La Parrilla Region**

### **5.3 Local Resources**

La Parrilla mine is well connected to various populated towns and villages within distances of about 10 km to 20 km, such as Nombre de Dios and Vicente Guerrero. Vicente Guerrero is a town of 12,000-inhabitants where postal, telephone, banking, hotels, restaurants, churches and schools are available. Most of La Parrilla workers are transported from these towns to the mine.

Durango and Zacatecas cities are located at easy driving distances from La Parrilla for more specialized resources, such as universities, private and public hospitals such as Instituto Mexicano del Seguro Social (IMSS), etc. Most of the supplies and labor required for the operation are brought in from the cities of Durango, Vicente Guerrero, Durango and Zacatecas.

Telephone communications are integrated to the national grid, including internet communications provided via copper wire from Tel-Mex. Hand held radios are carried by all supervisors, managers and all vehicle operators for internal communications.

International flights by commercial airlines to some US cities and to most national major cities are available from the cities of Durango and Zacatecas.

### **5.4 Infrastructure**

La Parrilla's location is excellent due to its proximity to a Federal Highway, which has now been upgraded to a four-lane road.

La Parrilla housing consists of a few houses for employees, apart from an office, warehouses, and other facilities. Power supply to the camp is provided by the National Grid (Comisión Federal de Electricidad). Potable water supply is provided to FMS from water wells.

FMS owns and controls land surface rights in and around the main mine areas. It also owns the surface rights where the plant and accessory installations have been built. The La Parrilla surrounding areas consist of mostly flat topographic terrain accessible for all the FMS operation's needs.

### **5.5 Physiography and Hydrology**

La Parrilla is located within the physiographic sub-province of Sierras y Llanuras de Durango, which borders between the Sierra Madre Occidental and the Mesa Central in north-western México. This physiographic sub-province presents elevations of about 1,600 m above sea level in the Mesa Central and up to 3,000 m above sea level in the mountain peaks of the Sierra Madre Occidental.

Topography in the La Parrilla area is dominated by either isolated mountains or northwest-oriented mountain chains, all surrounded by plateaus and flat lands of the Mesa Central. La Parrilla mine portal is located at an elevation of 2,100 m above sea level.

La Parrilla is located within the hydrologic region of Presidio - San Pedro in the south-eastern part of the state of Durango. This hydrologic region comprises about 25 percent of the State's surface, and it includes numerous rivers, such as La Saucedá – Mezquital, Galindo – San Diego, Poanas, etc., and numerous reservoirs, such as Santiago de las Presas, San Bartolo, Santiago Bayacora, Canoas and Guadalupe Victoria. There is sufficient land for installation and mine access.

## 6.0 HISTORY

La Parrilla mining district was discovered during the Spanish Colonial Times of the XVI century, when mining activity began in the region. Numerous mines within the region that were discovered during the Colonial Times that are still in operation include mines at Fresnillo, San Martín, Sombrerete, La Colorada, Cerro del Mercado, and others.

La Parrilla consists of underground silver-gold-lead-zinc mines with a processing facility that was originally constructed in 1956. The mine and plant were operated until 1999, when operations were shut down due to low silver prices. In 1960, the mining claims were acquired by Minera Los Rosarios, S.A. de C.V. who operated the mine until 1999. The Comisión de Fomento Minero (CFM), a Mexican Federal entity responsible for promoting and supporting mining, constructed a 180 tpd flotation plant at La Parrilla, which operated as a custom mill, processing ores from nearby areas, such as Chalchihuites, Sombrerete, Zacatecas, etc. This plant was purchased in 1990, by Minera Los Rosarios from CFM.

In 2004, FMS acquired the mining rights and the plant from Minera Los Rosarios and in 2006 successfully negotiated the acquisition of the mineral rights held by Grupo México which surrounded the original La Parrilla mine. Today FMS has consolidated ownership of the plant and all the land surrounding La Parrilla, where numerous mineral occurrences and mineral deposits are being investigated.

Production records by ASARCO and Consejo de Recursos Minerales, now denominated Servicio Geológico Mexicano (SGM), plus surveying some of the old stopes within La Parrilla district, suggest that approximately 1.37 million tonnes of silver ores were extracted from the various mines that make up this industrial complex at an estimated grade of 310 g/tonne Ag; 1.9 percent Pb; and 1.5 percent Zn.

FMS's production from the La Parrilla area for the period of October 1, 2008 to June 30, 2011, amounts to 770,890 tonnes with recovered average grade of 216 g/tonne Ag, 0.93 percent Pb, and 0.60 percent zinc. These are included in total production within the mining district of about 21.8 million ounces of silver equivalent at 2011 cutoff estimates. Table 6-1 summarizes the La Parrilla district's historical production.

**TABLE 6-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Historical Mineral Production**

Mine	Tonnes (m)	Ag g/t	Pb %	Zn %	Ag ounces (*)
Previous Production to Sept. 2008	1,374,000	310	1.93	1.47	15,452,457
Mina La Blanca - San José	114,941	184	0.96	0.40	826,502
Mina La Rosa	149,034	223	0.36	0.09	1,257,603
Mina Quebradillas	276,164	197	0.95	0.99	2,105,197
Mina Rosarios	200,858	262	1.34	0.41	1,951,086
Mina San Marcos	17,837	193	0.23	-	133,291
Mina Vacas	12,056	148	1.63	4.11	72,774
<b>Total Mineral Production</b>	<b>2,144,891</b>	<b>276</b>	<b>1.57</b>	<b>1.16</b>	<b>21,798,910</b>

(\*) Equivalency at 2011 COG - Pb=39 g/t-Ag: Zn=2 g/t-Ag



FMS resumed operations at La Parrilla in June 2004, with plans to improve and expand operations. In 2006, FMS initiated construction of a flotation plant within the cyanidation plant facilities, for total production capacity of 800 tonnes per day, including 400 tpd of oxide ore and 400 tpd of sulfide ore. This flexibility allowed for a more efficient processing of the ores extracted from the various mines within the La Parrilla land holdings.

FMS has been developing an aggressive exploration program in the area to increase the La Parrilla Resources and Reserves. This program has resulted in estimated Proven and Probable Mineral Reserves estimated as of June 30, 2011, of 7 million tonnes with recoverable 37.1 million ounces of silver equivalent, in addition to 1.1 million tonnes in Measured and Indicated Resources containing 8.1 million ounces of silver equivalent. Based on this reserve/resource base, FMS initiated a program to expand the current plant to process 2,000 tonnes per day including oxide and sulfide mineralization compared to the current 850 tpd.

Additionally, La Parrilla includes significant Inferred Mineral Resources and geologic potential within the operating mines and in other exploration targets within the concessions area.

## **7.0 GEOLOGICAL SETTING AND MINERALIZATION**

La Parrilla mining district is located in the physiographic sub-province of Sierras y Llanuras de Durango. It is located between the border zone between the physiographic provinces of the Sierra Madre Occidental and the Mesa Central.

La Parrilla Silver Mine includes mineral deposits situated on the surrounding border of the geologic contact zone between a dioritic intrusive stock and a sequence of Cretaceous sedimentary rocks. The regional geology map for the La Parrilla is shown in Figure 7-1.

### **7.1 *Regional Geology, Structural***

The regional geologic setting at La Parrilla is dominated by a core of igneous rocks of dioritic composition intruding a Cretaceous sedimentary sequence of calcareous rocks. This intrusive stock caused structural conditions favorable for subsequent emplacement of mineralization along faults and breccia zones, as well as replacement and skarn deposits into bed and contact zones.

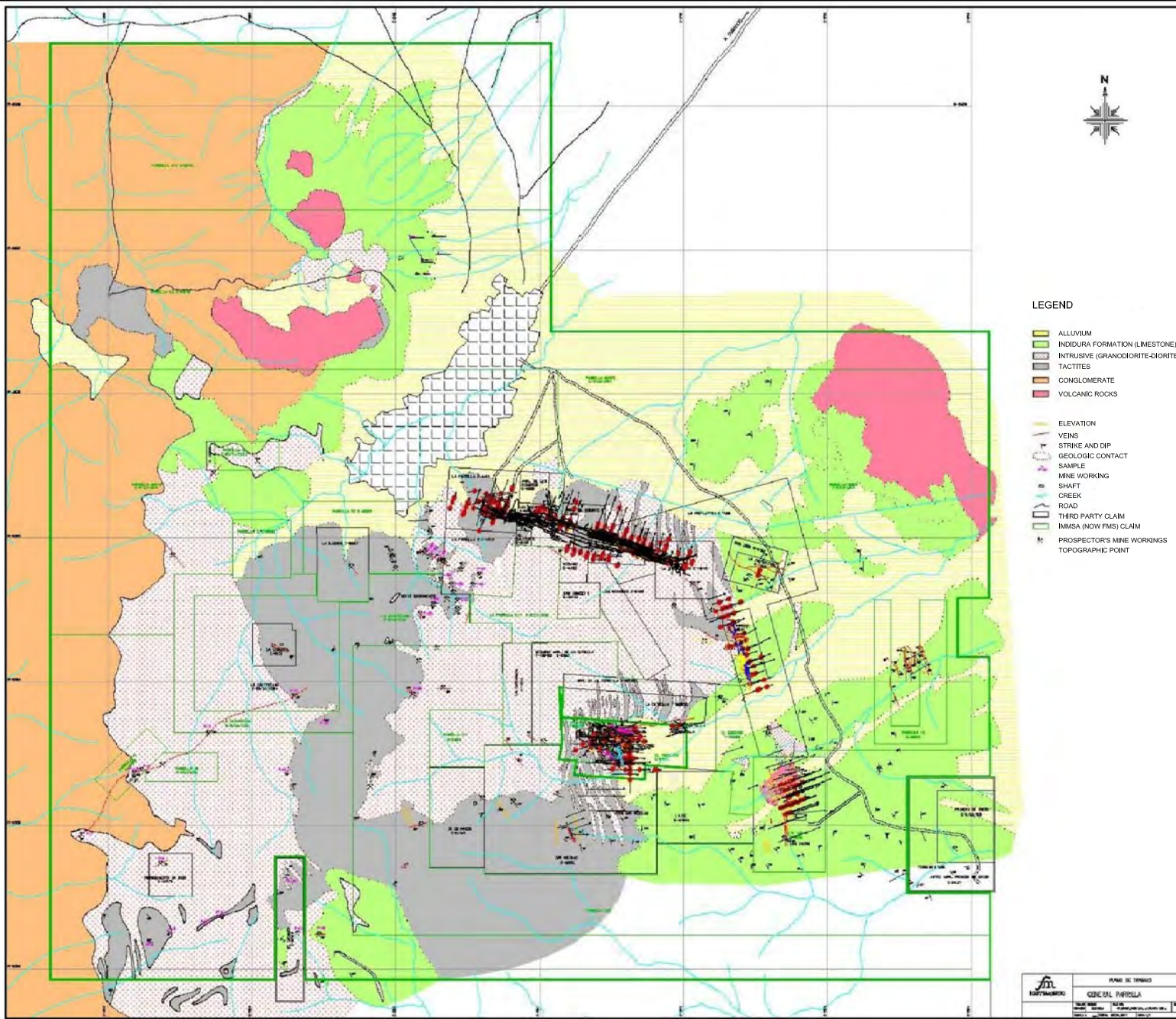
La Parrilla mineral concentrations occur as mineralized structures and breccia zones within stockwork areas and metasomatic deposits with skarns at geologic contact zones between the regional intrusive stock, dikes and sills, with calcareous rocks of Cretaceous age.


The main regional fault systems within the area occur associated with the dioritic intrusion, in northwest-southeast orientation at the northern part of the stock, and in north-south orientation at the eastern and southern sides of the skarn zone.

### **7.2 *Local Geology***

The La Parrilla diorite crops out as an elongated stock with its main axis in a NE 45° SW direction and an extension of about 2.8 km, by about 1.5 km in width. The skarn zone crops out around the diorite stock, with irregular extensions that vary from few meters at the northeast part, to over 2 km to the south. The intrusive rock has been dated at 87 million years. It is composed of plagioclase and hornblende in a phaneritic holocrystalline textured-mass. Numerous dikes and sills branch out from the stock into the sedimentary rocks.

The sedimentary rocks comprise a sequence of dark-gray limestone of the Cuesta del Cura Formation (Albian-Cenomanian). These rocks show strata thickness of 10 cm to 40 cm with intercalated beds of black flint. Overlaying this Formation a sequence of intercalated limestone and shale thin beds of the Indidura Formation (Upper Cretaceous) occurs. A Tertiary rhyolitic volcanic flow covers the north-eastern part of the district.



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FIGURE 7-1  
 Regional Geology

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 Fig7-1.dwg

### 7.3 *Deposit Geology*

The mineral concentrations at La Parrilla are associated with geologic structures, which appear related to the intrusive dioritic stock, dikes and sills.

- Structural intersections have originated breccia zones that caused favorable conditions for mineralization emplacement as stockwork zones.
- The contact zone, between the intrusive diorite and the sedimentary rocks, have originated metasomatic deposits.
- The most important known deposits at La Parrilla occur as vein deposits that pinch and swell along strike, as well as downdip. These are enclosed by three main structural systems within the mining district:
  - The first structural system appears to be related in orientation to the regional intrusive stock. Its general strike is NE 60° SW, dipping nearly vertical. It cuts through all regional rock units and it does not appear to represent economic significance.
  - The second structural system occurs with a general orientation of N 45° - 75° W dipping approximately 50° to 85° to the NE. It cuts through limestone, diorite and skarn zones. It encloses some of the most important mineral deposits in the area, such as Los Rosarios, El Carmen, San Cayetano, San José, etc.
  - The third regional structural system is oriented NS and dips to the E from 45° to vertical. It is generally concordant with the stratification and it encloses important mineral concentrations, such as San Marcos, Quebradillas, Vacas and San Nicolás.

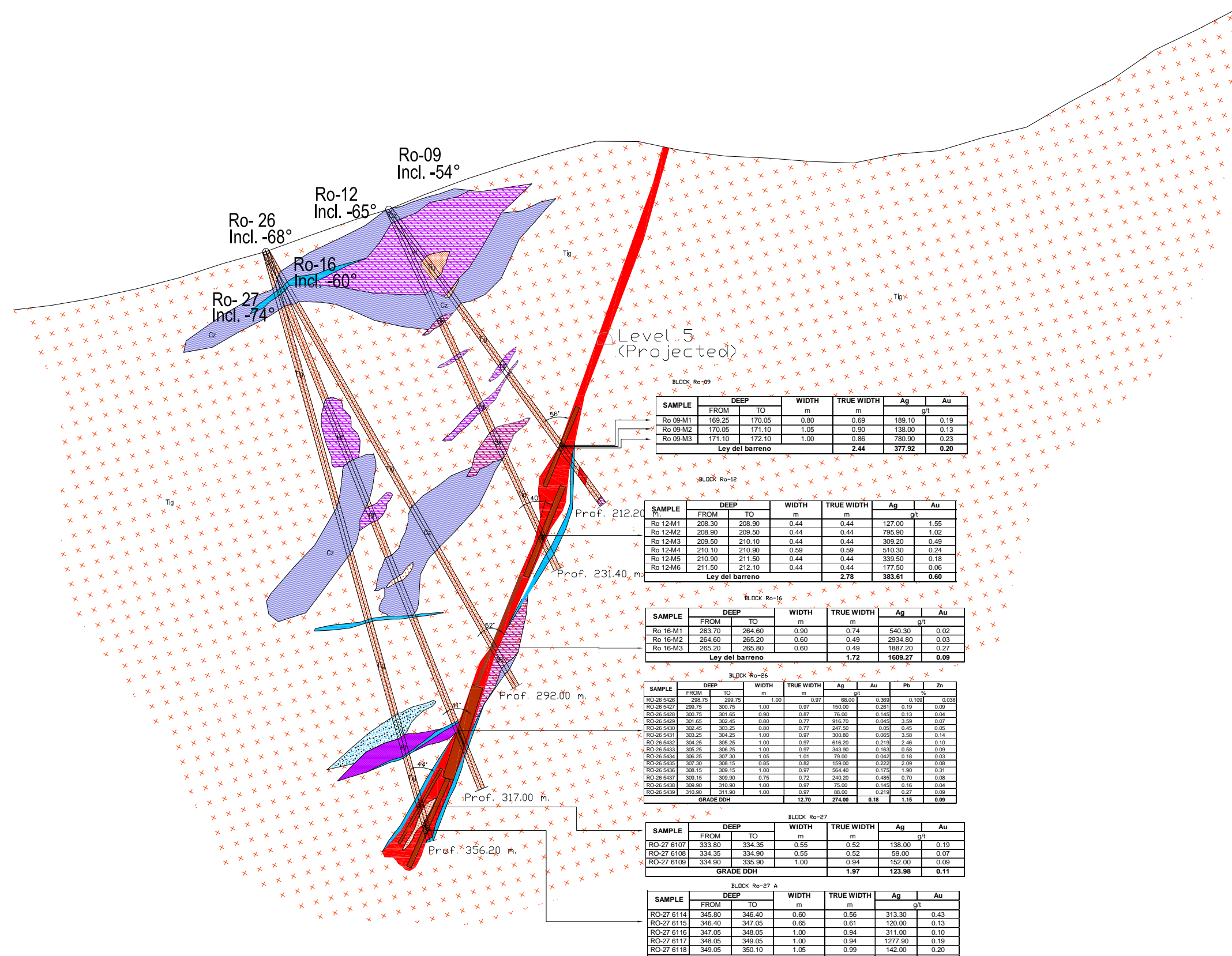
Figure 7-2 shows a geologic cross-section of the Los Rosarios deposit and Figure 7-3 shows a geologic cross-section of La Rosa vein.

### 7.4 *Mineralization*

Mineral assemblage at La Parrilla is typical of hydrothermal vein deposits and it also includes metasomatic deposits within the skarn zone with a high content of silver.

La Parrilla mining district mineralization consists of concentrations of silver, lead, and zinc, associated to gangue minerals such as quartz, calcite, and other minor elements. The primary sulfide mineralization follows down to depth within the mineralized structures containing pyrite, galena, sphalerite, argentite, some chalcopyrite, and other silver sulfosalts associated with quartz and calcite as gangue minerals.

Figure 7-4 shows sulfide mineralization.



- LITHOLOGY**
- RECRYSTALLIZED LIMESTONE
  - GRANODIORITE
  - CUESTA DEL CURA FORMATION
  - MINERALIZED STRUCTURE
  - HORNFELS
  - SKARN
  - FAULT ZONE
  - SEDIMENTARY BRECCIA

BLOCK Ro-09

SAMPLE	DEEP		WIDTH m	TRUE WIDTH m	Ag g/t	Au	
	FROM	TO					
Ro 09-M1	169.25	170.05	0.80	0.69	189.10	0.19	
Ro 09-M2	170.05	171.10	1.05	0.90	138.00	0.13	
Ro 09-M3	171.10	172.10	1.00	0.86	780.90	0.23	
<b>Ley del barren</b>					<b>2.44</b>	<b>377.92</b>	<b>0.20</b>

BLOCK Ro-12

SAMPLE	DEEP		WIDTH m	TRUE WIDTH m	Ag g/t	Au	
	FROM	TO					
Ro 12-M1	208.30	208.90	0.44	0.44	127.00	1.55	
Ro 12-M2	208.90	209.50	0.44	0.44	795.90	1.02	
Ro 12-M3	209.50	210.10	0.44	0.44	309.20	0.49	
Ro 12-M4	210.10	210.90	0.59	0.59	510.30	0.24	
Ro 12-M5	210.90	211.50	0.44	0.44	339.50	0.18	
Ro 12-M6	211.50	212.10	0.44	0.44	177.50	0.06	
<b>Ley del barren</b>					<b>2.78</b>	<b>383.61</b>	<b>0.60</b>

BLOCK Ro-16

SAMPLE	DEEP		WIDTH m	TRUE WIDTH m	Ag g/t	Au	
	FROM	TO					
Ro 16-M1	263.70	264.60	0.90	0.74	540.30	0.02	
Ro 16-M2	264.60	265.20	0.60	0.49	2934.80	0.03	
Ro 16-M3	265.20	265.80	0.60	0.49	1887.20	0.27	
<b>Ley del barren</b>					<b>1.72</b>	<b>1609.27</b>	<b>0.09</b>

BLOCK Ro-26


SAMPLE	DEEP		WIDTH m	TRUE WIDTH m	Ag g/t	Au	Pb	Zn	
	FROM	TO							
RO-26 5426	298.75	299.75	1.00	0.97	68.00	0.369	0.109	0.038	
RO-26 5427	299.75	300.75	1.00	0.97	150.00	0.251	0.19	0.09	
RO-26 5428	300.75	301.65	0.90	0.87	76.00	0.145	0.13	0.04	
RO-26 5429	301.65	302.45	0.80	0.77	916.70	0.043	3.59	0.07	
RO-26 5430	302.45	303.25	0.80	0.77	247.50	0.05	0.45	0.05	
RO-26 5431	303.25	304.25	1.00	0.97	300.80	0.065	3.58	0.14	
RO-26 5432	304.25	305.25	1.00	0.97	816.20	0.219	2.46	0.10	
RO-26 5433	305.25	306.25	1.00	0.97	343.90	0.163	0.58	0.09	
RO-26 5434	306.25	307.30	1.05	1.01	79.00	0.042	0.18	0.03	
RO-26 5435	307.30	308.15	0.85	0.82	159.00	0.222	2.09	0.08	
RO-26 5436	308.15	309.15	1.00	0.97	564.40	0.175	1.90	0.31	
RO-26 5437	309.15	309.90	0.75	0.72	240.20	0.485	0.70	0.08	
RO-26 5438	309.90	310.90	1.00	0.97	75.00	0.145	0.16	0.04	
RO-26 5439	310.90	311.90	1.00	0.97	88.00	0.219	0.27	0.09	
<b>GRADE DDH</b>					<b>12.79</b>	<b>274.69</b>	<b>0.18</b>	<b>1.15</b>	<b>0.09</b>

BLOCK Ro-27

SAMPLE	DEEP		WIDTH m	TRUE WIDTH m	Ag g/t	Au	
	FROM	TO					
RO-27 6107	333.80	334.35	0.55	0.52	138.00	0.19	
RO-27 6108	334.35	334.90	0.55	0.52	59.00	0.07	
RO-27 6109	334.90	335.90	1.00	0.94	152.00	0.09	
<b>GRADE DDH</b>					<b>1.97</b>	<b>123.98</b>	<b>0.11</b>

BLOCK Ro-27 A

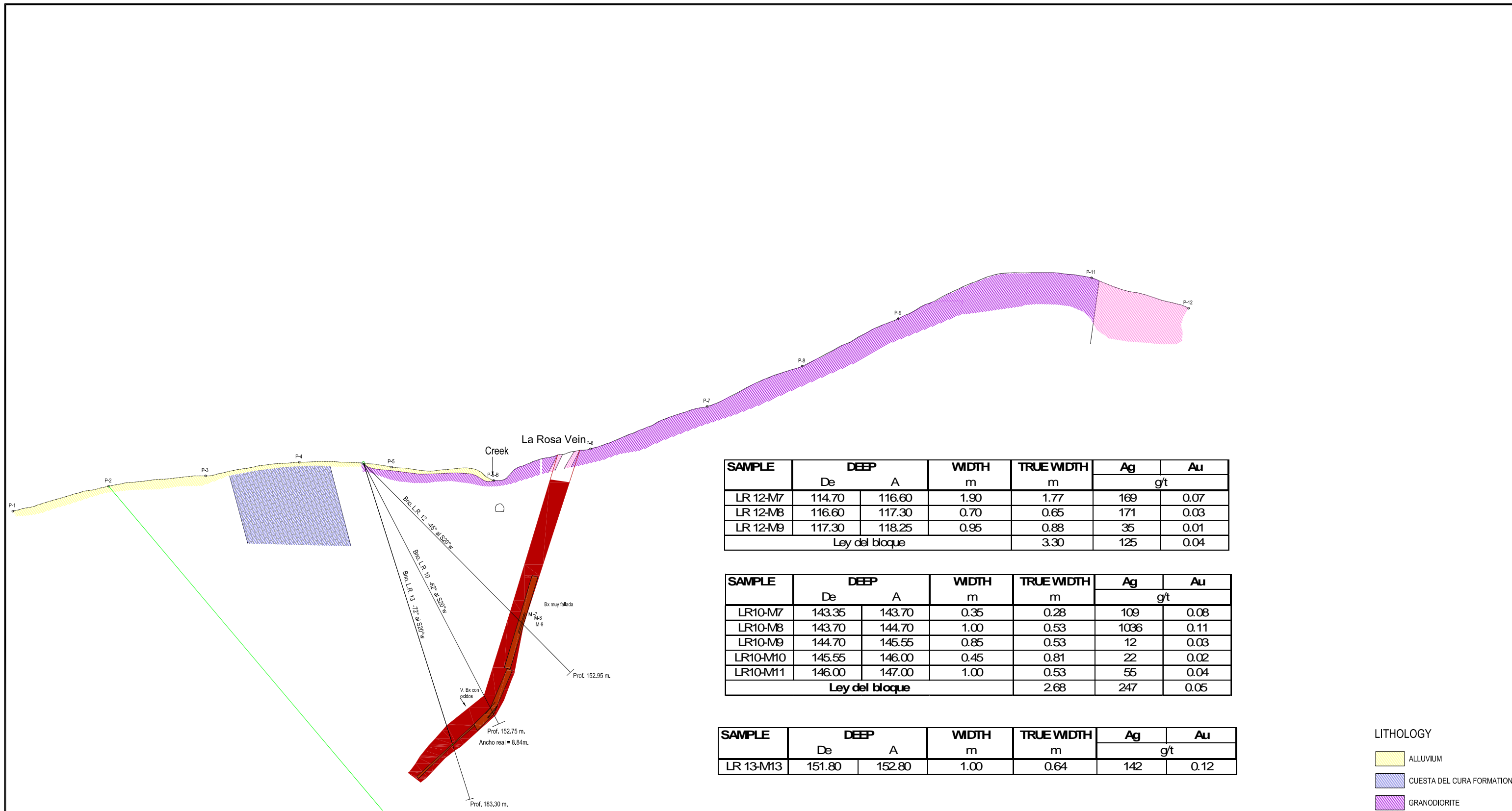
SAMPLE	DEEP		WIDTH m	TRUE WIDTH m	Ag g/t	Au	
	FROM	TO					
RO-27 6114	345.80	346.40	0.60	0.56	313.30	0.43	
RO-27 6115	346.40	347.05	0.65	0.61	120.00	0.13	
RO-27 6116	347.05	348.05	1.00	0.94	311.00	0.10	
RO-27 6117	348.05	349.05	1.00	0.94	1277.90	0.19	
RO-27 6118	349.05	350.10	1.05	0.99	142.00	0.20	
<b>GRADE DDH</b>					<b>4.04</b>	<b>466.04</b>	<b>0.19</b>

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**FIGURE 7-2**  
**Los Rosarios Geologic Cross-Section**

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SAMPLE	DEEP		WIDTH m	TRUE WIDTH m	Ag	Au
	De	A			g/t	
LR 12-M7	114.70	116.60	1.90	1.77	169	0.07
LR 12-M8	116.60	117.30	0.70	0.65	171	0.03
LR 12-M9	117.30	118.25	0.95	0.88	35	0.01
Ley del bloque				3.30	125	0.04

SAMPLE	DEEP		WIDTH m	TRUE WIDTH m	Ag	Au
	De	A			g/t	
LR10-M7	143.35	143.70	0.35	0.28	109	0.08
LR10-M8	143.70	144.70	1.00	0.53	1036	0.11
LR10-M9	144.70	145.55	0.85	0.53	12	0.03
LR10-M10	145.55	146.00	0.45	0.81	22	0.02
LR10-M11	146.00	147.00	1.00	0.53	55	0.04
Ley del bloque				2.68	247	0.05

SAMPLE	DEEP		WIDTH m	TRUE WIDTH m	Ag	Au
	De	A			g/t	
LR 13-M13	151.80	152.80	1.00	0.64	142	0.12

- LITHOLOGY
- ALLUVIUM
  - CUESTA DEL CURA FORMATION
  - GRANODIORITE
  - RECRISTALIZED LIMESTONE
  - SKARN
  - MINERALIZED STRUCTURE



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**FIGURE 7-4**  
**La Rosarios Mine Stope N-10-310-West Block**

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Fig7-4.dwg

Weathering of the La Parrilla mineralization has caused oxidization and secondary enrichment zones containing sulfosalts (cerargyrite, pyrargyrite, stephanite) and carbonates (cerussite, hydrozincite, hemimorphite), sulfates (anglesite, willemite), and iron oxides (hematite, limonite, etc.) that may reach depths of up to 150 m from the outcroppings. Figure 7-5 shows the San Marcos oxides.

The deepest area of mineralization in the La Parrilla zone is known to a depth of about 600 m from the outcroppings to about Level 10 of the Rosarios mine, in the Ore Shoot 1 block. The mineralized structure remains opened for investigations to depth and along strike containing primarily sulfides.

Similar geologic characteristics are present in other deposits within the region, such as San Martín (Grupo México), Sabinas (Peñoles), and La Colorada (Panamerican Silver) where mineralization still exists at depths greater than 700 m.


## **7.5 Main Mineral Deposits**

The main La Parrilla mineral deposits are the following:

- The Rosarios' mine extension is known by underground workings for a distance of about 1,500 m and it encloses three ore shoots of approximately 200 m to 300 m long each. Width of the mineralized structure may vary from few centimeters to over 20 m. Historical records indicate that a production of about 530,000 tonnes of ore at an average grade of 450 g (14.47 oz) Ag; 2.6 percent (57 lbs) Pb; and 2.8 percent (62 lbs) Zn per tonne, have been extracted from this vein during the period of Colonial Times until 2004.
- San Marcos vein system occurs parallel to metasomatic rocks stratification in a north-south direction. It dips about 70° to the East and its width is 1 m to 3 m. Extension of this vein has been recognized by about 200 m along strike, and about 200 m to depth. It contains oxidized mineralization with calcite and quartz as gangue minerals. Historical records indicate that about 100,000 tonnes have been extracted from this mine, at an average silver grade of 250 g/tonne (8 oz). A total of 10,122 m have been drilled in 43 holes by FMS to December 2010. Drilling program for 2011 for this deposit is budgeted at 1,600 m in 4 drill holes.
- The Vacas deposit appears to be an extension of the San Marcos mineralized structure. This structure is cropping out in a NW 19° southeast direction, dipping 44° to 75° to the east, with an average width of 7.60 m. The Vacas mineralization intercepted by drilling; shows coarse-crystallized sulfides with high content of Pb and Zn sulfides. The mineralization occurs most often as replacement of selective strata within the sedimentary carbonaceous sequence although it may also occur crossing the sedimentary strata. The Vacas vein outcropping has been mapped along its strike for about 400 m while mine workings and drilling have indicated a depth of about 250 m. The upper 120 m of the vein is oxidized and down deep the mineralization occurs in sulfides. Historical records indicate mine workings including a 240 m shaft and about 150 m development in four mine levels. Grupo México records also indicate estimated production extracted for the Vacas mine of about 200,000 tonnes of mineralized material with an average content of 150 g/t silver, 5.4 percent Pb and





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**FIGURE 7-5**  
**San Marcos Mine - Stope 038-South**

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Fig7-5.dwg


6.3 percent Zn. Grupo México drilled about 3,950 m in 9 holes to explore the Vacas vein between November 1889 and August 1990. FMS exploration program of the Vacas vein include 46 drill holes with total drilled depth of 15,217 m during the period of August 2007 and November 2008. FMS's drilling program for 2011 includes 1,600 m in 4 holes. Figure 7-6 shows the Vacas oxide mineralization.

- The Quebradillas deposit was acquired by FMS from Grupo México in 2005. It includes the Quebradillas vein which occurs associated to an oxidized breccia zone, Víboras, El Recuerdo, and El Parián mineral deposits. Grupo México records indicate historical production of about 200,000 tonnes at an average grade of 200 g/tonne-Ag from oxidized mineralization. Figure 7-7 shows the Quebradillas sulfides.
  - The Víboras – Quebradillas mineralized structure is oriented east-west dipping 75° to 84° to the South and a width that varies from 0.20 m to 2.00 m. It is identified by prospectors' workings along 200 m of outcropping. Its depth is known by mine workings and drill holes to a depth of about 150 m.
  - The El Recuerdo vein crops out in a N 80°W direction dipping to the northeast and thickness of 0.30 m to 2.00 m. Old prospector workings outline the outcroppings along a vertical range of 130 m.
  - El Parián vein is oriented to the N 60°W dipping 70° to the northeast with thickness of between 0.30 m and 1.30 m. Its outcropping is about 50 m long with vertical exposure of about 40m. It contains Pb and Fe oxides and PbCO<sub>3</sub>.
  - Breccia zones and vein-intercepts occur within the Quebradillas area originating stockwork and replacement zones within the sedimentary sequence.

Grupo México carried out a drilling program within the Quebradillas area including 10,297 m of diamond drilling in 45 holes during the period of 1981 to 1990. FMS drilled 99 holes with a total depth of 14,897 m in the Quebradillas area during 2010. FMS program of exploration for 2011 for the Quebradillas area includes 2,000 m in 16 drill holes.

- The San Nicolás vein system occurs vertical in a north-south direction parallel to a diorite sill. It shows a width of 1.30 m along an outcropping extension of 120 m. Mine workings developed to investigate this vein are accessible by a 70 m shaft and about 100 m-crosscut. The mineralization in this structure consists of oxides with quartz and calcite. No production records are available for this vein.
- The San José vein system consists of a series of tabular structures that occur concordant to the sedimentary stratification and in contact with diorite sills. The system crops out along a 300m outcrop outlined with numerous prospector workings. The mineralized system shows an outcropping width of about 100m. The mineralized system's strike is northwest-southeast. No production



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**FIGURE 7-6**  
**Vacas Fill Oxides - South Side**  
**(Old Workings)**

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**FIGURE 7-7**  
**Quebradillas N-6-460-South Block**  
**(Sulfides Between Limestone Beds)**

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May 2011

Drawing Name  
Fig7-7.dwg

records are available for this mineralized system; however, an estimate was made by Grupo México resulting in about 50,000 tonnes with a 150 to 200 g/t-Ag range grade.

- The La Gloria vein system consists of an east-west tabular structure dipping 74° to the South. It was investigated with a surface geochemical sampling by FMS in 2007, resulting in anomalous values of Ag, Pb, and Zn. One drill hole completed by FMS in 2008 intercepted 1.05 m averaging 660 g/t Ag at about 300 m below the surface. No production records are available for this vein.
- The Sacramento vein system consists of tabular mineralized strata occurring parallel to the sedimentary rocks near the contact between diorite and limestone. Mineralized replacement zones occur associated to the vein near the geologic contact. The Sacramento vein is oriented to the NW 82°SE dipping 80° to the SW and it occurs with a variable width of between 0.50 m and 1.50 m. Its outcropping has been mapped for 250m along strike. Small mine workings were developed in the past including a 15 m deep inaccessible shaft and crosscuts. The vein mineralization is oxidized and associated to quartz and calcite, while the replacement deposits include: Pb, Zn, and Ag sulfides. Historical production was estimated in about 1,000 tonnes of mineralized material with an average grade of 180 g/t-Ag.

FMS completed 8 drill holes during 2008 to investigate this area with total drilled depth of 1,910 m resulting in low-grade silver intercepts. Four additional drill holes are programmed for 2012 for this area with a total depth of 1,530 m.

Most mining activity at La Parrilla has been developed along the Rosarios vein within mineralization of the oxidized and transition zones. Currently estimated Reserves and Resources for this deposit are now localized within the sulfides zone. Drilling (DH RO-10) has indicated resources at depths 200 m beneath the deepest mining drifts (below Level 9 at the Rosarios area). The La Parrilla mineralized structure occurs within a range of about 600m in vertical extension (2,300 m to 1,700 m above sea level). This extension is known through underground development and drill holes and it is still opened for investigation to depth.

## 8.0 DEPOSIT TYPE

La Parrilla mineral deposits consist of structurally controlled mineral concentrations of silver/gold/lead/zinc and other secondary minerals. These deposits may occur enclosed by fault or breccia zones, associated and partly enclosed by metasomatic endo or exo-skarn zones, and by Tertiary dikes.

The plutonic cycle originated uplifting and intense faulting and fracturing of the pre-existing sedimentary rocks. A broad zone of metasomatic alteration was developed around the outer zone of the intrusive and into the sedimentary rocks, which may reach up to about 2 km in the southern part of the outcropping contact zone within the mining district area.

Three main structural systems dominate the La Parrilla geologic environment. These systems created appropriate conditions for mineralization emplacement as follows:

1. First system: N 60° - 80° E dipping nearly vertical. It appears to be the youngest system, since it cuts through all existing rocks in the La Parrilla area. This system is not related to significant deposits.
2. Second system: N 45° - 75° W dipping 50° - 85° to the NE. This structural system hosts some of the most significant deposits in La Parrilla, such as:
  - a. Los Rosarios System (La Blanca, El Témiz, Rosarios, La Rosa, San José)
  - b. El Carmen, and
  - c. San Cayetano.
3. Third system: N – S dipping 45° NE to nearly vertical. It is concordant with stratification and numerous sills to which mineral concentrations are preferentially associated, such as:
  - a. San Marcos
  - b. Quebradillas,
  - c. San Nicolás, and
  - d. Vacas

Most known outcropping mineral deposits within La Parrilla area occur related or enclosed by these structural systems, by their intersection zones or by fracturing zones associated to the fault systems. Other mineral concentrations occur related to the skarn zones, within deeper areas towards the plutonic mass.

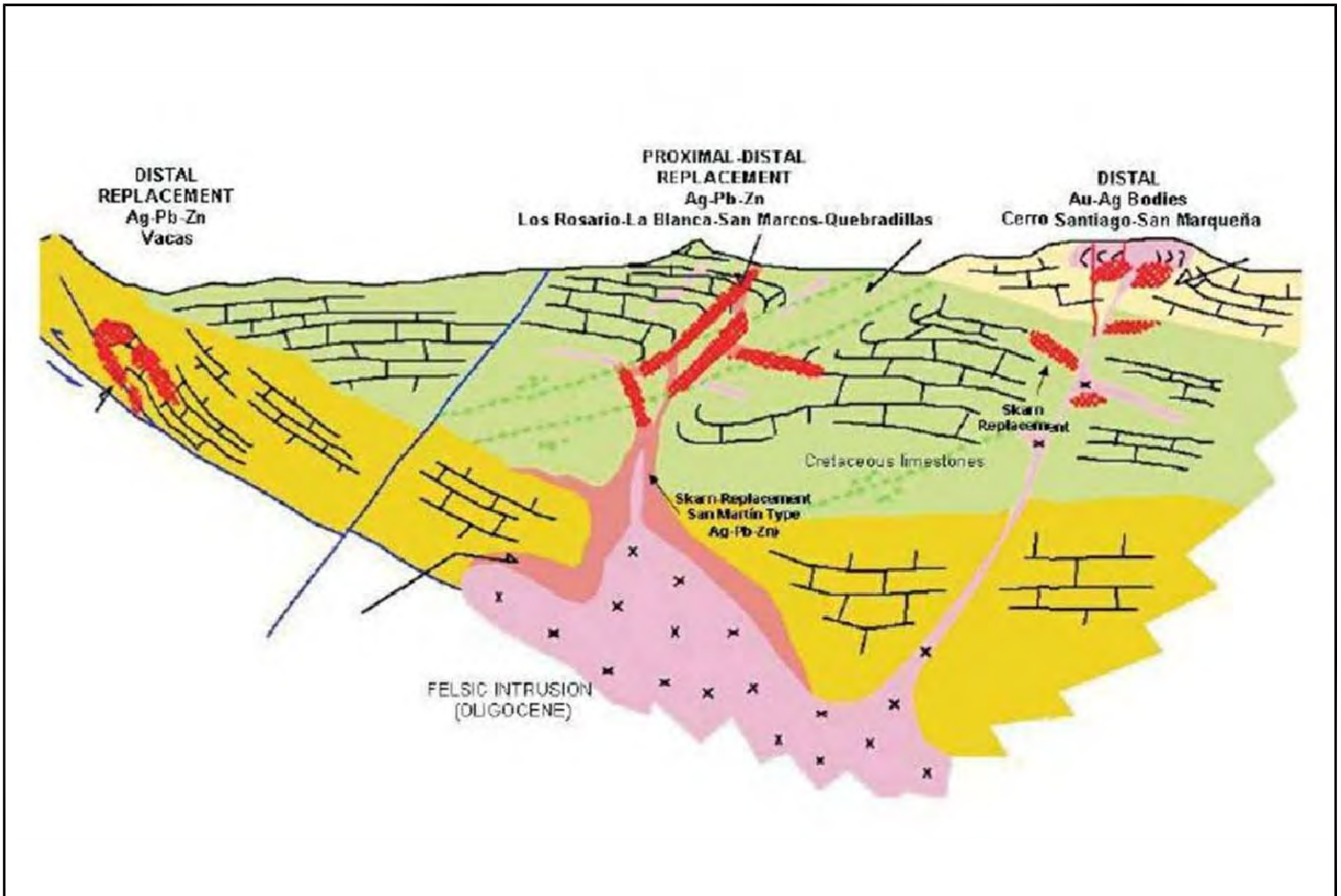
FMS exploration investigations are focused on determining the extents of these mineralized systems along strike and to depth. Most deposits within La Parrilla area are still opened for investigation to depth.


FMS has scheduled investigations to depth by underground workings and diamond drilling.

Figure 8-1 shows a sketch of typical models of the La Parrilla deposits.

Mineral assemblage at La Parrilla is typical of hydrothermal vein deposits. It mainly consists of pyrite, sphalerite, galena, some chalcopyrite, argentite and other silver sulfosalts associated to calcite and quartz as gangue minerals. Oxidation and secondary enrichment of these sulfides makes up the mineral concentrations in the upper parts of the deposits, which consists of sulfosalts (cerargyrite, pyrargyrite, stephanite) carbonates (cerussite, hydrozincite, hemimorphite), sulfates (anglesite, willemite), and iron oxides, hematite, limonite, etc.

The most important mineralization consists of vein deposits and mineral concentrations within breccia zones. This consists of oxides including hematite, limonite and other iron oxides, as well as carbonates and sulfates, including presence of zinc oxides. Silver and lead represent the main economic minerals within the oxidized and transition zones at La Parrilla. Silver mineralization occurs as argentite and native silver. Lead mineralization is present as carbonates (cerussite) and sulfates (anglesite) and other oxides.



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FIGURE 8-1  
 Sketch of La Parilla Geologic Model

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 Fig8-1.dwg



## **9.0 EXPLORATION**

### **9.1 *Introduction***

During the 1950s, ASARCO through its Mexican subsidiaries, entered La Parrilla area and carried out exploration and development in some of the mines within the district, such as Vacas, Quebradillas, Las Víboras, etc. During the period of 1990 to 1993, Grupo México drilled approximately 73 drill holes with a total drilled depth of 16,634 m. Grupo México, after acquiring all of ASARCO shares, also carried out geophysical investigations during 2003 and 2004, including aeromagnetic and Induced Polarization and Resistivity surveying. Geochemical investigations by Grupo México were undertaken in the Quebradillas, Vacas and El Parián areas during the period of 1990 to 2003.

FMS acquired all of Grupo México mineral rights to the properties adjacent to FMS's property including the exploration database.

The original La Parrilla mines were operated from about 1990 to 2002 by Minas Los Rosarios in small scale capacity. No exploration investigations were made during this period of time. In 2002, a private partnership reached an agreement to purchase the mineral rights, plant and all installation from Familia Gámiz, owners of Minas Los Rosarios. These rights were later transferred to First Majestic Resources México which was subsequently renamed as FM Plata.

FMS has carried out an aggressive exploration and development program that includes construction of access ramps, drifting and crosscutting into the old working areas of the Los Rosarios System. This program was based on the following premises:

- Consolidate production areas and increase operating capacity to take advantage of current high metal prices;
- Recover lower grade zones and consolidate mining blocks of reserves to support reasonable production schedule;
- Increase La Parrilla Resource / Reserve base; and
- Continue drilling deep holes from surface and underground sites.

FMS is focusing exploration efforts on large volume targets while preparing the mine for integration of all the area's mineral deposits. Based on positive results FMS is planning expansion of the processing plant from the current 850 tpd to 2,000 tpd.

## 9.2 Exploration Programs

FMS exploration programs for the La Parrilla district are designed to investigate principally two types of targets:


- Increase La Parrilla Resource / Reserve base within currently producing areas. This target includes mine development and drilling for confirmation of blocks and areas in the Los Rosarios System, San Marcos, Quebradillas, Vacas, etc.; and
- Investigate geophysical, geochemical and structural targets that may result in significant concentrations of minerals. Some of these anomalous areas appear to represent large-volume exploration targets. These anomalous areas appear associated with contact zones between the intrusive stock and sedimentary formations, or with dykes and sills that may indicate favorable zones for mineral concentrations.

FMS has budgeted considerable investments for exploration of La Parrilla district. This budget includes programs of exploration that have already shown positive results by indicating an important Reserve / Resource base for the mine. It appears that, at no other time during the life of the mine, has La Parrilla shown the Reserves and Resources currently estimated by FMS. Table 9-1 shows the La Parrilla additional exploration program for 2011 and 2012. Figure 9-1 shows the exploration areas for drilling.

**TABLE 9-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Exploration Program for 2011 and 2012**

Exploration Zone	Units	No.	US\$ Cost/Unit	Total Cost, US\$
Sacramento/Cerro Santiago/La Gloria	Ha	400	\$ 20.00	\$ 8,000.00
Regional District	Samples	800	\$ 20.00	\$ 16,000.00
Magnetic Anomalies	Anomalies	7	\$ 214,285.71	\$ 1,500,000.00
Surface Diamond Drilling				
Sacramento (4DH)	m	1,600	\$ 150.00	\$ 240,000.00
Catorce Marcos (4 DH)	m	1,500	\$ 150.00	\$ 225,000.00
Cerro Santiago (10 DH)	m	3,000	\$ 150.00	\$ 450,000.00
San Nicolás S, Geoph Anom.	m	1,200	\$ 150.00	\$ 180,000.00
Víboras (4 DH)	m	1,200	\$ 150.00	\$ 180,000.00
Regional District	m	10,000	\$ 150.00	\$ 1,500,000.00
<b>Total Drilling</b>	<b>m</b>	<b>18,500</b>	<b>\$ 150.00</b>	<b>\$ 2,775,000.00</b>
<b>Tunnel &amp; Robbins Quebradillas- Vacas</b>	<b>m</b>	<b>1,500</b>	<b>\$ 1,000.00</b>	<b>\$ 1,500,000.00</b>
Geologists		3		\$ 156,000.00
Vehicles		2		\$ 50,000.00
Equipment				\$ 27,700.00
Core Shack				\$ 50,000.00
Other Acquisitions				\$ 500,000.00
<b>Total Cost</b>				<b>\$ 6,582,700.00</b>



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FIGURE 9-1  
 Drilling Exploration Areas

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 Fig9-1.dwg

## 9.2.1 Geophysical Exploration

In 2003 and 2004, ASARCO carried out geophysical surveying in the La Parrilla area. This investigation included Aeromagnetic, Induced Polarization, and Resistivity methods. The objective was to define possible plutonic rocks or structural conditions that may be related to mineral concentrations.

FMS carried out geophysical investigations during the period of April to June 2007, to confirm previous studies within the areas of Quebradillas, Sacramento, Vacas, and Santa Paula (formerly Los Perros). These investigations have confirmed the presence of Induced Polarization and Resistivity anomalies which will be further investigated by direct methods, such as drilling and underground access where possible.

The geophysical survey was developed by Geolinsa, a Monterrey-city based geophysical company. Methodology and results were described in the report "Informe Técnico Exploración Geofísica en La Parrilla, Durango," dated August 30, 2007. This Survey consisted in measuring electric resistivity and induced polarization (IP). The data was processed by EarthImager 3D Software including topographic information. The IP survey was developed by the Dipole – Dipole method with readings at 100m along the lines. The topographic survey included location of control points at 50m spacing along the lines. Figure 9-2 shows the regional geophysical anomalies in the La Parrilla area.

During the months of October/November 2010, the group Alfa-Monterrey carried out an aero-magnetic study for the La Parrilla area. This study was prepared and reported in accordance with Fullerton, California-based Hughes Aircraft Company (Tracey, 1974), and applied to Earth Sciences (Ciencias de la Tierra) by West Virginia Geological and Economic Survey and Alfa Monterrey in November 2010.

The purpose of this study was to make an interpretation of previous aero-magnetic surveys of the La Parrilla area to identify potentially mineralized zones within the La Parrilla and nearby areas.

The resulting interpretation shows potentially mineralized zones presented in plan-view and in projected cross-sections indicating electrical resistivity and induced polarization (chargeability) in 2D vertical representation. Note that anomaly "A" represents the Rosarios mineralized zone. The survey identified the main geophysical anomalies as indicated in Table 9-2.

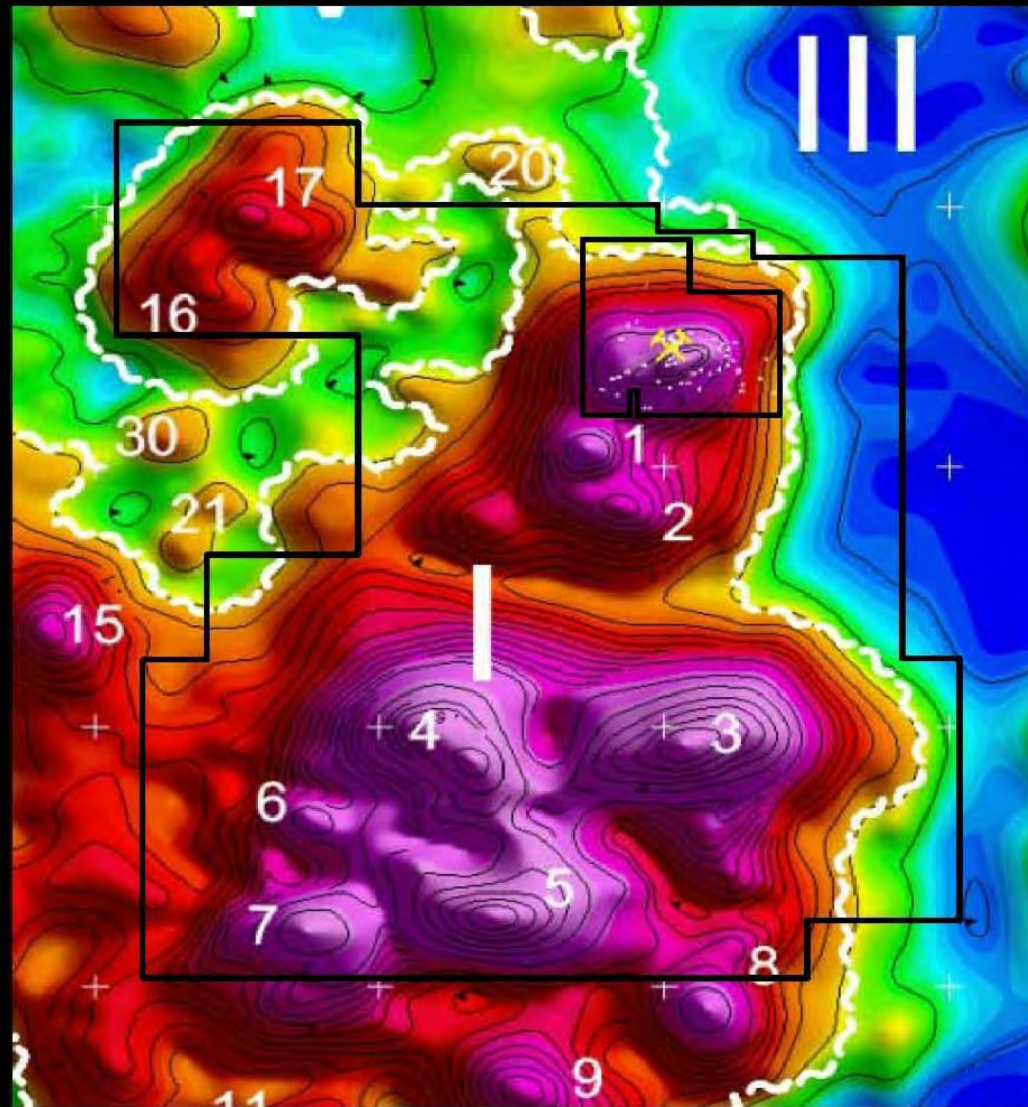
**TABLE 9-2**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Aero-Magnetic Anomalies**

Anomalies	Coordinates (*)		Strike	Length	Width
	X	Y		km	km
A	591,726	1,624,495	NE - SW	2.8	1.9
B	593,369	2,625,605	N - S	1.3	0.9
C	588,633	2,655,857	N - S	1.2	0.9
D	588,470	1,624,495	E - W	0.6	0.4
E	588,736	2,623,089	NE - SW	1.5	1.2
F	587,345	2,620,928	E - W	1.7	1.1
G	592,732	2,620,751	E - W	0.6	0.3


(\*) To approximate center of the area

# REGIONAL EXPLORATION

10,000 m 40 DDH



## RESIDUAL MAGNETIC FIELD

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FIGURE 9-2  
 Regional Exploration Anomalies

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May 2011

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Fig9-2.dwg

Project No.

DE-00200

The geophysical survey resulted in prospective anomalous zones showing high resistivity and high chargeability. Drill sites were recommended to investigate the most outstanding anomalies as indicated above. Figure 9-3 shows the geophysical anomalies in the La Parrilla area.

## 9.2.2 Geochemical Exploration

A geochemical survey including 800 samples has been scheduled for La Parrilla during 2011. FMS exploration program for La Parrilla during the rest of 2011 includes geologic mapping and geochemical sampling of regional areas. Grupo México reported geochemical surveying at Quebradillas, Vacas and El Parián areas that included 2,200 geochemical samples. No results or details of this survey are available to PAH.

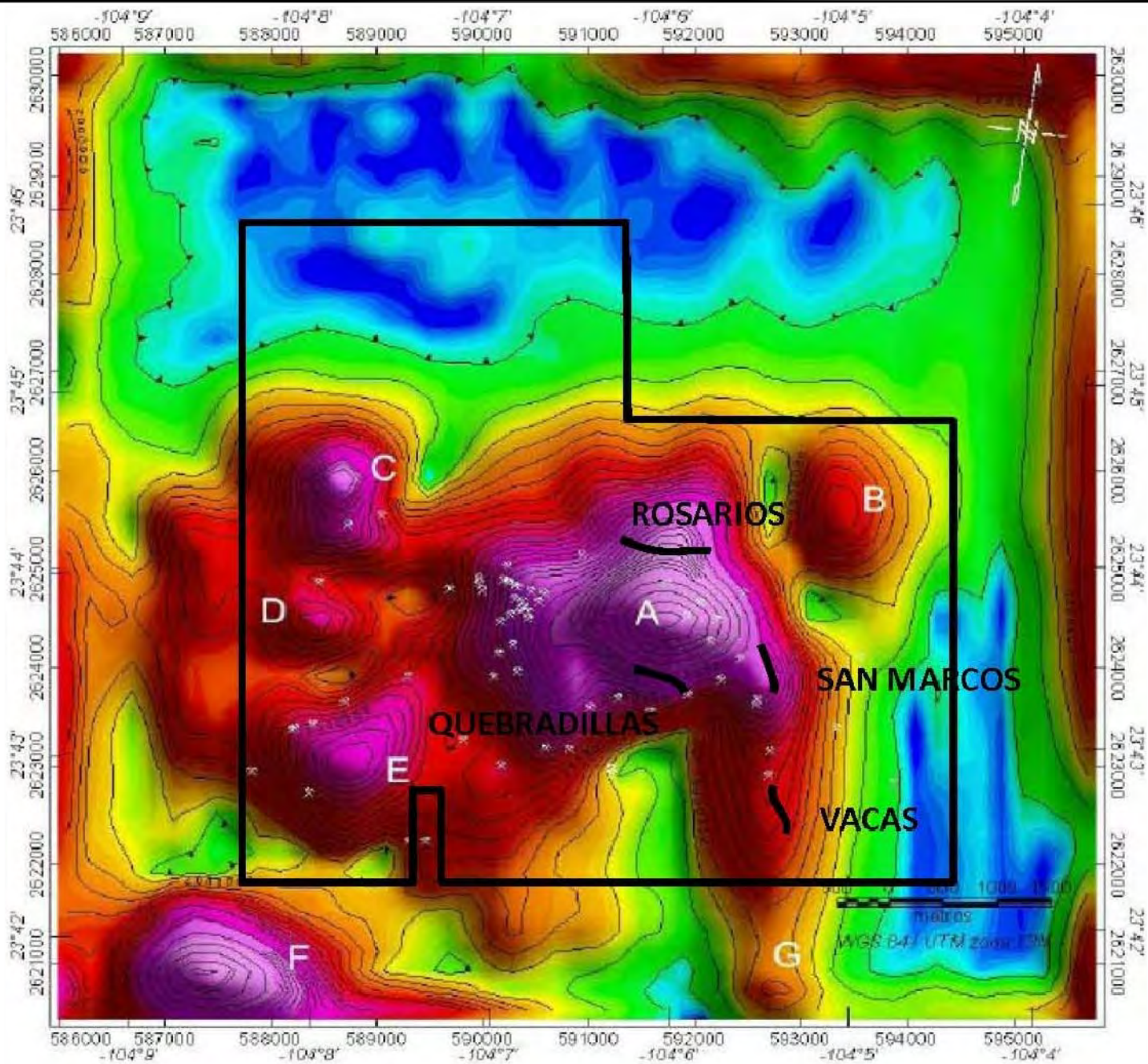
## 9.3 Drilling


Drilling programs at La Parrilla have been limited by past operators, since the best exploration results may have been obtained through underground development. Drilling at La Parrilla by Grupo México included programs from 1990 to 1993 completing 73 drill holes with a drilled depth of 16,634 m.

FMS took control of La Parrilla operation in January 2004, and initiated an aggressive drilling program to explore the various areas of interest within La Parrilla holdings in 2005. From the period of June 2005 to June 2011, a total of 409 drill holes have been completed in La Parrilla district by FMS with a total drilled depth of 87,212 m. Table 9-3 shows drilling completed by FMS in each of the production zones and areas of interest in La Parrilla to June 30, 2011. Figure 9-4 shows drilling areas at Quebradillas.

**TABLE 9-3**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**FMS Drilling Programs through June, 2011**

Area	Drilling	
	No. Drill Holes	Meters
La Blanca	56	11,950
La Rosa	36	6,668
Los Rosarios System	47	14,305
Oxidos	17	1,623
Quebradillas	100	15,616
Tajo Quebradillas	34	2,923
San José	5	1,097
San Marcos	43	10,122
San Nicolas	9	3,143
Las Vacas	48	16,235
Santa Paula	4	1,107
Sacramento	8	1,910
Viboras	2	513
<b>Total</b>	<b>409</b>	<b>87,212</b>
Average drilled depth per hole		213



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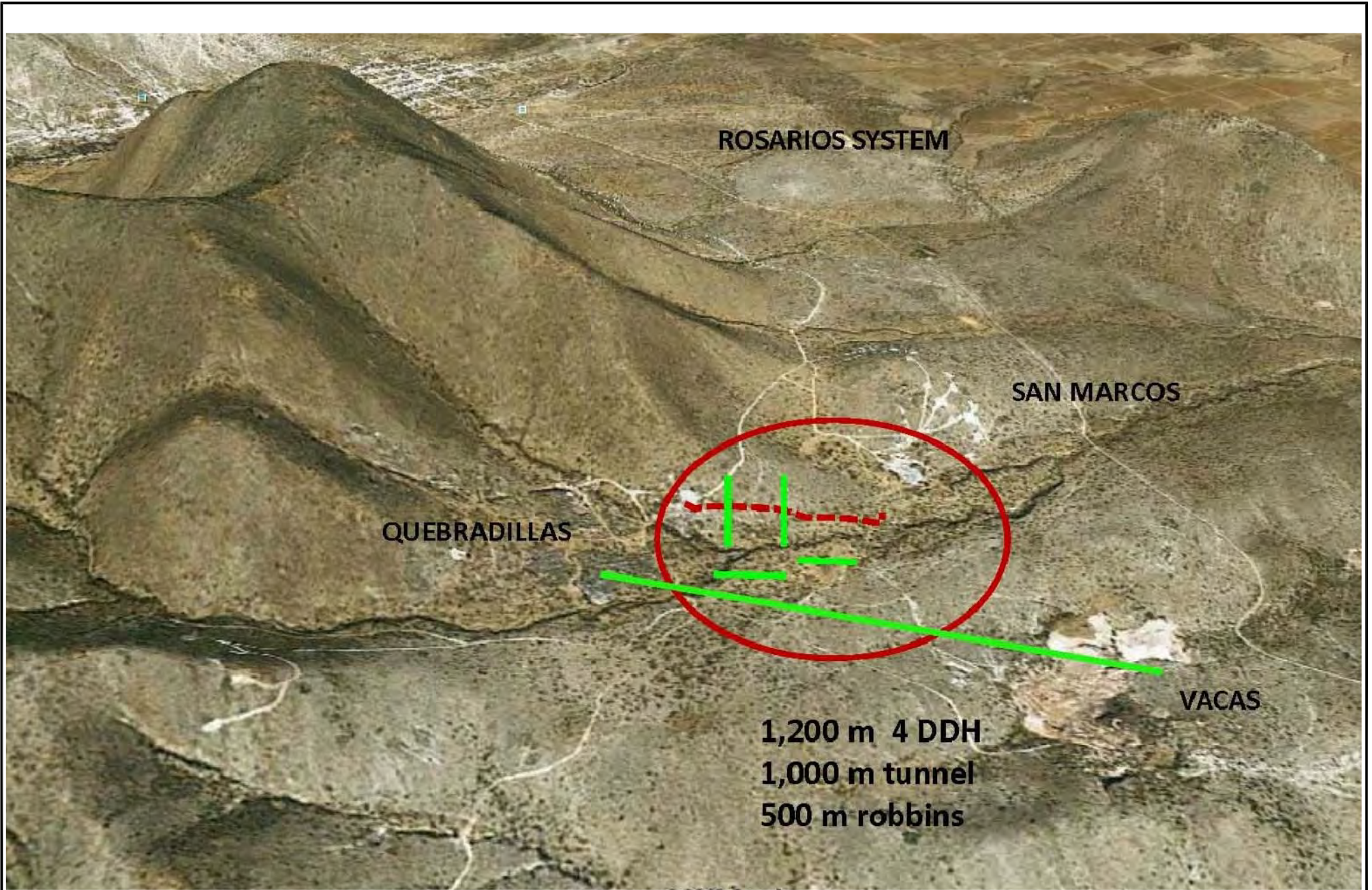
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FIGURE 9-3  
 Geophysical Anomalies in La Parrilla Area

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FIGURE 9-4  
 Drilling Areas at Quebradillas

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 Fig9-4.dwg



FMS continues development of an aggressive exploration program that includes underground workings, such as access ramps, drifting and crosscutting into the old working areas of the Los Rosarios System including La Blanca, San Marcos, Quebradillas and Vacas areas. During the period of January 2010 to June 2011, FMS has developed 3,080m in mine workings for exploration purposes only.

It also included, for 2010, the completion of investigations for the development of the Quebradillas outcroppings area by open pit methods.

FMS 2011 exploration program is focused on the following objectives:

- Prepare the La Parrilla Silver Mine operation with sufficient mineral reserves to sustain economic production throughout periods of low metals prices.
- Plan and develop systematic production for expansion of the operating capacity to 2,000 tpd.
- Recover oxide and sulfide mineralization, consolidate mining blocks and increase reserves to support a sustainable production schedule.
- Support exploration activities by underground development and underground and surface drilling.
- Focus efforts on regional exploration targets.

FMS exploration efforts are designed to investigate potentially large volume targets. FMS has carried out preparation development for large size volume mineral extraction in blocks and accessible areas along the workings. Part of the effort during 2008-2010, focused on the development of Quebradillas by underground development and of the outcroppings area by open pit methods.

FMS contracted the México city-based Tecmin drilling company to carry out the exploration program for 2011/2012. This program includes drilling from surface and underground sites with a total of 20,000m for exploration of the Sacramento, San Marcos, Cerro Santiago, San Nicolás, Víboras, and regional exploration.

## **9.4      *Opinion***

In PAH's opinion the exploration programs developed by FMS within the La Parrilla Silver Mine district have been successful in testing exploration targets, increasing the mine's Reserve / Resource base and indicating new targets of exploration within the mining district.

FMS has assembled an experienced and enthusiastic team of exploration professionals to cover all facets of the exploration requirements.

In PAH's opinion FMS exploration programs have established a significant Resource / Reserve base for La Parrilla mine. FMS has increased the Resource / Reserve base for projected operations at the plant

expansion capacity for an estimated period of 7 years of mine life. These exploration programs have been developed according to industry standards.

Underground mines similar to the La Parrilla generally carry reserves for a period of 3 to 5 years. During the period of 2004 to 2011, FMS has replaced the reserves mined and has continued increasing the reserves and the life of mine.

## **10.0 DRILLING**

FMS has been drilling at La Parrilla since June 2005, shortly after acquisition of the project. FMS has contracted several drilling companies during the exploration programs, including Cau S.A. de C.V. (“Causa”), a Gómez Palacio, Durango, México-based drilling company. Currently the main contractor at La Parrilla is Tecmin, a drilling company with equipment for surface and underground drilling. It is based in México city, Ave. Coyoacán 1878, Colonia Del Valle, C.P. 03100.

### **10.1 *Drilling Methods***

Drilling programs at La Parrilla are planned on geologic cross-sections and plan view maps. The geologic interpretation is supported by underground mine maps.

The drill core is measured at the drill site by the contractor and by the project geologist to determine core recoveries. Core recovery constitutes the basis for contract settlements. According to FMS drilling contracts, only drill holes with a minimum of 80 percent core recovery are acceptable for payment.

Logging of the drilling core is performed by the project geologist in each of the areas being investigated. The project geologist also determines the sample intervals. Trained assistants are in charge of core splitting and sampling as per the project’s geologist indications.

FMS’s drill hole database is compiled in electronic format, which contains collar, assay intervals, lithology, and assay information with gold/silver/lead/zinc values. Most of the holes are drilled at an angle to intersect vein or mineralized structures that generally dip at near vertical angles. According to FMS, based on geologic interpretations, no apparent deviation has been detected in drill holes. FMS has established a surveying procedure which is performed during the drilling stage. Most of FMS drill holes are now longer than 150 m. Deviation is defined with one survey reading at the bottom for holes of 150 m in depth and two survey readings for holes longer than 150m; one reading at the middle and one reading at the bottom of the hole.

PAH believes that FMS’s drilling program from surface and underground sites, in combination with underground development, is appropriate and well designed to explore promising targets and access ore deposits continuity.

### **10.2 *Interpretation***

In PAH’s opinion, FMS’s exploration drilling programs are justified as an investment as they have consistently developed additional reserves/resources for the La Parrilla mine. The estimated budget for the program anticipated for the second semester of 2011 and first semester of 2012 is included in Sections 9 and 26 of this Report – Explorations and Recommendations.

FMS's 2011 exploration drilling program represents an aggressive investment for confirmation of currently estimated Reserves / Resources to support a longer mine life including the plant expansion. It includes a total of 20,000 meters in drilling for exploration within the following areas: Quebradillas, Vacas, San Marcos, La Blanca, Cerro Santiago, Víboras, San Nicolás, Sacramento and regional exploration. This program has been outlined in Table 10-1 and includes underground development and surface access as preparations for drilling.

**TABLE 10-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Summary of Drilling and Mine Development Exploration Programs, 2007 to June 2011**

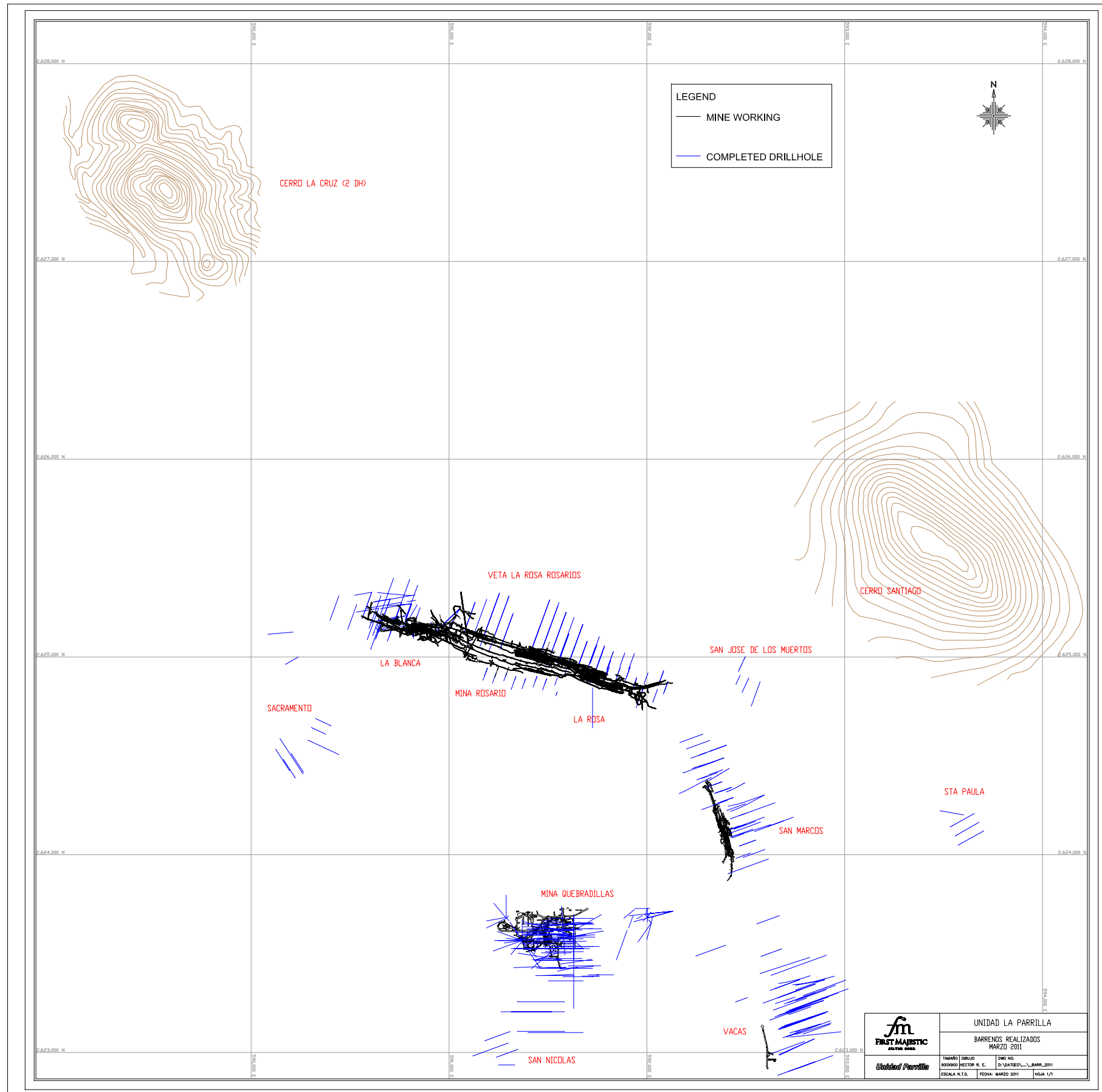
Month / Year	Drilling, m					Exploration Mine Development, Underground, m				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
January	2,345	1,690	352	20	412	74	336	36	179	122
February	2,884	2,478	273	0	977	94	99	185	218	71
March	1,988	2,803	239	0	723	189	199	246	200	186
April	2,163	1,632	89	0	908	138	174	188	219	281
May	3,029	2,197	0	0	642	6	112	126	200	312
June	2,974	2,354	0	0	1,046	144	182	265	225	270
July	2,712	2,791	0	0		84	152	257	85	
August	2,733	2,490	0	97		115	213	219	84	
September	2,866	1,805	0	46		113	183	30	23	
October	2,964	932	0	414		114	301	135	100	
November	2,293	1,214	0	588		176	298	191	186	
December	1,530	455	126	500		239	80	173	119	
<b>TOTAL</b>	<b>30,481</b>	<b>22,841</b>	<b>1,079</b>	<b>1,665</b>	<b>4,708</b>	<b>1,486</b>	<b>2,329</b>	<b>2,052</b>	<b>1,838</b>	<b>1,242</b>
<b>Grand Total</b>					<b>60,774</b>					<b>8,947</b>

Figure 10-1 shows the La Parrilla general map showing all the areas under exploration within the mining district. Geologic potential exists to discover additional mineralized zones along the development workings.

### 10.3 *Sampling Intervals, True Thickness*

The mineralized thicknesses are structurally controlled and they vary according to local geologic features, mineral intensity, fracturing, geologic contacts, etc. The true thickness of the mineralized zones is estimated from underground works mapping, channel samples, geologic projections of the mineralized zones and drill intercepts.

The mineralized structures are developed by underground workings. Systematic channel sampling is carried out for grade control and reconciliation purposes. True thickness of the veins and mineralized structures are considered in geologic interpretations for resource/reserve estimates.



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TAMARO (DIBUJO)	DWG NO.	D:\SANTOVALLE\LA_PARRILLA_2011	
BOGOSHO HECTOR R. E.	ESCALA N.T.S.	FECHA: MARZO 2011	HOJA: 1/1

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**FIGURE 10-1**  
**La Parrilla Drilled Areas**

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## **11.0 SAMPLE PREPARATION, ANALYSIS, AND SECURITY**

### **11.1 *Sample Preparation***

La Parrilla FMS's sample preparation descriptions were presented in PAH's February 26, 2009, Technical Report as follows: "Exploration, mine development, production, and plant samples are sent to FMS's on-site laboratory for chemical analysis of silver, gold, lead, zinc, and copper. Silver and gold assays are carried out by fire assaying methods, while the rest of the elements are assayed by atomic absorption (AA)." These methods were still applied during PAH site visit in 2011.

A typical channel sample received by the laboratory, weighing approximately 4 kg, is passed through a jaw crusher to reduce it to a 1.3 cm (1/2") size. A 500 gram split is taken and passed through gyratory or disk crushers to reduce it to a 10-mesh (1/8") size. A 200 to 300 gram split is taken and placed in a drying oven at 120°C. After drying, the material is put into two pulverizers, one disk pulverizer and one ring pulverizer, to grind the rock to minus 100 mesh. The resulting pulp is homogenized and 10 grams taken for fire assay analysis of silver and gold for geology samples and for concentrates; 20 grams are taken for head samples; and 1 gram is used for precipitate samples.

The 10 gram pulps are placed in fusion crucibles and placed into an electric furnace for fusion into lead buttons. The lead buttons are placed in cupels and placed into an electric furnace for cupellation into a silver-gold bead. The bead is weighed and then put into nitric acid to dissolve away the silver and then the remaining gold bead is weighed again. The microbalance used has a sensitivity of  $\pm 1$  per 10,000 (equivalent to an actual grade of +0.1 gram per tonne), while the gold beads commonly range in weight from 100 milligrams down to less than 1 milligram. As a result, the determination of the smaller bead weight is at or below the detection limits of the microbalance.

### **11.2 *Laboratory Facilities***

PAH notes that the La Parrilla laboratories generally appear to be adequate, with reasonable cleaning and organization. The laboratory currently processes about 250 samples by fire assay and by AA per day, including exploration samples, development samples, and mill samples. Laboratory personnel include five sample preparation operators, one Chief Chemist/AA operator and one Assistant Operator in fire assay and AA, and one person who weighs samples and reports results.

La Parrilla supports students under scholarship programs for practicing at the laboratory during the summer months.

The on-site laboratory consists of two separate buildings for sample preparation and for assaying. The assaying facility includes electric equipment, two crushers, one ball mill, and electric and LPG fuelled furnaces. Solution samples are analyzed with a Perkin Elmer 400 Atomic Absorption unit.

The La Parrilla lab also includes facilities for metallurgical test work. Test work for flotation, cyanidation and gravimetric concentration is done in the lab. FMS is constructing new laboratory facilities as part of the La Parrilla expansion program. This new lab has been designed for ISO certification.

FMS's QC procedure consists of sending mine samples and/or pulps to an outside laboratory, usually BSI-Inspectorate Labs in Reno, Nevada. Samples of concentrates are regularly sent to Peñoles or Trafigura providing check assays of concentrate samples. The laboratory duplicates pulp assays at 1 sample for every 20. FMS has established a QC procedure by checking assays. Drill samples are duplicated at 1 sample for every 20 regular samples. FMS also inserts standard and blank samples in the sampling stream.

### 11.3 *Quality Assurance/Quality Control*

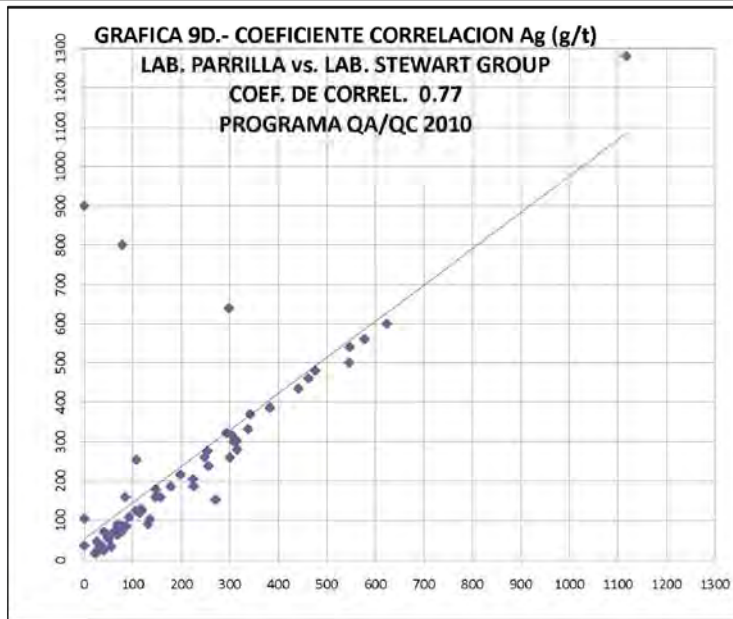
To evaluate sample quality control, FMS performs periodic check analyses on samples. For the period to June 30, 2011, FMS has sent 103 standard samples to Inspectorate Laboratories (ISO 9001:2000), and to ECO Tech Laboratory Ltd. (ISO 9001:2008), two independent and prestigious commercial laboratories in Reno, Nevada; Durango, México; Vancouver, BC; and Zacatecas, México, respectively for duplicate analysis. All core samples are sent to the BSI-Inspectorate lab for assaying. The samples were also assayed by La Parrilla lab and statistics and correlation were applied to the assay results. Table 11-1 shows a summary of statistics for duplicate and pulp sample assay checks.

**TABLE 11-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**2009-2010 QA/QC Program - La Parrilla Lab**

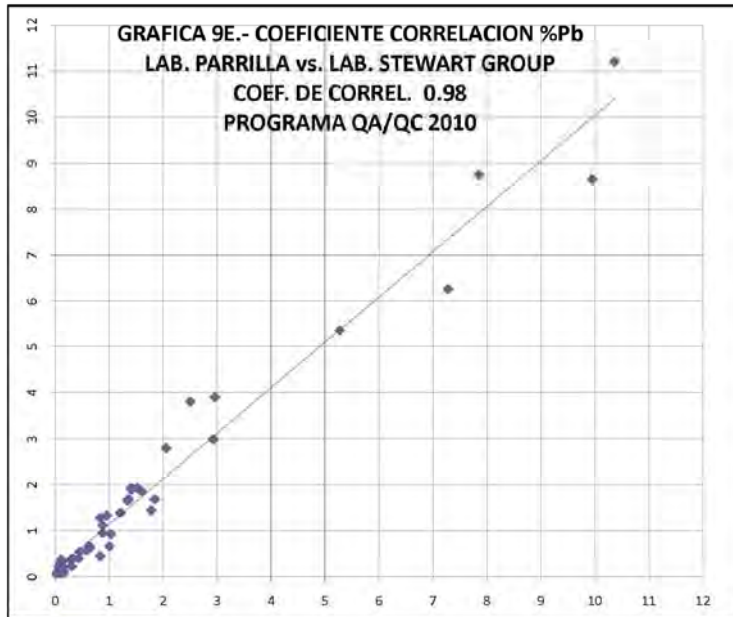
<b>Duplicate Samples</b>											
<b>Statistics</b>	<b>Width, m</b>	<b>Ag-1 (g/t)</b>	<b>Ag-2 (g/t)</b>	<b>Pb-1 %</b>	<b>Pb-2 %</b>	<b>Zn-1 %</b>	<b>Zn-2 %</b>	<b>Cu-1 %</b>	<b>Cu-2 %</b>	<b>Au-1 (g/t)</b>	<b>Au-2 (g/t)</b>
Minimum	0.25	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	2.60	5,752	2,970	29.72	23.58	23.74	28.57	0.60	0.50	0.40	2.40
Average	0.67	178	170	1.19	1.11	0.84	0.86	0.02	0.02	0.15	0.25
Std. Dev.		372	282	2.25	2.01	1.79	2.02	0.05	0.04	0.12	0.50
<b>Correlation</b>	<b>1,038 samples</b>	<b>0.66</b>		<b>0.88</b>		<b>0.81</b>		<b>0.91</b>		<b>0.65</b>	
<b>Pulps Check LP</b>											
<b>Statistics</b>		<b>Ag-1 (g/t)</b>	<b>Ag-1A (g/t)</b>	<b>Pb-1 %</b>	<b>Pb-1A %</b>	<b>Zn-1 %</b>	<b>Zn-1A %</b>	<b>Cu-1 %</b>	<b>Cu-1A %</b>	<b>Au-1 (g/t)</b>	<b>Au-1A (g/t)</b>
Minimum		0	0	0.00	0.00	0.01	0.00	0.00	0.00	0.20	0.00
Maximum		1,316	1,622	12.61	11.01	7.50	8.67	0.21	0.02	0.20	1.20
Average		187	191	0.96	1.05	0.62	0.58	0.01	0.01	0.20	0.26
Std. Dev.		217	228	1.77	1.75	1.18	1.07	0.03	0.01	0.20	0.38
<b>Correlation</b>	<b>289 samples</b>	<b>0.93</b>		<b>0.97</b>		<b>0.97</b>		<b>0.49</b>		<b>0.20</b>	

Figure 11-1 shows correlation graphs of pulp assay checks for silver, lead and zinc. La Parrilla Laboratory assays for the period of October 2008, to June 30, 2011. The correlation for silver assays of duplicate samples is only 66 percent due to discrepancies on high-grade samples, for instance Ag 5,752 vs. Ag 2,970 at the maximum assays, while the pulp duplicates correlation is acceptable at 93 percent, as shown in Table 11-1.

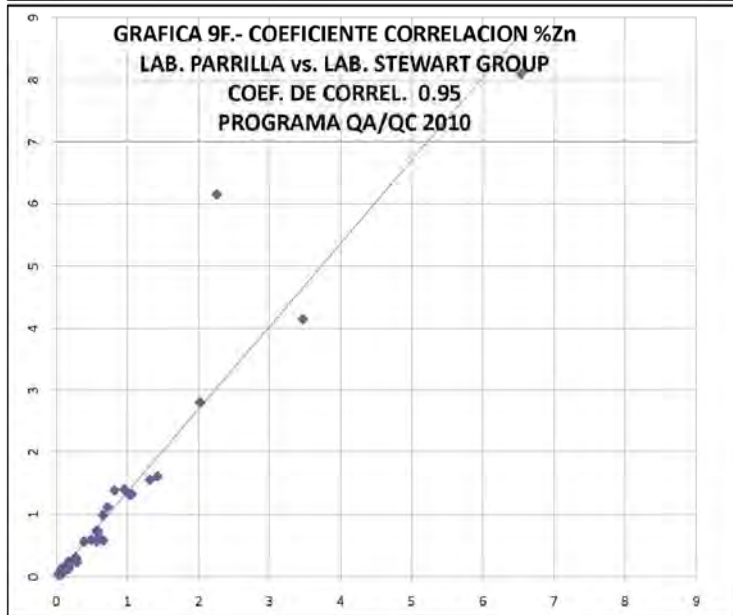
Silver Assays




Lead Assays



Zinc Assays



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Project No. DE-00200

Drawing Provided by/Prepared for  
**First Majestic Silver Corp.**  
 Project Name  
 La Parrilla Project

**FIGURE 11-1**  
**Correlation Graph for Ag, Pb, Zn Assays**  
**Between La Parrilla and External Labs**

Date of Issue  
 Aug 2011  
 Drawing Name  
 Fig11-1.dwg



The correlation for assays of lead is 88 percent and 97 percent for duplicate and pulp samples respectively as shown in Table 11-1. The correlation for zinc assays is 81 percent for duplicate samples and 97 percent for pulp sample duplicates. The range of silver values is from 0 to 5,752 g/tonne, with an average grade of 178 g/tonne, while the range for lead is 0 to 30 percent with an average of 1.19 percent and for zinc is 0 to 24 percent with an average grade of 0.84 percent.

Channel sample checks are performed by analyzing random sample pulps at the La Parrilla lab with assay checking by the Inspectorate lab at Durango. The assays include silver, lead and zinc.

#### **11.4      *Drill Core Samples***

FMS exploration drilling is performed by the contractor firm of Tecmin. This company is based in México city, and at the time of the PAH visit was operating three drilling rigs within the La Parrilla area; two in underground zones and one on the surface. A fourth drill rig was expected at La Parrilla at the time of PAH site visit.

Sampling of the drill core is made after the core has been logged by the mine geologists. The geologist marks the core on the basis of geologic and mineralization features. Then the sampling crew splits the core with diamond saw, as indicated by the geologist and one half of the core is placed in a numbered bag and sent to Inspectorate lab in Durango city. Generally the samples represent core lengths of less than 1.5 m. All the core samples are sent for assaying by Inspectorate. The core samples are crushed and pulverized at Inspectorate in Durango city and 250 gram pulp samples are sent to Reno, Nevada for assaying.

Duplicate core samples are taken by FMS crew from the remaining half of the core, by again splitting the core to a one quarter size. Therefore, one quarter of the core still remains in the box for future reference. Duplicate samples are taken at a rate of approximately one duplicate sample from every 20 regular samples.

Drill hole data are included in the Resource / Reserve calculations, and are generally applied by La Parrilla in the resource projections. Drilling results are applied in the grade calculations giving more weight to the larger-size channel sample data.

#### **11.5      *Channel Sampling***

Exploration sampling for Reserve delineation at La Parrilla is conducted along the mine drifting and development of the mineralized zones. Channel samples are the primary means of sampling in the mine and are taken perpendicular to the vein structures, across the back of the drift and across the drifts and workings, generally from the footwall towards the hanging wall of the mineralized structure.

Sampling crews typically take channel samples at regular intervals of 2 m to 3 m, with several samples along every sampling channel on new openings (drifts, crosscuts, ramps, stopes, etc.) and every day

from stope development muck piles. Channel samples are taken in consecutive lengths of less than 1.5 m along the channel, depending on geologic features.

The assays are composited to determine the average grade of each channel including samples taken within the vein only and measuring the true width as the perpendicular distance between the vein walls considering the vein's dip.

Channel samples are taken with chisel and hammer, collected in a canvas tarp and deposited in numbered bags for transportation to the laboratory. About 50 samples are taken from production areas and 10 samples from exploration areas per day in each of the operating mines.

A channel "line" typically consists of two or more individual samples taken to reflect changes in geology and/or mineralogy across the structural zone. Each sample weighs approximately 4 kg. All channels for sampling are painted by the geologist and numbered on the drift's walls for proper orientation and identification.

The La Parrilla sampling quality control program consists of checking the assays of one duplicate sample for every 20 regular samples from pulp samples. La Parrilla mine's duplicate samples for the period of 2010 included 1,550 samples from channel samples of exploration areas. Additionally, the program included insertion of 103 standard samples, 108 blank samples, and 289 pulp samples.

All samples are assayed at La Parrilla's lab, while duplicate samples are sent to BSI-Inspectorate laboratory, a US lab located in Reno, Nevada, with representation and sampling preparation facilities in Durango city, México.

## **11.6 Conclusion**

Overall, PAH found that the results from the check assaying are reasonable. PAH recommends the inclusion of standard samples in the sample stream to assess analytical precision. In addition, field duplicate samples and blank samples within the sample stream would allow for an assessment of sample preparation procedures.

It is PAH's opinion that the sample methods and analyses are representative of the deposits at La Parrilla, and that most of FMS's data was generated by procedures that were carried out according to accepted industry standards and using accepted practices.

PAH understands that no FMS Director, Officer or Associate of the issuer is involved in La Parrilla sampling works and procedures.

PAH finds that the exploration, sampling, and laboratory analysis for the La Parrilla mine operation is being conducted by FMS's employees in a reasonable manner, consistent with standard industry practices. PAH would expect the sampling results to be reasonably representative of the mineralization of

the deposits, and believes that they may be used with acceptable confidence in the estimation of the mineable Reserves.

PAH reviewed La Parrilla's sampling program for the preparation of this Technical Report. La Parrilla's current sampling team consists of three sampling crews with three employees each for underground sampling, one sampler for drill core, and one sampling supervisor. This process is managed by the mine geologists. The samples are only taken from mineralized zones.

Based on statistical analysis, log normal distribution charts and histograms generated from sample assays for each of the La Blanca and Rosarios mine areas, FMS determined capping values for Ag, Pb and Zn. The high-grade samples were capped at 1,000 g/t Ag; 5 percent Pb; and 10 percent Zn.

Results of the capping values affected 42 out of 1,385 samples in silver assays for the Rosarios mine, and 45 for the La Blanca deposit. The La Blanca deposit capping for Pb and Zn affected 48 and 78 samples respectively.

PAH's opinion regarding the channel sampling applied by FMS's exploration and mining crews, is that it is done carefully and responsibly by well trained samplers. The sampling generally reconciles with silver production and sales by FMS. The drill and channel samples appear to properly represent the mineralization of the various La Parrilla deposits; therefore, they are acceptable for Resource and Reserve estimates.

## **12.0 DATA VERIFICATION**

### **12.1 *Production - Sales***

PAH has not taken independent samples from the surface or underground exposures of the mineral concentrations at La Parrilla as other Qualified Persons have previously sampled the mineralization as discussed in this report.

Production and sales records are the most reliable proof of mineralization contained in the ore deposits under exploration and development at the mine.

FMS has established a systematic procedure to verify data and quality control which has proven effective and accurate. Assay data and information generated by the operation is transmitted manually; however, the entire paper trail is accessible and available for inspection.

FMS initiated effective control of the La Parrilla operations in January 2004 when it took control of the mining operation.

La Parrilla maintains an active program of assay checks for the production of concentrates at the mine's lab, in addition to a sampling and assaying program by a sales representative in the city of Torreón, Coahuila, to check the assays reported by MET-MEX Peñoles smelter and by Trafigura in Manzanillo, Colima.

Table 12-1 presents a summary of concentrates and doré shipments for 2010. It includes 21 shipments of lead concentrates for a total tonnage of 686.5 tonnes, four shipments of zinc concentrates for a total of 130.1 tonnes, and five shipments of La Parrilla doré with assays reported by FMS and by Peñoles or Trafigura laboratories.

Statistical correlation for doré weight and assays of shipments between the La Parrilla and Peñoles labs is 100 percent for weight and 99.8 percent for the silver assays, while the gold content shows a negative correlation of 27 percent with lower assays for La Parrilla due to very low-grades in the ores.

The lead concentrates weight reported by Peñoles and Trafigura is 99.7 percent the weight reported by FMS while the zinc is 99.9 percent.

PAH believes that an adequate amount of checking has been conducted and that the results are representative of the doré and concentrates produced at La Parrilla and shipped for sales.

PAH's conclusion is that the results from check assaying are reasonable, including appropriate preparation procedures, that the sampling results appear to be reasonably representative of the various deposits mineralization and concentrates, and should be usable with acceptable confidence in the estimation of



the Mineral Resources and Reserves, and that the sales of doré and concentrates are a clear representation of FMS production sales.

## **12.2      *Production – Reserves***

FMS maintains records of production and Reserves reconciliation. These records include mine blocks from the Quebradillas, La Blanca, Rosarios and La Rosa mines for sulfides, and for the Quebradillas, La Blanca, La Rosa, Rosarios, San Marcos and Vacas for oxide mineralization. Table 12-2 shows reconciliation of sulfide production.

The reconciliation includes previously estimated Reserves for the indicated mine blocks and stopes; the production extracted from these working areas and the resulting mineralization extracted out of Reserves, due to larger reserve blocks than previously estimated. These blocks only represent some of the active mining areas and do not include all the estimated reserves. Table 12-3 shows the reconciliation of oxide production.

The resulting reconciliation in production of sulfides is 74.4 percent recovery of the Reserves containing silver, while the silver recovery in oxides mineralization was 7.7 percent higher than the silver contained in Reserves.

**TABLE 12-2**  
**First Majestic Plata, S.A. de C.V.**  
**La Parrilla Silver Mine**  
**Reserves - Production Reconciliation - Sulfides 2010**

PRODUCTION RESERVES RECONCILIATION			Mineral Reserves 2009					Mineral Production Out of Reserves 2009				2010 Production Control Grade				Remaining Reserves for 2011			
MINE	2009 Reserve Blocks	Stopes	Tonnes	Width m	Grade Ag, g/t	Pb, %	Zn, %	Tonnes	Grade Ag, g/t	Pb, %	Zn, %	Tonnes	Assays Ag, g/t	Pb, %	Zn, %	Tonnes	Assays Ag, g/t	Pb, %	Zn, %
QUEBRADILLAS Mine	Q25-A1	Q-25	3,623	1.80	296.00							1,671	173	1.42	2.30	1,952	256	2.09	2.71
QUEBRADILLAS Mine	Q25-B8	REB Q-25 AL BAJO	441	1.60	218			168	342	3.68	5.21	609	208	2.86	4.20	0	0	0.00	0.00
QUEBRADILLAS Mine	Q25-B2	550 E	1,715	1.50	159			19,089	244	2.25	2.88	2,982	244	2.25	2.88	0	0	0.00	0.00
QUEBRADILLAS Mine	Q25-B6		1,267	2.00	265											1,267	2.00	265	0.00
QUEBRADILLAS Mine	New Block	550 W						6,371	79	1.58	2.01					0			
QUEBRADILLAS Mine	New Block	538 W						1,203	140	0.94	2.55					0			
QUEBRADILLAS Mine	New Block	Reb. 650						3,296	225	2.34	2.68					0			
QUEBRADILLAS Mine	New Block	Crucero 6-460						264	169	1.39	1.66					0			
QUEBRADILLAS Mine	New Block	RAMPA VIBORAS						237	138	0.97	1.01					0			
LA BLANCA Mine	6-169 PILAR	Rebaje 6-169	4,447	3.17	218	1.89	0.32					245	219	1.36	0.52	4,202	219	1.36	0.52
LA BLANCA Mine	LB-*177C	8-169	9,738	2.63	216	0.25						3,695	173	1.79	1.04	6,044	207	2.21	0.90
LA BLANCA Mine	8-169 A		3,925	2.13	206	2.20	0.97									3,925	206	2.20	0.97
LA BLANCA Mine	LB8-193 A	Reb. 8-193	4,248	2.91	125	1.50	0.96	2,377	136	1.62	0.86	6,626	121	1.32	0.82	0	0	0.00	0.00
LA BLANCA Mine	LB 6-340 A	REB 6-340	5,442	2.13	121	1.50	0.67					1,045	129	1.83	0.59	4,397	140	2.61	0.88
LA BLANCA Mine	4-340 c	4-340	3,751	2.04	158	2.10	0.52					424	305	4.52	1.11	3,327	334	5.45	1.30
LA BLANCA Mine	LB 7-195 A	REBAJE 7-195	3,411	2.52	127	1.71	0.89					504	131	1.18	0.73	2,906	147	1.90	0.84
ROSARIOS Mine	LR-10E	9-242	12,682	3.46	342	1.35	0.25	5,990	249	1.24	0.53	51,031	228	1.35	0.49	6,692	249	1.24	0.53
ROSARIOS Mine	LR-6E	9-242	7,322	2.74	379	2.23	2.62									7,322	379	2.23	2.62
ROSARIOS Mine	LR-9E	9-242	5,851	2.02	302	1.17	0.56									5,851	302	1.17	0.56
ROSARIOS Mine	LR-14 E	9-242	13,335	3.46	342	1.35	0.25									13,335	342	1.35	0.25
ROSARIOS Mine	LR 5-E	9-242	5,851	2.02	302	1.17	0.56									5,851	302	1.17	0.56
ROSARIOS Mine	LR 4E	REBAJE 8-450	1,936	2.31	359	1.10	0.27					504	181	0.65	0.59	1,432	202	0.65	0.59
ROSARIOS Mine	LR -12 E	REB 9-450	7,918	2.60	262	1.38	0.32									7,918	262	1.38	0.32
ROSARIOS Mine	LR- 8E	REB. 9-450	21,050	2.71	297	1.18	0.43					12,746	260	1.34	0.42	8,304	281	1.35	0.29
ROSARIOS Mine	Development	FTE 9 OTE						666	276	1.38	1.84					0	276	1.38	1.84
LA ROSA Mine	LR 3F	8-730	21,685	2.04	202	0.17						1,191	173	0.57	0.48	20,494	196	0.89	0.24
LA ROSA Mine	New Block	7-1100						6,357	187	0.98	0.97					0			
ROSARIOS Mine	New Block	9-350						936	220	0.79	1.30					0			
ROSARIOS Mine	LR-20	10-242	24,071	2.36	373	1.80	0.35	921	273	1.21	0.30	12,893	239	1.04	0.27	11,178	373	1.80	0.35
ROSARIOS Mine		10-354						10,392	296	1.52	0.46	10,392	280	1.48	0.53	0	0	0.00	0.00
ROSARIOS Mine		10-310						1,707	253	1.60	0.27	1,707	237	1.60	0.38	0	0	0.00	0.00
Tailings	mineral fuera de reservas	Vacas						4,394	136	1.72	5.96					0			
<b>TOTAL</b>			<b>163,709</b>	<b>2.55</b>	<b>278</b>	<b>1.21</b>	<b>0.43</b>	<b>64,369</b>	<b>217</b>	<b>1.70</b>	<b>1.97</b>	<b>108,264</b>	<b>227</b>	<b>1.38</b>	<b>0.62</b>	<b>116,397</b>	<b>267</b>	<b>4.47</b>	<b>0.64</b>

**TABLE 12-3**  
**First Majestic Plata, S.A. de C.V.**  
**La Parrilla Silver Mine**  
**Reserves - Production Reconciliation - Oxides 2010**

PRODUCTION RESERVES RECONCILIATION			Mineral Reserves 2009					Mineral Production Out of Reserves 2009				2010 Production Control Grade				Remaining Reserves for end of 2010			
MINE	2009 Reserve Blocks	Stopes	Tonnes	Width m	Grade Ag, g/t	Pb, %	Zn, %	Tonnes	Grade Ag, g/t	Pb, %	Zn, %	Tonnes	Assays Ag, g/t	Pb, %	Zn, %	Tonnes	Assays Ag, g/t	Pb, %	Zn, %
QUEBRADILLAS Mine	Q1-N	Q-4 XRO1	3,129	2.30	301							645	246	0.00	0.00	2,484	333	0.00	0.00
QUEBRADILLAS Mine	Q2A-N	Crucero 2 Q-4	478	3.80	307							38	140	0.00	0.00	440	140	0.00	0.00
QUEBRADILLAS Mine	RPA Q1A-N	Q-4 XRO4	3,316	2.50	223							89	160	0.00	0.00	3,227	160	0.00	0.00
QUEBRADILLAS Mine	RPA Q4-N	Q-4 XRO4 NTE	1,140	2.30	153			2,161	227	0.00	0.00	3,301	201	0.00	0.00	0	0	0.00	0.00
QUEBRADILLAS Mine	Q4-R1	Q-4 R-1	2,100	3.40	209							826	162	0.00	0.00	1,274	204	0.00	0.00
QUEBRADILLAS Mine	Q4-R2-N	Reb Q4	931	2.20	195			9,581	249	0.38	0.05	10,512	199	0.73	0.15	0	0	0.00	0.00
QUEBRADILLAS Mine	Development	Fte. Víboras						461	130	0.00	0.00						167	0.00	0.00
QUEBRADILLAS Mine	520.00	Cro 520	4,820	10.00	256							2,337	192	0.14	0.00	7,303	216	0.00	0.00
QUEBRADILLAS Mine	520-A		4,820	10.00	256														
QUEBRADILLAS Mine	592-3C	Rebaje 592	1,373	1.90	135							358	170	0.00	0.00	1,015	136	0.00	0.00
QUEBRADILLAS Mine	Development	La Yegua						992	107	0.00	0.00						165	0.00	0.00
QUEBRADILLAS Mine	Development	Xo. Cargadero						150	140	0.00	0.00						140	0.00	0.00
QUEBRADILLAS Mine	Development	Xo. 550						140	131	0.00	0.00						299	0.00	0.00
QUEBRADILLAS Mine	Development	El recuerdo						37	133	0.00	0.00						133	0.00	0.00
LA BLANCA Mine	LB 6-340 A	Rebaje 6-340	5,442	2.13	121	1.50	0.67					1,576	123	1.34	0.60	3,865	140	1.93	0.65
LA BLANCA Mine	8-169 A	REB. 8-169	3,925	2.13	206	2.20	0.97					2,258	151	0.92	0.24	1,667	168	1.02	0.00
LA BLANCA Mine	6-169 PILAR	6-169	4,447	3.17	218	1.89	0.32					216	183	0.00	0.00	4,231	217	1.19	0.37
LA BLANCA Mine	3-169 PILAR	Reb. 3-169 San Onofre	15,252	2.53	260	1.24	0.20					344	135	0.00	0.00	14,908	144	0.00	0.00
LA BLANCA Mine	LB4-340 E	Reb. 4-340	2,098	2.46	151	1.01	0.58	1,289	183	2.17	0.13	7,477	163	1.38	0.07	0	0	0.00	0.00
LA BLANCA Mine	LB 4-340 G		4,091	2.53	145	1.95	0.26												
LA BLANCA Mine	Development	Temiz						89	160	0.62	0.00						160	0.84	0.18
LA ROSA Mine	LR3 C1	7-730	1,330	2.37	233	0.59		8,781	198	0.77	0.08	13,874	183	0.60	0.07	0	0	0.00	0.00
LA ROSA Mine	LR 3C3		3,763	1.83	168	0.83													
LA ROSA Mine	Development	REB. 7-1100						2,960	290	0.49	0.04						330	0.54	0.10
LA ROSA Mine	Development	8-730						4,717	125	0.48	0.00						161	0.66	0.00
LA ROSA Mine	LR 2C	Stope 8-564	15,666	3.03	218	0.45						13,912	242	0.29	0.09	1,754	276	0.41	0.08
LA ROSA Mine	LR 2F	9-564	15,363	2.52	341							10,477	208	0.42	0.03	4,886	237	0.29	0.01
LA ROSA Mine	LR 3D	7-865	21,965	2.04	204	0.17						3,518	242	1.74	0.00	18,447	286	1.84	0.01
ROSARIOS Mine	Development	Niv. 9 E						424	312	0.35	0.01						388	0.39	0.02
ROSARIOS Mine	LR -12 E	9-450	7,918	2.60	262	1.38	0.32					2,308	176	0.50	0.01	5,610	235	0.74	0.05
ROSARIOS Mine	Development	10-354						204	221	0.00	0.00						227	0.00	0.00
SAN MARCOS Mine	Development	038 SUR						336	181	0.00	0.00						215	0.00	0.00
SAN MARCOS Mine	Development	Cross cut 136						352	140	0.00	0.00						190	0.00	0.00
SAN MARCOS Mine	SM-075 N	075 SUR	2,321	1.70	118	0.60						1,100	194	0.00	0.00	1,221	195	0.00	0.00
SAN MARCOS Mine	SM-358-A	358.00	1,606	2.00	362	1.50		996	213		0.13	2,602	147	0.80	0.03	0	0	0.00	0.00
VACAS Mine		JALES						237	185	0.00	0.00						185	0.00	0.00
QUEBRADILLAS Mine		Mine Fill Q-4						18,731	197	0.16	0.00						217	0.16	0.00
QUEBRADILLAS Mine		TAJO						33,545	214	0.00	0.00						238	0.00	0.00
QUEBRADILLAS Mine		Waste dumps						5,006	194	0.00	0.00						244	0.00	0.00
LA ROSA Mine		Waste dumps						1,182	185	0.00	0.00						207	0.00	0.00
SAN MARCOS Mine		Waste dumps						218	225	0.00	0.00						250	0.00	0.00
VACAS Mine		Tailings						689	157	1.33	0.02						157	1.30	0.02
SACRAMENTO Mine		Waste dumps						1,090	163	0.00	0.00						170	0.00	0.00
<b>TOTAL</b>			<b>127,294</b>	<b>3.02</b>	<b>232</b>	<b>0.66</b>	<b>0.13</b>	<b>71,560</b>	<b>201</b>	<b>0.11</b>	<b>0.00</b>	<b>77,769</b>	<b>197</b>	<b>0.63</b>	<b>0.08</b>	<b>49,526</b>	<b>228</b>	<b>1.78</b>	<b>1.57</b>



## 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

The ore processed from the La Parrilla mining operation consists of two essential types: oxides and sulfides. Oxides are the in-situ oxidation product of the sulfide ore. For both ore types the principal economic component is silver. The ores also contain significant amounts of lead and zinc, and minor amounts of gold. Oxide ores are processed by cyanide leaching to produce doré metal; sulfide ores are processed by differential flotation to produce a silver-rich lead concentrate and a zinc concentrate.


Metal recovery of silver in the cyanide leaching circuit is currently low by general industry standards, about 65 percent. Recovery of silver in the flotation circuit is good, amounting to about 82 percent into the lead flotation concentrate and 3 percent into the zinc flotation concentrate. Lead and zinc recoveries and concentrate grades are not particularly good. There is a likelihood of higher silver recovery in the cyanide leach circuit with longer leach times following the plant expansion currently in progress. The valuable mineral in the sulfide ore is essentially argentiferous galena. The mineralogy of the oxide ore is essentially the oxidation product of the sulfides. It is probable that most of the silver occurs as argentite.

Ore processed in the plant up to now has been mostly from the Rosa/Rosario and La Blanca veins with smaller amounts from the San Marcos and Quebradillas veins. Future ore will also include that from the Vacas deposit, the sulfide fraction of which has a high zinc content.

Results of recent metallurgical test work are summarized in Table 13-1. As shown in the table, flotation of Quebradillas ore shows slightly better results than those of the plant operation. Cyanidation of old Vacas tailings gave poor results but a sample of high-grade in-situ ore leached well. Flotation of Vacas ore has given mixed results, some good and some poor, though it is expected that the plant operation will be good as a consequence of the mineralogy of the ore which exhibits well crystallized galena and sphalerite with minimal fine crystal intergrowth. While the zinc recovery in tests of the Vacas sulfide ore are inconsistent, it is probable, given the mineralogy and higher zinc grade of the deposit, that recoveries will be better than the average of that for the district; PAH believes it appropriate to use a zinc recovery of 60 percent for Vacas sulfide ore.

Figure 13-1 shows one view of the Plant Expansion in progress.



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Project Name  
**La Parilla Project**

**FIGURE 13-1**  
**Plant Expansion in Progress**

Date of Issue  
**May 2011**

Drawing Name  
**Fig13-1.dwg**

Project No.  
**DE-00200**

**TABLE 13-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Metallurgical Testwork Summary**

Deposit		Quebradilla	Quebradilla	Quebradilla/ Rosario Mix	Vacas	Vacas	Vacas	Vacas	Vacas
Ore Type		High-Grade Oxide	Sulfide	Sulfide	Tailings Oxide	High-Grade Oxide	Sulfide	Sulfide	Sulfide
Test Type		Cyanidation	Flotation	Flotation	Cyanidation	Cyanidation	Flotation	Flotation*	Flotation*
Test Date	Units	2010-11	Sep-08	May-10	2010-11	2010-11	Oct-08	Sep-10	Oct-10
<b>Feed Grade</b>									
Silver	grams/tonne	250	200	316	112	367	181	150	160
Lead	percent	1.36	2.13	3.3	1.52	1.83	3.44	2.6	1.9
Zinc	percent	0.3	1.28	2.5	1.54	1.8	8.51	6.4	5.8
<b>Recovery</b>									
Silver dissolution		78			40.5	86.9			
Lead concentrate									
Silver	percent		75.9	85.0			84.7	62.0	59.4
Lead	percent		54.0	91.9			94.3	60.1	61.6
Zinc	percent		10.1	8.3			3.5	22.7	11.1
Zinc concentrate									
Zinc	percent		50.5	82.8			95.6	52.9	66.2
<b>Concentrate Grades</b>									
Lead									
Silver	grams/tonne		3,456	3,757			1,650	690	584
Lead	percent		21.3	41.8			46.1	10.0	7.7
Zinc	percent		20.3	39.9			50.5	20.5	21.0
<b>Reagent Consumptions</b>									
Cyanide	grams/tonne	1.9			5.5	5.3			
Lime	grams/tonne	1			53	11			

\* Roughing only

## 14.0 MINERAL RESOURCE ESTIMATES

Description of the Mineral Resources and Reserves for La Parrilla was reported in previous Technical Reports prepared by PAH including the Amended and Restated Technical Report dated February 26, 2009, as follows: La Parrilla uses conventional, manual methods, supported by computer applications and software, to calculate the tonnage and average grades of the mineral Resources and Reserves.

FMS has initiated the compilation of all data to incorporate it into a database and create a geologic model in SURPAC software which has been acquired by FMS. Preliminary modeling in SURPAC was applied to the Quebradillas outcropping area for projected open pit mining. Currently FMS maintains geologic interpretations and mine plans in AutoCAD and databases in Excel spreadsheets.

PAH has reviewed FMS calculated Resources and Reserves for La Parrilla to assess the current status of the property and to use it as a basis for reconciliation. This estimate is also the basis for design and evaluation of exploration programs for the mine. This Resource / Reserve calculation has been estimated as of June 30, 2011.

FMS Mineral Resources and Reserves are estimated by La Parrilla geology and mining staff under the direction of FMS corporate explorations director, Mr. Florentino Muñoz, QP.

### 14.1 *Introduction*

FMS initiated exploration activities at the La Parrilla Silver Mine area in July 2005. Diamond drilling and underground development works were focused in exploring the Los Rosarios System. Other than exploration by Grupo México at Quebradillas and Vacas mines, no other significant exploration studies had been carried out at La Parrilla until FMS initiated these investigations.

FMS exploration investigations are based on underground development and drilling at the Los Rosarios mineralized structure, which includes La Blanca, La Rosa, and Rosarios mines; and later programs carried out on the San Marcos, Quebradillas, Vacas, San Onofre, Santa Paula, and Témiz – La Blanca. As a result of these exploration efforts, other areas have been located that will be included in future FMS programs, such as the Quebradillas and geophysical anomalies at Cerro Santiago and La Cruz.

FMS initiated exploration programs based on drifting and channel sampling. Old workings and accessible areas within the Los Rosarios system were a primary target for confirmation and further exploration by FMS, as well as other promising areas of resources.

Exploration studies by FMS at La Parrilla to June 30, 2011, amounts up to 409 drill holes with a total drilled depth of 87,212 m; 274.2 km of geophysical surveying (IP/RA), including 46 km carried out by FMS during 2007; 36 km<sup>2</sup> of aeromagnetic investigations; and about 4,100 samples for geochemical research, in addition to 8,947 m of underground development, from 2007 to June 30, 2011.

## 14.2 *Methodology*

La Parrilla 's actual Reserve and Resource blocks are primarily located in the Los Rosarios, San Marcos, Quebradillas, and Vacas mines. Mineralization at La Parrilla is controlled by regional and local mineralized structures, intrusive stocks, dikes, sills and the metasomatic zone that surrounds the main diorite stock.

Regional and local geologic features appear to indicate that the main mineral concentrations are emplaced in the surrounding area are related to deep-seated diorite stocks. These stocks are well defined by magnetic anomalies. Geologic structures are located and oriented around the boundaries of the deep igneous bodies, which probably originated them during tectonic events. Breccia zones and intense fracturing of some areas were also originated by the igneous events. Chemically and structurally favorable enclosing rocks have allowed deposition and replacement of the economic mineralization in the area.

Under this propitious geologic environment, the Resource and Reserve blocks have been defined at the various mineralized structures, veins, veinlets, intersections and stock-work zones at the drift levels along the Los Rosarios system and other FMS mines within the area, where sampling has found economically mineable mineralization.

Main parameters and considerations for estimating Resources and Reserves are summarized in Table 14-1.

For Reserve estimation, the cross sectional area of mineralization is drawn on each of the blocks using AutoCAD software and the assayed sample lengths. The volume of mineralization of each section is calculated for the mineralized zone. The Reserve Blocks are projected up and down by a maximum length of 20 m in vertical extension, although they may be limited by mine drifts or other workings. Mine dilution is adjusted to a minimum mining width of 2 m. Proven Reserves are based on channel sampling of contiguous drift levels and accessible raises and other mine works. Probable Reserves are projected at 20 m beyond the proven blocks. Measured and Indicated Resources are projected beyond the Probable Reserves, considering geologic features and evidences of mineralization continuity. Resource estimates are projected at 25 m from the drill intercepts.

To estimate the average grade and thickness for each Reserve / Resource block at La Parrilla composites of all channels and sample grades that occur on either side within the block's drifts are taken into consideration. The total length of samples in the composite is then divided by the total number of composites, giving the average width of the mineralization in the drift at that section. Similarly, the average silver grade of the samples, weighted by length, gives the average silver grade for the drift at that section.

The tonnes and grade for each Resource Block are then determined by combining the tonnes and grade results obtained for each section that crosses the block. The Resource Block tonnes and grade are tabulated by FMS on a series of spreadsheet summaries.

**TABLE 14-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Main Parameters and Considerations for Resource/Reserve Estimates**

<b>Parameters and Considerations</b>	<b>Magnitude</b>
Geologic mapping, surveying	Regional and Local
Cross sections, interpretation	At 30 m and 50 m spacing
Mine workings, levels	At 30 m to 50 m vertical
Geophysical investigations	274.2 km - lines, IP and RA
	46 km - lines, IP and RA
	36 km <sup>2</sup> , aeromagnetics
Geochemical sampling	4,100 samples
Underground Exploration development	8,947 meters
Drifts, Cross Cuts, Mine Access Ramps, etc.	Mine levels at 30 m to 50 m
Channel Sampling	At 2 m - 3 m spacing along structures
	Geology controlled, width= 0.50 m to 1.50 m channel
Diamond Drilling, Surface and UG sites	Total 409 drill holes = 87,212 drilled meters; avg drill hole = 213 m
	Sampling mineralized zones only
Quality Assurance / Quality Control	Sampling stream includes: duplicate, standard, and blank samples, and pulp checks
	Assays performed by: Inspectorate (ISO9001:2000); ECO Tech Laboratory Ltd (ISO 9001:2008); and La Parrilla lab
Mineral Resource Estimates	Measured, Indicated, and Inferred
	Mine blocks: 50 m to 100 m long; 20 m to 30 m vertical
	Mine blocks thickness = Mineralized structures >2 m
	Drill hole intercepts and projections <25 m
	Grade above cutoff
Inferred Resources	Drill holes intercepts and mine blocks beyond Indicated
Mineral Reserves	Proven and Probable
	Estimated from Measured and Indicated Resources
	Accesible for mining with mining method
	Minimum mining width = 2 m
	Include: Mine dilution and mine recovery
	Above cutoff grade
<b>Mineral Resources are exclusive of Mineral Reserves</b>	

To June 30, 2011

### 14.2.1 Los Rosarios System

The Reserve tonnage and grade are based largely on channel samples, while the Resources are largely determined by diamond drilling and projections of the underground developments. Reserve blocks range in length according to variable extensions of the ore shoots along the veins and breccia or mineralized zones. The Los Rosarios system has been developed about 1,500 m along strike. Within this distance FMS has defined four ore shoots: Ore shoot 4 (200 m); Ore shoot 3 (200 m); Ore shoot 2 (300 m); and Ore shoot 1 (over 150 m).

Vertical extension of the Reserve and Resource blocks is projected between contiguous drift levels. Vertical extension is generally projected to 30 m, but in some cases it may reach 50 m. The Los Rosarios

system has been developed and partially drilled, in its central portion. This system includes, from the southeast, the La Blanca, Rosarios and La Rosa mines. The central portion of the system comprises the main mining development within La Parrilla and it also holds most of the currently estimated Reserves (above mine level 10) and Resources (above 1,700 m elevation). Figure 14-1 shows a longitudinal section of the Los Rosarios vein system with Long-term Mine Plan developments and Reserve/Resource blocks.

### **14.2.2 San Marcos Deposit**

The San Marcos vein occurs in a general north-south strike at the eastern part of the area, and it tends to intercept the Los Rosarios system. The San Marcos mine was developed near the area where this projection may take place. FMS is reopening and developing the old mine in a systematic manner with ramps and regular drifting to prepare mine blocks for production, as well as for exploration. An ore shoot of approximately 200 m long has been delineated and some Reserves are already accessible for production. Most of San Marcos Reserves and Resources consist of oxidized mineralization. Few Indicated Resources have been drill intercepted. An intense drilling program indicates continuity of the mineralization to depth, as well as along strike.

The San Marcos mine workings are located at higher elevation than the Los Rosarios and Quebradillas current developments. Figure 14-2 shows a longitudinal section of the San Marcos vein with Long-term Mine Plan developments Reserve/Resource blocks.

### **14.2.3 Vacas Deposit**

The Vacas vein appears to be continuity of the San Marcos vein. It is oriented to the NW 19° SE dipping 44° to 75° to the East and its thickness averages 7.60 m. It contains massive sulfide mineralization with coarse crystals of Pb and Zn minerals. The vein mineralization occurs parallel or across the sedimentary rocks stratification. The vein has been mapped along about 400m and about 250 m to depth with drilling and underground workings. The vein's oxidation zone reaches a depth of about 120 m. Old mine working in the Vacas vein include a 240 m deep shaft which is partially collapsed. Grupo México records indicated a historical production of about 200,000 tonnes of mineralized material at an average grade of 150 g/t Ag; 5.4 percent Pb; and 6.3 percent Zn.

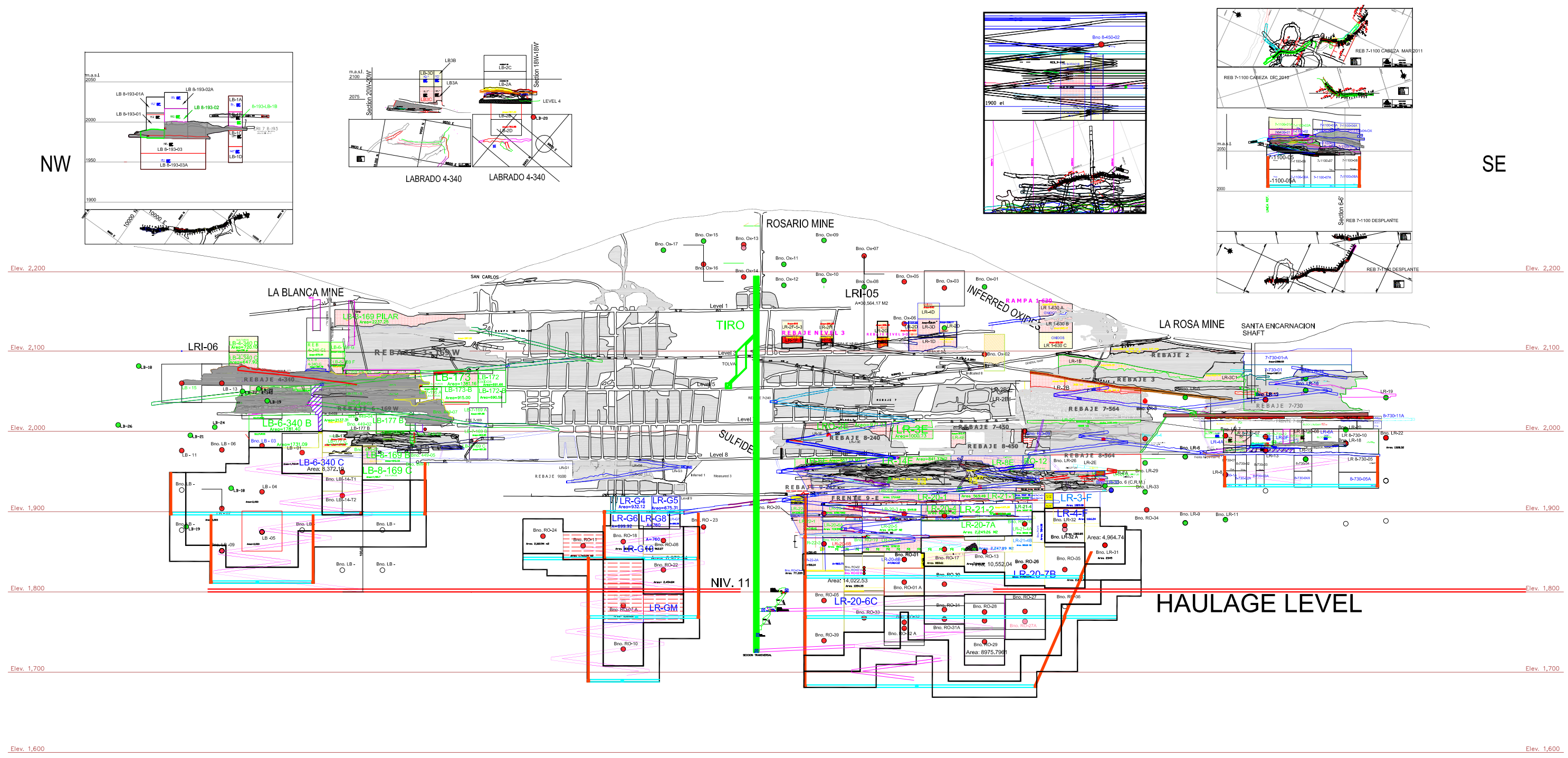
The Vacas vein deposit was explored by Grupo México including 9 drill holes with total drilled depth of 3,950 m from November 1989 to August 1990. FMS completed a drilling program from August 2007 to November 2008, with a total drilled depth of 15,217 m in 46 drill holes. Figure 14-3 shows a longitudinal section of the Vacas vein with Long-term Mine Plan developments and Reserve/Resource blocks.

### **14.2.4 Quebradillas Deposit**


Other significant Resources are now under investigation by FMS in the Quebradillas deposit where an interesting breccia pipe is under investigation and development. The Quebradillas deposit is under

NW

SE



- MINE DEVELOPMENTS
- RAMPS
  - STOPES IN ORE
  - RAISE

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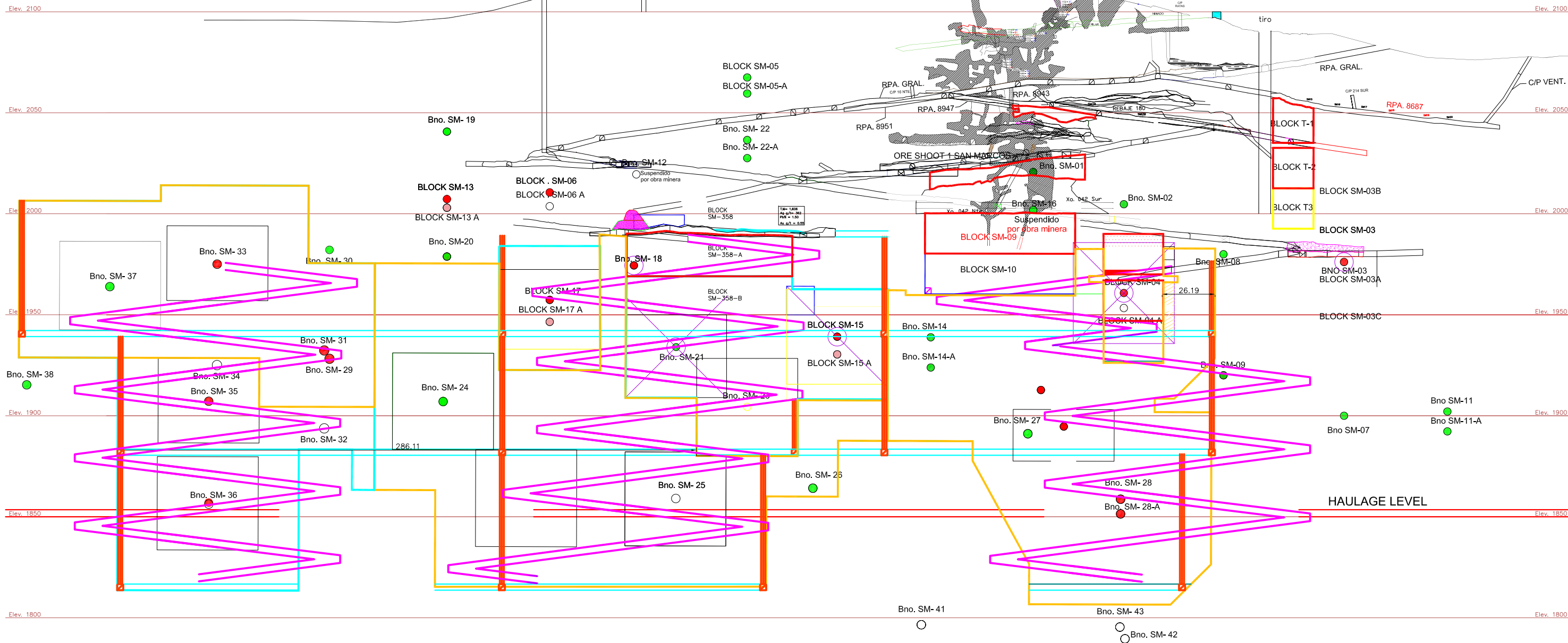
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**FIGURE 14-1**  
**Los Rosarios Mine**  
 Mineral Resource/Reserve Blocks

Date of Issue  
 Sept 2011  
 Drawing Name  
 Fig14-1.dwg




SECTION NW SE LOOKING TO NE



MINE DEVELOPMENTS

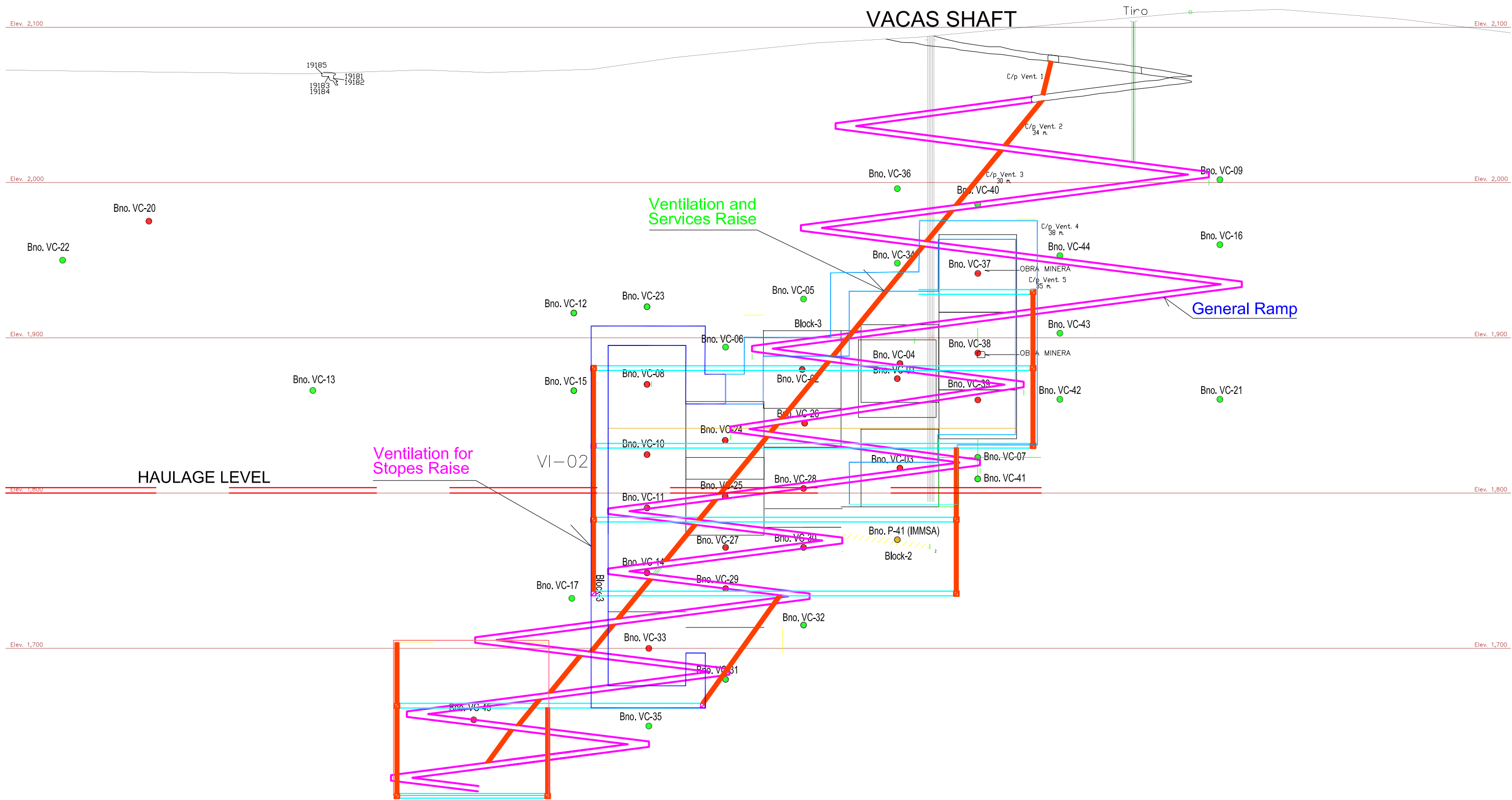
- RAMPS
- STOPES IN ORE
- RAISE

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**FIGURE 14-2**  
**San Marcos Mine**  
 Mineral Resource/Reserve Blocks

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 Fig14-2.dwg



- MINE DEVELOPMENTS**
- ▬ RAMPS
  - ▬ STOPES IN ORE
  - ▬ RAISE

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**FIGURE 14-3**  
**Vacas Mine**  
 Mineral Resource/Reserve Blocks

Date of Issue  
 Sept 2011

Drawing Name  
 Fig14-3.dwg

development by underground mining, as well as by open pit methods. The Quebradillas mineral deposit consists of breccia and fault mineralized zones.

The Quebradillas mine was acquired by FMS from Grupo México and initiated aggressive mine development and drilling to validate Grupo México's estimated Resources. During this period, FMS has estimated about 170,500 tonnes in Reserves in addition to about 489,000 tonnes of ore in Resources at the Quebradillas mine. These Reserves and Resources were estimated with drill hole samples assayed at La Parrilla lab and at Inspectorate lab, and with underground development. Geologic projections of the Quebradillas deposit appear to indicate a significant deposit for further development. Figure 14-4 shows a longitudinal section of the Quebradillas vein with Long-term Mine Plan developments and Reserve/Resource blocks.

### **14.2.5 Quebradillas Open Pit Deposit**

FMS carried out a drilling program to investigate a breccia zone on the eastern side of the Quebradillas outcropping deposit. The program included 33 drill holes with 1,944 samples. The outcropping mineralized zone was modeled in SURPAC software to evaluate the potential for open pit mining. In-pit Mineral Reserve estimates were made based on cutoff at 60 g/t Ag with composites at 1.5m and grade capping at 244 g/t Ag, considering an average density of 2.5. Proven and Probable Mineral Reserves were estimated at 1,774,200 tonnes with an average grade of 102 g/t Ag. Projected Inferred Resources resulted in 1.3 million tonnes at an average grade of 99 g/t Ag. PAH has estimated a cutoff grade of 33 g/t Ag for the Quebradillas Mineral Reserves.

This area has been under stripping with preliminary production. No additional information was provided to PAH to reconcile the preliminary production with respect to the estimated tonnages. Figures 14-5 and 14-6 show views of the East and West walls of the Quebradillas pit.

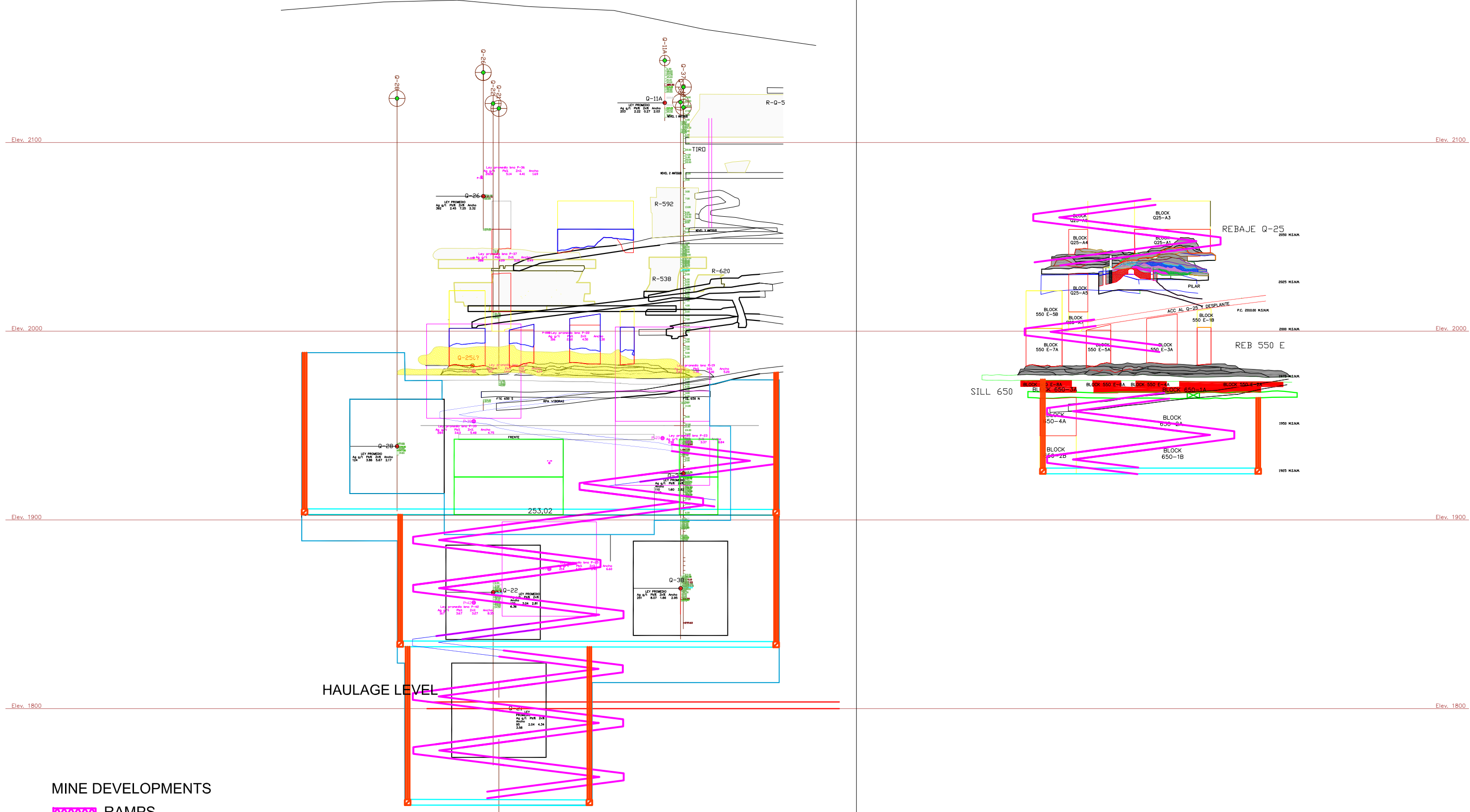
### **14.3 Density Determinations**

The density factor used (2.70) to convert Reserve block volumes into tonnes has been determined as a weighted average from ore samples representative of the various deposit areas. The density tests were performed by Mr. Manuel Yañez Escareño, Manager of the La Parrilla lab and by Inspectorate.


PAH believes that on average the density for mineralization is conservative since the results indicate a general average of 2.79. PAH recommends that samples be periodically taken as checks for bulk density determination to ensure the application of an appropriate density factor.

### **14.4 Resource Estimation**

Resource calculations by FMS at La Parrilla are based on projections of the mineralized zones in the underground mine workings, 20 m beyond the areas of Reserves for the Measured Resources, and another 20 m beyond the boundaries of the Measured Resources for the blocks of Indicated Resources. Inferred Resources are estimated by projecting up to 50 m beyond the Indicated Resource Block



- MINE DEVELOPMENTS
-  RAMPS
  -  STOPES IN ORE
  -  RAISE

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**FIGURE 14-4**  
**Quebradillas Mine**  
 Mineral Resource/Reserve Blocks

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 Fig14-4.dwg



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**FIGURE 14-5**  
**Quebradillas East Wall Pit**

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Fig14-5.dwg



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**FIGURE 14-6**  
**Quebradillas West Wall Pit**

Date of Issue  
May 2011

Drawing Name  
Fig14-6.dwg

boundaries along mineralized structures, and another 20 m beyond the blocks' width. The estimated Resource blocks may be limited by underground levels and previous mining extraction.

Longitudinal projections depend on the drift development along the mineralized zones and on the ore shoots projections and they may reach 300 m in length as in the Rosarios system.

La Parrilla mineral Resource estimates were applied mostly to diamond drilling intercepts, as well as to some adjacent blocks from the estimated Reserves.

The grade for these blocks is determined from the grade estimated for the drill hole intercepted grade and from the adjacent Resource Blocks, and sampling in mine workings and drill holes located within the block area.

FMS estimate of Measured and Indicated Resource Blocks as reviewed by PAH is shown in Table 14-2. Most of the Resources are defined by diamond drilling. The Measured and Indicated silver Resources, including oxides and sulfides mineralization, consist of 1.09 million tonnes averaging 146 grams per tonne silver, for a total content of 5.1 million ounces of silver only contained or 8.1 million ounces of silver equivalent net of gold credit for oxides and lead and zinc for sulfides. The Resources grade has been estimated "in situ" above cutoff grade, and the silver equivalent content is net of gold credit in oxides, at 5 g/tonne Ag, and net of lead and zinc credit for sulfides, at 39 and 2 g/tonne Ag respectively per percent of the base metals. This estimate is based on the following prices: Ag - \$23.85/oz, Au - \$1,300/oz, Pb - \$1.00/lb and Zn - \$1.00/lb.

## **14.5 Additional Geologic Potential**

FMS continues to identify Reserve and Resource blocks, and exploring additional areas. The estimated mineral Resources are considered conservative, since only adjacent blocks are projected from the Reserve Blocks. Mineralization within the metasomatic zone in the contact between the intrusive stock and the carbonaceous Cuesta del Cura Formation has shown high probability of occurrence as Skarn deposits.

Additional geologic potential exists within the La Parrilla area to investigate targets that may result in significant resource development for the operation such as the outcropping Quebradillas and the Vacas areas. Direct exploration of the geophysical anomaly areas may be confirmed as significant target zones for further exploration. Geophysical investigations by FMS during 2007 and 2010, have indicated anomalous areas of interest for further exploration, which confirm previous investigations by Grupo México with magnetic and IP methods and may represent concentrations of sulfides or other conductive minerals.

Other areas representing interesting geologic potential within the FMS holdings are the following:

- San José mine
- Sacramento

TABLE 14-2

First Majestic Silver Corp.  
La Parrilla Silver Mine

Measured and Indicated Mineral Resources Estimated by FMPlata, as of June 30, 2011 (\*)

MINERAL RESOURCES Mine	Mineralization Type	Category	Metric Tonnes	Width meters	Grade				Contained Silver "In Situ" (1)	
					Gold g/t	Silver g/t	Lead, %	Zinc, %	Silver only (1)	Silver equiv (2)
La Rosa-Rosarios-La Blanca	Oxides	Measured	56,108	2.52	0.03	144	0.00	0.00	259,000	268,000
Quebradillas	Oxides	Measured	193,872	11.24	0.00	156	2.46	1.92	970,000	1,001,100
<b>Sub - Total</b>	<b>Oxides</b>	<b>Measured</b>	<b>249,980</b>	<b>9.28</b>	<b>0.01</b>	<b>153</b>	<b>1.91</b>	<b>1.49</b>	<b>1,229,000</b>	<b>1,269,100</b>
<b>Total</b>	<b>Oxides</b>	<b>Measured + Indicated</b>	<b>250,000</b>	<b>9.28</b>	<b>0.01</b>	<b>153</b>	<b>1.91</b>	<b>1.49</b>	<b>1,229,000</b>	<b>1,269,100</b>
La Rosa-Rosarios-La Blanca	Sulfides	Measured	84,999	2.59	0.16	124	1.52	1.64	339,155	451,199
Quebradillas	Sulfides	Measured	148,892	9.20	0.00	270	2.93	2.97	1,293,665	1,489,932
Vacas (last 43-101)	Sulfides	Measured	546,904	9.78	0.02	119	1.74	6.94	2,093,002	4,498,408
<b>Sub - Total</b>	<b>Sulfides</b>	<b>Measured</b>	<b>780,800</b>	<b>8.89</b>	<b>0.03</b>	<b>148</b>	<b>1.94</b>	<b>5.60</b>	<b>3,725,800</b>	<b>6,439,600</b>
Quebradillas	Sulfides	Indicated	4,735	2.67	0.00	343	2.15	4.59	52,200	58,500
Vacas (last 43-101)	Sulfides	Indicated	51,580	2.03	0.01	50	1.02	3.31	82,500	309,400
<b>Sub - Total</b>	<b>Sulfides</b>	<b>Indicated</b>	<b>56,300</b>	<b>2.08</b>	<b>0.01</b>	<b>74</b>	<b>1.11</b>	<b>3.41</b>	<b>134,700</b>	<b>367,900</b>
<b>Total</b>	<b>Sulfides</b>	<b>Measured + Indicated</b>	<b>837,100</b>	<b>8.43</b>	<b>0.03</b>	<b>143</b>	<b>1.88</b>	<b>5.46</b>	<b>3,860,500</b>	<b>6,807,500</b>
<b>TOTAL RESOURCES</b>	<b>Oxides + Sulfides</b>	<b>Measured + Indicated</b>	<b>1,087,100</b>	<b>8.63</b>	<b>0.03</b>	<b>146</b>	<b>1.89</b>	<b>4.54</b>	<b>5,089,500</b>	<b>8,076,600</b>

Notes: Cutoff = Sulfides \$74.12/tonne (Ag only - 124 g/t; Pb only - 3.96%; Zn only - 4.16%; Vacas Zn only - 6.65%); Oxides Ag only = 81 g/t; Ag + Au = 86 g/t.

(1) Containing Silver "In Situ" only. Rounded totals.

(1).-No recoveries are considered in the Resources

(2).-Contained Silver Equivalent "In Situ"= Oxides Ag + Payable Au=5 g/t-Ag. Sulfides = Payable Pb=39 g/t-Ag; Zn = 2 g/t-Ag (Vacas 97.8 g/t-Ag).

(\*) Resources are Exclusive of Reserves



- Cerro Santiago
- Stockwork zone to the East of Quebradillas
- Las Víboras
- San Marqueña
- Mina Santa Paula
- Color anomaly to the West of San José de la Parrilla, and
- La Protectora, etc.

Additional Inferred Resources have been projected in the La Rosa/Rosarios/La Blanca system, San Marcos, Quebradillas and Vacas zones. These are estimated in addition to the reported Measured and Indicated Resources and Proven and Probable Reserves.

FMS has estimated additional silver Resources at a distance beyond the Measured and Indicated Mineral Resources. These Inferred Resources are estimated at 9.3 million tonnes at an average grade of 166 g/tonne Ag, representing a content of 49.9 million ounces of silver only, or 61.2 million ounces of silver equivalent including Au, Pb and Zn, within the Resource. These Inferred Resources include a preliminary estimate of Resources at the Quebradillas area for projected open pit mining. These additional Resources lack sufficient drifting, raising, sampling, drill holes or old workings with production data and are estimated at a lower degree of confidence than the other Reserve or Resource categories. PAH considers these additional Resources to be of an Inferred category and they are based on projections of presumed vein continuity ahead, above, and below current mining; and are based on widely-spaced drill holes, surface sampling or old surface workings. These Resources are presented by FMS as Inferred Resources.

The Inferred Resources need considerable grade and tonnage information before they can be “proved up” to “Measured or Indicated Resources.” To date, Los Rosarios system at La Parrilla has demonstrated a continuity along about 1.5 km of strike length and down dip to about 400m; so it is reasonable to assume that in the future, Resources will continue to be converted to Reserves (ore) as additional drifting, crosscutting and raising define vein configurations, sampling and assaying determine the grade, and diamond drilling confirms vein extensions and fills in data gaps. Inferred Resources for La Parrilla are presented in the lower portion of Table 14-3.

## **14.6 Conclusion**

PAH believes that FMS Reserve and Resource estimates for the La Parrilla have been reasonably prepared and conform to acceptable engineering standards for reporting of Resources. PAH believes that the classification of the Reserves and Resources meets the standards of Canadian National Instrument NI 43-101 and the definitions of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM).

The Reserves and Resources herein reported by FMS were reviewed by PAH and constitute part of an active operation since 2004 by FMPlata, a Mexican subsidiary of FMS. In PAH’s opinion there are no significant technical, legal, environmental, political or other kind of restrictions; therefore, these Reserves and Resources, which are exclusive of each other category, may not be materially affected by issues that could prevent their extraction and processing.

TABLE 14-3

First Majestic Silver Corp.

La Parrilla Silver Mine

Inferred Mineral Resources Estimated by FMPlata, as of June 30, 2011 (\*)

UNDERGROUND INFERRED RESOURCES											
MINERAL RESOURCES	Mineralization	Category	Metric Tonnes	Width meters	Grade				Contained Silver "In Situ" (1)		
Mine	Type				Gold g/tonne	Silver g/tonne	Lead, %	Zinc, %	Silver only (1)	Silver equivalent (2)	
La Rosa-Rosarios-La Blanca	Oxides	Inferred	478,800	2.43	0.00	162	0.15	0.07	2,493,800	2,570,800	
San Marcos	Oxides	Inferred	1,126,800	3.28	0.05	225	0.37	0.18	8,159,600	8,335,000	
<b>Sub -Total</b>	<b>Oxides</b>	<b>Inferred</b>	<b>1,605,600</b>	<b>3.03</b>	<b>0.04</b>	<b>206</b>	<b>0.31</b>	<b>0.14</b>	<b>10,653,500</b>	<b>10,905,800</b>	
La Rosa-Rosarios-La Blanca	Sulfides	Inferred	5,121,100	6.42	0.00	182	1.18	0.74	29,897,000	36,647,600	
Quebradillas	Sulfides	Inferred	348,100	4.64	0.00	131	2.56	3.28	1,460,800	1,919,600	
San Marcos	Sulfides	Inferred	186,500	3.67	0.00	214	0.82	0.80	1,280,300	1,516,400	
Vacas (last 43-101)	Sulfides	Inferred	791,900	9.88	0.02	97	1.31	6.52	2,467,100	5,949,900	
<b>Sub - Total</b>	<b>Sulfides</b>	<b>Inferred</b>	<b>6,447,600</b>	<b>6.67</b>	<b>0.00</b>	<b>170</b>	<b>1.26</b>	<b>1.59</b>	<b>35,105,200</b>	<b>46,033,500</b>	
<b>TOTAL INFERRED RESOURCES</b>	<b>Oxides + Sulfides</b>	<b>Inferred</b>	<b>8,053,200</b>	<b>5.94</b>	<b>0.01</b>	<b>177</b>	<b>1.07</b>	<b>1.30</b>	<b>45,758,700</b>	<b>56,939,300</b>	

Notes: Inferred Resources do not have economic value. Rounded figures.

(1) Contained Silver "In Situ" only.

(1).-No recoveries are considered in the Resources

(2).-Contained Silver Equivalent "In Situ"= Oxides Ag + Payable Au=5 g/t-Ag. Sulfides = Payable Pb=39 g/t-Ag; Zn = 2 g/t-Ag (Vacas 97.8

QUEBRADILLAS OPEN PIT INFERRED RESOURCES											
QUEBRADILLAS OPEN PIT	Oxides	Inferred	1,293,600	0.00	0.00	99	0.00	0.00	4,100,400	4,308,300	
<b>TOTAL OPEN PIT INFERRED RESOURCES</b>	<b>Oxides</b>	<b>Inferred</b>	<b>1,293,600</b>	<b>0.00</b>	<b>0.00</b>	<b>99</b>	<b>0.00</b>	<b>0.00</b>	<b>4,100,400</b>	<b>4,308,300</b>	

Notes: Inferred Resources do not have economic value. Rounded figures.

(1) Contained Silver "In Situ" only.

(1).-No recoveries are considered in the Resources

(2).-Contained Silver Equivalent "In Situ"= Oxides Ag + Credits Au=5 g/t-Ag. Cutoff grade Ag-33g/t only.

(\*) Inferred Resources are Exclusive of Proven and Probable Reserves and Measured and Indicated Resources

## 15.0 RESERVE ESTIMATES

PAH has reviewed the La Parrilla Reserve update of June 30, 2011, along with factors for mining dilution to a minimum mining width of 2 m and mining recovery. In addition, the sampling methods, assaying procedures, compositing methods, data handling, cutoff grade application and grade calculations were reviewed. Several Reserve Blocks were cross-checked to track data handling from the initial assays to the final tonnage and grade calculation to ensure that the stated methods and practices were observed.

FMS has estimated Proven and Probable Reserves for La Parrilla's following deposits:

- La Rosa – Rosarios vein system
- San Marcos
- Vacas
- Quebradillas UG and OP

The total “in situ” diluted Proven and Probable Reserves at a minimum mining width of 2 m, as reviewed by PAH, is 4.1 million tonnes averaging 162 grams per tonne silver, 0.9 percent lead and 1.3 percent zinc, for a total of 15.3 million recoverable ounces of silver only or 17.9 million ounces of silver equivalent contained with gold and lead credits. As discussed previously in the calculation methodology section, the Proven ore category has been projected up to 20 meters from the drift sample data, while the Probable ore category is projected another 20 meters beyond the proven ore. Table 15-1 presents a summary of La Parrilla Proven and Probable Reserves.

During the period of September 30, 2008 to June 30, 2011, La Parrilla operation mined and processed a total of 770,900 tonnes of mineral reserves with an average grade of 216 g/t-Ag from the La Rosa – Rosarios – La Blanca, Quebradillas, San Marcos, and Vacas mines. The estimated Proven and Probable Reserves for La Parrilla to June 30, 2011 amount to 5.3 million tonnes for the underground mines with an average grade of 202 g/t-Ag. Additionally, La Parrilla developed 1.774 million tonnes in open pit Proven and Probable Reserves with an average grade of 102 g/t-Ag. These figures result in a net increment of Proven and Probable Reserves during the same period of 6.5 million tonnes containing a total of 37.1 million ounces of silver equivalent with an average grade of 164 g/t-Ag including Pb and Zn values.

The newly developed reserves may result from various factors, including continuous mine development along the mineralized structures, exploration efforts, the presence of unforeseen adjacent vein branches and breccia zones and by mine dilution to accommodate mining equipment.

Production reconciliation records shown in Section 12 of this Technical Report show detailed comparison of reserve blocks tonnages and grades mined from the La Parrilla underground mines for sulfides (Table 12-2) and oxides (Table 12-3). These reserve blocks produced higher tonnages extracted due to mine dilution, wider veins, and mineralized zones that were not included within the reserve estimates due to insufficient information in geologic mapping and projections. The sulfides mineralization resulted in 37

TABLE 15-1

First Majestic Silver Corp.  
La Parrilla Silver Mine

Proven and Probable Mineral Reserves Estimated by FMPlata, as of June 30, 2011 (\*)

UNDERGROUND RESERVES											
MINERAL RESERVES	Mineralization	Category	Metric Tonnes	Width meters	Grade				Recoverable Silver (1)		
					Gold g/tonne	Silver g/tonne	Lead, %	Zinc, %	Silver Only (1)	Silver Equiv (2)	
Mine	Type										
La Rosa-Rosarios-La Blanca	Oxides	Proven	174,241	2.50	0.00	205	0.85	0.12	747,000	765,200	
San Marcos	Oxides	Proven	40,673	2.70	0.02	224	0.50	0.07	190,500	194,700	
Quebradillas	Oxides	Proven	26,918	4.41	0.00	227	0.90	0.11	127,500	130,300	
<b>Sub - Total</b>	<b>Oxides</b>	<b>Proven</b>	<b>241,800</b>	<b>2.75</b>	<b>0.00</b>	<b>210.72</b>	<b>0.80</b>	<b>0.11</b>	<b>1,065,000</b>	<b>1,090,200</b>	
La Rosa-Rosarios-La Blanca	Oxides	Probable	156,528	2.67	0.00	204	0.80	0.13	667,800	684,100	
San Marcos	Oxides	Probable	714,749	3.15	0.08	211	0.03	0.02	3,154,700	3,229,400	
Quebradillas	Oxides	Probable	23,840	4.58	0.00	218	0.61	0.14	108,800	111,300	
<b>Sub -Total</b>	<b>Oxides</b>	<b>Probable</b>	<b>895,100</b>	<b>3.11</b>	<b>0.06</b>	<b>210.16</b>	<b>0.18</b>	<b>0.04</b>	<b>3,931,300</b>	<b>4,024,800</b>	
<b>Total</b>	<b>Oxides</b>	<b>Proven+Probable</b>	<b>1,136,900</b>	<b>3.03</b>	<b>0.05</b>	<b>210</b>	<b>0.31</b>	<b>0.06</b>	<b>4,996,300</b>	<b>5,115,000</b>	
La Rosa-Rosarios-La Blanca	Sulfides	Proven	338,977	3.12	0.00	232	1.31	0.51	2,073,700	2,440,100	
Quebradillas	Sulfides	Proven	58,822	2.92	0.00	336	4.04	3.53	521,300	584,900	
<b>Sub - Total</b>	<b>Sulfides</b>	<b>Proven</b>	<b>397,800</b>	<b>3.09</b>	<b>0.00</b>	<b>247</b>	<b>1.71</b>	<b>0.96</b>	<b>2,595,000</b>	<b>3,025,000</b>	
La Rosa-Rosarios-La Blanca	Sulfides	Probable	2,685,456	8.25	0.01	204	1.01	0.67	14,451,600	17,354,300	
San Marcos	Sulfides	Probable	190,243	5.76	0.00	232	0.00	0.00	1,161,400	1,367,100	
Quebradillas	Sulfides	Probable	184,545	4.91	0.00	199	3.04	3.05	966,000	1,165,400	
Vacas (last 43-101)	Sulfides	Probable	667,002	8.18	0.02	148	2.47	6.92	2,596,700	5,002,300	
<b>Sub - Total</b>	<b>Sulfides</b>	<b>Probable</b>	<b>3,727,200</b>	<b>7.94</b>	<b>0.01</b>	<b>195</b>	<b>1.32</b>	<b>1.87</b>	<b>19,175,700</b>	<b>24,889,100</b>	
<b>Total</b>	<b>Sulfides</b>	<b>Proven+Probable</b>	<b>4,125,000</b>	<b>7.48</b>	<b>0.01</b>	<b>200</b>	<b>1.36</b>	<b>1.79</b>	<b>21,770,700</b>	<b>27,914,100</b>	
<b>TOTAL RESERVES</b>	<b>Oxides + Sulfides</b>	<b>Proven+Probable</b>	<b>5,261,900</b>	<b>6.52</b>	<b>0.02</b>	<b>202</b>	<b>1.13</b>	<b>1.41</b>	<b>26,767,000</b>	<b>33,029,100</b>	

Notes: Rounded totals

(1).- Recoverable Silver= Ag -Recovery (65%-oxides; 82%-sulfides)-S&R charges (Oxides=0.005%; Sulfides=0.05%); Payable Pb=39 g/t-Ag; Zn = 2 g/t-Ag.

(2).- Oxides = Silver(Met recov=65%)-Smelter & Ref (0.995) + Payable Gold=5 g/t-Ag

(2).- Sulfides = Recoveries Ag (82%; payable 95%); Payable Pb=39 g/t-Ag; Zn = 2 g/t-Ag (Vacas 97.8 g/t-Ag).

(\*) Reserves are exclusive of Resources

QUEBRADILLAS OPEN PIT											
Mine	Type	Category	Metric Tonnes	Width meters	Gold g/tonne	Silver g/tonne	Lead, %	Zinc, %	Silver Only (1)	Silver Equiv (2)	
Quebradillas TAJO	Oxides	Proven	505,600	3.50	0.00	114	0.00	0.00	1,196,200	1,277,400	
Quebradillas TAJO	Oxides	Probable	1,268,600	3.50	0.00	98	0.00	0.00	2,583,600	2,787,500	
<b>TOTAL OPEN PIT RESERVES</b>	<b>Oxides</b>	<b>Proven + Probable</b>	<b>1,774,200</b>	<b>3.50</b>	<b>0.00</b>	<b>102</b>	<b>0.00</b>	<b>0.00</b>	<b>3,779,800</b>	<b>4,064,900</b>	

Notes: Rounded totals

(1).- Oxides = Silver(Met recov=65%)-Smelter & Ref (0.995) + Payable Gold=5g/t-Ag; Cutoff = 33 g/t-Ag only.

(\*) Reserves are exclusive of Resources

percent more reserves than the original estimates, while the oxides resulted in 48 percent more tonnes than the estimated reserves.

Figures in previous section of this Technical Report, 14-1, 14-2, 14-3, and 14-4 show cross-sections of the Los Rosarios, San Marcos, Vacas, and Quebradillas mines showing Reserve and Resource Blocks.

PAH notes that in this Technical Report the estimated Reserve and Resource blocks are exclusive of each other.

## 15.1 Cutoff Grade Calculations

For the current La Parrilla ore reserve PAH has calculated break-even cutoff grades based on sales of products from oxide and sulfide ores. The cutoff grades are metal price dependent; therefore, PAH calculated the average metal prices for silver, gold, lead and zinc, which are shown in Table 15-2. The 3 year averages are quite low compared to current prices and price trends. PAH has, therefore, elected to use the First Majestic price projections for silver, gold, lead and zinc, which appear to be reasonable and conservative.

**TABLE 15-2**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Metal Price Comparisons (US\$)**

Metal	Metal Prices				
	3-yr Avg.	Spot - June 30, 2011	FMS Avg 2010	FMS Avg 2011-6mos	FMS Metal Prices
Silver (per oz.)	\$19.46	\$35.80	\$21.04	\$41.48	\$23.85
Gold (per oz.)	\$1,112	\$1,529	\$1,247	\$1,570	\$1,300
Lead (per lb.)	\$0.90	\$1.14	\$0.96	\$1.15	\$1.00
Zinc (per lb.)	\$0.86	\$1.01	\$0.98	\$1.03	\$1.00

\*June 30, 2011

Since the mill and process plant of La Parrilla is equipped with both oxide and sulfide recovery circuits, and since the mine operations now include a small oxide open pit, cutoff grades for underground sulfides production, underground oxide production and open pit oxide production were calculated.

The basic parameters, applicable to the cutoff grade calculations for three scenarios, are shown in Tables 15-3, 15-4 and 15-5.

### 15.1.1 Lead-Silver Sulfide Ore

- $CGS_{Ag} = \text{Total Operating Costs} / (\text{silver price} \times \text{mill recovery} \times \text{smelter payable metal})$
- $CGS_{Ag} = \$74.1206 / (\$23.85 \times 0.82 \times 0.95) = 3.99 \text{ ozs Ag per t} \times 31.1 \text{ g/oz} = 124 \text{ gpt Ag}$

**TABLE 15-3****First Majestic Silver Corp.****La Parrilla Silver Mine****Cutoff Grade Parameters for Silver-Lead-Zinc Sulfides - U/G Mines**

<b>Concepts</b>	<b>Costs &amp; Other</b>
Silver recovery in mill (%)	82%
Lead recovery in mill (%)	87%
Zinc recovery in mill (%)	51%
Payable silver from refinery	95%
Payable lead from smelter	90%
Payable zinc from smelter	82%
*Monetary exchange rate	\$11.775 pesos/\$1.00 US
Average total U/G operating cost (U/G Mines)	\$74.12
<b>GOG - Silver only</b>	<b>124 gpt Ag</b>
<b>COG - w/lead-zinc credit</b>	<b>66 gpt Ag, 1.73% Pb, 0.17% Zn</b>

\*June 30, 2011

**TABLE 15-4****First Majestic Silver Corp.****La Parrilla Silver Mine****Cutoff Grade Parameters for Silver Oxides - U/G Mines**

<b>CONCEPTS</b>	<b>COSTS &amp; OTHER</b>
Silver recovery in mill (%)	65.0%
Gold recovery in mill (%)	90.0%
Payable silver from refinery	99.5%
Payable gold from refinery	99.0%
*Monetary exchange rate	\$11.775 pesos/\$1.00 US
Average total U/G operating cost	\$43.19 per tonne
COG -Ag only	87 gpt Ag
COG -Ag w/ Au Credit	82 gpt Ag

\*June 30, 2011

**TABLE 15-5****First Majestic Silver Corp.****La Parrilla Silver Mine****Cutoff Grade Parameters for Silver Oxide Ore - Quebradillas Open Pit**

<b>Concepts</b>	<b>Costs &amp; Other</b>
Silver recovery in mill (%)	65.0%
Gold recovery in mill (%)	90.0%
Payable silver from refinery	99.5%
Payable gold from refinery	99.0%
*Monetary exchange rate	\$11.922 pesos/\$1.00 US
**Average total OP operating cost	\$16.22
Quebradillas OP COG	<b>33 gpt Ag</b>

\*June 30, 2011

\*\*From FMs expansion plan

Lead is a significant contributor of revenues for the underground sulfide ore; therefore, the silver equivalent of the lead credit is deducted from the silver-only cutoff grade. During the 18 month period of 2010 and the first 6 months of 2011 revenue was obtained from about 6,817,150 lbs of lead, which amounts to 29.8 lbs of paid lead per tonne of sulfide ore milled and processed. The value of this metal was \$6.817 million, which converts to 285,834 oz of silver or 8,889,449 grams of silver. Based on milling and processing of 228,774 tonnes milled in the 18 month period the lead content is 39 gpt Ag equivalents as follows:

- Ag equiv. =  $(6,817,150 \text{ lbs Pb @ } \$1.00 / \text{lb Pb}) / \$23.85 \text{ per oz. Ag} ) \times 31.1 \text{ g/oz} = 8,889,449 \text{ g Ag}$
- Ag equiv. per tonne =  $8,889,449 \text{ g Ag} / 228,774 \text{ tonnes} = 38.9 \text{ gpt Ag} = 39 \text{ gpt Ag}$
- The cutoff grade adjusted for lead is then  $124 \text{ gpt Ag} - 39 \text{ gpt Ag equiv.} = 85 \text{ gpt Ag}$

Zinc has been a small contributor to sulfide ore revenues over the 2010 and first semester of 2011 period; therefore, the silver equivalent of the zinc revenue is deducted from the silver lead cutoff grade. About 363,300 lbs of zinc metal with a value of \$363,300 were produced during the 18-month period. The silver equivalent of this is 15,232.7 oz/Ag or 473,737 g/Ag. The silver equivalents per tonne milled are 2.07 gpt/Ag as follows:

- Ag equiv. =  $(363,300 \text{ lb Zn @ } \$1.00/\text{lb}) / \$23.85/\text{oz. Ag} = 15,233 \text{ oz Ag} \times 31.1 \text{ g/oz.} = 473,737 \text{ g Ag}$
- Ag equiv. per t =  $473,737 \text{ g Ag} / 228,774 \text{ tonnes} = 2.07 \text{ gpt Ag equiv. or about } 2 \text{ gpt Ag equiv.}$

The adjusted silver cutoff grade for sulfide ore containing zinc is then  $124 - 2$  or 122 gpt Ag.

The cutoff grades for sulfide ores are then:

- **CGAg ore with negligible Pb and Zn = 124 gpt**
- CG Ag-Pb ore with negligible Zn:
  - Net Pb content =  $(38.9 \text{ gpt Ag} / 31.1 \text{ g per oz.}) \times \$23.85 \text{ per oz Ag} = 29.8 \text{ lbs. Pb per tonne}$ ; mill recoveries for Pb are about 87 percent and about 90 percent of the contained lead is paid by the smelter and refinery, therefore the gross lead content is:
  - Pb content =  $29.8 \text{ lbs. per t} / (0.87 \times 0.90) = 38.1 \text{ lbs. per t or } 38.1 \text{ lbs.} / 2.2046 \text{ lbs. per kg.} = 17.3 \text{ kg/t}$
- **Pb Grade = ( 17.3 kg/ 1000 kg per t) X 100 = 1.73% Pb with 85 gpt Ag and 0% Zn**
- CG Ag-Pb-Zn ore:
  - Net zinc content =  $(2.07 \text{ gpt Ag} / 31.1 \text{ g per oz.}) \times \$23.85 \text{ per oz Ag} = 1.894 \text{ lbs. Zn per tonne}$ ; mill recoveries for Zn are about 51 percent and about 82 percent of contained zinc metal is paid by the smelter and refinery, therefore the gross zinc content is:

- Zn content = 1.71 lbs. per t/ (0.51 X 0.82)X 100 = 0.17% Zn with 66 gpt Ag and 1.66% Pb or 0.17 % Zn and 122 gpt Ag
- **Zn Grade = (2.05 kg per t/1000 kg per t) X 100 = 0.21 % Zn with 66 gpt Ag and 1.66 % Pb.**

### 15.1.2 Oxide Ore – Underground

The basic parameters for the cutoff grade calculation for mining and processing of the underground silver-gold oxide ores are shown in Table 21-4. Equating these parameters, the breakeven cutoff grade for mining and processing of the silver-gold oxide ores, based solely on silver, and based on the total operating costs (Table 21-5) and 2010 and first semester 2011 process recoveries is as follows:

- **CGOAg = \$43.19 per t./ (\$23.85 per oz. X 0.65 X 0.995) = 2.801 oz. per t Ag = 2.604 oz. per t X 31.1 g per oz. = 87.1 gpt Ag or 87 gpt Ag**

Gold is a small contributor to the oxide ore revenues. During 2010 and first semester of 2011, about 556 oz or 17,287 g Au were sold by FMS with an approximate value of \$722,800 which equates to about 30,306 oz of silver or 942,519 g Ag.

Applying mill recoveries and payable metal from the smelter the gross production of gold was:

- Au gross metal = (17,287 g Au / (0.90 X 0.95)) = 20,218 g Au
- Au Grade = 20,218 g Au/ 226,903 tonnes = 0.0891 gpt Au
- Ag equiv. for Au = (0.089 gpt Au/31.1 g per oz X \$1300 per oz Au)/ \$23.85 per oz Ag = 0.156 oz Ag
- Au contribution = 0.156 oz X 31.1 g per oz = 4.8 gpt Ag equivalents or 5 gpt Ag..

Therefore, the adjusted oxide ore cutoff grade is:

- **COG Ag-Au = 87 – 5 = 82 gpt Ag equiv.**

### 15.1.3 Oxide Ores – Quebradillas Open Pit

Recently a small open pit above the existing Quebradillas underground mine was initiated by FMS. The long range plan is for about eight years of production of oxide ore from the pit area. The costs for the operation have been estimated and these are used as the basis for the silver and gold cutoff grades for the pit. The basic parameters for the cutoff grade calculation for mining and processing of the Quebradillas open pit silver oxide ores are shown in Table 15-5; gold has not been considered by FMS as an important revenue source from this pit.

Equating these parameters, the breakeven cutoff grade for mining and processing of the silver oxide ores, based solely on silver, and based on the total operating costs (Table 21-6) and 2010 and first semester of 2011 process recoveries, is as follows:



- $$\text{CGOAg} = \$16.22 \text{ per t.} / (\$23.85 \text{ per oz.} \times 0.65 \times 0.995) = 1.0515 \text{ oz. per t Ag or } (1.0515 \text{ oz. per t} \times 31.1 \text{ g per oz.}) = 32.7 \text{ gpt Ag or } 33 \text{ gpt Ag}$$

#### 15.1.4 Sulfide Ores – Vacas Mine

The cutoff grade for the Vacas mine, the ores of which are principally zinc sulfides with appreciable of silver was calculated using the average grades of 6.92 percent Zn and 148 gpt Ag per tonne, which are the FMS Proven and Probable average reserves grades for La Parrilla. One of the major assumptions in this cut off calculation is that zinc recovery will improve from a current average of about 51 percent to over 60 percent in the expanded mill and process plant, and that the concentrate grade will be acceptable to most zinc smelters (+50% Zn). All other parameters remain the same including the calculated operating cost of \$74.12 per tonne, as shown in Table 15-6.

**TABLE 15-6**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Cutoff Grade Parameters for Vacas Silver - Zinc Sulfides; U/G Mines**

CONCEPTS	COSTS & OTHER
Silver recovery in mill (%)	65.00%
Gold recovery in mill (%)	90.00%
Zinc recovery in mill	60.00%
Payable silver from refinery	95.00%
Payable gold from refinery	99.00%
*Monetary exchange rate	\$11.775 pesos/\$1.00 US
Average total U/G operating cost	\$74.12 per tonne
COG -Ag only	124 gpt Ag
COG -Zn only	6.84%

Equating the applicable parameters, the breakeven cutoff grade for mining and processing of the Vacas silver sulfide ores, based solely on silver, and based on the total operating costs (Table 21-6) and 2010 and first semester of 2011 process recoveries, is as follows:

$$\text{COGAg Vac,} = \frac{\$74.12 \text{ per tonne}}{(\$23.85 \text{ per oz.} \times 0.82 \times 0.95)} = 3.99 \text{ opt Ag or } 124.1 \text{ gpt Ag or } 124 \text{ gpt Ag}$$

The average grade of zinc in Vacas sulfide ores is 6.92 percent Zn. Recovered zinc in mill & smelter =  $(0.692 \times 1,000 \text{ kg/tonne} \times 2.2046 \text{ lb/kg} \times 0.60 \times 0.82) = 75 \text{ lbs/tonne}$ .

Value of recovered zinc =  $75 \text{ lbs} \times \$1.00 \text{ per lb} = \$75.00 \text{ per tonne}$ .

Operating costs = \$74.12 per tonne therefore factor =  $\frac{\$74.12 \text{ per tonne}}{\$75.00 \text{ per tonne}} = 0.988$

$$\text{COG Zn Vac} = 0.988 \times 6.92 = 6.84\% \text{ Zn}$$

### 15.1.5 Summary of Cutoff Grades

A summary of some combinations of cutoff grades for underground sulfide and oxide ores, as well as open pit oxide ores is shown in Table 15-7.

**TABLE 15-7**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Summary of Typical Underground and Open Pit Cutoff Grades**

SULFIDE ORES - U/G Mines	Silver Grade	Gold Grade	Lead Grade	Zinc Grade
	(gpt Ag)	(gpt Au)	(% Pb)	(% Zn)
Silver Only	124	NA	0%	0%
Silver - Lead Only	68	NA	1.66%	0%
Silver-Lead-Zinc	66	NA	1.73%	0.17%
Lead Only	0	NA	3.96%	0%
Zinc only	0	NA	0%	4.16%
Zinc only (Vacas)	0	0	0%	6.84%
<b>OXIDE ORES - U/G Mines</b>				
Silver only	82	0	NA	NA
Silver - gold	77	0.1	NA	NA
Gold only	0	1.6	NA	NA
<b>OXIDE ORES -OP Mine</b>				
Silver only	33	NA	NA	NA

### 15.2 *Opinion*

The Mineral Reserves herein reported by FMS were reviewed by PAH and constitute part of an active mining operation since 2004. In PAH's opinion these Reserves have been estimated according to acceptable engineering practices and reported in conformance to the standards of Canadian National Instrument NI 43-101 and definitions of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM).

In PAH's opinion there are no significant legal, environmental, political or any other kind of restrictions that may affect or prevent extraction, processing and marketing of the estimated Mineral Reserves.

## 16.0 MINING METHODS

Mine design, recent production, manpower, mine equipment, anticipated capital expenditures, and current and expected operating costs are described in this section of the report.

La Parrilla operations include production from four different underground mines, and a small open pit. The underground operations are, Rosario-La Blanca, San Marcos, Quebradillas and Vacas. The open pit has been developed on oxide ore situated atop the active Quebradillas underground mine. The Quebradillas and Vacas projects, along with an extensive adjoining land package, were acquired from Grupo México in 2006.

The Mine Engineering Department currently does all the mine planning and engineering for the operation, although mining consultants were employed to evaluate, design and schedule the open pit operation. Most engineering and planning consists of annual, and monthly and daily development and production plans and schedules; however, rock mechanics, ventilation and dewatering issues are also addressed by the mining engineers.

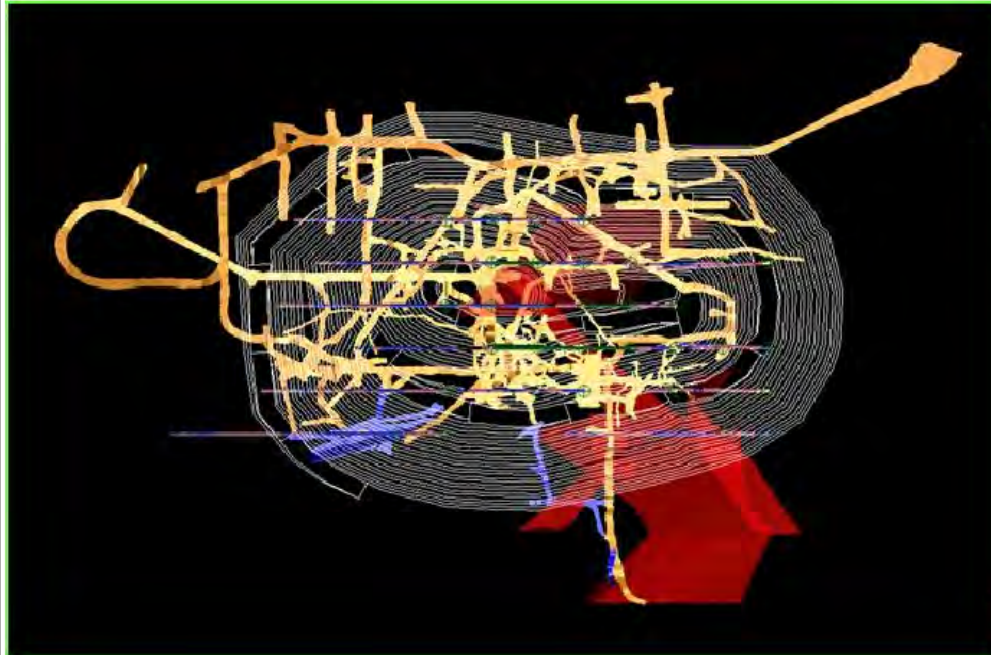
Most mine development and exploration, and production and support operations for La Parrilla, including the new Quebradillas open pit, are performed by external mining contract firms. The mill and process plant is operated exclusively with company personnel, as are administrative and technical support functions.

Mine production is obtained from four distinct areas of La Parrilla mining district. These are La Blanca-Rosa-Rosarios, San Marcos, Quebradilla, and Vacas underground mines. A recently commenced open pit is in development on oxidized ores of the Quebradillas system will provide mainly oxide ore for the plant in the near future. Figure 16-1 shows Quebradillas Open Pit.

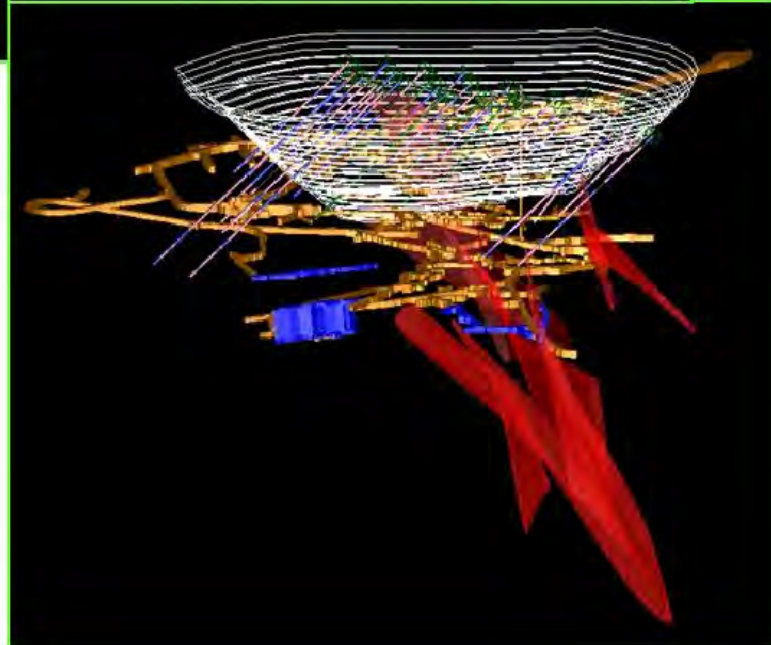
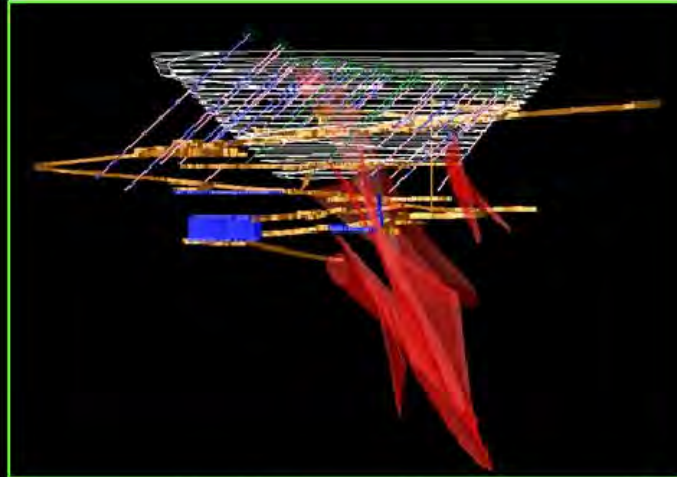
The underground stoping method used for mining the near-vertical veins and orebodies of the operations of La Parrilla is overhand cut and fill. Some longhole stoping was done in the recent past, but no longhole stopes are currently being mined. Stope cuts are currently drilled with hand-held pneumatic jackleg drills. Stoping is largely done using breast-mining techniques, although some back stoping is also done. Ore is mucked in the stopes utilizing diesel-powered load-haul-dump units (LHDs), which have access to the stopes through crosscuts driven from ramps driven in the footwall of the stope. Once a stope back has been completely mined out the full length of the stope, backfilling is done using waste from development. The minimum mining width for all the mine operations is about 2.0 meters.


In 2010, mine and mill production from La Parrilla was about 3,228,220 equivalent ounces of silver from mining 228,471 tonnes of oxide and mixed ores and 225,225 tonnes of sulfide ores. FMS metal production was 806,951 equivalent ounces of silver during the first semester of 2011, obtained from 77,960 tonnes of oxides and mixed ores and 73,906 tonnes of sulfide ores. Mine production of oxide ore was 13.3 percent above budget in 2010, and has been 13 percent above budget in 2011. Sulfide ore produced was 14.9 percent over budget in 2010, and for the first semester of 2011, is 2.7 percent

QUEBRADILLAS  
25x25 m DDH GRID



QUEBRADILLAS OPEN PIT



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Drawing Provided by/Prepared for  
**First Majestic Silver Corp.**

Project Name  
 La Parilla Project

Project No.  
 DE-00200

FIGURE 16-1  
 Plan Section and Isometric Views of Quebraillas Open Pit

Date of Issue  
 May 2011

Drawing Name  
 Fig16-1.dwg

under budget. Total mine and mill production was 303,811 tonnes during 2010 and 151,866 tonnes during the first semester of 2011. These compare to 266,307 tonnes budgeted for 2010 and 144,963 tonnes budgeted for the first 6 months of 2011. Although a small portion of the ore both oxides and sulfides was obtained from development work, most was from stoping operations with a very small amount obtained from old stope backfill material. About 11 active stopes are required to maintain current production levels, and this will increase to about 27 active stopes for the expanded operations.

The actual mined production with respective ore grades from each ore type, oxides and mixed ore and sulfides, is shown in Table 16-1, and the actual mine production tonnes by month for the 2010 and first semester 2011, 18-month period is shown in Table 16-2.

The total mine production tonnes and average grade for 2010 and first semester of 2011, versus the budgets for the same period, is shown in Table 16-3, and the 18-month period production and milling in comparison to the budgeted production for the period 2010 through first semester 2011 is shown in Table 16-4.

Mine development for La Parrilla Silver Mine is done with conventional methods, although blasthole drilling with hand-held jackleg drills is being replaced with electro-hydraulic diesel-powered drill rigs. The development sequence is still drill-blast-muck, with mucking done with rubber-tired, diesel-powered load-haul-dump units (LHDs). Haulage of ore and waste is accomplished using both low-profile and highway type diesel dump trucks. Drifts and ramps require little ground support, and the operators are installing rock bolts with or without wire mesh, and also shotcrete in dubious ground of the backs and ribs of drifts and ramps, and also in stope backs. Bored and conventional raises are largely unsupported with occasional rock bolting done where dubious ground conditions have been identified.

A considerable amount of mine development and exploration projects are required to sustain the ore resources and stope development at the levels required to maintain the required production rates for La Parrilla Silver Mine. The total development driven during 2010 and first semester 2011 was 9,818 meters; 7,775 meters in 2010, and 2,043 meters during 1<sup>st</sup> semester 2011. Development for 2010 was 9.2 percent below budget, but is 57 percent below budget for first semester 2011. During 2010, 1,838 meters of exploration headings were driven in the mines, and in first semester 2011 these amounted to 379 meters.

A summary of all mine development for 2010 and the first six months of 2011, is shown in Table 16-1. One of the key elements in the Life of Mine is the connection of all the mine operations underground with a low-level haulage drift. The horizon selected for the 4- X 4-m drift is the 11 level (elevation 1,800 m asl), and it will depart from the new Rosarios Shaft to connect Rosa Rosarios with the underground workings of San Marcos, Quebradillas and Vacas. The total length of the 11-level, which will be the main rail haulage level for all the operations, will be about 4,500 meters.

Figure 16-2 shows the plan of Level 11 haulage for the expansion project.

TABLE 16-1

First Majestic Silver Corp.

La Parrilla Silver Mine

2010 and 1st Semester 2011 Mine Development Totals

Year & Month	Exploration			Stope Preparation			General Mine Development			TOTAL Development		
	Actual (m)	Plan (m)	Variance	Actual (m)	Plan (m)	Variance	Actual (m)	Plan (m)	Variance	Actual (m)	Plan (m)	Variance
<b>2010</b>												
January	179	190	-11	285	300	-15	101	75	26	565	565	0
February	218	190	28	224	300	-76	115	75	40	557	565	-8
March	200	190	10	263	300	-37	119	75	44	582	565	17
April	219	190	29	268	300	-32	97	75	22	584	565	19
May	200	190	10	297	300	-3	74	75	-1	571	565	6
June	225	190	35	330	300	30	70	75	-5	625	565	60
July	85	30	55	497	623	-126	247	21	226	829	674	155
August	84	30	54	472	535	-63	136	335	-199	692	900	-208
September	23	40	-17	580	564	16	159	296	-137	762	900	-138
October	100	70	30	299	620	-321	198	210	-12	597	900	-303
November	186	186	0	512	596	-84	70	118	-48	768	900	-132
December	119	185	-66	419	600	-181	105	115	-10	643	900	-257
<b>Sub-Totals 2010</b>	<b>1,838</b>	<b>1,681</b>	<b>157</b>	<b>4,446</b>	<b>5,338</b>	<b>-892</b>	<b>1,491</b>	<b>1,545</b>	<b>-54</b>	<b>7,775</b>	<b>8,564</b>	<b>-789</b>
<b>2011</b>												
January	122	160	-38	279	963	-684	263	430	-167	664	1,553	-889
February	71	150	-79	346	1,085	-739	229	296	-67	646	1,531	-885
March	186	180	6	265	1,148	-883	282	353	-71	733	1,681	-948
April	281	212	69	461	326	135	208	945	-737	950	1,483	-533
May	312	250	62	585	319	266	350	961	-611	1,247	1,530	-283
June	270	250	20	421	417	4	502	959	-457	1,193	1,626	-433
<b>Sub-Totals 2011</b>	<b>1,242</b>	<b>1,202</b>	<b>40</b>	<b>2,357</b>	<b>4,258</b>	<b>-1,902</b>	<b>1,835</b>	<b>3,944</b>	<b>-2,109</b>	<b>5,433</b>	<b>9,404</b>	<b>-3,971</b>
<b>TOTAL - 18 months</b>	<b>3,080</b>	<b>2,883</b>	<b>197</b>	<b>6,803</b>	<b>9,596</b>	<b>-2,794</b>	<b>3,326</b>	<b>5,489</b>	<b>-2,163</b>	<b>13,208</b>	<b>17,968</b>	<b>-4,760</b>

**TABLE 16-2**

**First Majestic Silver Corp.  
La Parrilla Silver Mine  
Mine Production for 2010 and First Semester 2011**

Month and Year	OXIDES		SULFIDES				TOTAL PRODUCTION OXIDES + SULFIDES			
	Total	Avg. Grade	Total	Average Grades			Total	*Average Grades		
	(tonnes)	(gpt Ag)	(tonnes)	(gpt Ag)	(% Pb)	(% Zn)	(tonnes)	(gpt Ag)	(% Pb)	(% Zn)
2010										
January	12,626	211	13,865	220	1.24	0.00	26,491	216	0.65	0
February	10,824	218	11,320	220	1.80	1.10	22,144	219	0.92	0.56
March	12,358	196	12,006	231	2.00	1.20	24,364	213	0.99	0.59
April	13,250	191	10,913	211	1.40	1.20	24,163	200	0.63	0.54
May	11,008	189	11,017	220	1.40	0.70	22,025	205	0.7	0.35
June	12,424	196	12,492	194	1.20	0.60	24,916	195	0.6	0.3
July	11,917	184	14,170	186	1.40	1.10	26,087	185	0.76	0.6
August	12,326	215	12,818	267	1.50	1.20	25,144	242	0.76	0.61
September	13,390	191	13,936	254	1.20	1.20	27,326	223	0.61	0.61
October	11,847	241	12,176	231	1.50	1.50	24,023	236	0.76	0.76
November	13,518	183	12,966	184	1.40	2.40	26,484	183	0.69	1.17
December	13,840	175	13,399	201	1.20	1.60	27,239	188	0.59	0.79
<b>Sub-Total 2010</b>	<b>149,328</b>	<b>199</b>	<b>151,078</b>	<b>218</b>	<b>1.43</b>	<b>1.15</b>	<b>300,406</b>	<b>208</b>	<b>0.72</b>	<b>0.58</b>
2011										
January	11,960	174	12,229	231	1.50	1.90	24,189	203	0.76	0.96
February	12,444	140	10,576	225	1.50	1.70	23,020	179	0.69	0.78
March	14,331	155	13,626	237	2.00	1.20	27,957	195	0.97	0.58
April	13,966	198	12,956	197	1.83	1.48	26,922	197	0.88	0.71
May	13,214	200	12,473	223	1.81	1.23	25,687	211	0.88	0.60
June	13,228	201	12,287	231	2.23	1.55	25,515	215	1.07	0.75
<b>Sub-Total 2011</b>	<b>79,143</b>	<b>178</b>	<b>74,147</b>	<b>224</b>	<b>1.82</b>	<b>1.71</b>	<b>153,290</b>	<b>200</b>	<b>0.88</b>	<b>0.83</b>
<b>Total All</b>	<b>228,471</b>	<b>192</b>	<b>225,225</b>	<b>220</b>	<b>1.56</b>	<b>1.33</b>	<b>453,696</b>	<b>206</b>	<b>0.77</b>	<b>0.66</b>

\*Average grades for lead & zinc in Total Production columns are of little value, since no lead or zinc is recovered from oxide ores.

**TABLE 16-3**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Mine Production Tonnes By Mine; 2010 and Six Months 2011**

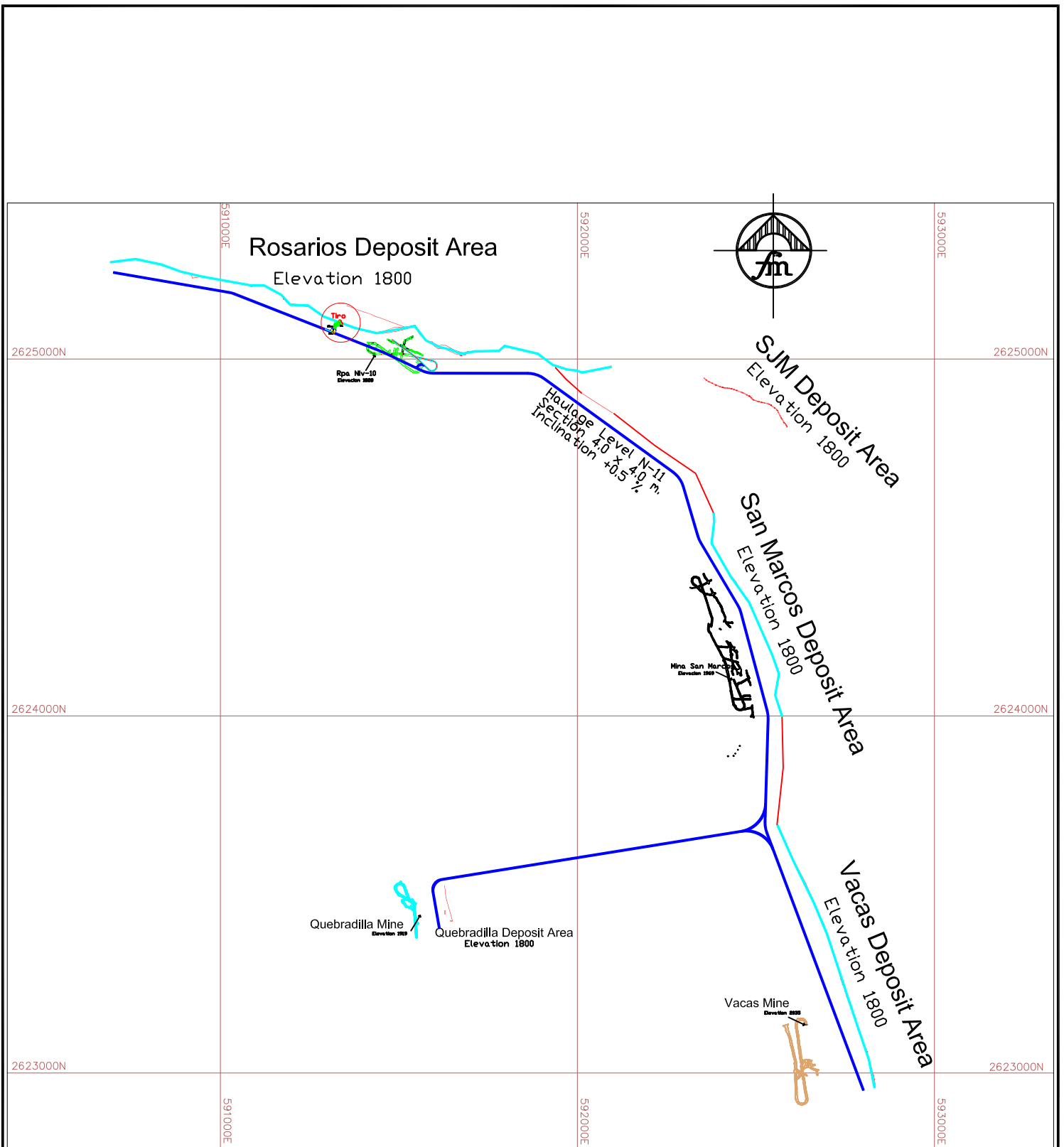
Year and Month	OXIDES											SULFIDES							TOTAL ALL (tonnes)
	*Mined Tonnes by Mine or Area											*Mined Tonnes by Mine or Area							
	Sn. Jose- La Blanca (tonnes)	Rosa-Rosarios (tonnes)	Sn. Marcos (tonnes)	Quebradillas U/G (tonnes)	Quebradillas - OP (tonnes)	Vacas (tonnes)	New Tailings (tonnes)	Old Tailings (tonnes)	Old Dumps (tonnes)	Sacramento (tonnes)	San Juan (tonnes)	TOTAL Oxides (tonnes)	Sn. Jose-La Blanca (tonnes)	Rosa-Rosarios (tonnes)	Quebradillas (tonnes)	Vacas (tonnes)	Old Tailings (tonnes)	Dolores (tonnes)	
<b>2010</b>																			
January	1,047	5,524	465	5,590							12,626	3,373	9,419	1,074				13,865	26,491
February	1,419	6,726	425	2,018			237				10,824	1,464	8,128	1,729				11,320	22,144
March	2,081	5,909	950	2,470					947		12,358	1,026	8,806	2,174				12,006	24,364
April	1,975	5,551	158	5,566							13,250	490	9,677	745				10,913	24,163
May	1,429	5,309	134	4,136							11,008	1,061	9,200	756				11,017	22,025
June	538	3,128	228	8,529							12,424	1,093	9,581	1,818				12,492	24,916
July	1,229	2,257	242	8,189							11,917	1,469	7,461	5,239				14,170	26,087
August	1,062	3,352	239	7,672							12,326	193	8,285	4,340				12,818	25,144
September		2,982		10,408							13,390		8,454	5,482				13,936	27,326
October	296	3,763	352	7,436							11,847	541	6,217	5,418				12,176	24,023
November	684	4,426	1,100	1,161				689	5,459		13,518	79	6,222	3,941		2,724		12,966	26,484
December	431	3,253	97	8,964						1,095	13,840	568	7,982	3,178		1,670		13,398	27,238
<b>Sub-Total 2010</b>	<b>12,191</b>	<b>52,181</b>	<b>4,390</b>	<b>72,140</b>			<b>237</b>	<b>689</b>	<b>6,406</b>	<b>1,095</b>	<b>149,329</b>	<b>11,356</b>	<b>99,433</b>	<b>35,894</b>		<b>4,394</b>		<b>151,077</b>	<b>300,406</b>
<b>2011</b>																			
January	667	1,634		9,659							11,960	54	7,502	3,776	896			12,229	24,189
February	196	320	148	11,780							12,444		5,343	3,338	1,895			10,576	23,020
March	1,217	1,891		10,326						897	14,331	490	7,069	4,320	1,727		20	13,626	27,957
April	210	1,240	369	321	8,740	668				1,469	13,017	1,013	6,523	4,351		546		12,433	25,450
May	334	1,352	1,358	222	7,926	694				593	12,479	850	5,952	5,158		311		12,271	24,750
June	199	3,567	118		7,506						11,390	1,863	5,440	5,673				12,976	24,366
<b>Sub-Total 2011</b>	<b>2,823</b>	<b>10,004</b>	<b>1,993</b>	<b>32,308</b>	<b>24,172</b>	<b>1,362</b>				<b>897</b>	<b>75,621</b>	<b>544</b>	<b>19,914</b>	<b>11,433</b>	<b>4,519</b>	<b>857</b>	<b>20</b>	<b>74,111</b>	<b>149,732</b>
<b>TOTAL 18 mos.</b>	<b>15,014</b>	<b>62,185</b>	<b>6,383</b>	<b>104,448</b>	<b>24,172</b>	<b>1,362</b>	<b>237</b>	<b>689</b>	<b>12,812</b>	<b>2,190</b>	<b>224,950</b>	<b>11,900</b>	<b>119,347</b>	<b>94,655</b>	<b>9,037</b>	<b>5,251</b>	<b>20</b>	<b>225,188</b>	<b>450,138</b>




**TABLE 16-4**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**

**2010 and 6 Months 2011 Mine/Mill Production vs Budget**

PARAMETER	2010			2011 -6 Months			TOTALS - 18 months		
	Actual	Budget	Variance	Actual	Budget	Variance	Actual	Budget	Variance
<b>OXIDES</b>									
Tonnes Mined/Milled	148,943	131,513	17,430	77,960	69,003	8,957	226,903	200,516	26,387
Average Grades								0	
Silver (gpt Ag)	197	200	-3	181	194	-13	192	198	-6
Gold (gpt Au)	0.095	0.15	-0.055	0.07	0.15	-0.08	0.09	0.15	-0.06
Silver Produced (ozs. Ag)	639,934	591,954	47,980	296,640	311,181	-14,541	936,574	903,135	33,439
Equiv. Silver Produced (ozs. Ag)	665,567	623,517	42,050	307,680	328,332	-20,652	973,247	951,849	21,398
<b>SULFIDES</b>									
Tonnes Mined/Milled	154,868	134,794	20,074	73,906	75,960	-2054	228,774	210,754	18,020
Average Grades									
Silver (gpt Ag)	221	250	-29	215	243	-28	219	247	-28
Lead (% Pb)	1.48%	1.50%	-0.02%	1.58%	1.40%	0.18%	1.51%	1.46%	0.05%
Zinc (% Zn)	2.04%	1.90%	0.14%	0.93%	2.47%	-1.54%	1.68%	2.11%	-0.42%
Silver Produced (ozs. Ag)	898,829	855,075	43,754	419,570	301,422	118,148	1,318,399	1,156,497	161,902
Equiv. Silver Produced (ozs. Ag)	1,142,267	904,598	237,669	499,271	544,273	-45,002	1,641,538	1,448,871	192,667
<b>TOTALS</b>									
Tonnes Mined/Milled	303,811	266,307	37,504	151,866	144,963	6,903	455,677	411,270	44,407
Average Grades									
Silver (gpt Ag)	209	225	-16	198	220	-22	205	223	-18
Gold (gpt Au-oxide only)	0.095	0.150	-0.055	0.091	0.150	-0.059	0.094	0.1500	-0.056
Lead (%Pb-sulfide only)	1.48%	1.50%	-0.02%	1.81%	1.40%	0.41%	3.29%	2.90%	0.39%
Zinc (% Zn-sulfide only)	2.04%	1.90%	0.14%	0.00%	2.47%	-2.47%	0.0204	4.37%	NA
Silver Produced (ozs. Ag)	1,538,763	1,447,029	91,734	716,210	612,603	103,607	2,254,973	2,059,632	195,341
Equiv. Silver Produced (ozs. Ag)	1,807,834	1,759,673	48,161	808,191	1,156,876	-348,685	3,228,220	3,011,481	216,739



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Drawing Provided by/Prepared for  
**First Majestic Silver Corp.**

Project No. **DE-00200**

Project Name  
**La Parilla Project**

**FIGURE 16-2**  
**Plan of Level II Highway Project**

Date of Issue  
 Sept 2011

Drawing Name  
 Fig16-2.dwg

## **17.0 RECOVERY METHODS**

### **17.1 *Metallurgy***

The ore processed at the La Parrilla operation consists of two essential types; oxides and sulfides. Oxides are the in situ oxidation product of the sulfide ore. For both ore types the principal economic component is silver. The ores also contain significant amounts of lead and zinc, and minor amounts of gold. Oxide ores are processed by cyanide leaching to produce doré metal; sulfide ores are processed by differential flotation to produce a silver-rich lead concentrate and a zinc concentrate.

Metal recovery of silver in the cyanide leaching circuit is currently low by general industry standards, about 65 percent. Recovery of silver in the flotation circuit is good, amounting to about 82 percent into the lead flotation concentrate and 3 percent into the zinc flotation concentrate. Lead and zinc recoveries and concentrate grades are not particularly good. There is a likelihood of higher silver recovery in the cyanide leach circuit with longer leach times following the plant expansion currently in progress. The valuable mineral in the sulfide ore is essentially argentiferous galena. The mineralogy of the oxide ore is essentially the oxidation product of the sulfides. It is probable that most of the silver occurs as argentite.

Ore processed in the plant up to now has been mostly from the Rosa/Rosario and La Blanca veins with smaller amounts from the San Marcos and Quebradillas veins. Future ore will also include that from the Vacas deposit, the sulfide fraction of which has high zinc content.

Consideration has been given to further process the sulfide flotation tails in the oxide cyanide leach circuit but the capacity of the oxide cyanide leach circuit is limited and would require expansion to allow this.

### **17.2 *Ore Processing Plant***

The ore processing plant is currently being extensively expanded to more than double the capacity and replace much of the existing equipment with more modern and more efficient equipment. Expansion of the sulfide flotation section of the plant is projected to be complete by mid-2011 and the oxide cyanide leaching section by the end of 2011.

Principal parameters for the expanded plant are presented in Table 17-1. Flow diagrams of the plant are provided in Figures 17-1 and 17-2 and a listing of the principal equipment is shown in Table 17-2. A general site map, which shows the existing and expanded tailings containment, and the layout of the expanded ore processing plant is shown in Figure 4-2.

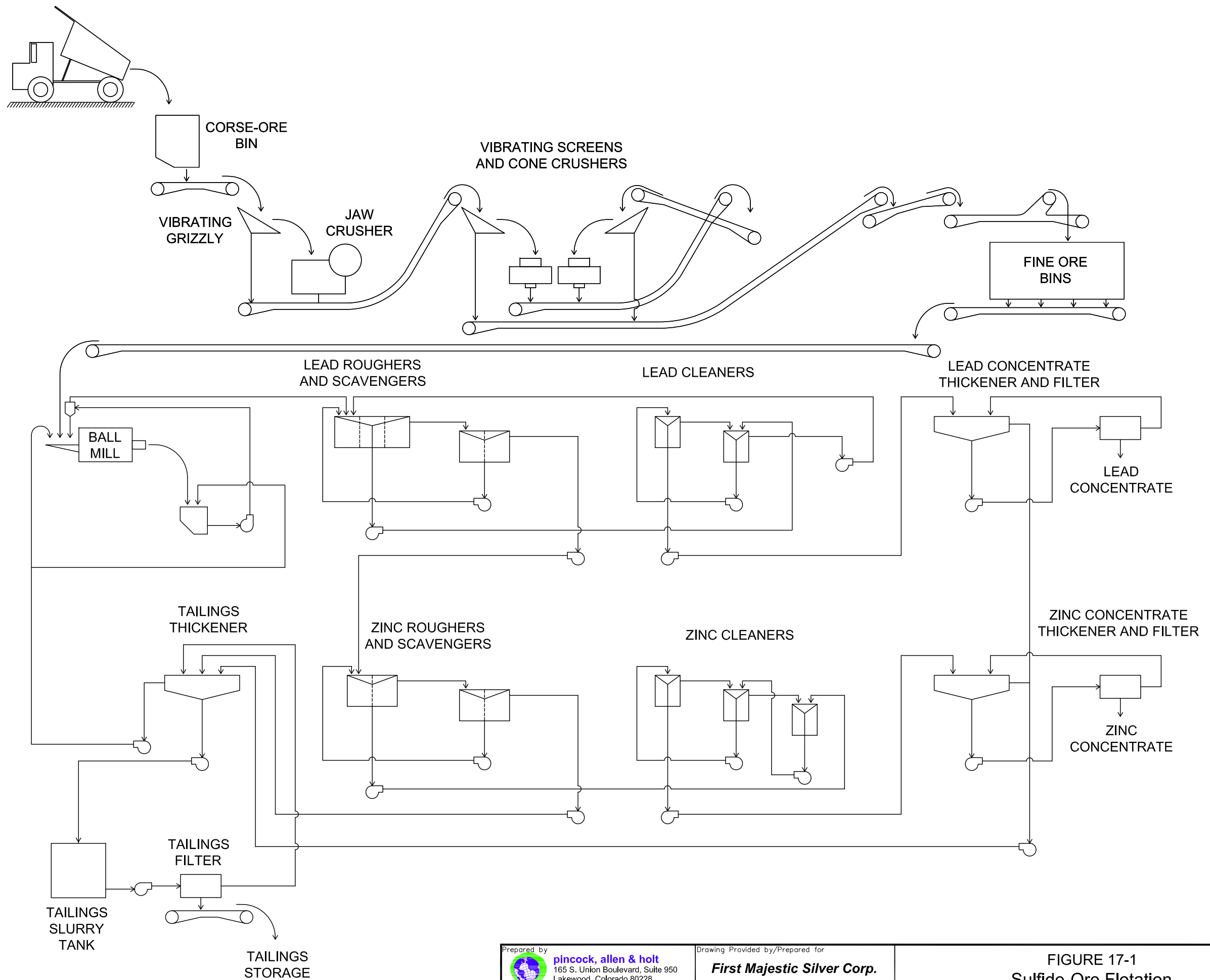
The original ore processing plant was a very small (180 tonne per day capacity) conventional cyanide leach mill that was built as a custom mill to serve small miners in the district by the since discontinued Federal government agency, *Fomento Minero*. The plant was expanded in 2005 to process 500 tonnes


**TABLE 17-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Ore Processing, Principal Parameters (post expansion)**

Parameter	Units	Oxide	Sulfide		
			General	Pb Conc.	Zn Conc.
<b>Plant Capacity</b>					
Annual	thousand tonnes/year	319	319		
Daily	tonnes/day	1,000	1,000		
<b>Actual Throughput Rate</b>					
Annual	thousand tonnes/year	319	319		
Daily	tonnes/day	1,000	1,000		
<b>Ore Grade</b>					
Silver	grams/tonne	130	200		
Gold	grams/tonne	0.07	0.02		
Lead	percent		2.0		
Zinc	percent		4.0		
<b>Operating Parameters</b>					
Crush size	inches	3/8	3/8		
Grind size	percent minus 200 mesh	65	65		
Cyanide concentration	ppm NaCN	1,500			
Reagent consumptions					
Cyanide	kilograms/tonne NaCN	1.9			
Lime	kilograms/tonne	3 - 3.5			
Leach retention time	hours	72			
<b>Recovery</b>					
Silver	percent	65%		82%	
Gold	percent	90%			
Lead	percent			87%	
Zinc	percent				51%
<b>Doré Grade</b>					
Silver	grams/kilogram	910			
Gold	grams/kilogram	0.5			
<b>Concentrate Grade</b>					
Silver	kilograms/tonne			4.5	
Lead	percent			50%	
Zinc	percent				50%
<b>Doré Quantity</b>	kilograms/year	30,000			
<b>Concentrate Quantity</b>	dry tonnes/year			11,000	12,000
<b>Contained Silver</b>	thousand ounces/year	900		1,600	
<b>Plant Operating Cost</b>	\$/tonne ore	\$20.00	\$20.00		

**TABLE 17-2**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Ore Processing, Principal Equipment List**

Item	Size	General		Lead Flotation		Zinc Flotation	
		Qty.	h.p.	Qty.	h.p.	Qty.	h.p.
<b>COMMINUTION CIRCUIT</b>							
<b>Crushing</b>							
Ore Receiving Hoppers							
Oxide ore	500 tonnes	1					
Sulphide ore	500 tonnes	1					
Apron Feeders		2	25				
Jaw Crusher	28- x 42-inch	1	150				
Cone crushers (Terex-Cedarapids)	Model MVP450X	2	400				
Vibrating Screen (Terex)	7- x 20-ft	2	50				
<b>Crushed Ore Bins</b>							
Oxide ore	800 tonnes	1					
	600 tonnes	1					
Sulphide ore	1,500 tonnes	1					
<b>Grinding</b>							
<b>Sulphide ore</b>							
Mill	10-1/2- x 14-ft	1	900				
Cyclone feed pumps	8- x 6-inch	2					
Cyclones	D-20	2					
<b>Oxide ore</b>							
Mills	8-1/2- x 12-ft	2	350				
Cyclone feed pumps	6- x 6-inch	4					
<b>CYANIDATION CIRCUIT</b>							
Primary Thickener	40-ft diam.	2	3				
Leach Tanks	26 x 29-ft	10	60				
Air Compressors	rotary screw	1	200				
		1	60				
Secondary Thickeners	40-ft diam.	1	3				
	25-ft diam.	1	3				
CCD Thickeners	60-ft dia	4	10				
Pregnant Solution Clarifiers (Autojet)		2					
Pregnant Solution Tanks	250 m <sup>3</sup>	2					
Precipitate Presses	48-inch frame side	2					
Barren Solution Tanks	250 m <sup>3</sup>	1					
Semipregnant solution	250 m <sup>3</sup>	1					
Vacuum Pumps	Vectra XL130	2	75				
Induction Crucible Furnace	750-kg capacity	1					
<b>FLOTATION CIRCUIT</b>							
Conditioning Tank	12- X 12-ft			1	25	2	25
Rougher flotation	500-ft <sup>3</sup>			3	40	2	40
Scavenger flotation	300-ft <sup>3</sup>			2	30	2	30
Cleaners (2 stages Pb; 3 stages Zn)	300-ft <sup>3</sup>			2	30	3	30
Concentrate Thickeners	30-ft diam.			1	5	1	5
Concentrate Filters	32-inch frame side			1		1	
Flotation Tailings Thickener	60-ft diam.	1	10				
Final Tailings Filtration (oxide/sulfide)	60-inch frame side	3					

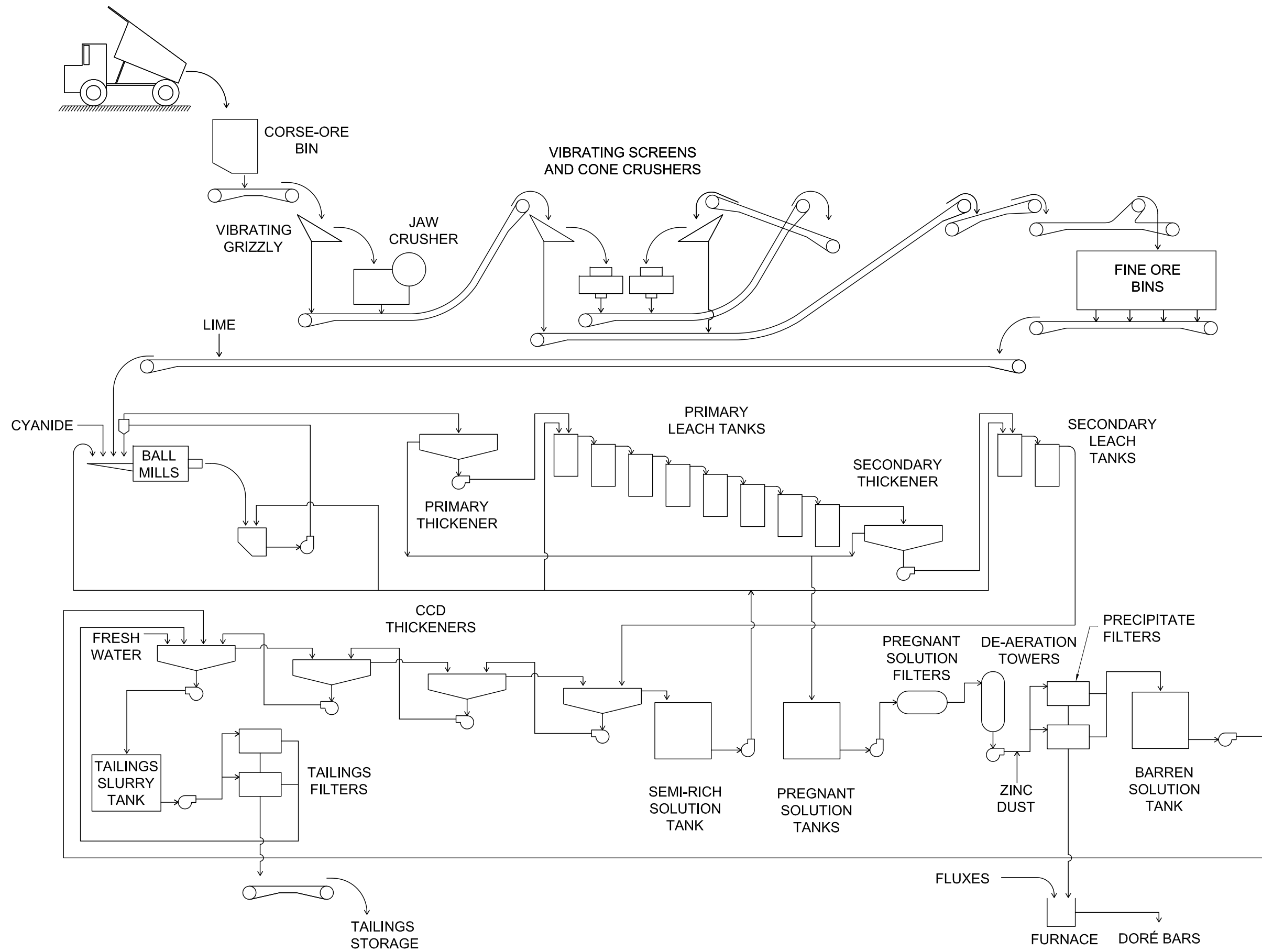


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Drawing Provided by/Prepared for  
**First Majestic Silver Corp.**  
 Project Name  
 La Parilla Project

**FIGURE 17-1**  
**Sulfide-Ore Flotation**  
**Flow Diagram**

Date of Issue  
 May 2011  
 Drawing Name  
 Fig17-1.dwg



per day each of both oxide and sulfide ore. The plant was expanded in 2007 to 750 tonnes per day and to 850 in 2008 tonnes per day. The crushing circuit consists of two sequential multi-stage crushing circuits; one mobile and the other stationary. The mobile system was brought into service in 2007 because of difficulties in getting adequate throughput with the original stationary equipment. The description that follows is that for the plant as it will be following the expansion.

Ore from the mines will be delivered by dump trucks into two adjacent bins, one for oxide ore and one for sulfide ore. The bins will be covered with stationary grizzlies and a stationary rock breaker will be mounted adjacent to the bins to break oversize lumps. A single crushing plant will serve for both oxide and sulfide ore with the ore types campaigned through the plant.

Apron feeders under the coarse ore bins will feed onto the vibrating grizzly of a mobile combination grizzly/jaw crusher set in semi-permanent position at right-angles to the apron feeders. The design is such that the entire grizzly/jaw crusher unit can be easily replaced if necessary, as might be required for an extensive overhaul.

Secondary and tertiary crushing will be accomplished using two adjoining vibrating screens and two adjoining cone crushers with the secondary crusher operating in open circuit and the tertiary crusher in closed circuit. Grizzly undersize and jaw crusher product from the primary crushing system will be conveyed to one of the screens with screen undersize being final mill feed and oversize passing to one of the cone crusher that will act as a secondary crusher. Secondary crusher product, in conjunction with tertiary crusher product, will be conveyed by two conveyors in a scissors arrangement to the second screen. Undersize from the second screen will also be final mill feed and the oversize will pass to the tertiary crusher. Mill feed from the crushing circuit will be conveyed to separate bins for the oxide and sulfide circuits.

### **17.2.1 Oxide Ore Cyanide Leach Circuit**

The cyanide leach circuit will follow conventional Mexican cyanide leaching practice with milling in cyanide followed by thickening, two stages of leaching with thickening between the stages, a series of counter-current-decantation (CCD) thickeners, and a Merrill Crowe circuit. CCD overflow solution will be used for grinding and for diluting the primary and secondary thickener underflows. Primary and secondary thickener overflows will comprise pregnant solution. Barren solution and fresh water will be used as wash solution in the CCD circuit.

Oxide ore will be milled in the two existing ball mills using the mills in parallel. These mills are conventional overflow ball mills closed with cyclones. Cyanide and lime will be added in the milling circuit. Cyclone overflow will pass to a primary thickener. Primary thickener overflow will comprise the principal component of the pregnant solution. Primary thickener underflow will be combined with CCD overflow solution and pumped to eight primary stirred leach tank operated in series. Discharge of the primary leach tanks will pass to a secondary thickener.



Secondary thickener overflow will comprise part of the pregnant solution. Secondary thickener underflow will be combined with CCD overflow solution and pumped to two secondary leach tanks operated in series. Discharge of the secondary leach tanks will pass to a four-stage CCD set of thickeners. CCD thickener underflow will be final tailings and will be pumped to a storage tank adjoining the tailings filtration plant.

Tailings will be filtered using plate-and-frame type pressure filters. Filtrate will be recycled to the CCD thickeners. Filter cake will be conveyed to the existing tailings containment and spread with a bulldozer.

Pregnant solution, constituting the overflow from the primary and secondary thickeners, will pass to pregnant solution tanks. Pregnant solution will be filtered in diatomaceous earth pressure filters and de-aerated in vacuum towers. Zinc dust slurry will be added to the filtered, de-aerated solution and the silver precipitate formed recovered in plate-and-frame pressure filters. The precipitate filters will be opened periodically, the precipitate dried, and then added together with fluxes to an electrical induction furnace. Doré metal will be poured from the furnace, packaged and shipped to the Peñoles smelter in Torreon. Doré shipped from the current operation is relatively pure containing about 95 percent silver and this is expected continue following the expansion. The doré also contains a very small quantity of gold, amounting to about 0.05 percent.

### **17.2.2 Sulfide Ore Flotation Circuit**

The flotation circuit will follow conventional lead/zinc differential flotation processing with lead flotation followed by zinc flotation (incorporating both roughing and scavenging), counter-current multi-stage cleaning of the rougher concentrates, and final concentrate dewatering. Final flotation tailings will be thickened and filtered and conveyed to the tailings containment.

Sulfide ore will be milled in a single new overflow ball mill closed with a cyclone. Cyclone overflow will flow to a conditioner and then to a series of three lead rougher cells in series. Rougher tailings will pass to a scavenger circuit consisting of three additional cells in series, but smaller than the roughers. Scavenger concentrate will be recycled to the roughers. Rougher concentrate will be cleaned in two stages and the final concentrate delivered to a lead concentrate thickener. Thickener underflow will be filtered on an elevated plate-and-frame pressure filter; the filtered lead and/or zinc con cake will be stockpiled under the filter and then periodically loaded onto trucks and shipped to Manzanillo, México for shipment to smelters in the Far East.

Lead scavenger tailings will be pumped to zinc flotation circuit which will be almost identical to that of the lead circuit and will differ only in that it will include two instead of one conditioner ahead of the rougher cells, will include only two rather than three scavenger cells, and will have three rather than two stages of rougher concentrate cleaning.

Zinc scavenger tailings will be pumped to a flotation tailings thickener adjoining the tailings filtration plant. Tailings underflow will be stored in a stirred tank and filtered on a plate-and-frame pressure filter

press, conveyed to the tailings containment together with the filtered tailings from the oxide ore cyanide leach plant and spread with a bulldozer.

### **17.3 Tailings Storage**

There are about one million tonnes of tailings from past operations in the old tailings containment area. The tailings form a wedge-shaped mass against the hillside adjoining the mill with the upper end at the upper elevation of the mill at the same elevation as the ground and the downhill end being about 15 meters above grade. Use of this tailings containment has been discontinued and reclamation is in progress.

In 2007, the tailings containment area was expanded by leasing land adjoining the old tailing dam and building a starter dike using borrowed material from within the dam area and also mine waste rock. The perimeter walls of the dam were raised by manually digging material from within the containment and building walls on the upstream side. The new containment covers an area of about 100,000 square meters and the elevation between the current level and dumping elevation is about 25 meters. Accordingly, capacity of the containment is about 2.5 million cubic meters or about 4.4 million tonnes at 1.75 tonnes per cubic meter, sufficient for the currently planned ore to be processed. Additional capacity could be provided by raising the containment above the dumping elevation.

## 18.0 PROJECT INFRASTRUCTURE

The infrastructure at La Parrilla is well established. The facility adjoins the local village making for convenient accommodation for the employees and contractors. Operations support facilities, located near the plant, consist of administrative offices, warehouse, maintenance shop, assay laboratory, metallurgical laboratory, mess, change houses, and two houses for senior personnel. There is also an explosive magazine on the site, set apart from other facilities. As part of the expansion, additional office space will be provided and a new assay and metallurgical laboratory is under construction.

Plant power supply was augmented in 2008 by the construction of a new line and substation to connect to one of the major CFE (*Comisión Federal de Electricidad*) lines that run parallel to the Durango-Zacatecas road, which is about two kilometers from the mine. The power supply is currently being expanded once again with a new line to one of the CFE lines that parallel the Durango-Zacatecas road and a new substation. Total mill connected load following the expansion will be about five megawatts.

A line powered electric well pump located seven kilometers from the mine in the adjoining valley supplies water. Water is also provided from a line-powered electric pump in the shaft of the Quebradillas mine located about two kilometers from the plant. For the expansion the water supply will be expanded with an additional well in the same area as the existing well. Water storage for the expansion will be augmented with an additional water storage tank, one that will also provide for a fire water reserve.

Diesel fuel is stored in a horizontal 20,000 liter tank in a concrete walled basin at the site.

Fire protection is currently based on portable fire extinguishers located throughout the buildings. In parallel with the expansion, dedicated fire water storage will be provided together with a fire water reticulation system. There is an ambulance on site for emergency use which is also available to the town if required.

Offices are connected to the local phone system and to a internet copper telephone-line based system. Radios are used for local communication.

## 19.0 MARKET STUDIES AND CONTRACTS

Three products are marketed by La Parrilla: doré metal, lead flotation concentrate, and zinc flotation concentrate. The doré is shipped to the Met-Mex Peñoles smelter at Torreón which is 375 km by road from the mine. The lead and zinc flotation concentrates are shipped to Manzanillo, a port on the Pacific coast of México, about 800 km by road from the mine. Freight, smelting and refining (FSR) terms for both doré and concentrate are summarized in Table 19-1.

**TABLE 19-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Product Marketing, Freight, Smelting, and Refining (FSR) Terms**

Parameter	Units	Value
<b>Doré Refining</b>		
Freight and insurance cost	\$/kilogram doré	\$ 3.75
Refining cost	\$/kilogram doré	\$ 11.25
Assaying and representation	\$/kilogram doré	\$ 1.00
<b>Total FSR</b>	<b>\$/kilogram doré</b>	<b>\$ 16.00</b>
Payables		
Silver	percent	99.5%
Gold	percent	95.0%
<b>Lead Concentrate FSR</b>		
Freight and insurance cost	\$/dry tonne	\$ 45.00
Smelting cost		
Base charge	\$/dry tonne	\$ 340.00
Metal price premium @ \$1/lb Pb	\$/dry tonne	\$ 90.00
Arsenic and antimony penalties	\$/dry tonne	\$ 40.00
Silver refining (\$1.50/oz)	\$/dry tonne	\$ 240.00
Combined	\$/dry tonne	\$ 710.00
Assaying and representation	\$/dry tonne	\$ 2.00
<b>Total FSR</b>	<b>\$/dry tonne</b>	<b>\$ 757.00</b>
Payables		
Silver & Gold	percent	95.0%
Lead (minus 3 units)	percent	~90%
<b>Zinc Concentrate FSR</b>		
Freight and insurance cost	\$/dry tonne	\$ 45.00
Smelting cost		
Base charge	\$/dry tonne	\$ 250.00
Metal price premium @ \$1/lb Zn	\$/dry tonne	\$ 150.00
Iron, silica, and cadmium penalties	\$/dry tonne	\$ 10.00
Combined	\$/dry tonne	\$ 410.00
Assaying and representation	\$/dry tonne	\$ 2.00
<b>Total FSR</b>	<b>\$/dry tonne</b>	<b>\$ 457.00</b>
Payables		
Silver (70% post 3.5 oz/t deduct)	percent	~60%
Zinc (minus 8 units)	percent	~82%

The doré is about 95 percent silver with very minor gold content. The lead and zinc feed grades are projected to rise significantly from the current values following completion of the expansion: the lead grade is projected to rise from about 1 percent to about 2 percent and the zinc feed grade from about 1.5 percent to about 4 percent. The lead flotation concentrate contains about 4.5 kilograms (145 ounces) per tonne of silver and currently about 35 percent lead; this is expected to rise to about 50 percent lead with about the same concentration of silver; the zinc concentrate currently contains about 45 percent zinc and this is expected to rise to about 50 percent zinc. Silver content in the zinc concentrate is projected to be below the payable threshold.

## **20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL AND COMMUNITY IMPACT**

### **20.1 *Environmental***

FMS information regarding environmental status, Permits and Environmental Requirements compliance, of the La Parrilla was provided by FMS Corporate Manager of Environmental and Permitting, on behalf of the La Parrilla mining operation.

### **20.2 *Permitting***

This document of statement and list of permits and requirements was provided to PAH by FMS Corporate Manager of Environmental and Permitting, Mr. José Luis Hernández Santibañez, dated on May 11, 2011. It includes the following:

- Delegación Federal de la SEMARNAT, Estado de Durango, Unidad de Gestión Ambiental. April 17, 2006. Authorization to change the "Licencia Ambiental Unica No. LAU-10/016-2005" dated March 16, 2005 to updated terms due to increment of operating capacity at La Parrilla, registration No. "FMR141001611" dated April 17, 2006.
- Delegación Federal de la SEMARNAT, Estado de Durango, Unidad de Gestión Ambiental on resolution to authorize construction and use of Tailings dam "Parrilla II." Document No. SG/130.2.1.1/000897. Dated April 16, 2007. It includes other documents in which FMRM is authorized to change the use of the land, etc.
- State Manager of CNA (Comisión Nacional del Agua), Estado de Durango. Official notification of Concesión Title No. 03DGO102200/11IMGE06 for the use of water at La Parrilla, dated December 18, 2006. Registration of title rights on October 26, 2006. Authorization for modification dated December 14, 2010, No.03DGO102200/11IMDL10.
- Delegación Federal de la SEMARNAT, Estado de Durango. Permit as industry that uses and handles dangerous substances, including the use of Sodium Cyanide. Authorization March 01, 2005. No. 10/GR-0013/03/05 and NRA: FMR141001611.
- Delegación Federal Durango, Subdelegación de Gestión para la Protección Ambiental y Recursos Naturales, Unidad de Aprovechamiento y Restauración de Recursos Naturales. Document No. SG/130.2.2./000979. Authorization to change the use of land for the project construction and operation of the La Parrilla II Tailings Dam of the La Parrilla Mining Operation. Dated on Durango city April 27, 2007.
- Program of Environmental Audit completed and presented to SEMARNAT. A Certificate of Clean Industry was awarded to FMPlata on February 6, 2009 under No. PFPA/1/1S.3/0095/09.

- Annual Operating Certificate awarded since 2005.
- Actualization of Unique Environmental License on April 17, 2006 and No. SG/130.2.1?000578; February 9, 2009 and Certificate No. SG/130.2.1/000222.
- Risk Analysis for the Plant. Authorized on June 15, 2006 with Certificate No. DGGIMAR.710/004497.
- Program of Accidents Prevention. Authorized on June 15, 2006 with Certificate No. DGGIMAR.710/004497.
- Documents of reception, transportation and certificates for dangerous substances since 2005.
- Permit for discharges of residual waters, not applicable.
- Characterization as operation generating dangerous residues, approved on December 17, 2007.
- Budget for Plan of Mine Closure, since 2008.
- Approval of change of land use for the Quebradillas open pit mine, authorized on January 17, 2011 with Certificate No. SG/130.2.2/000149/11.
- Environmental Impact Assessment for the Quebradillas Open Pit Mine, authorized on February 8, 2011 under Certificate No. SG/130.2.1.1/000233/11.
- Authorization for Plant Expansion Areas, in progress.
- Preventive Report on the Exploration program for Drilling Areas of the La Rosa – San José Mines. Authorized on April 28, 2011 with Certificate No. SG/130.2.1.1/00785/11.
- PAH's observations during site visits on the periods of June 20-25, 2006; April 13-15, 2007; May 15–18, 2007, November 13–18, 2007, and May 9-13, 2011.

In PAH opinion FMS is operating under proper permits and in accordance with Mexican environmental regulations and guidelines.

### **20.3 Social and Community Impact**

FMS operations at La Parrilla have impacted the San José de la Parrilla village since the XVI century; however no further affects appear to be impacting the village. FMS is operating according to Laws and Regulations in México and preventing, as much as possible, other effects that may be caused by the operation, such as building a road of access to the mine to bypass the residential areas of San José de la Parrilla, dust prevention, etc.

FMS economic impact to the surrounding towns and villages is positive. Mr. Alfonso Aguirre Gonzáles representing FMS maintains an active program of support and communications with the La Parrilla nearby communities. During this period of 2011, FMS has budgeted \$1.5 million pesos (about US\$150,000) for communities covering improvements in the areas of infrastructure, such as potable water systems, school facilities, sporting facilities, and street paving.

During the period of 2010, FMS's communities support included:

- Health: Contributions to the Community Health Center by purchasing medicines. The La Parrilla clinic doctor attended 1,458 residents during the year at no charge to communities' residents.
- Sports: FMS contributed funds for construction of the baseball field including fencing, dugouts, board, and attendants sitting facilities. It also provided uniforms to the children's baseball team.
- Education: FMS assisted students with transportation tickets from their community to schools, and with scholarships to some students, with installation of free internet in the schools including furniture for the computer rooms.
- Infrastructure: FMS financed 50 percent of the funds required for construction of the village's recreation center; with material and supplied for street paving, and provided a water tank for the local school.
- Others: FMS provided blankets and food for the needy and gifts on special occasions for the communities.



## **21.0 CAPITAL AND OPERATING COSTS**

### **21.1 *Capital Costs***

Currently La Parrilla is being expanded from about an 850 tonnes per day plant production rate (425 tpd oxides and 425 tpd sulfides) to about 2,000 tonnes per day (1,000 tpd oxides and 1,000 tpd sulfides). The estimated capital cost for the expansion, which was started in 2010, is about \$66.5 million. A summary of the estimated costs for the expansion program, which is completed at year-end 2011 with continued underground preparations and plant sustaining expenditures until 2014, is about \$69.5 million. The total capital expended in 2010 for the project was about \$3.7 million, including \$2.0 million for new mill equipment and \$1.6 million for new mine equipment, both of which were purchased within the production expansion program.

Most of the Capital costs in the actual 2010 expenditures, and also for the planned 2011, 2012, 2013 and 2014 Mine Plan budgets are for the on-going La Parrilla mill and process plant expansion, underground mine development and consolidation, open pit development, infrastructure upgrading, equipment purchases and exploration.

The company has generated a life-of-mine capital expenditure schedule, which amounts to about \$169.5 million from January 1, 2011, forward. Sustaining capital over the 14-year mine life includes capitalized development for both open pit and underground mines, and also new mine and plant equipment costs, as well as on-going exploration and tailings expansion capital. A summary of the total estimated life-of-mine (LOM) capital costs are shown in Table 21-1.

It will be noted that the estimating engineers have included capital expenditures for the mine life, which will be spent in closure and rehabilitation costs, especially if the La Parrilla ore deposits are depleted by 2024.

### **21.2 *Operating Costs***

The site operating costs for La Parrilla averaged \$41.06 per tonne mined and milled during the period 2010 and first semester 2011. A summary of the costs by cost area is shown in Table 21-2.

The operating costs used by PAH for cutoff grade calculations, are based on the mining, milling and processing of 226,903 tonnes of oxide ore and 228,774 tonnes of sulfide ore during the 2010 through June 30, 2011, period. These costs averaged \$40.89 per tonne and \$9.41 per ounce of silver equivalents for oxides ores and \$41.22 per tonne and \$5.79 per ounce of silver equivalents for sulfide ores. These costs are summarized in Table 21-3.

In addition, the costs of *downstream* processing bullion and concentrates, and marketing of these was considered in the unit costs. PAH developed separate cost tables for oxide and sulfide ores in order to

TABLE 21-1  
 First Majestic Silver Corp.  
 La Parrilla Silver Mine  
 Summary of Capital Expenditures for 2010 (Actual) and LOM Plan

CATEGORY	2010 (Actual)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	TOTALS (2011 - 2024)
<b>Mine &amp; Exploration Projects</b>																
Exploration		\$ 3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,001	\$3,000,002	\$3,000,003	\$1,500,000	\$1,500,000	\$1,500,000	\$37,500,006
Stripping Quebradillas Open Pit		1,200,089	\$1,059,128	\$1,196,992	\$1,220,708	\$1,293,950	\$1,371,587	\$1,495,395	\$1,928,330	\$1,633,582	\$403,708					\$12,803,469
Underground Development		\$6,361,010	\$6,238,736	\$4,431,254	\$3,089,496	\$2,763,941	\$2,453,637	\$1,684,491	\$1,590,089	\$1,492,639	\$900,830	\$145,775				\$31,151,898
Low-Level Haulage Drift Development			\$1,442,395	\$1,749,445	\$1,731,737											\$4,923,577
Shaft & Ventilation Boreholes			\$1,073,000	\$773,800	\$1,157,308											\$3,004,108
Mine Infrastructure	\$ 20,955	\$385,000														\$385,000
Open pit Stripping		\$0														\$0
<b>Sub-Total Mine and Exploration Projects</b>	<b>\$ 20,955</b>	<b>\$ 12,019,099</b>	<b>\$12,514,059</b>	<b>\$11,534,999</b>	<b>\$9,041,941</b>	<b>\$7,057,891</b>	<b>\$6,825,224</b>	<b>\$6,179,886</b>	<b>\$6,518,419</b>	<b>\$6,126,222</b>	<b>\$4,304,540</b>	<b>\$3,145,778</b>	<b>\$1,500,000</b>	<b>\$1,500,000</b>	<b>\$1,500,000</b>	<b>\$89,768,058</b>
<b>Mine Equipment</b>																
Mine personal equipment	\$ 52,173															
Hoist and Headframe New Sn Jose Shaft			\$4,000,000													\$4,000,000
Leaky Feeder Communications System			\$700,000	\$800,000												\$1,500,000
Scoop Trams	\$ 1,339,112		\$895,400	\$481,000	\$1,239,000	\$529,100	\$660,000	\$817,700	\$842,700	\$1,468,400	\$681,700	\$793,700	\$364,400	\$958,700	\$9,700	\$9,741,500
Trucks	\$ 1,264		\$1,398,000	\$660,000	\$18,000	\$132,000	\$6,000	\$240,000	\$18,000							\$2,472,000
General Mine Equipment	\$ 205,889	2,275,435														\$2,275,435
Sub-Total Mine Equipment	\$ 1,598,437	\$ 2,275,435	\$6,993,400	\$1,941,000	\$1,257,000	\$661,100	\$666,000	\$1,057,700	\$860,700	\$1,468,400	\$681,700	\$793,700	\$364,400	\$958,700	\$9,700	\$19,988,935
<b>Sub-Total Mine</b>	<b>\$ 1,619,393</b>	<b>\$14,294,534</b>	<b>\$19,507,459</b>	<b>\$13,475,999</b>	<b>\$10,298,941</b>	<b>\$7,718,991</b>	<b>\$7,491,224</b>	<b>\$7,237,586</b>	<b>\$7,379,119</b>	<b>\$7,594,622</b>	<b>\$4,986,240</b>	<b>\$3,939,478</b>	<b>\$1,864,400</b>	<b>\$2,458,700</b>	<b>\$1,509,700</b>	<b>\$109,756,993</b>
<b>Mill Equipment</b>																
Crushing Circuit	\$ 470,606	\$4,819,484														\$4,819,484
Grinding Circuits	\$ 292,814	\$2,368,669														\$2,368,669
Flotation Circuit & Filtering	\$ 286,456	\$2,883,027														\$2,883,027
Cyanide Circuit Filtering	\$ 368,300	\$3,801,325														\$3,801,325
Cyanidation Circuit	\$ 61,383	\$550,000														\$550,000
Merrill-Crowe Circuit	\$ 102,306	\$1,005,000														\$1,005,000
Tailings	\$ 368,300	\$3,684,745	\$250,000	\$1,500,000	\$200,000	\$150,000	\$2,000,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$8,984,745
Assay Lab Equipment	\$ 40,922	\$500,000														\$500,000
Mill Mobile Equipment	\$ 55,026	\$1,000,000														\$1,000,000
Sustaining Mill Equipment			\$200,000	\$500,000	\$200,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$2,400,000
<b>Sub-Total Mill, Process Plant and Tailings</b>	<b>\$ 2,046,114</b>	<b>\$20,612,250</b>	<b>\$450,000</b>	<b>\$2,000,000</b>	<b>\$400,000</b>	<b>\$300,000</b>	<b>\$2,150,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$28,312,250</b>
<b>General Infrastructure</b>																
Power Line		\$2,500,000	\$900,000	\$4,000,000	\$800,000	\$600,000	\$4,300,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$17,900,000
Water Well		\$200,000														\$200,000
Power Sub-Station Contract w/CFE		\$500,000														\$500,000
General & Other Offices	\$52,956	\$889,146														\$889,146
Environmental Impact Study-Vacas Project		\$50,000														\$50,000
Hydrants and Other Fire Control System		\$100,000														\$100,000
Reclamation			250,000	1,500,000	200,000	150,000	2,000,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	\$5,300,000
Mine Closure															\$3,000,000	\$3,000,000
<b>Sub-Total General Infrastructure</b>	<b>\$52,956</b>	<b>\$4,239,146</b>	<b>\$1,150,000</b>	<b>\$5,500,000</b>	<b>\$1,000,000</b>	<b>\$750,000</b>	<b>\$6,300,000</b>	<b>\$750,000</b>	<b>\$750,000</b>	<b>\$750,000</b>	<b>\$750,000</b>	<b>\$750,000</b>	<b>\$750,000</b>	<b>\$750,000</b>	<b>\$3,750,000</b>	<b>\$27,939,146</b>
<b>General Project Management</b>		\$1,200,000														\$1,200,000
<b>Contingencies @3.2%</b>		\$1,969,415														\$1,969,415
<b>Working capital</b>		\$360,000														\$360,000
<b>TOTAL</b>	<b>\$ 3,718,463</b>	<b>\$42,675,345</b>	<b>\$21,107,459</b>	<b>\$20,975,999</b>	<b>\$11,698,941</b>	<b>\$8,768,991</b>	<b>\$15,941,224</b>	<b>\$8,287,586</b>	<b>\$8,429,119</b>	<b>\$8,644,622</b>	<b>\$6,036,240</b>	<b>\$4,989,478</b>	<b>\$2,914,400</b>	<b>\$3,508,700</b>	<b>\$5,559,700</b>	<b>\$169,537,804</b>

**TABLE 21-2**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**2010 and 2011 La Parrilla Site Operating Costs (\$US/tonne)**

COST AREA	TOTAL COSTS			TONNES MILLED			PRODUCTION SILVER EQUIVALENTS			COST PER TONNE (\$US)			COST PER EQUIV. OUNCE (\$US)		
	2010	2011, 6 mos.	Total, 18 mos.	2010	2011, 6 mos.	Total, 18 mos.	2010, oz Ag	2011, oz Ag	Total Equiv. oz Ag	2010	2011, 6 mos.	Avg., 18 mos.	2010	2011, 6 mos.	Avg., 18 mos.
<b>Sulfides</b>															
Mine - U/G Sulfides	\$2,252,119	\$1,321,407	\$3,573,526							\$14.54	\$17.88	\$15.62	\$1.99	\$2.65	\$2.19
Mill & Process - U/G Sulfides	\$2,727,591	\$1,402,295	\$4,129,886	154,868	73,906	228,774	1,129,358	499,271	1,628,629	\$17.61	\$18.97	\$18.05	\$2.42	\$2.81	\$2.54
Site G&A, U/G Sulfides	\$1,038,080	\$689,283	\$1,727,363							\$6.70	\$9.33	\$7.55	\$0.92	\$4.45	\$1.06
<b>Sub-Total Sulfides</b>	<b>\$6,017,790</b>	<b>\$3,412,985</b>	<b>\$9,430,775</b>	<b>154,868</b>	<b>73,906</b>	<b>228,774</b>	<b>1,129,358</b>	<b>499,271</b>	<b>1,628,629</b>	<b>\$38.86</b>	<b>\$46.18</b>	<b>\$41.22</b>	<b>\$5.33</b>	<b>\$9.91</b>	<b>\$5.79</b>
<b>Oxides</b>															
Mine - U/G Oxides	\$2,166,097	\$1,049,482	\$3,215,579							\$14.54	\$13.46	\$14.17	\$3.19	\$3.41	\$3.26
Mill & Process-UG Oxides	\$2,686,159	\$1,633,923	\$4,320,082	148,943	77,960	226,903	678,471	307,680	986,151	\$18.03	\$20.96	\$19.04	\$3.96	\$5.31	\$4.38
Site G&A, U/G Oxides	\$1,054,092	\$689,283	\$1,743,375							\$7.08	\$8.84	\$7.68	\$1.55	\$2.24	\$1.77
<b>Sub-Total Oxides</b>	<b>\$5,906,348</b>	<b>\$3,372,688</b>	<b>\$9,279,036</b>	<b>148,943</b>	<b>77,960</b>	<b>226,903</b>	<b>678,471</b>	<b>307,680</b>	<b>986,151</b>	<b>\$39.66</b>	<b>\$43.26</b>	<b>\$40.89</b>	<b>\$8.71</b>	<b>\$10.96</b>	<b>\$9.41</b>
<b>TOTALS<sup>1</sup></b>	<b>\$11,924,138</b>	<b>\$6,785,673</b>	<b>\$18,709,811</b>	<b>303,811</b>	<b>151,866</b>	<b>455,677</b>	<b>1,807,829</b>	<b>806,951</b>	<b>2,614,780</b>	<b>\$39.25</b>	<b>\$44.68</b>	<b>\$41.06</b>	<b>\$6.60</b>	<b>\$8.41</b>	<b>\$7.16</b>
Foreign Exchange Translation & Other	(219,207)	(61,878)	(281,086)	58	-	58	5,959	1	5,960	(0.73)	(0.41)	(0.62)	(0.14)	(0.08)	(0.12)
<b>TOTALS per Financial Statements</b>	<b>11,704,931</b>	<b>6,723,795</b>	<b>18,428,725</b>	<b>303,869</b>	<b>151,866</b>	<b>455,735</b>	<b>1,813,788</b>	<b>806,952</b>	<b>2,620,740</b>	<b>38.52</b>	<b>44.27</b>	<b>40.44</b>	<b>6.45</b>	<b>8.33</b>	<b>7.03</b>

**Note 1:**  
Pincock, Allen and Holt applied the annual average exchange rates MXP / USD for translation of operating costs for 2010 and 2011. The Company applies IFRS rules and translation rates on the day of the transaction for Financial Statement purposes, using specific daily historical exchange rates for the translation of operation cost. A reconciliation of the immaterial differences is provided below the table.

calculate cutoff grades for each ore type (Section 17.4 of this report). The average cost of mining, milling and processing oxide ores during the 18-month period was \$43.19 per tonne, and for sulfide ores was \$74.12 per tonne. A summary of these costs is shown in Table 21-3 and Table 21-4.

**TABLE 21-3**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Summary of Total Operating Costs for Cutoff Grade; Underground Extraction Oxides**

COST AREA	Total Costs	Unit Costs
	(\$US)	(\$US per tonne)
*Oxide Ores		
Mining	\$3,215,579	\$14.16
Milling & Processing	\$4,320,082	\$19.02
Site G & A	\$1,743,375	\$7.68
Sub-Totals	\$9,279,036	\$40.86
* *Bullion freight & insurance	\$147,930	\$0.65
Refining, assaying, representation Doré	\$380,384	\$1.68
Sub-Totals	\$528,314	\$2.33
<b>TOTALS</b>	<b>\$9,807,350</b>	<b>\$43.19</b>

\*Based on mining & milling 226,903 tonnes of oxide ores; 2010 & 6 Mos. 2011

\*\*Based on freight for 30,628.6 kg doré in 18 mos.

**TABLE 21-4**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Summary of Total Operating Costs for Cutoff Grade; Underground Extraction Sulfide Ore**

COST AREA	Total Costs	Unit Costs
	(\$US)	(\$US per tonne)
*Sulfide Ores		
Mining	\$3,573,526	\$15.63
Milling & Processing	\$4,129,886	\$18.07
Site G & A	\$1,727,363	\$7.56
Sub-Totals	\$9,430,775	\$41.26
* *Concentrate freight	\$443,229	\$1.94
Smelting, refining, penalties Pb concentrates	\$6,897,891	\$30.15
Smelting, refining, penalties Zn concentrates	\$176,767	\$0.77
Sub-Totals	\$7,517,887	\$32.86
<b>TOTALS</b>	<b>\$16,948,662</b>	<b>\$74.12</b>

\*Based on mining & milling 228,774 tonnes sulfide ores.; 2010 & 6 Mos.2011

\*\*Based on freight for 9,622.4 tonnes concentrates; 9235.6 tonnes Pb & 386.8 tonnes Zn

The unit costs for Las Quebradillas open pit oxide ore were calculated at an average (for the LOM) of \$16.22 per ore tonne. The contracted price for excavation of ore and waste from the pit is \$3.40 per tonne. A summary of the total unit costs used for PAH's cutoff grade calculation for Las Quebradillas open pit is shown in Table 21-5.

**TABLE 21-5**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Summary of Total Operating Costs for Cutoff Grade; Open Pit Extraction, Oxide Ore**

<b>COST AREA</b>	<b>Total Costs (\$US)</b>	<b>Unit Costs (\$US per tonne)</b>
<b>*Oxide Ores</b>		
Mining	\$7,144,956	\$4.03
Milling & Processing	\$18,535,970	\$10.45
Site G & A	\$1,200,188	\$0.68
<b>Sub-Totals</b>	<b>\$26,881,114</b>	<b>\$15.15</b>
* *Bullion freight & insurance	\$442,811	\$0.25
Refining, assaying, representation Doré	\$1,446,516	\$0.82
<b>Sub-Totals</b>	<b>\$1,889,326</b>	<b>\$1.06</b>
<b>TOTALS</b>	<b>\$28,770,440</b>	<b>\$16.22</b>

\*Based on 1,774,156 ore tonnes extracted; Pre-Feasibility Study for La Parrilla Silver Mine Expansion.

\*\*Based on 117,492.5 kg Ag net

Total Kg dore =  $117,492.5/0.9 = 118,082.9$  kg

## 22.0 ECONOMIC ANALYSIS

### 22.1 *Parameters and Assumptions*

In generating future production figures (silver and gold in doré, silver and lead in lead concentrate, and zinc in zinc concentrate), FMS have based the projections on fixed recoveries and fixed concentration ratios for the sulfide concentrates. The recovery parameters and the basis for them are shown in Table 22-1.

**TABLE 22-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Basis for Recoveries Projections**

Metal	Period	OXIDE		SULFIDE	
		Ore Qty (tonnes)	Recovery (%)	Ore Qty (tonnes)	Recovery (%)
Silver	Q-4 2010	39,194	70.10	39,345	81.27
	Q-1 2011	38,313	60.18	36,190	82.17
<b>Weighted Average Recovery</b>		<b>77,507</b>	<b>65.19</b>	<b>75,535</b>	<b>81.70</b>
Gold	Q-4 2010	39,194	89.17		
	Q-1 2011	38,313	90.00		
<b>Weighted Average Recovery</b>		<b>77,507</b>	<b>89.58</b>		
Lead	Q-4 2010			39,345	86.11
	Q-1 2011			36,190	85.99
<b>Weighted Average Recovery</b>				<b>75,535</b>	<b>86.05</b>
Zinc	Sep. 2010			1,796	60.53
	Oct. 2010			764	65.19
	Nov. 2010			3,700	44.03
<b>Weighted Average Recovery</b>				<b>6,260</b>	<b>51.35</b>

The application of fixed concentration ratios results in fixed tonnages of concentrates to tonnages of ore processed for the projected life of the mine and, consequently, varying concentrate grades; the alternative would be to fix the concentrate grades and allow the concentration ratio and thus tonnage of concentrate to vary. Either strategy can be considered acceptable. Applying fixed concentration ratios (ore:concentrate) of 28:1 for lead and 27:1 for zinc results in higher concentrate grades than have been historically achieved; however, this is not unreasonable considering that future sulfide ore grades will be about twice those of ore processed thus far.

Unit operating costs used by FMS for economic projections are as follows: Mining \$14.70 per tonne of ore processed; ore-processing \$17.50 per tonne of ore processed; and G&A \$1.9 million per year.

FMS generated NSR values, exclusive of product freight and insurance, are shown in Table 22-2.

PAH considers the projected recovery, concentrate ratios, unit costs, and NSR values to be acceptable.



## **22.2 Cash Flow Analysis**

FMS provided a cash flow based on the Mine Life 2011 to 2024, including the expansion production program. Cumulative cash flow for the project results in \$124.7 million with projected gross revenues of \$712 million.

FMS cash flow results are shown in the Table 22-3. Under the estimated assumptions and parameters, the Project shows a Net Present Value of \$78.6 million at a discount rate of 5 percent, and an Internal Rate of Return of 40 percent. The payback period is estimated in 3.20 years.

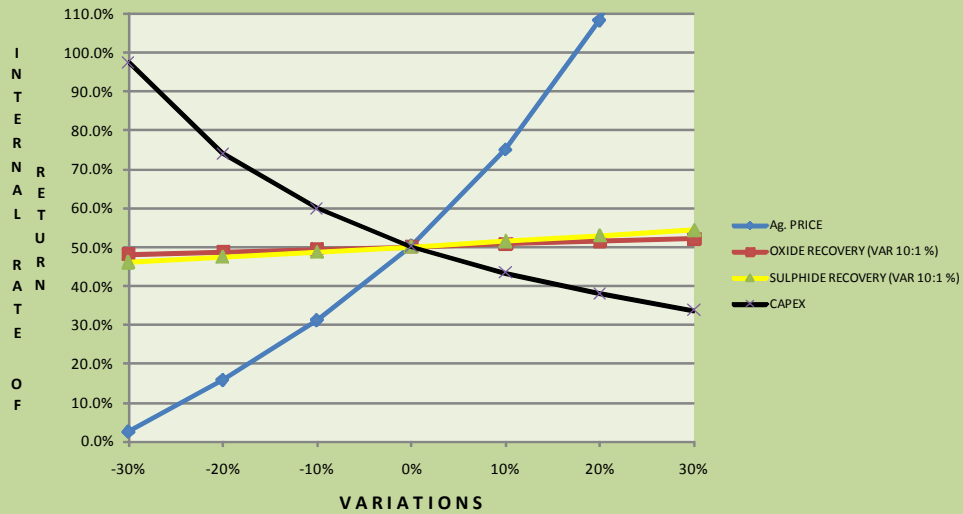
Sensitivity analyses were completed by FMS showing the Project most sensitive to silver price fluctuations as shown in the graph of Figure 22-1.

In PAH's opinion FMS production and economic projections for the La Parrilla expansion program appear to be reasonable and achievable according to the program schedule. The expansion of the flotation plant has been completed and the equipment is currently being tested with schedule to start running ore at the higher rate at the end of August or early September 2011.

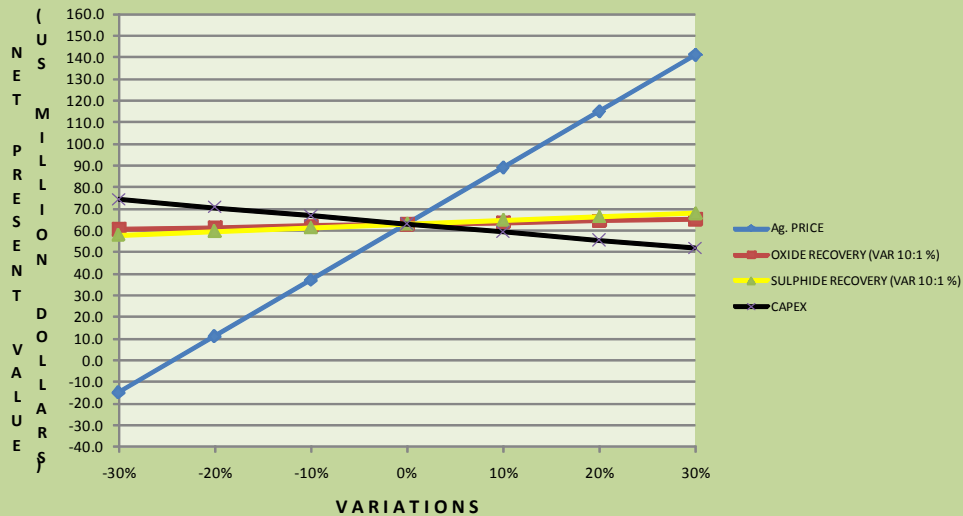




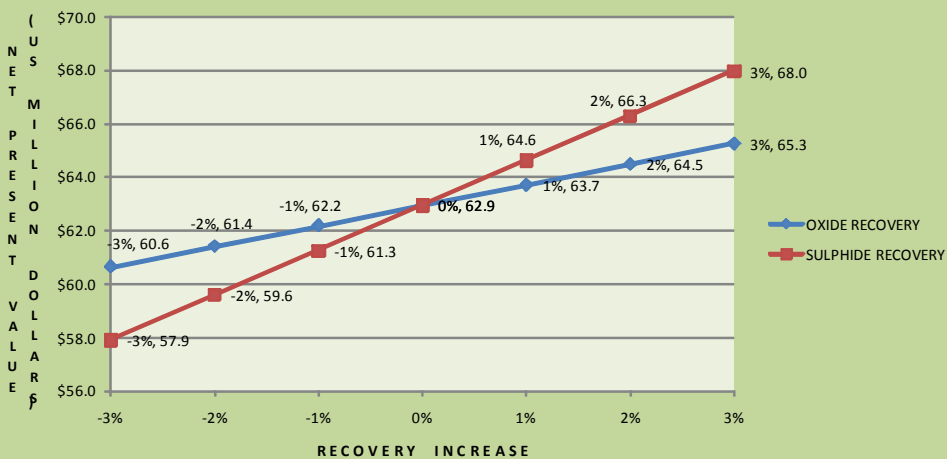
### SENSITIVITY ANALYSIS IRR



### SENSITIVITY ANALYSIS NPV (10% DISCOUNT RATE)



### IMPACT OF RECOVERY IN THE NET PRESENT VALUE



## 23.0 ADJACENT PROPERTIES

No adjacent properties exist within the surrounding areas of La Parrilla. Several mines, including; Quebradillas, La Blanca, Vacas, San Nicolás and other mines, are covered by mining concessions owned by FMS.

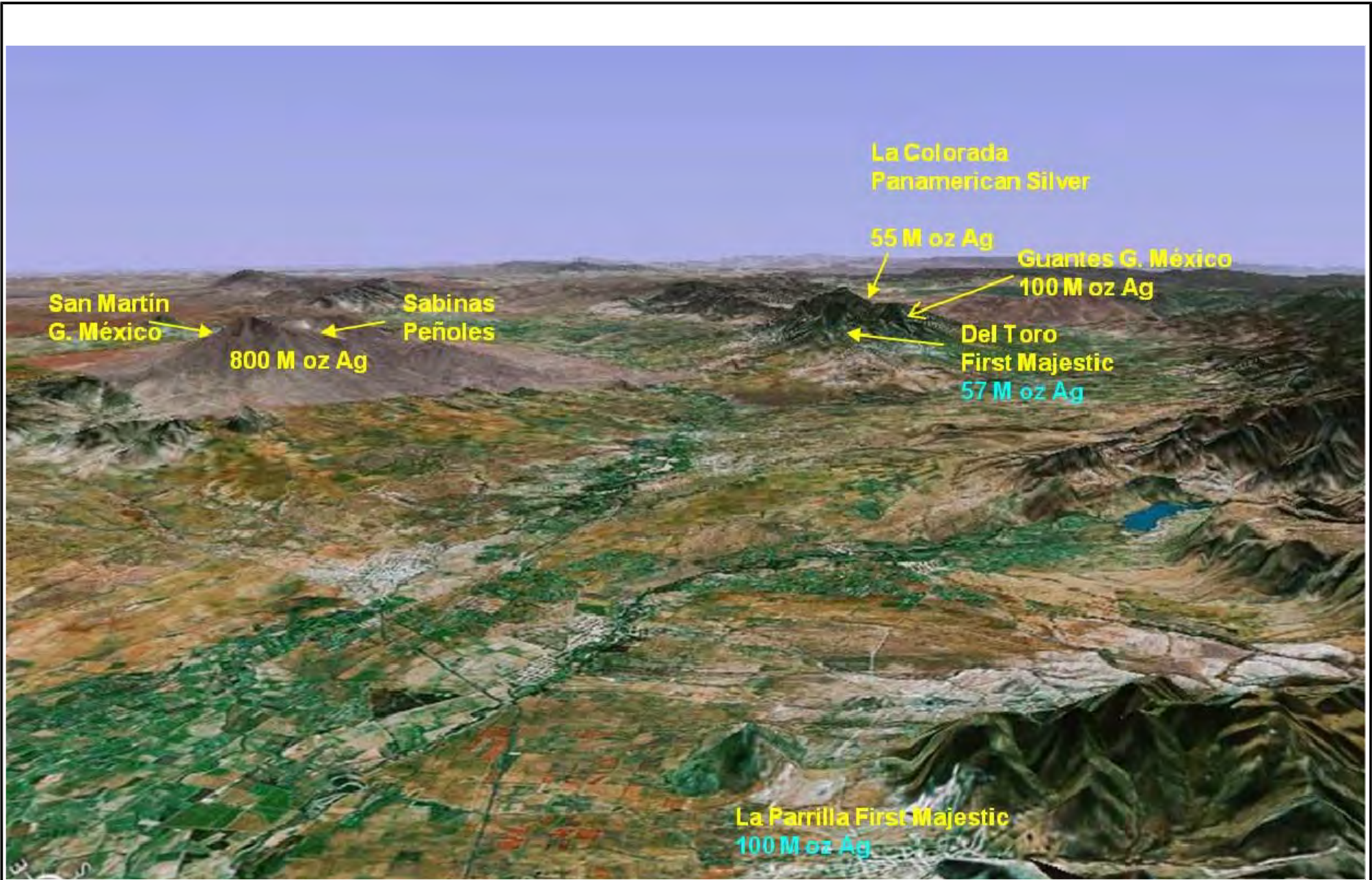
FMS has consolidated ownership of the area surrounding the La Parrilla mine. FMS owns 39 contiguous mining claims within the La Parrilla district. The claims provide coverage of 69,440 hectares (694 km<sup>2</sup>). These claims have been registered at the Dirección General de Minas under FMPlata. According to Legal Opinion by FMS Legal Adviser, Fernando Todd Dip, on August 25, 2011, all of these mining claims are current in legal standing.


No other mines exist nearby the La Parrilla area. Other mining districts located within the La Parrilla region are the following:

- The Chalchihuites mining district, partially owned by FMS, is located approximately S 50° E and 50 km from the La Parrilla's district. The areas within this district owned by FMS include the Perseverancia mine and the San Juan mine, which are part of a project FMS calls the Del Toro Silver Mine.
- La Colorada mine, owned and operated by Pan American Silver is located about 70 km S 40° E from La Parrilla Silver Mine.
- The San Martín/Sabinas/Los Tocayos mining district, with mines operated by Grupo México, Peñoles and others near the city of Sombrerete, Zacatecas, is about 60 km to the S 75° E from the La Parrilla Silver Mine area.

La Parrilla district and other regional mining districts as shown in Figure 23-1.

Surface rights for installations, waste dumps, tailings, and some of the mines within the La Parrilla area, have been obtained by FMS in an agreement for the use of surface rights with the Ejido of San José de La Parrilla, for 15 years, covering 69 hectares and also FMS purchased an additional 30.5 hectares of surface rights from Grupo México. FMS also has signed an agreement for leasing 60 hectares from Ejido San José de La Parrilla for a period of 15 renewable years and has acquired, by purchase, additional surface rights for total holdings of 531.5536 hectares covering La Parrilla installations and active mining areas.



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Project No.  
 DE-00200

Drawing Provided by/Prepared for  
**First Majestic Silver Corp.**

Project Name  
 La Parrilla Project

**FIGURE 23-1**  
**Mining Districts**

Date of Issue  
 May 2011

Drawing Name  
 Fig23-1.dwg

## 24.0 OTHER RELEVANT DATA AND INFORMATION

La Parrilla consists of several mines within FMS's large land holdings (about 694 km<sup>2</sup>) which make up the operations of the La Parrilla Silver Mine. Many of these mines have been in operation intermittently since the sixteenth century, when many of the mining districts in the region were discovered, such as Zacatecas, Fresnillo, San Martín/Sabinas/Tocayos near Sombrerete, Cerro del Mercado, etc.

Silver production from the La Parrilla district until June 30, 2011, based on unpublished reports by ASARCO, the Comisión de Fomento Minero, production records from Mina Los Rosarios, S.A. de C.V. and production records from FMS from June 2004, is estimated at a total of about 2.1 million tonnes of ore at an average grade of 276 g/tonne Ag, 1.57 percent Pb, about 1.16 percent Zn and some Au. This represents about 19 million ounces of silver only, while equivalent silver considering lead and zinc credits of 39 and 2 g/t-Ag respectively it represents 21.9 million ounces.

Mineralization at the Los Rosarios system, which includes the mines of Rosarios, La Rosa, La Blanca and San José, consists of a vein system that has been partially developed to depths of less than 300 m at Ore Shoot 1 of the Rosarios area, while at other mines of similar geologic environments within the region, such as the San Martín/Sabinas and La Colorada mines, the ore deposits have been developed to depths greater than 600 m to 800 m.

In PAH's opinion numerous outcropping mineralized structures and alteration zones within the La Parrilla district still remain to be explored. No other mines are operating within adjacent areas to the FMS's holdings.

## **25.0 INTERPRETATION AND CONCLUSIONS**

### **25.1 *Interpretation***

La Parrilla Silver Mine district consists of a mineralized region where a plutonic intrusive in contact with carbonaceous sedimentary rocks, in addition to subsequent hydrothermal mineralizing events, generated appropriate geologic conditions for mineral deposition, creating numerous mineral deposits within the district. These mineral deposits occur, associated with or enclosed by, the regional intrusive stock, stockwork zones, breccia zones and vein structures. Similar geologic conditions exist at San Martín/Sabinas, near Sombrerete; at Fresnillo; at Zacatecas; at Chalchihuites; at Concepción del Oro, and in the Peñasquito mining districts, all within the State of Zacatecas, México.

Production records of the La Parrilla mine indicate a total mining output of approximately 2.1 million tonnes containing about 21.9 million ounces of silver equivalent at 2011 estimates through June 30, 2011. This production was primarily extracted from the Los Rosarios system, Quebradillas, San José, San Marcos, and Vacas mines.

Current exploration studies by FMS and previous operators in the area have indicated significant geologic potential within the La Parrilla district, along and to depth in the Los Rosarios system (La Blanca, La Rosa, Rosarios, San José); along and to depth in the San Marcos vein system; in the Quebradillas–Las Víboras zone; in the Vacas mine; as well as at numerous geophysical magnetic and IP anomalies. FMPlata is planning to continue with an aggressive exploration program for the following several years to investigate the district's numerous exploration targets.

### **25.2 *Conclusions***

FMS is conducting a mine consolidation program in which the current independent workings will be connected and integrated into a single interconnected underground mine. The program will include development of a low-level rail haulage level communicating the Los Rosarios, San Marcos, Quebradillas, and the Vacas mines at about the Los Rosarios Level 11. The rail haulage level will be used to haul ore to a new shaft, located in the Rosarios area, which will be used to hoist ore to a mill level tunnel. The mine preparation program is many faceted and requires sound planning and engineering, which PAH believes has been done. Successful conclusion of the plan will result in a more efficient operation, at lower operating costs, and a predictable production schedule.

An integral part of the mine operations expansion is the development of a new open pit on the oxidized ores lying atop the Quebradillas area. This pit is currently in development and will be extracted at the rate of about 600 ore tonnes per day. The life of the pit is through 2017.

FMS has completed Pre-Feasibility studies, and has partially completed construction of an expansion of current processing facilities to a capacity of 2,000 tonnes per day. This will include a flotation and a cyanidation circuits to process sulfide and oxide ores.

FMS's exploration and development efforts and investments at La Parrilla have resulted in estimated Proven and Probable Reserves and Measured and Indicated Resources for the operation as of June 30, 2011, of 37.1 million ounces of silver equivalent in Proven and Probable Reserves, which represent a significant increment of about 600 percent over previously reported estimates; 8.1 million ounces of silver equivalent contained in underground Measured and Indicated Resources, or a decrement of 73 percent over the 2008 estimates; and 61.2 million ounces contained in Inferred Resources, or 15.9 percent above those from the previous estimate. The reserve and resource increment is due to the continued exploration efforts and conversion of Resources to Reserves.

Based on the current Ore Reserves for La Parrilla Silver Mine, a life-of-mine production plan has been developed. The planned operation will last through the year 2024, based on the 2,000 tonnes per day production rate; however, the last oxide ore reserves will be depleted in 2020, while the low-grade open pit oxides will be mined out in 2018. The planning engineers have budgeted about \$3.0 million per year for exploration, in addition to \$6.6 million for 2011 and 2012, and given the excellent potential near the current mining areas and in La Parrilla Mining District, PAH believes that significant mineral resources can be increased in categories to Reserves, and additional Resources may be found and developed quickly. Obviously, additional resources will result in added mine life.

FMS has initiated training and support for educational programs to attract experienced personnel in preparing for the future. These programs include coordination and support to nearby communities as part of social responsibilities.

La Parrilla estimated Resource/Reserve base for this period represents an important step towards consolidating the mining operation under a solid scenario of mineable Reserves for the following fiscal operating periods. Currently estimated Reserves and Resources constitute a solid justification for plant expansion investments.

In PAH's opinion, FMS's operation at La Parrilla is being conducted with sound engineering practices and acceptable methods of general application within the world mining industry; therefore, PAH believes that the exploration, mining, processing methods, and plant expansion programs conducted by FMPlata at La Parrilla are acceptable and justified, and are in accordance with good engineering practices.

## 26.0 RECOMMENDATIONS

FMS has considered significant budgets for investment in plant expansion, mine preparation and continued exploration at La Parrilla.

These programs of exploration have already shown positive results by indicating an important Resource/Reserve base for the mine. PAH highly recommends continuing with these programs in the Los Rosarios system, San Marcos, Vacas and Quebradillas areas. FMS has estimated an expenditure of \$6.6 million for the periods of 2011 and 2012. In PAH's opinion, this investment represents a reasonable budget for exploration of targets that show geologic potential and highly promising evidences of mineral concentrations within accessible areas of the mining district. The exploration budget is presented in Table 26-1.

**TABLE 26-1**  
**First Majestic Silver Corp.**  
**La Parrilla Silver Mine**  
**Recommended Exploration Program and Budget for 2011 and 2012**

Exploration Zone	Units	No.	Total Cost US\$
Sacramento/Cerro Santiago/La Gloria	Ha	400	8,000
Regional District	Samples	800	16,000
Magnetic Anomalies	Anomalies	7	1,500,000
Surface Diamond Drilling			0
Sacramento (4DH)	m	1,600	240,000
Catorce Marcos (4 DH)	m	1,500	225,000
Cerro Santiago (10 DH)	m	3,000	450,000
San Nicolás S, Geoph Anom.	m	1,200	180,000
Víboras (4 DH)	m	1,200	180,000
Regional District	m	10,000	1,500,000
Total Drilling	m	18,500	2,775,000
Tunnel & Robbins Quebradillas- Vacas	m	1,500	1,500,000
Geologists		3	156,000
Vehicles		2	50,000
Equipment			27,700
Core Shack			50,000
Other Acquisitions			500,000
<b>Total Cost</b>			<b>6,582,700</b>

In PAH's opinion the La Parrilla programmed capital expenditures for the period of 2011 to 2024, for a total of \$169.5 million, which will serve not only expand the operation from a nominal 800 tonnes per day to 2,000 tonnes per day, but also consolidate the mines and improve the operation, is appropriate. In addition, with success from the underground and surface exploration programs, the mine's Reserve and Resource base will be improved, and the mine life will therefore be extended.



Other recommendations by PAH related to operating practices, for which no budget can be estimated are the following:

- Metallurgical accounting must be more accurate. The operators must closely control the ore flow and stockpiles for both La Parrilla and the ore from outside operations, such as Del Toro.
- The system of long-range planning by the mine engineering group at La Parrilla is now in place. Long-range plans are being generated with much more detail than previously, and PAH recommends that the company continue to develop this very useful tool.

## 27.0 REFERENCES

This report was prepared for First Majestic Silver Corp. (FMS), by the independent consulting firm Pincock, Allen & Holt, Inc. ("Consultant"), and is based in part on information prepared by other parties. PAH has relied primarily on information provided as part of the following reports, investigations and operating results:

- Technical Report for the La Parrilla Silver Mine, State of Durango, México. Prepared for First Majestic Silver Corp. Amended and Restated, February 26, 2009. Prepared by Pincock, Allen and Holt, Inc.
- Resource and Reserve Estimates by FMS for La Parrilla Silver Mine. Prepared by FMPlata and FMRM staff and reviewed by PAH. September 30, 2008.
- Technical Report for the La Parrilla Silver Mine Amended, Durango State, México (Technical Report Amended). Prepared for First Majestic Silver Corp. Prepared by Pincock, Allen & Holt, Inc., March 18, 2008, and published in SEDAR in March 19, 2008.
- Technical Report for the La Parrilla Silver Mine Amended, Durango State, México (Technical Report Amended). Prepared for First Majestic Silver Corp. Prepared by Pincock, Allen & Holt, Inc., July 24, 2007, and published in SEDAR on July 25, 2007.
- Mining in México: It's Harvest Season. Intelligence Series. Business News Americas. March 2011. Published: [www.BNAmericas.com](http://www.BNAmericas.com).
- La Parrilla Geologic Report, Durango, México. Prepared by the consulting firm of Exploraciones Geológico-Mineras de Occidente, S.A. de C.V., Ing. Florentino Muñoz Cabral, April 2004.
- Geological Evaluation of the La Parrilla Property, State of Durango, México. Prepared by: J.N. Helsen, Ph.D., P.Ge., March 27, 2006.
- Information provided by FMRM and FMS as owners and operators of La Parrilla mine, including data from January to September 2008.
- Information provided by FMS Corporate Manager of Environmental and Permitting on Permits and Environmental Requirements compliance on behalf of the La Parrilla mining operation. This document of statement and list of permits and requirements was provided to PAH by FMS Corporate Manager of Environmental and Permitting, Mr. José Luis Hernández Santibañez, dated on May 11, 2011.
- Legal Opinion regarding current status of the Mining Concessions, including copies of Mining Department Certificates for FMPlata concessions held by acquisition or direct staking, and proof of current Mine Dues payment for the concessions. Prepared and executed by FMS Corporate Legal

Adviser, Mr. Fernando Todd Dip, partner of México city-based legal firm Todd y Asociados, S.C. dated August 25, 2011.

- FMPlata royalty payment status regarding acquisition of certain mining concessions, prepared by C.P. Francisco Garza, FMS's Vice President Financial Administration, by e-mail, dated June 9, 2011.
- PAH's observations during site visits on the periods of June 20-25, 2006; April 13-15, 2007; May 15-18, 2007, November 13-18, 2007, and May 9 - 13, 2011.

PAH believes all above described documents and information regarding the property current status, legal title and environmental compliance for the La Parrilla Silver Mine mining – metallurgical operation to be accurate and current in legal standing.

PAH believes that this information is reliable for use in this report.

## 28.0 STATEMENT OF QUALIFIED PERSONS

**Leonel López, C.P.G.**  
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Lakewood, Colorado 80228  
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I, Leonel López, C.P.G., am a professional geologist and Principal Geologist for Pincock, Allen & Holt, Inc. of 165 S. Union Boulevard, Suite 950, Lakewood, Colorado, USA. This certificate applies to the Technical Report for the La Parrilla Silver Mine, Durango State, México dated September 8, 2011, (the "Technical Report").

1. I am a Professional Geologist (PG-2407) in the state of Wyoming, USA, a Certified Professional Geologist (CPG-08359) in the American Institute of Professional Geologists, an SME Founding Registered Member (#1943910), a registered Geological Engineer (Cédula Profesional #1191), in the Universidad Nacional Autónoma de México, a member of the International Association on the Genesis of Ore Deposits, a member of the Society of Economic Geologists, and a member of the Association of Exploration Geochemists.
2. I graduated from the Universidad Nacional Autónoma de México with the title of Ingeniero Geólogo in 1966 and subsequently have taken numerous short courses in Economic Evaluation and Investment Decision Methods at Colorado School of Mines, other short courses and seminars on mineral economics and other technical and economic subjects in related professional seminars. I have practiced my profession continuously since 1963.
3. Since 1963, I have been involved in mineral exploration and economic evaluation of mineral properties for gold, silver, lead, zinc, copper, antimony, and non-metallic deposits as fluorite, barite, dolomite and coal deposits in Canada, United States of America, México, Guatemala, Costa Rica, Nicaragua, Ecuador, Venezuela, Perú, Bolivia, Chile, Brazil and Argentina.
4. As a result of my experience and qualification I am a Qualified Person as defined in NI 43-101.
5. I am presently a Principal Geologist with the international resource and mining consulting company of Pincock, Allen & Holt, Inc. and have been employed since December 2003, and was formerly employed by the same firm from 1988 to 1993.
6. I have previously worked on the La Parrilla Silver Mine in the preparation of the Technical Report dated February 16, 2009, as part of a PAH team to audit the operation in 2006. As part of this study, I visited the project site from May 9-13, 2011 and previously from May 15-18 and November 13-18, 2007, July 15-18 and October 30 – November 1, 2008, for the purposes of observing site layout and infrastructure, examining the deposit geology, inspecting the underground mine,

reviewing sampling procedures, reviewing available exploration and reserve and resource estimates and data, and discussing the project with site personnel.

7. I am the primary author of the Technical Report. I am responsible for and assembled all the report sections. I have visited the project in May 2011, May 2007, and November 2007, and in July and October-November 2008. I have acted as Project Manager for the preparation of this Technical Report.
8. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
9. I am independent of First Majestic Silver Corp. in accordance with the application of Section 1.4 of National Instrument 43-101.
10. I have read National Instrument 43-101, Form 43-101F1 and this report has been prepared in compliance with the new Companion Policy for NI 43-101 and Form 43-101F1 to be implemented as of June 30, 2011, for technical reports.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publications in the public company files, on their websites accessible by the public.

Dated in Lakewood, Colorado, this 8<sup>th</sup> day of September 2011.

***“Leonel López”***

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Leonel López, C.P.G.

**Richard Addison**

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I, Richard Addison, P.E., C. Eng., Eur. Ing., for Pincock, Allen & Holt, Inc. of 165 S. Union Boulevard, Suite 950, Lakewood, Colorado, USA. This certificate applies to the Technical Report for the La Parrilla Silver Mine, Durango State, México dated September 8, 2011, (the "Technical Report") that:

1. I graduated from the Camborne School of Mines in England as an Honors Associate in 1964 and subsequently obtained a Master of Science degree in metallurgical engineering from the Colorado School of Mines in 1968. I have practiced my profession continuously since 1964.
2. I am a Registered Professional Engineer (#3198) in the state of Nevada, USA, a Chartered Engineer in the U.K., and a registered European Engineer in the EU. I am a member of the American Institute of Mining, Metallurgical, and Petroleum Engineers and a member of The Institute of Materials, Minerals and Mining in the U.K.
3. I have worked as a metallurgical engineer for a total of 46 years since my graduation from university and have been involved in the evaluation and operation of mineral properties for gold, silver, copper, lead, zinc, tin, aluminum, iron, potash, gypsum, limestone, barite, clay, sulfur, pyrite, oil shale, coal, and diamonds in the United States, Canada, Mexico, Dominican Republic, Honduras, Nicaragua, Costa Rica, Panama, Venezuela, Guyana, Peru, Ecuador, Bolivia, Argentina, Chile, Spain, Portugal, Britain, Bulgaria, Indonesia, Papua New Guinea, the Philippines, Japan, Tunisia, Ghana, Zambia, South Africa, Russia, Kyrgyzstan, Brazil, and Australia.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I am responsible for the preparation of the ore processing and infrastructure paragraphs in Section 1.0, Summary; Section 13, Mineral Processing and Metallurgical Testing; the paragraphs concerning ore processing in Section 25, Interpretation and Conclusions; Section 18.0, Project Infrastructure; and Section 19, Market Studies and Contracts.
6. As of the date of the certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to disclose to make the technical report not misleading.
7. I am independent of the Issuer in accordance with Section 1.4 of NI 43-101.

8. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I consent to the filing of the Technical Report with any securities regulatory authority, stock exchange or other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated in Lakewood, Colorado, this 8<sup>th</sup> day of September 2011.

***“Richard Addison”***

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Richard Addison, P.E., C. Eng., Eur. Ing.