

INTERNATIONAL MINERALS CORPORATION

TECHNICAL REPORT ON THE MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES, PALLANCATA MINE, PERU

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IMPORTANT NOTICE

This report was prepared as a National Instrument 43-101 Technical Report, in accordance with Form 43-101F1, for International Minerals Corporation (IMZ) by Micon International Limited (Micon). The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in Micon's services, and based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended to be used by International Minerals Corporation, subject to the terms and conditions of its contract with Micon. This contract permits International Minerals Corporation to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to National Instrument 43-101, Standards of Disclosure for Mineral Projects. Any other use of this report by any third party is at that party's sole risk.



1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The objective of this report is to update information pertaining to International Minerals Corporation (IMZ) interest in the Pallancata silver-gold property in the Department of Ayacucho, Peru.

The technical report is in support of a news release on 14 May, 2009 which announced updated estimates of mineral resources and mineral reserves from the mine operator, London-listed Hochschild Mining Plc (Hochschild). Pallancata is jointly owned by IMZ (40%) and Hochschild (60%) through a joint venture company, Minera Suyamarca SAC (Suyamarca), registered in Peru.

The effective date of the updated mineral resource and reserve estimates, and the information presented in this report, is December 31, 2008.

Independent, Toronto, Canada-based Micon International Limited (Micon) was retained by IMZ to review the Pallancata Mine mineral resource and reserve estimates that were prepared by Hochschild.

The independent Qualified Persons responsible for this report are the following:

Reno Pressacco, P.Geo., Micon International Limited Geraint Harris, C.Eng., MAusIMM, Micon International Limited Richard Gowans, P.Eng., Micon International Limited

In June, 2006, IMZ signed a formal Joint Venture agreement (JV) with the Hochschild group of companies (collectively Hochschild), which include Compañia Minera Ares SAC (Ares), owner and operator of the Selene-Explorador silver-gold mine, located some 22 km by road northeast of the Pallancata mine. The terms and conditions of the JV agreement are implemented by Suyamarca and the JV also establishes that operational management is undertaken by Ares on behalf of Suyamarca. This operations management agreement has been consolidated in two contracts both dated 31 December, 2007, one defining scope and remuneration for general project management and administration and the other the technical and management services to be provided by Ares.

As part of the JV, IMZ transferred ownership of the mineral concessions and surface land tenure rights to Suyamarca, comprising 18 mineral concessions which together constitute the Pallancata property, now consolidated as an area covering 7,181.42 ha.

The Pallancata property hosts a low-sulfidation precious metal epithermal system of probable mid-Miocene age within Tertiary volcanics and intrusives. Silver and gold mineralization is present in a complex array of vein structures, breccias (both hydrothermal and tectonic), stockworks and silicified zones up to 40 m wide in places, but more typically in the 0.5 m to 3.0 m range. The mineralization is generally sulfide-poor and includes ruby silver minerals (pyrargyrite/proustite), argentite, pyrite, marcasite, galena, electrum, and rarely, native gold.



The primary exploration target has been the Pallancata Vein System, the site of shallow workings during the Spanish colonial period, which extends over a strike length of over 2 km and to a depth below surface in excess of 500 m. Another five significant target areas and vein structures have been identified on the property which, to date, have been the subject of only preliminary investigation.

All quoted mineral resources and reserves, as at 31 December, 2008 are within the Pallancata Vein System where current mine operations and development have been in progress since September, 2007. Much of the high-grade mineralization on the property is found in the western part of the Pallancata Vein System (i.e., the Veta Oeste or West Vein) and the Veta Central or Central Vein, and comprises an intensely silicified body accompanied by a strong stockwork of quartz veins. To the north of the Pallancata Vein System, in the Mariana and San Javier areas, the mineralized veins are generally narrower than the Pallancata Vein. Those veins, however, are generally higher grade and exhibit similar epithermal textures to those seen at the Pallancata Vein.

Exploration by IMZ at Pallancata commenced in 2002, comprising geological mapping and surface and underground rock sampling. Core drilling commenced in 2003 and has continued since then in a number of phases. Since September, 2006, the exploration program has been under the direction of Suyamarca which, under the terms of the JV, uses the geological services of Ares. As of the end of December, 2008, total surface and underground drilling on the Pallancata property comprised 62,440 m in 278 core drill holes. The greater part of the exploration effort has been concentrated on the West and Central Veins within the Pallancata Vein System.

Table 1.1 below shows updated estimated mineral resources and reserves for the Pallancata Mine (effective date of 31 December, 2008) based on information supplied by the mine operator, Hochschild, as of 31 December, 2008. Mineral reserves and mineral resources are reported at an economic cut-off grade of US\$62/t (total on-site cost of operation) and a marginal economic cut-off value of US\$46/t (being the variable cost of operation), respectively, using metal prices of US\$12/oz of silver and US\$800/oz of gold.

The updated mineral reserve estimates in the proven and probable category (Mineral Reserves), on a 100% basis, comprise an aggregate of 4.3 million tonnes at an average grade of 366 g/t silver and 1.5 g/t gold, containing a total of 50.6 million ounces of silver and 209,000 ounces of gold. The mineral reserve estimates are inclusive of the mineral resources described below.

The updated mineral resource estimates in the measured and indicated categories (M&I Resources), on a 100% basis, comprise an aggregate of 4.3 million tonnes at an average grade of 415 g/t silver and 1.7 g/t gold, containing a total of 57.5 million ounces of silver and 238,000 ounces of gold. An additional 1.2 million tonnes at an average grade of 395 g/t silver and 1.6 g/t gold containing a total of 15.5 million ounces of silver and 62,000 ounces of gold are estimated in inferred category.

Hochschild's data and methodology have been reviewed by Toronto-based independent consultants Micon International's Geraint Harris for the mineral reserve estimates and Reno



Pressacco for the mineral resource estimates. Both are Qualified Persons as defined by National Instrument (NI) 43-101.

Table 1.1
Pallancata Mine Mineral Reserve and Resource Estimates as at December 31, 2008

Reserve Category	Tonnes	Average Grade	Average Grade	100% Basis Contained	100% Basis Contained	IMZ 40% Attributable	IMZ 40% Attributable
		(g/t silver)	(g/t gold)	Silver Ounces	Gold Ounces	Silver Ounces	Gold Ounces
Proven Reserves	1,965,000	380	1.60	24,011,000	101,000	9,605,000	40,000
Probable Reserves	2,337,000	354	1.43	26,595,000	107,000	10,638,000	43,000
Total Reserves	4,302,000	366	1.51	50,606,000	209,000	20,242,000	83,000
Resource Category	Tonnes	Average	Average	100% Basis	100% Basis	IMZ 40%	IMZ 40%
		Grade	Grade	Contained	Contained	Attributable	Attributable
		(g/t silver)	(g/t gold)	Silver Ounces	Gold Ounces	Silver Ounces	Gold Ounces
Measured Resources	1,968,000	431	1.8	27,270,000	115,000	10,908,000	46,000
Indicated Resources	2,336,000	402	1.6	30,194,000	122,000	12,077,000	49,000
Total Measured and	4,304,000	415	1.7	57,464,000	238,000	22,985,000	95,000
Indicated Resources							
Inferred Resources	1,224,000	395	1.6	15,543,000	62,000	6,217,000	25,000

Notes:

- 1. Measured and Indicated Resources include Proven and Probable Reserves.
- 2. Metal prices used are US\$12/oz for silver and US\$800/oz for gold.
- 3. The estimated reserves include 12% for ore loss during mining and 13% for dilution assigned using zero grade.
- 4. The estimated mineral resources are not mineral reserves and do not have demonstrated economic viability.
- 5. Numbers have been rounded in all categories to reflect the precision of the estimates.
- The mineral resources were estimated using ordinary kriging for the major vein units and inverse distance to the power of three for peripheral veins.
- 7. The mineral reserves were estimated from the life of mine plan, which defined sustaining capital requirements and mine operating costs, to demonstrate that the these reserves can be economically extracted and processed. Mining losses and dilution were determined based on sub-surface geotechnical conditions and the specific mining technique and equipment limitations for each area of the mine.
- 8. Contained metal in estimated reserves remains subject to metallurgical recovery losses.
- 9. The resource and reserve estimates reflect the deposit at Pallancata as of 31 December, 2008.
- 10. The minimum mining width used to calculate Reserves was 0.8 m. Mineralization narrower than 0.8 m was diluted by the addition of material at zero grade.

All Pallancata ore is processed at the Selene Mine processing plant owned by Ares, for which Ares charges Suyamarca a toll processing fee per tonne based on the plant operating costs. Presently, the Selene processing plant is designed to treat 3,000 t/d of ore from both the Pallancata and Selene Mines.

Pallancata is an underground mine with production sourced from a number of veins and orebodies associated with the Pallancata Vein System, the principal orebody being the Veta Oeste. The mine started in production in September, 2007 at a nominal rate of 500 t/d. This level of production, defined as the Initial Production Level in the JV, is a development threshold which was formally accepted as by IMZ having been achieved on 10 August, 2007.

Commercial Production, another development threshold in the JV, and defined as 30 days of mine production averaging 500 t/d, was achieved on 9 September, 2007. Production was increased to a nominal 1,000 t/d in the second quarter of 2008. Further expansions have seen current production levels rise to approximately 2,400 t/d.

Further plans are to increase production to a nominal 3,000 t/d by mid 2009.



All ore from the Pallancata Mine is transported by 32-t haul trucks, to the Hochschild-owned Selene flotation plant, an approximate distance of 22 km by a well-maintained gravel road.

Total production from the Pallancata Mine from start up in September, 2007 to December, 2008 totalled 546,460 t of ore and 4,913 t of concentrate. The average head-grade for silver was 312 g/t and the average head grade for gold was 1.5 g/t. Overall average "effective" silver and gold recoveries were 88% and 73%, respectively, based on mass-balance calculations. The silver-gold concentrate, averaging 27,000-30,000 g/t silver and 100-125 g/t gold, is transported by road and ship for processing and sale to smelters in North America and/or Europe.

Table 1.2 shows the production schedule developed by Hochschild but discounted by 10% by IMZ in order to more accurately account for equipment productivity and availability. This modified plan, which is used in IMZ's discounted cash flow analysis, reflects the potential risk of the mine not achieving the estimated full production rate of 3,000 t/d. Micon concurs that this conservative approach is prudent.

Table 1.2
Base Case Production Scenario for the Pallancata Mine

		2009	2010	2011	2012	2013	Total
Production Schedule	Tonnes	858,780	953,100	953,100	953,101	643,488	4,361,570
	Ag g/t	372	378	365	349	339	362
	Au g/t	1.62	1.61	1.51	1.39	1.31	1.50
Ounces Produced	Ag oz	8,930,875	10,070,149	9,737,809	9,302,643	6,097,685	44,139,170
	Au oz	32,554	35,939	33,832	31,096	19,818	153,240
Concentrate	Tonnes	10,372	11,511	11,511	11,511	2,504	47,408

The key elements projected for an economic analysis are summarized as follows:

- Mine Life: based on current reserves is nominally 5 years.
- Mining Method: underground production is by means of mechanized cut-and-fill and Avoca style open-stoping methods. The minimum designed mining width is 0.8 m and the maximum mining width is approximately 35 m. Ore is loaded into standard road haulage trucks (32-t capacity) carrying the ore from the mine ramps either to a temporary stockpile on-site at Pallancata, or directly to the process plant primary crusher at the Selene processing plant. All mining services are provided by Ares.
- Annual production: based on currently projected mine and plant throughput is estimated to be approximately 9 million ounces of silver and 30,000 ounces of gold per year commencing in 2009.
- Operating Costs: life-of-mine average operating cost is estimated at US\$67.16/t, including a project management fee to Hochschild of US\$5.92/t, toll processing costs of US\$24.5/t and a government royalty of US\$2.80/t, but excluding commercialization costs of the concentrate of US\$14.0/t.



- Metallurgical Recovery: the flotation plant at Hochschild's Selene process facility is used for toll processing of the ore from the Pallancata Mine to produce a silver-gold concentrate that is transported to smelters for processing and sale. Future anticipated recoveries to produce the flotation concentrate are projected at 87% for silver and 73% for gold.
- Pre-Tax NPV: based on projected prices of US\$800/oz for gold and US\$12.00/oz for silver, on a 100% project basis the current reserves are estimated to generate a pre-tax, cash flow of approximately US\$188 million at a 5% per year discount rate, over the current estimated 5 year mine life, with approximately US\$75 million being attributable to IMZ for its 40% interest in the JV.

Sensitivity to variation in metal prices is shown in Tables 1.3 and 1.4.

Table 1.3 Sensitivity to Gold and Silver Prices – 100% Basis

NPV	5%	Gold Price per Ounce						
In U	S\$ 000's	\$600	\$700	\$800	\$ 900	\$1,000		
93	\$9.00	52,982	65,731	78,512	91,293	104,074		
Ounce	\$10.00	89,672	102,453	115,234	128,015	140,728		
	\$11.00	126,393	139,125	151,806	164,410	177,014		
e pe	\$12.00	162,817	175,421	187,958	200,400	212,842		
Price per	\$13.00	198,831	211,273	223,715	236,157	248,599		
er]	\$14.00	234,588	247,030	259,472	271,913	284,355		
Silver	\$15.00	270,344	282,786	295,228	307,670	320,112		

Table 1.4 Sensitivity to Gold and Silver Prices for IMZ's 40% Ownership Interest

NPV	7 5%	Gold Price per Ounce						
In U	S\$ 000's	\$600	\$700	\$800	\$ 900	\$1,000		
e	\$9.00	21,193	26,293	31,405	36,517	41,630		
Ounce	\$10.00	35,869	40,981	46,093	51,206	56,291		
_	\$11.00	50,557	55,650	60,722	65,764	70,806		
Price per	\$12.00	65,127	70,169	75,183	80,160	85,137		
Pric	\$13.00	79,532	84,509	89,486	94,463	99,440		
	\$14.00	93,835	98,812	103,789	108,765	113,742		
Silver	\$15.00	108,138	113,114	118,091	123,068	128,045		

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2.0 INTRODUCTION AND TERMS OF REFERENCE

2.1 TERMS OF REFERENCE

This report has been prepared as an Independent Technical report as described in NI 43-101.

The Technical Report is in support of the issue of a news release by International Minerals Corporation (IMZ) on 14 May, 2009, which announced an update in mineral resources and reserves at the Pallancata Mine, Peru, received by IMZ from the mine operator, the London-listed company, Hochschild Mining Plc (Hochschild). The Pallancata Property is jointly owned by IMZ (40%) and Hochschild (60%) through a joint venture company, Minera Suyamarca SAC (Suyamarca), which is registered in Peru.

Micon International Limited (Micon) of Toronto, Canada, was retained by IMZ to review the updated Pallancata mineral resources and reserves that were estimated by Hochschild.

The purpose of this Technical Report is to document the updated mineral reserve and mineral resource estimates and other information pertaining to the interest of IMZ in the Pallancata silver-gold property in the Department of Ayacucho, Peru.

Independent Qualified Persons, Richard Gowans, Reno Pressacco and Geraint Harris, all of Micon, visited the Pallancata Property on 7 December, 2008. The site visit included inspection of the underground workings, the exposed vein section, the surface access infrastructure and the off-site processing facility/plant at Hochschild's Selene Mine. Available data was also reviewed in detail in the IMZ and Hochschild offices in Lima, Peru.

2.1.1 Sources of Information

The sources of information and data used in the preparation of this report are as follows:

- a) Technical Report on the Pallancata Mine, Peru, prepared on behalf of International Minerals Corporation by Nicholas Appleyard, Anthony Brown and Mark Cannuli, dated 9 October, 2008.
- b) Technical Report on the Pallancata Mine, prepared for International Minerals by the UK-based IMC Group Consulting Limited (IMCGCL), dated 21 May, 2008 (Qualified Persons: S. Henley, N. Holloway, J. Knight, Julian Bennett, Geoffrey Hammond)
- c) Reserve Report by Hochschild dated 23 March, 2009.
- d) Report: Recursos Minerales, Unidad Minera Pallancata, Ayacucho, Perú, December, 2008. Internal Report of Compañia Minera Ares (Ares), the wholly-owned subsidiary of Hochschild and the Pallancata Mine operator. Associated with this report, supporting information provided by Hochschild included the database of drill hole (underground and surface) and analytical records complete to 31 December, 2008, modeling parameters, a database of composites prepared for each vein, files defining the mineralized envelope for each vein within which



block models were constructed and files covering the resource and reserve estimation stages for each vein.

- e) Metallurgical Balance Spreadsheet from start-up in September 2007 to December, 2008. Compiled by IMZ from regular reporting information provided by Ares; a spreadsheet record of each consignment of Pallancata ore treated through Hochschild's Selene process plant with tonnages of concentrate and tailings together with metal recoveries
- f) Joint Venture Agreement, dated 30 June, 2006 (as amended) between Ares, Ludlow Corporation and Coriorco SAC (all wholly-owned by Hochschild), IMZ and IMZ's wholly-owned Peruvian subsidiary, Minera Oro Vega (Oro Vega).
- g) Various data files and spreadsheets detailing the: as-mined areas, planned mining areas, operational costs, dilution and recovery calculations, production schedule, capital cost schedule and the production schedule for the life-of-mine from Hochschild were supplied between March, 2009 and May, 2009.
- h) A discounted cash flow model by IMZ, dated 1 May, 2009.
- i) Geomechanical Evaluation of the Mining Method for the Pallancata Central Vein, by David Cordova Rojas dated October, 2008 (preliminary report).

Information on the current status of property holdings and operating permits and licenses, as provided by Hochschild personnel.

2.2 **JOINT VENTURE**

Commencing in late 2002, IMZ commenced accumulating and consolidating the mineral rights over the group of mineral concessions which together now constitute the Pallancata Property and, by mid-2006, had completed the initial exploration and evaluation of the Pallancata, as reported in NI 43-101 compliant Technical Reports filed by IMZ in May, 2006 (Cannuli, 2006) and 2007 (IMCGCL, 2007).

On 30 June, 2006, following the signing of a Letter of Agreement dated 13 January, 2006, IMZ signed a formal Joint Venture Agreement (the JV, as amended) with Compañia Minera Coriorco SAC (Coriorco), Ludlow Corporation (Ludlow) and Compañia Minera Ares SAC (Ares). These companies were all wholly-owned subsidiaries of the Peruvian mining company, Mauricio Hochschild & Cia SAC (collectively Hochschild, and now publicly trading as the London-listed Hochschild Mining Plc). The JV was to fast-track development, permitting and commencement of commercial production from the Pallancata Property. Ares is also the owner and operator of the Selene-Explorador silver-gold mine located some 22 km by road northeast of Pallancata, where the Pallancata Mine ore was to be toll-processed.

Under the JV, IMZ, through its wholly-owned subsidiary Minera Oro Vega SAC (Oro Vega) and Coriorco formed a Peruvian registered joint venture company, Minera Suyamarca SAC (Suyamarca). The shares of Suyamarca are held 60% by Coriorco and 40% by IMZ, through its Oro Vega subsidiary. Under the agreement, Coriorco, with the financial guarantee of Ludlow, undertook to provide to Suyamarca 100% of the funds required for drilling and associated costs incurred in converting all or part of the then-known mineral resources to



mineral reserves on the Pallancata Property. Hochschild also undertook to provide to Suyamarca 100% of the capital investment required to develop, permit and construct a mining operation at Pallancata at an initial production level of 500 t/d within 12 months of the receipt of the required permits for a mining operation (the Initial Construction Period). Hochschild's capital investment is not recoverable from IMZ's share of mine production cash flows.

During 2007, Coriorco changed its name to Pallancata Holdings SAC (Pallancata Holdings). On 10 September, 2007 Pallancata Holdings issued formal notices to Oro Vega and to IMZ, which have been accepted by IMZ, in regard to attaining threshold points in mine development as follows:

- i. The mine reached the Initial Production Level of 500 t/d on 10 August, 2007, and;
- ii. The mine operated for 30 consecutive days at an average production level of not less than 500 t/d, such that mine completion conditions (Mine Completion) were fulfilled on 9 September, 2007.

Once the objectives of the Initial Construction Period were met, from that point Suyamarca became responsible for all sustaining capital and operating cost of the mine. Ares is the manager and operator of the project. As of the Mine Completion date in September, 2007, Ares charges Suyamarca a management services fee comprising 10% of the operating costs incurred by Suyamarca at Pallancata.

Under the terms of the JV, Hochschild was to also provide to Suyamarca 100% of the capital required to expand mine production from 500 t/d to 750 t/d within 12 months from the date that the 500 t/d level was reached (the Initial Mine Expansion Target Date), and this additional capital investment was not recoverable from IMZ's share of production cash flows. The Initial Mine Expansion Target Date (to 750 t/d) was achieved on 10 August, 2008.

Mine expansion to 1,000 t/d (although not a contractual requirement under the JV) was completed in May, 2008, with the capital cost for the expansion also being funded 100% by Hochschild to Suyamarca. This additional capital investment is also not recoverable by Hochschild from IMZ's share of production cash flows. Further expansion of the mine is being undertaken by Hochschild to produce 3,000 t/d, with this expansion project being funded from mine cash flow and not 100% by Hochschild.

All Pallancata ore is being processed to produce a silver-gold concentrate at the Selene Mine processing plant of Ares, for which Ares is charging Suyamarca a toll processing fee based on the plant operating costs. If additional processing capacity is required at the Selene processing plant in order to treat ore from Pallancata, then Ares has agreed to pay 100% of the capital costs of such plant expansion, and the toll processing cost charged to Suyamarca by Ares would be adjusted to reflect the additional costs cost incurred by Ares.

As reported in this Technical Report, the Pallancata Mine has been in operation since September, 2007 and has produced a total of approximately 546,460 t of ore to the end of December, 2008 and produced approximately 4.2 million ounces of silver and 16,000 ounces of gold.



The present Technical Report is prepared in accordance with the requirements of National Instrument 43-101 (NI 43-101) of the Ontario Securities Commission (OSC) and the Canadian Securities Administrators (CSA). The resource and reserve estimates are prepared in compliance with the CIM Definitions and Standards on Mineral Resources and Mineral Reserves, as adopted by the CIM Council on December 11, 2005.

2.3 UNITS AND CURRENCY

In this report, all currency amounts and commodity prices are stated in US dollars (US\$). Quantities are generally stated in Système International d'Unités (SI) metric units, the standard Canadian and international practice, including metric tons (tonnes, t) and kilograms (kg) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area, grams (g) and grams per tonne (g/t) for gold and silver grades. Gold and silver grades may also be reported in parts per million (ppm) or parts per billion (ppb). Quantities of gold and silver may also be reported in troy ounces (oz). Gold and silver assay values are reported in grams of metal per tonne (g/t), unless ounces per short ton (oz/T) are specifically stated.

Additional abbreviations which may appear in this report are presented in Table 2.1.

Table 2.1
List of Abbreviations

Term	Abbreviation
Antimony	Sb
Arsenic	As
Atomic absorption	AA
Degree(s)	o
Degrees Celsius	°C
Environmental Impact Assessment	EIA
Foot(feet)	ft
Gram(s)	g
Grams per cubic centimetre	g/cm ³
Grams per litre	g/L
Grams per tonne	g/t
Gold	Au
Gold equivalent	AuEq
Horsepower	HP
Hour(s)	h
Hour(s) per day	h/d
Inch(es)	in
Internal rate of return	IRR
Iron	Fe
Joint venture	JV
Kilogram(s)	kg
Kilometre(s)	km
Kilovolt(s)	kV
Kilowatt(s)	kW
Lead	Pb
Litre(s)	L
Life-of-mine	LOM



Term	Abbreviation
Litres per second	L/s
Mercury	Hg
Metre(s)	m
Micron(s)	μm
Milligrams	mg
Milligrams per litre	mg/L
Millimetre(s)	mm
Millimetres per year	mm/y
Million	M
Mining Stability Agreement	MSA
Minute(s)	min
Net present value	NPV
Net profits interest	NSI
Net smelter return	NSR
Neutralization potential	NP
Ounce(s) (troy ounce)	OZ
Ounces per tonne	oz/t
Parts per billion	ppb
Parts per million	ppm
Per cent	%
Quality assurance/quality control	QA/QC
Rock quality designation	RQD
Second	S
Short ton (2,000 pounds)	T
Silver	Ag
Silver equivalent	AgEq
Square metre(s)	m^2
Square kilometre(s)	km ²
Sulphur	S
Thousand tonnes	kt
Tonne(s)	t
Tonnes per day	t/d
Tonnes per hour	t/h
Tonnes per year	t/y
United States dollars	US\$
X-ray diffraction	XRD



3.0 RELIANCE ON OTHER EXPERTS

For the preparation of this Technical Report, the independent Qualified Persons have not relied upon the work of other experts.

The authors wish to make clear that they are Qualified Persons only in respect of the areas in this report identified in their Certificates of Qualified Persons submitted with this report to the Canadian Securities Administrators.

An independent verification of land title and tenure was not performed. Micon has not verified the legality of any underlying agreement(s) that may exist concerning the licenses or other agreement(s) between third parties.

A draft copy of the report has been reviewed for factual errors by IMZ. Any changes made as a result of these reviews did not involve any alteration to the conclusions made. Hence, the statement and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are neither false nor misleading at the date of this report.



4.0 PROPERTY LOCATION AND DESCRIPTION

4.1 LOCATION AND ACCESS

The Pallancata Property is located approximately 520 km southeast of Lima in the Coronel Castañeda District, Parinacochas Province, Ayacucho Department, Peru. It is approximately 180 km southwest of Cuzco and 240 km northwest of Arequipa (see Figure 4.1). The nearest operating mine, Hochschild's Selene-Explorador silver-gold mine, is located to the northeast, approximately 22 km by a well-maintained gravel road.

The preferred method of access for personnel to the property (for acclimatization purposes) is via air to Cuzco and then by ground transportation on a paved road to Izcahuaca in the direction of Nazca. From Izcahuaca the route goes 20 km southeast on a well-maintained public dirt road toward Hochschild's Selene-Explorador Mine. Before reaching the Selene-Explorador Mine, the route turns south to the Pallancata Property, a distance of approximately 20 km. Travel time by road from Cuzco is approximately 8 hours.

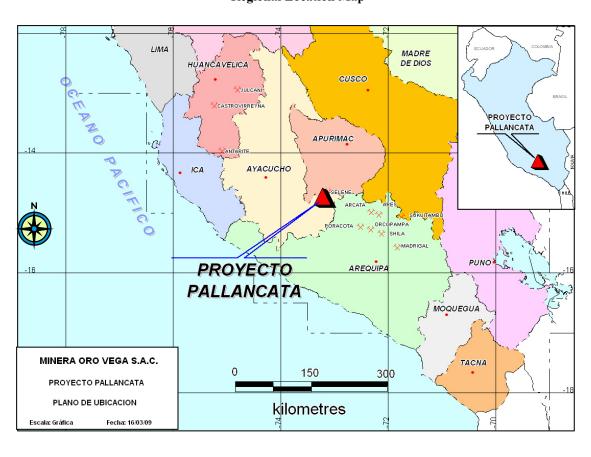


Figure 4.1 Regional Location Map

4.2 DESCRIPTION AND TENURE

The Pallancata Property position is now held by Suyamarca and totals 7,181.42 ha (approximately 72 km²) in 18 concessions (Table 4.1). Three concessions were originally



held under the terms of an option-to-purchase agreement between IMZ's Peruvian subsidiary and Sr. Javier Triveño Pinto (Triveño): Pallancata, Pallancata No.1 and Virgen del Carmen No.1. As of the second quarter of 2007, the terms of this agreement were fulfilled and these three properties are now owned 100% by Suyamarca.

Two concessions are held under another agreement with Triveño: Oro Vega 500 (with a 3% net profit interest (NPI) royalty) and Au Dos Mil (also with a 3% NPI royalty), is also held under an agreement with a third individual.

Three additional concessions, Jelway, Mile Hi, and QB No. 7 (all with a 1% net smelter return (NSR) royalty) are held under an agreement with a second individual. Four additional concessions, Tyler Two, Don Nico Tres, Coriam and Iñiko Tres were purchased from a third individual.

Five concessions were claimed directly from the Peruvian government by Oro Vega and one was claimed directly by Suyamarca.

Table 4.1 Mining Concessions

Number	Concession Name	Code	Area (ha)	
1	Pallancata	100009751X01	431.49	
2	Pallancata No 1	10000049Y02	449.47	
3	Virgen del Carmen 1	10010594X01	349.56	
4	Tucsa 2002	0101517-02	600.00	
5	Pallancata 2002	0101950-02	572.96	
6	La Tranca 2003	0100423-03	110.40	
7	Oro Vega 500	0100419-03	205.26	
8	Oro Vega 800	0102124-04	600.00	
9	Tyler Two	10342903	11.78	
10	Don Nico Tres	10209202	197.37	
11	Pallancata Sur	10366005	648.62	
12	Coriam	10134204	4.05	
13	Iñiko Tres	10010304	41.09	
14	Au Dos Mil	10164602	159.37	
15	Jelway	10082704	1,000.00	
16	Mile Hi	10083804	700.00	
17	QB No 7	10082804	200.00	
18	Pallancata 2008	010113208	900.00	
Total			7,181.42	

4.2.1 Claim Numbers and Names

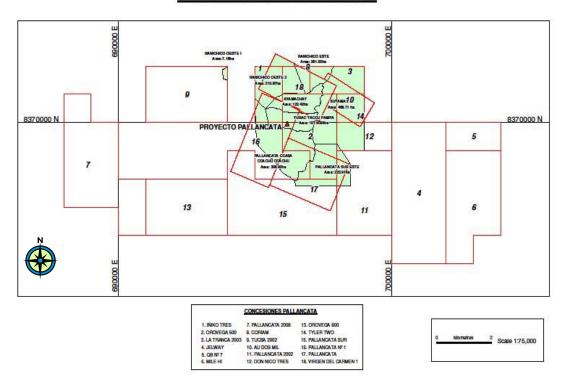
The mineral concessions are identified as Pallancata, Pallancata No.1, Virgen del Carmen 1, Tucsa 2002, Pallancata 2002, Oro Vega 500, La Tranca 2003, Oro Vega 800, Tyler Two, Don Nico Tres, Pallancata Sur, Coriam, Iñiko Tres, Au Dos Mil, Jelway, Mile Hi, QB No. 7 and Pallancata 2008 (see Figure 4.2).



Figure 4.2 Pallancata Claim Map

PROYECTO PALLANCATA

PLANO DE TERRENOS Y CONCESIONES



4.2.2 Nature and Extent of Title

Under Peruvian law, the right to explore for and exploit minerals is granted by way of mining concessions. A Peruvian mining concession is a property right, independent from the ownership of land on which it is located. The concession can be defended against possible claim by third parties, transferred or sold, leased, mortgaged and may be inherited in families. In general, a mining concession may be subject of any transaction or contract. Government authorization is not required for this purpose.

IMZ held title to all of the concessions described previously, until the second quarter of 2007, at which time all of the concessions were transferred to Suyamarca. In addition, IMZ leased the surface rights to 1,709 ha which rights were also transferred to Suyamarca.

According to the mining law, the basic unit for newly claimed mineral concessions is 100 ha to a maximum of 1,000 ha. The concessions are irrevocable and indefinite as long as its holder fulfills the obligations prescribed by law to maintain them. There is no limit to the number of concessions that may be held by a company or individual.

From 2001 onwards, the concession holder must pay an annual rent (Derecho de Vigencia) of US\$3.00/ha by June 30 of each year. The concession holder must sustain a minimum level



of annual commercial production of US\$100/ha in gross sales within six years of the grant of the concession. If the concession has not been put into production within that period, then the concession holder must make an additional payment called a Penalty (Penalidad) of US\$6.00/ha for the 7th through 11th year following the granting of the concession and of US\$20.00/ha thereafter. The concession holder is exempted from the Penalty if the investment made during the previous year was 10 times the Penalty amount (i.e., US\$60/ha per year 7 through to 11).

4.2.3 Survey

IMZ and Hochschild personnel have surveyed the concession limits of the Pallancata group of concessions. No external, independent audit of this data has taken place.

4.3 LOCATION OF MINERALIZED ZONES

The locations of the known mineralized zones are shown in Figure 4.3.

4.4 ROYALTIES AND PAYMENTS

All royalties, payment obligations and concession titles described in this section have now been transferred to the JV company, Suyamarca.

4.4.1 Pallancata, Pallancata No. 1 and Virgen Del Carmen No.1

In June and August, 2002, Minera Oro Vega, IMZ's wholly owned local subsidiary, entered into two option agreements with Sr. Javier Triveño Pinto, a local Peruvian individual, to acquire a 100% interest in the Pallancata, Pallancata No.1, and Virgen del Carmen No.1 concessions (the Optioned Concessions). Under the terms of the agreement, Oro Vega could acquire an initial 75% in the Optioned Concessions by making cash payments totalling US\$1.0 million over seven years. Oro Vega could then acquire an additional 25% interest in the Optioned Concessions (for an aggregate total interest of 100%) by paying an additional US\$600,000 (for an aggregate payment of US\$1.6 million) payable by October, 2009.

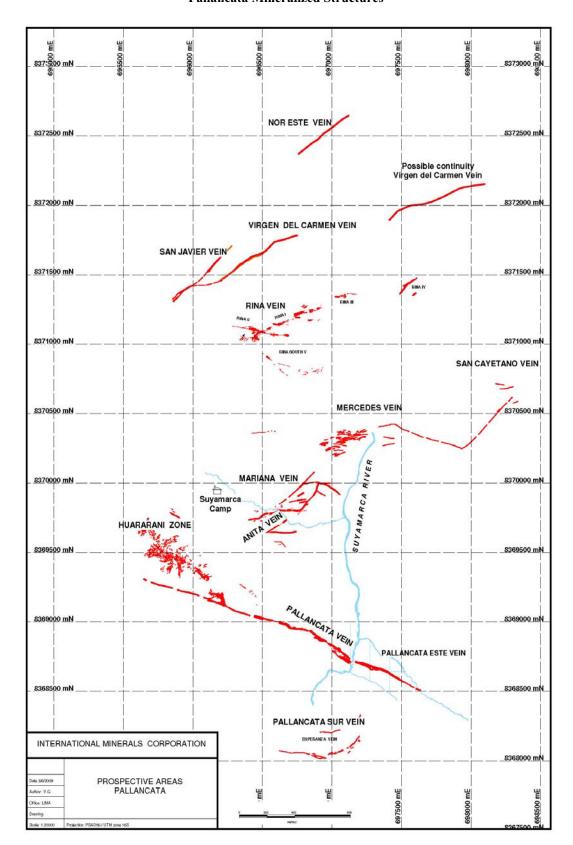
In February, 2007, Suyamarca paid the outstanding balance of the US\$1.6 million due to Triveño and now owns 100% of these concessions.

4.4.2 Oro Vega 500

The concession was staked by Oro Vega in 2004. However, there was a simultaneous claim by Triveño who declined to participate in a public bid for a payment of US\$3,000 plus a 10% interest in the claim. In March, 2005, Oro Vega purchased this 10% interest for US\$25,000 and a 3% NPI royalty upon commencement of commercial production. The royalty can be purchased at any time by Suyamarca for US\$500,000.



Figure 4.3 Pallancata Mineralized Structures





4.4.3 Au Dos Mil

In March, 2006, Oro Vega entered into an agreement with Jaime Triveño to purchase the Au Dos Mil concession for US\$200,000 over a three-year period. This amount has been paid in full.

This agreement also includes a 3% NPI which can be purchased at any time by Suyamarca for US\$300,000.

4.4.4 Tucsa 2002, Oro Vega 800, La Tranca 2003, Pallancata Sur and Pallancata 2002

The Company acquired a 100% interest in five additional concessions (Tucsa 2002, Oro Vega 800, La Tranca 2003, Pallancata Sur and Pallancata 2000) directly from the Peruvian government.

4.4.5 Jelway, Mile Hi and QB No. 7

In March and June, 2006, the Company entered into agreements with an American individual to purchase three concessions (Jelway, Mile Hi and QB No. 7) for a total cost of US\$30,000. The agreement also included a 1% NSR royalty, 0.5% of which can be purchased at any time by Suyamarca as follows:

Jelway US\$200,000 Mile Hi US\$140,000 OB No. 7 US\$60,000

4.4.6 Tyler Two, Don Nico Tres, Coriam and Iñiko Tres

The Company purchased these four additional concessions from local owners for a total of US\$75,500.

4.4.7 Pallancata 2008

Suyamarca acquired a 100% interest in the Pallancata 2008 concession directly from the Peruvian government.

4.4.8 Peruvian Government Mining Royalty

Once a mine is in production, the concession holder must pay in favour of the Peruvian State a royalty to be determined with reference to the value of the ore concentrates less the costs for indirect taxes, insurance, freight and storage in ports. The following rates apply to establish the royalty, per year:

Up to US\$60 million	1%
For the excess of US\$60 million up to US\$120 million	2%
For the excess of US\$120 million	3%



4.5 ENVIRONMENTAL LIABILITIES

No environmental liabilities from previous works or from current operations are recognized to exist on the area. Hochschild have acquired all permits and are responsible for all operational environmental and social activity. Hochschild's environmental reporting structure is shown in the next paragraph.

"Environmental management is facilitated through a reporting structure at mine level with accountability to the Corporate Environmental Manager forming part of the Operational Excellence group. In addition to its primary responsibilities, the Environmental Department works together with the operational teams, community relations and the Legal Department on the application for, and on-going compliance with, mining permits, thereby assuring the continuity of operations. The Group is committed to complying with the highest standards of environmental management systems at its three original operations in Peru (Ares, Arcata and Selene), which have been recertified ISO14001 compliant during the year. The same standards are applied to the Group's operations elsewhere with the intention that official certification will be achieved at San José, Pallancata and Moris during 2010."

See also Sections 23.6 and 23.8 for additional information.

4.6 PERMITS

For development and operation of the Pallancata Mine, Hochschild are responsible for obtaining all permits related to production as part of the JV agreement. All permits for the production and processing of ore from the Pallancata Mine are in place and are current.

All of the required permits were obtained from Ministerio de Energia y Minas (Ministry of Energy and Mines) of Peru, in each case with the presentation of the corresponding Environmental Impact Assessment (EIA).



5.0 CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPY

5.1 TOPOGRAPHY, ELEVATION AND VEGETATION

Situated in the Western Cordillera of Southern Peru, elevations in the Pallancata property range from 4,200 m in the central part of the property to 4,700 m in the Virgen del Carmen No.1 concession in the north. The project area topography is rugged with substantial outcrop exposure. The elevation, rock exposure, steep slopes and lack of substantial soil cover result in a lack of major vegetation.

5.2 CLIMATE

The climate in Pallancata consists of a dry season and wet season. The wettest months are December to March. Temperatures at the Pallancata Property range from -5°C to 20°C.

5.3 PROXIMITY TO POPULATION CENTRE

The nearest large population centre to the Pallancata Property is the village of Izcahuaca, 40 km to the northwest, with a population of approximately 500. Facilities there are very limited.

At the Pallancata Mine and at the Selene-Explorador Mine, some 22 km by road from the Pallancata Mine, Hochschild maintains substantial mine camps although personnel are not generally on long-term residential deployment. The camps include professional medical facilities.

5.4 SUFFICIENCY OF SURFACE RIGHTS

Surface rights held by Suyamarca total 1,709 ha. This is adequate for current mine development plans which will not be constrained by issues related to surface rights.

It should be noted that under the terms of the JV for production at the Pallancata Mine, ore is trucked over a gravel road to Hochschild's Selene-Explorador plant, operated by Ares, and the corresponding requirements for power, water, mill consumables and tailings disposal at the Selene plant are the responsibility of Hochschild.



6.0 HISTORY

6.1 OWNERSHIP

See Sections 4.4.1 to 4.4.4 of this report for details of the 18 mining concessions at the Pallancata Property.

On 18 July, 2006, Oro Vega signed a formal JV agreement with affiliated companies of the Hochschild group of companies whereby the new joint venture company, Suyamarca, whose ownership is 60% Hochschild and 40% Oro Vega, would be formed. Under this agreement, Hochschild agreed to fast-track the development of the Pallancata Mine and bear, at its sole cost, the development expenditures required to achieve a production level of 1,000 t/d. The terms of the JV are summarized in Section 2.2 of this report.

6.2 HISTORICAL EXPLORATION

6.2.1 Exploration in 2002

Prior to acquiring the Pallancata Property, Oro Vega carried out an initial sampling program over the Pallancata Vein and San Javier zone (in the Virgen del Carmen No. 1 concession) which consisted of 60 rock panel and channel samples. Only two of the rock channel samples from the main portion of the vein reported significant precious metal values.

6.2.2 Exploration in 2003

In 2003, Oro Vega commenced a more extensive exploration program. This comprised the surveying, rehabilitation and detailed sampling of 27 previously inaccessible underground workings (many of which date back to the Spanish colonial era) together with surface rock sampling and geological mapping. Oro Vega collected a total of 231 surface and underground rock chip and channel samples from the vein and enclosing wall rocks.

Detailed mapping and sampling of the West Breccia Zone in the western part of the main Pallancata Vein structure was also carried out. In total, 23 rock chip and panel samples were taken of vein material from the stockwork zone, and 31 rock chip and panel samples from a silicified zone to the west. Results ranged from trace to 195 g/t silver and trace to 0.7 g/t gold. Following these encouraging results from surface sampling on the Pallancata Vein, Oro Vega completed its Phase 1 drilling campaign totalling 2,490 m in 17 core holes, focused on the West and Central Veins of the main Pallancata Vein System.

6.2.3 Exploration in 2004

In early 2004, Oro Vega geologists discovered high-grade epithermal vein mineralization in the Mariana Vein located some 800 m to the north of the West Vein. So far, the Mariana Vein has been traced over a strike length of approximately 350 m. A total of 72 rock channel samples were taken from accessible workings on the vein. The Oro Vega Phase 2 drilling program commenced in August, 2004. Also in 2004, geological consultant, Dr. Warren Pratt undertook regional mapping of the property from 10 November to 3 December, 2004.



6.2.4 Exploration in 2005

The Oro Vega Phase 2 drilling program was completed in June, 2005, comprising 13,497 m in 51 core holes. The majority of the core drill holes (39 holes, 11,433 m) were drilled in the West and Central Veins of the Pallancata Vein System, with 4 drill holes (625 m) on the Mariana Vein and 8 drill holes (1,440 m) on the San Javier Vein.

6.2.5 Exploration in 2006

In July, 2006, the JV company, Suyamarca, assumed responsibility for mine development and also for management of the continuing exploration. A program of infill and exploration core drilling was commenced on the Pallancata Vein, with the goal of improving the existing resource calculations and augmenting reserves. The Mariana Vein structure and the Huararani stockwork zone were also drill-tested. A total of 17,340 m (61 core drill holes) were completed during the 2006 drilling campaign. Of these, 16,326 m (58 drill holes) were completed on the Pallancata/Huararani zones; and 1,013 m (3 drill holes) were completed on the Mariana Vein. Surface sampling was also undertaken on the Mariana, Mercedes and San Cayetano areas of mineralization. In the Mariana Area a total of 349 rock chip samples were taken, in the Mercedes area a total of 673 were taken, and in the San Cayetano area a total of 211 were taken.

6.2.6 Exploration in 2007

The details of exploration and drilling programs undertaken under the management of Suyamarca are provided in Sections 11 and 12 of this report. The Pallancata Mine commenced production in September, 2007.

6.2.7 Exploration in 2008

Hochschild developed an exploration and drilling program for 2008. This program totalled 6,397 m in 67 core drill holes and was primarily focused on developing the main Pallancata Vein.

6.3 HISTORICAL MINERAL RESOURCE AND RESERVE ESTIMATES

No historical mineral resources as defined by NI 43-101 exist for the Pallancata deposit. In September, 2005, IMZ announced the first mineral resource estimate for the Pallancata deposit. This estimate was carried out and disclosed in accordance with NI 43-101 by IMZ Qualified Person, Technical Manager, Nicholas Appleyard and reviewed and verified by the then, independent Qualified Person, Mark Cannuli (now IMZ Exploration Manager).

The previous mineral resource estimates are shown in Table 6.1.



Table 6.1
Previous Mineral Resource Estimates, Pallancata Deposit

Date	Cut-off Grade (g/t Ag)	Tonnes	Grade Ag (g/t)	Grade Au (g/t)	Ounces Ag	Ounces Au	Oz, Ag Equiv.	Oz, Au Equiv.
Sep. 05 ^{1,2,3}	150	2,698,268	445	1.7	38,603,664	146,606	48,189,424	737,015
May 07 5,6	150	2,635,000	383	1.3	32,470,000	107,000	37,820,000	756,000
May 07 3,6	150	2,558,000	359	1.5	29,496,000	119,000	35,446,000	709,000
Dec. 07 4,5	148	3,214,154	342	1.46	35,341,382	150,873	43,962,671	769,347
Dec. 07 4,3	148	2,154,070	479	1.35	33,173,100	93,494	38,515,622	674,023
June 08 4,5	148	5,347,000	388	1.4	66,772,000	249,000	81,000,571	1,417,51 0
June 08 4,3	148	852,000	369	1.2	10,113,000	34,000	12,055,857	210,978

This Resource is estimated on uncut grades.

6.4 PRODUCTION HISTORY, PALLANCATA DEPOSIT

The life-of-mine production data from commercial production commencing on 9 September, 2007 until 31 December, 2008, is summarized in Table 6.2.

Table 6.2 Life of Mine Production Data

Item	Q3 2007	Q4 2007	2007	Q1 2008	Q2 2008	Q3 2008	Q4 2008	2008
Tonnes mined	11,125	65,174	76,299	66,408	88,033	154,301	209,297	518,039
Tonnes Processed	14,723	63,612	78,335	50,893	83,517	88,247	245,468	468,125
Head grade Ag (g/t)	256	323	310	340	339	337	288	312
Head grade Au (g/t)	1.3	1.5	1.5	1.61	1.7	1.6	1.4	1.5
Conc produced (t)	79	560	639	541	847	909	1,968	4,265
Conc grade Ag (kg/t)	41.6	33.3	34.3	28.7	30.5	30.8	31.0	30.6
Conc grade Au (kg/t)	0.17	0.13	0.1	0.12	0.12	0.11	0.12	0.12
Ag produced (koz)	105	599	704	500	829	899	1,959	4,187
Au produced (oz)	430	2,330	2,760	1,930	3,230	3,350	7,655	16,165
Recovery Ag ¹ (%)	87	91	90	90	91	94	86	89
Recovery Au 1 (%)	72	74	74	73	71	75	71	72

 $^{^1}$ The plant recoveries do not take into account changes in inventory within the Selene plant

² Silver and Gold Equivalents are calculated using US\$6.50/oz silver and US\$425/oz gold, with no allowance being given for metallurgical recoveries.

³ Inferred resource.

⁴ Silver and Gold Equivalents are calculated using US\$10.50/oz silver and US\$600/oz gold, with no allowance being given for metallurgical recoveries.

⁵ Combined measured and indicated resources.

⁶ Silver and Gold Equivalents are calculated using US\$12.00/oz silver and US\$600/oz gold, with no allowance being given for metallurgical recoveries.



7.0 GEOLOGICAL SETTING

7.1 REGIONAL GEOLOGY

Regionally, the project lies in the Western Cordillera of southern Peru which comprises principally Cretaceous and Tertiary volcanics and rare sedimentary sequences, together with Tertiary intrusives. The principal lithologies within the Pallancata Property are shown on Figure 7.1.

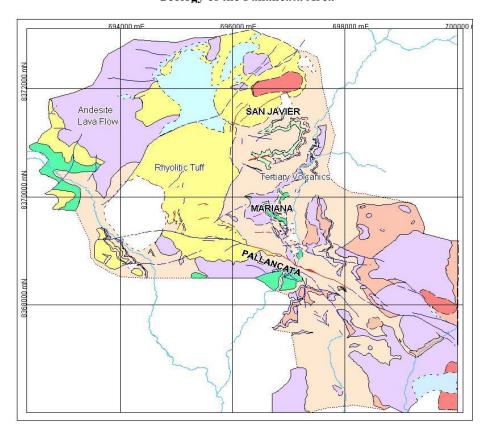


Figure 7.1 Geology of the Pallancata Area

7.2 DETAILED GEOLOGY

The geological mapping of the concession area was carried out by independent geological consultants (Pratt & Crummy, 2005) and the IMZ exploration group and forms the basis of regional interpretation and the strategy for identification of other exploration targets in addition to the Pallancata Vein System.

Volcaniclastic rocks, including lapilli and crystal tuffs, volcanic breccias and conglomerates, and volcanic sediments intercalated with andesitic lava flows dominate the Pallancata project area. A massive white rhyolitic tuff lies unconformably above the volcaniclastics, covering much of the higher ground in the area. Rhyolite stocks have intruded the volcanics in the north of the area and to the east of the project. On the Pallancata and Pallancata 2002 concessions, a large porphyritic andesite laccolith is present at depth.



The Tertiary volcanic rocks on the Pallancata Property were deposited in a very active tectonic environment. There are numerous small- and large-scale examples of profound syndepositional changes, controlled largely by active faults. Some of these faults have a similar northwest-southeast orientation to the Pallancata Vein but many others strike almost north-south. Evidence of instability is widespread, but is strongest in the vicinity of the main Pallancata Vein structure. This was probably a major zone of collapse: either part of a caldera margin or linear graben. Where slickensides exist on fault planes, they are invariably sinistral.

Faults and veins form a continuous group of sub-vertical structures with varying degrees of sinistral strike-slip movement. The remarkable similarities between fault and vein orientations suggest they were active at the same time.

Alteration and mineralization appear to be controlled by these structures, and high grade zones (for example the West Vein or Veta Oeste) may be related to dilatational portions related to jogs and bends in these structures.

The principal vein structures at the Pallancata Property are illustrated in Figure 7.2. (See also Figure 4.3).

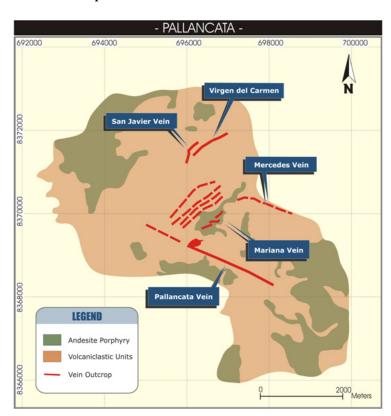


Figure 7.2
Principal Vein Structures in the Pallancata Area



8.0 DEPOSIT MODEL

The Pallancata mineralization has been recognized as a low-sulfidation precious metal epithermal system by IMZ geologists and independent geological consultants. The reported basis of these conclusions is consistent with features widely recognized and published as characteristic for this type of mineralization

Multiple events of mineralization are apparent. The main-stage precious metal mineralization overprints earlier stages, but may also represent the waning stages of the same hydrothermal system. Control of the main-stage mineralization is likely to have been provided by a major northwest-southeast striking fault.



9.0 MINERALIZATION

Six principal areas of mineralization are identified on the Pallancata Property within an area of 3 km by 2 km. These comprise Virgen del Carmen/San Javier, Mariana, Mercedes, San Cayetano, Pallancata and Huararani (see Figure 4.3).

Low sulfidation, epithermal silver-gold mineralization is present in a complex array of veins, breccias (both hydrothermal and tectonic), stockworks and silicified zones. Vein zones comprise vein breccia with in-situ clasts of bladed carbonate replacement and partial leaching. Crustiform and colloform banding is also common. The matrix generally consists of milky-white to coarse-grained semi-translucent drusy quartz. Multiple phases of veining are apparent. Breccias range from simple tectonic breccias to complex multiple-event hydrothermal breccias. These include black silica breccia (rich in sulfides) to massive white quartz breccias.

The main Pallancata Vein System is the principal target area and hosts a west-northwest to east-southeast trending zone of complex multiphase veining and faulting that generally has well-defined conduits that underwent major dilation. The system pinches, splits and has a sinuous nature. It is apparent that the vein system is en echelon in form, both horizontally and vertically.

The dip of the vein system is generally sub-vertical, with a down-throw to the south. The alteration style of the clay components changes from smectitic to illitic towards the main structure, but it is often hard to distinguish hydrothermal-related clay alteration from diagenetic alteration due to the high pumice content of the lapilli tuffs. There is a distinct silicified halo around the veins which is more prominent on the north side of the vein.

The main Pallancata Vein structure, as currently recognized has a strike length of approximately 2 km and is up to 40 m wide at its widest, including the intensely silicified wall rocks. Individual veins or splays are more typically 0.5 m to 3 m wide. Mineralization has been delineated to depths up to 500 m below surface. Portions of the system are dominated by in situ quartz altered, bladed carbonate. Elsewhere it shows jigsaw breccia, commonly with black chalcedonic silica and sulfide fill. Other parts are true hydrothermal breccias with complex textures and multiple phases of banded chalcedonic silica and euhedral drusy quartz.

Much of the high-grade mineralization on the Pallancata Property is seen in the West Vein. This zone is located in the western part of the main Pallancata structure, and comprises an intensely silicified body with a strong stockwork of quartz veins, typically striking northeast-southwest to north-south. High-grade zones occur where these veins intersect the northwest-southeast striking main Pallancata Vein System. In the West Vein, fracture movements are seen to be normal and sinistral, while in the Central Vein they are normal and dextral. The main structure displays mineralized cimoides (duplex veins) and tensional veins principally in the footwall of the West Vein, and in both footwall and hanging wall in the Central Vein.

The mineralization is generally sulfide poor and includes argentite, ruby silver (pyrargyrite/proustite), pyrite, marcasite, galena, electrum and, rarely, native gold. Most of the visible silver mineralization in drill core from the Pallancata Vein occurs within the



massive silica, including silica displaying carbonate replacement textures. In these areas the silver occurs as argentite and pyrargyrite. Some argentite mineralization occurs with adularia after an early silicification and brecciation and an intermediate banded chalcedony phase. There appear to have been multiple episodes of silver deposition in the Pallancata Vein. Shadowy carbonate replacement textures, the product of the silicification of laminar calcite, and the presence of adularia are interpreted as being the results of boiling conditions during vein breccia formation. IMZ geologists report a mineralogical and XRD study indicating:

- Grains of native gold associated with argentite, filling cavities in pyrite and disseminated in quartz.
- Argentite replacing galena and chalcopyrite.
- Ruby silver (pyrargyrite/proustite) associated with argentite filling micro fractures and cavities in quartz and pyrite, replacing galena and chalcopyrite.
- Sphalerite filling micro fractures and cavities in quartz, replacing pyrite and marcasite, itself being replaced by galena, chalcopyrite and quartz.
- Covellite replacing chalcopyrite and argentite.
- Oxide minerals, primarily haematite and limonite filling fractures, interstices and cavities, giving a yellowish colour to the gangue material.

The Huararani stockworks outcrop immediately to the north of the West Vein. They are composed of much the same type of quartz veins and alteration as in the Pallancata Vein albeit at a higher structural/geochemical level. The stockworks are moderately anomalous in precious metals at the surface. Drilling during 2006, however, confirmed that precious metal grades increase at depth (as evidenced by a drill intersection of up to 2.2 m wide with 1,269 g/t silver and 4.7 g/t gold).

The San Javier/Virgen del Carmen, Mariana, San Cayetano and Mercedes zones display similar types of quartz veining to the Pallancata Vein. The Mercedes Vein parallels the Pallancata structure, whereas the others strike northeast-southwest as a result of tensional opening away from the main west-northwest-east-southeast system.



10.0 EXPLORATION

10.1 RESULTS OF SURVEYS AND INVESTIGATIONS

Systematic exploration commenced in 2002 by Oro Vega and was focused on geological mapping as well as surface and underground rock geochemical sampling in the Pallancata Vein. During 2003 and 2004, geological mapping and rock sampling was extended to cover the northern part of the property (Virgen del Carmen No.1 and Oro Vega 500). The Mariana Vein was identified by Oro Vega based on "bonanza" silver grades from previously undiscovered underground workings. During November and December, 2004 detailed regional geological mapping was undertaken by Dr Warren Pratt (Pratt & Crummy, 2005).

Oro Vega undertook two surface core drilling campaigns between 2003 and 2005. The first phase, comprising 2,491 m in 17 drill holes (holes PAC01 to PAC17), focused on the Pallancata Vein. Of these initial 17 drill holes, only three tested the western part of the Pallancata Vein (the Veta Oeste, or West Vein). The second phase, commenced in August, 2004 and was completed in June, 2005, comprised13,397 m in 51 drill holes and focused on the Pallancata Vein together with drilling the Mariana and San Javier vein systems. A total of 39 holes were drilled in the Pallancata Vein (holes PAC18 to PAC56), four were drilled in the Mariana area (holes PAC57 to PAC60) and eight were drilled in the San Javier area (holes PAC61 to PAC68).

In April, 2006, Ares performed additional core drilling as part of Hochschild's due diligence program prior to signing the JV. A total of 2,458 m in seven core holes were drilled. From September to December, 2006 a program of infill core drilling was carried out with four drill rigs on the Pallancata Vein. This was under the direction of Suyamarca, which planned and supervised the completion of 58 drill holes in the northwest and central sectors of Pallancata Vein. Three holes were also drilled on the Mariana Vein. Total metres drilled during this stage were 17,340 m.

During 2005 and 2006, geological mapping and sampling were performed on the Huararani stockworks, adjacent and to the north of the Pallancata Vein, and on the Mariana, Mercedes and San Cayetano Veins.

During 2007, infill core drilling was performed at the Pallancata Vein, both from surface as well as underground. The greater part of the exploration effort was concentrated on the West and Central Veins (15,640 m in 60 drill holes). Drilling was also performed on the Mariana Vein (3,549 m in 12 drill holes) and the Mercedes Vein (1,521 m in 5 drill holes).

During the period January to December 31, 2008, both surface and underground infill drilling were carried out at the West and Central Veins. A total of 6,397 m in 67 core drill holes were completed.

10.1.1 Pallancata Vein

In early 2003, following acquisition of the property in late 2002, Oro Vega commenced an extensive exploration program, which comprised the surveying, rehabilitation and detailed sampling of 27 previously inaccessible underground workings (many of which date back to



the Spanish colonial period) together with surface rock sampling and geological mapping. Oro Vega collected a total of 231 surface and underground rock chip and channel samples from the Pallancata Vein and enclosing wall rocks, with values ranging from trace to 4,380 g/t silver and 0.01 to 22 g/t gold.

Subsequent assessment by Suyamarca of the Pallancata Vein has been based primarily upon core drill holes collared at surface, with an increasing use of underground drilling as mine development has progressed since the latter half of 2007. The Pallancata Vein has now been identified as a continuous mineralized structure over a horizontal distance of over 1.8 km, with mineralization extending to a depth of over 500 m from surface.

For the purposes of mine description and planning, the development of the principal orebodies associated with the Pallancata Vein, the following zones are identified with respect to the mine coordinates: (a) a western zone (Veta Oeste or West Vein) extending to the west-northwest of the area of the Santa Angela decline (west from the easting coordinate 696.500); b) a central zone (Veta Central or Central Vein) west-northwest from the area of the Orion decline up to the western zone (between easting coordinates 697.00 and 696.500); and c) an eastern zone (Veta Este, or East Vein), extending east-southeast of the area of the Orion decline.

10.1.2 Huararani Zone

The Huararani vein/stockwork area crops out a short distance northeast of the West Vein and roughly 50 to 100 m higher than the highest elevation of the Pallancata Vein. The surface expression of these veins consists of a dense stockwork, which exhibits a strong east-northeast to west-southwest trend.

During 2005 and 2006, the Huararani zone was geologically mapped and sampled by Oro Vega with a total of 354 rock chip samples taken across the Huararani stockworks. These samples returned assays which were anomalous in silver (maximum 10.8 g/t Ag), gold (maximum 2.85 g/t Au), antimony (maximum 428 ppm Sb), mercury (maximum 8.61 ppm Hg) and arsenic (maximum 7,970 ppm As).

10.1.3 Mariana Zone

In early 2004, Oro Vega discovered high-grade epithermal vein mineralization in the Mariana Vein located some 800 m to the north of the Pallancata Vein. The Mariana Vein was mapped over a strike length of approximately 350 m. A total of 72 rock channel samples taken from accessible workings on the vein averaged 802 g/t silver and 2.7 g/t gold, with individual samples ranging from 72 to 8,240 g/t silver and 0.3 to 26.7 g/t gold, with estimated true widths ranging from 0.30 m to 1.20 m.

Additional mapping and sampling was performed in 2006. Two additional subsidiary veins, Mariana Este and Mariana Norte were discovered. A total of 349 samples were taken from the Mariana, Mariana Este and Mariana Norte veins. The results ranged from trace to 2,200 g/t of silver and trace to 9.4 g/t of gold.



The Mariana Vein system has been investigated by three drill holes during 2006 and a further 11 drill holes during 2007. Further core drilling is planned in 2009.

10.1.4 Mercedes Zone

The Mercedes zone, comprising east-striking silver-gold bearing veins and stockworks to the north of the Mariana Vein, was discovered by Oro Vega in 2006. Detailed mapping and sampling were performed and the vein was traced along a strike length of nearly 500 m. A total of 673 rock chip samples were taken. Silver values ranged from trace to 3,860 g/t and gold values from trace to 9.32 g/t.

Among the best surface rock chip sample results from the Mercedes zone were the following: 0.4 m at 1,125 g/t silver and 1.8 g/t gold, 0.4 m at 1,240 g/t silver and 1.8 g/t gold, 0.4 m at 2,640 g/t silver and 5.9 g/t gold and 0.4 m at 3,860 g/t silver and 1.9 g/t gold.

During 2007, the zone was investigated by five drill holes totalling 1,521 m. Further core drilling is planned in 2009.

10.1.5 San Cayetano Zone

Mapping and sampling of this vein zone was initiated in 2006 by Oro Vega. A total of 211 rock chip samples were taken. Silver assay results ranged from traces to 1,310 g/t; gold ranged from traces to 13.75 g/t.

Amongst the best rock sample results from the San Cayetano Vein were the following: 0.6 m at 576 g/t silver and 13.8 g/t gold, 1 m at 872 g/t silver and 3.3 g/t gold, and 1 m at 786 g/t silver and 0.34 g/t gold.

No drilling has been carried out to date in this zone.

10.1.6 San Javier/Virgen Del Carmen Zone

The San Javier/Virgen del Carmen vein zone is located in the north of the property in the Virgen del Carmen No.1 concession.

The mineralized zone comprises two sub-parallel, northeast-southwest striking veins with a strike length of 650 m. In the initial Oro Vega reconnaissance program a total of seven surface rock chip samples and one dump grab sample from this area reported values from 4 g/t to 377 g/t silver and 0.04 g/t to 3.8 g/t gold. Several previously inaccessible underground and surface workings (also dating back to the colonial era) were located by Oro Vega.

During 2005, the zone was investigated by eight drill holes totalling 1,440 m. Initial core drilling is planned in 2009.

10.2 EXPLORATION PROGRAM FOR 2009

Suyamarca has programmed further exploration for 2009. This program consists of 15,220 m of core drilling in 77 drill holes for the main Pallancata Vein (38 drill holes from



underground and 39 drill holes from surface) 17 surface drill holes in San Javier Vein, 13 surface drill holes in Virgen del Carmen Vein and 9 surface drill holes in Marina Vein. In addition, approximately 3,700 m of surface core drilling will further test the Mercedes Vein and initially test the San Cayetano and the Alexandra and Rina Veins (the latter two in the San Cayetano/Mercedes area).

10.3 INTERPRETATION OF EXPLORATION INFORMATION

The Pallancata low-sulfidation, epithermal silver-gold mineralization is expressed as a complex array of veins, breccias (both hydrothermal and tectonic), stockworks and silicified zones. Much of the high-grade mineralization on the property is seen in the Veta Oeste and Veta Central zones and comprises an intensely silicified body with a strong stockwork of quartz veins, typically with a strike of northeast-southwest to north-south. The high-grade mineralization occurs in vein breccia zones with shadowy carbonate-replacement texture, testifying boiling conditions during formation of the vein breccia, and in zones where multiphase veining and brecciation is apparent.

To the north of the Pallancata Vein, in the Mariana, Mercedes, San Cayetano and San Javier/Virgen del Carmen Zones, the mineralized veins are generally narrower than the Pallancata Vein. These veins are high-grade, however, and exhibit similar epithermal textures to those seen in the Pallancata Vein.

10.4 STATEMENT REGARDING USE OF CONTRACTORS TO CARRY OUT EXPLORATION

Until September, 2006, personnel of Oro Vega were responsible for, and carried out, the surface geological mapping and sampling together with drill core logging and sampling. During November and December, 2004, detailed regional geological mapping was undertaken under contract to Oro Vega by Dr, Warren Pratt (Pratt & Crummy, 2005). Since September, 2006, responsibility for additional geological exploration and sampling has been under the direction of Suyamarca which, where appropriate, has drawn on geological expertise and personnel from the Hochschild exploration department. Estimation of resources and reserves in the Pallancata Vein, as stated in this Technical Report, has been prepared by the Hochschild exploration department on behalf of Suyamarca.

The first two programs of drilling operations under the management of Oro Vega employed Canadian drilling contractors, respectively Kluane International Drilling Inc. of Vancouver, Canada and Bradley Brothers of Rouyn, Quebec, Canada. The in-fill drilling program performed under the management of Suyamarca from September, 2006 has been carried out by Boart-Longyear of Lima, Peru.



11.0 DRILLING

11.1 SUMMARY

Core drilling undertaken on the Pallancata Property between 2003 and the end of December, 2008 is summarized in Table 11.1. During the period 2003-2005, the Oro Vega drilling programs consisted of a total of 15,888 m in 68 core drill holes. Suyamarca assumed responsibility for all exploration and drilling programs at the Pallancata Property in mid-2006 and the Suyamarca totals are shown below in Table 11.1. A total of 62,440 m of core drilling has been performed on the Pallancata Property since 2003; this includes 9,833 m drilled from underground.

Table 11.1
Diamond Drill Summary, 2003 to December 31, 2008

		Underground		Surface			
Year	Drilled By	No. of	Metres	No. of	Metres	Drill Holes	
		Holes	Drilled	Holes	Drilled		
2003	Oro Vega			17	2,592	PAC 01-17	
2004	Oro Vega			18	5,111	PAC 18-35	
2005	Oro Vega			33	8,285	PAC 36-68	
2006	Ares (Due Diligence)/			68	19,816	DLPL 01-68	
2006	Suyamarca						
2007	Suyamarca	22	3,436	53	16,803	DLPL 69, 69A, 70-144	
2008	Suyamarca	67	6,397			DLPL 145-211	
Total			9,833		52,607		

Table 11.2 shows the principal mineralized vein intersections of the Pallancata Vein System.

Table 11.2 Major Vein Intersections — Pallancata Vein System

Drill Hole	From (m)	To (m)	Intersect (m)	Estimated True Width (m)	Ag (g/t)	Au (g/t)	Vein	
PAC-04	69.3	74.5	5.2	4.4	493	1.6	Veta Central	
PAC-12	21.5	25.2	3.7	3.2	651	1.8	Veta Central	
PAC-20	281.7	292.2	10.5	6.6	2,118	11.8	Oeste	
PAC-23	157.2	161.2	4.0	2.7	1,455	6.5	Oeste	
PAC-26	189.2	213.4	24.2	12.8	989	1.3	Ramal Central	
PAC-51	249.3	259.7	10.4	7.3	503	3.5	Oeste	
PAC-53	276.3	286.1	9.9	5.8	481	1.4	Oeste	
PAC-54	230.0	262.0	31.9	20.5	461	1.3	Oeste	
DLPL-A08	119.6	177.5	58.0	35.4	332	1.2	Oeste	
DLPL-A69A	97.7	128.2	30.5	19.2	557	2.5	Veta Central	
DLPL-A74	112.5	160.6	48.0	30.3	402	1.5	Veta Central	
DLPL-A74	165.6	174.4	8.8	6.4	1,151	2.6	Ramal Central	
DLPL-A77	97.9	103.9	6.0	3.6	1,296	3.7	Nora	
DLPL-A79	62.1	87.7	25.5	12.8	561	1.2	Veta Central	
DLPL-A81	245.1	268.4	23.3	14.0	589	1.2	Ramal Central	
DLPL-A88	74.7	82.7	7.9	6.9	493	3.4	Amelia	



Drill Hole	From (m)	To (m)	Intersect (m)	Estimated True Width (m)	Ag (g/t)	Au (g/t)	Vein	
DLPL-A91	117.5	124.7	7.2	5.1	650	2.1	Diana	
DLPL-A94	234.6	243.0	8.3	5.3	538	2.0	Veta Central	
DLPL-A96	0	19.0	19.0	16.3	545	2.2	Oeste	
DLPL-A102	206.6	219.4	12.8	5.4	612	2.3	Veta Central	
DLPL-A113	0.0	17.2	17.2	11.4	364	1.1	Oeste	
DLPL-A113	95.8	102.2	6.4	4.5	469	2.5	Cimoide	
DLPL-A116	0.0	7.3	7.3	5.2	402	1.4	Underground	
DLPL-A119	53.3	60.9	7.6	6.9	344	2.0	Cimoide	
DLPL-A131A	330.6	349.7	19.1	6.4	1,284	4.8	Oeste	
DLPL-A134	105.3	160.4	55.1	25.2	564	1.8	Ramal Central	
DLPL-A140	155.3	197.9	42.6	20.9	953	3.2	Veta Central	
DLPL-A142	9.0	14.6	5.6	4.6	579	1.1	Isabella	

Note: The known orebody is currently in two main areas. These are Veta Oeste (West Vein) which includes the veins, Veta Sofia, Veta Cimoide, Veta Maria, Veta Doris, Veta Isabella and Veta Oeste Veins and the Veta Central which includes the veins Veta Diana, Veta Tensional, Veta Nora, Veta Ramal Central and Veta Central.

11.2 SUYAMARCA 2008 DRILLING PROGRAM

Details regarding the drilling programs undertaken in prior years have been disclosed in previous Technical Reports which are available for viewing on the SEDAR web site. In 2008, Suyamarca undertook a total of 67 core drill holes for an aggregate total of 6,397 m, all of which were targeted at defining the orebody in the main Pallancata Vein System.

11.3 RELATIONSHIP BETWEEN DRILL HOLE SAMPLE LENGTH AND TRUE THICKNESS

In all the target areas within the Pallancata Vein the mineralized vein structures are subvertical; core drill holes were therefore orientated approximately perpendicular to strike and with inclinations between -40° and -60°. True widths for cored intervals were estimated with respect to the projected vein envelope and lithological contacts recorded in the core. The estimated true widths are shown in the above tables of drill holes results.

During the exploration programs managed by Suyamarca (since 2006) drilling has been primarily undertaken on an in-fill basis or to prove lateral or depth continuity of the known veins, allowing correspondingly more accurate identification of targets. As a rule, with relatively few exceptions, surface-collared drill holes have been orientated to intersect veins at a perpendicular angle. Drill hole collars are surveyed by the Pallancata Mine Survey Department using a Total Station down-hole surveying instrument. Down-hole surveys are undertaken at 100-m intervals using an EZ-SHOT REFLEX instrument.



12.0 SAMPLING METHOD AND APPROACH

The sampling method and approach currently adopted by Suyamarca corresponds with the standard procedures adopted in all of Hochschild's other Peruvian mining operations (Ares, Selene and Arcata). All sampling is performed by Hochschild and/or Ares project personnel. Samples collected are designated in three categories:

- Surface channel samples.
- Underground channel samples.
- Samples from core drilling.

12.1 SURFACE CHANNEL SAMPLES

Surface channel sampling was primarily a feature of the regional reconnaissance investigation performed under the management of Oro Vega until mid-2006. As reported by IMZ Exploration Manager, Mark Cannuli (Cannuli, 2005), rock chip samples from surface outcrops were taken over dimensions up to 1.0 m in width with a maximum length of 5 m. Multiple rock chip samples were collected covering at least 50% of the sample area, targeting a total sample weight for each sample of approximately 5 kg.

12.2 UNDERGROUND CHANNEL SAMPLES

Underground channel sampling is a consistent feature of the current Suyamarca program for the control of underground mine development and production. Channel samples are taken in the mine at a frequency of every 2 m in advancing drives or galleries developed along mineralized structures, and at every 3 m in production working areas (stopes). In both cases this is undertaken perpendicular to the vein structure. The channel line is marked with spray paint, as an elongate rectangle of 0.30-m width, which is washed by a pressurized water hose prior to sampling to minimize contamination. Reference to a survey point with established XYZ coordinates is made and the azimuth, distance and the inclination from the point to the channel is measured and is entered into the GEMM database management system, generating coordinates for the contacts of each sample. A pneumatic pick is utilized to obtain rock chip material with continuous representative frequency across the pre-marked channel line over the full width of mineralization; where exposed, wall-rock material is taken in separate individual samples.

The selection of contacts of individual samples within the channel is governed by lithology and visible mineralization. As a general rule sample widths are not more than 1.0 m in length although they are occasionally up to 1.5 m. The minimum sample length is 0.3 m, smaller units being combined with any sample immediately adjacent.

Samples are collected directly into clean plastic bags which are immediately sealed and labelled in accordance with standard company procedures; sample weights are normally in the range 3 to 5 kg.



12.3 DRILL CORE SAMPLES

The selection and sampling of drill hole core in the 2005-2006 drilling campaigns under the management of Oro Vega has been described by Cannuli (2005). The subsequent surface drilling program under the management of Suyamarca follows the same procedures, with corresponding documentation and practice.

After core extraction from the core barrel, the core is cleaned with water to remove mud and grease, and placed in boxes marked-up with the core runs and identification of the drill hole number and location. It is then transported to the adjacent core logging and storage facility, where it is registered as received by the responsible geologist.

The core undergoes detailed logging according to standard procedures, starting with accurate measurement of recovery and allocation of any losses. The core is photographed and then logged to record the geotechnical rock quality designation (RQD) and rock quality parameters. Detailed logging is undertaken with respect to lithology, nature and orientation of lithological contacts, nature of mineralization and relationship of styles or phases of mineralization, structural features and contacts. During this process, the recording geologist identifies the proposed basis for sampling, based on lithological contacts, style and relationships of mineralized units and with respect to standard procedures for selection of sample length. The proposed sequence of samples is subject to review by an experienced supervising geologist, after which the sample contacts and numbering sequence are clearly marked on the core with appropriate markers in the core box.

The sample lengths in mineralized, or potentially economically interesting, intervals are adjusted to reflect lithological units and contacts. The maximum sample length is 2 m measured along core and the minimum sample length is set at 0.20 m. As a general rule, where apparently barren material of up to 5 m occurs as a lens, band or unit between veins or the vein splits, this is consistently sampled. A minimum core length of 2 m is also sampled on either side of visually-identified mineralized units. The selected sample intervals are sawn in half at the core-shed site, using a diamond saw, one half immediately being placed into a labelled sample bag and sealed, the remaining half being returned to the core box, with identifying markers for the sample interval. Sawing is undertaken under a water flush in accordance with widely recognized standard practice, and the sawn section is washed prior to sealing in the sample bag, such that contamination between samples is considered minimized.

During 2007, the surface drilling program produced core primarily NQ in size (48 mm in diameter). Also in this period a total of 22 underground drill holes were undertaken from within mine development headings; these drill holes are of shorter length and drilled using Explorer or similar machines, to produce core of nominal BQ size (36 to 38 mm in diameter). This smaller-size core is subject to the same procedure for handling, measurement, recording and sampling. A sawn half-section is retained in the core box unless used for re-sampling (field duplicate) quality assurance/quality control (QA/QC) determinations.

12.4 SAMPLE HANDLING AND DATA MANAGEMENT

Each sample is identified and entered on a sample card which contains the following information:



- Sample number.
- Name of the sampler.
- Date.
- Sampling location (mine working or surface locality).
- Type of sample and its accurate location defined by XYZ co-ordinates.
- Any other relevant data.

Samples remain under the control and responsibility of the personnel of Ares' Geology and Exploration Department until formally received at the assay laboratory in accordance with standard procedures.

All samples during the period 2003 to September, 2006 were sent to the ALS-Chemex Laboratory, Lima. From September 2006, samples from the Suyamarca-managed exploration program were initially sent to SGS Laboratories, Lima, Peru, although from mid-2006, SGS Lima assumed the contract for direct management of the Selene Mine laboratory. Thereafter, samples from the Suyamarca-managed exploration program from late 2006 through to the end of December, 2007 were dispatched to the Selene Mine laboratory, with a small number of exceptions which were dispatched directly to SGS Lima. From 1 January, 2008, the Selene Mine laboratory reverted to the direct management of Ares. Under this change of management, procedures have been newly documented in line with the laboratory audit report of Smee and Associates Consulting Ltd. (Smee, 2007). See Section 13.2.

The procedure for receiving geological samples at the Selene Mine laboratory has been redocumented as at 1 January, 2008 and has been inspected as part of the present reporting. Key features are as follows:

- Mandatory use of personal protective equipment by all staff.
- Access to the samples is only by authorized personnel.
- The drying oven is switched on at the time of first receipt of samples, and in principle has a 20-min period to reach the correct uniform temperature before samples are placed in it.
- All samples received at the laboratory must have their respective laboratory documentation (work orders), in which are the sample reference codes, derivation of each sample, sampler name and elements to be assayed.
- The laboratory employee signing for receipt of the samples assumes responsibility for any anomalies, which must be recorded at the time of receipt.
- Sample numbers must be verified against the work orders; samples are laid out in the reception area in ascending order.
- Each sample in sequence is emptied on to a clean and dry drying tray, with the base lined by fresh grease-proof paper (Kraft paper); the interior label inside each sample bag must be placed securely in the tray.



- Trays are placed in order in the drying racks or trolley of the drying oven, in a standard order starting from the top of the racks, from left to right in successively lower levels.
- Under no circumstances must one tray be placed on another.
- There are strict instructions for cleanliness, dust minimization and disposal of used sample bags.
- Completion of the work order document and recording the reception of each sample
 with corresponding sample details forms an initial reference system against which
 assay procedures are checked and assay results recorded for inclusion in the GEMM
 database system.

As a general rule, the laboratory aims to turn-around assay results for gold and silver within 24 hours from receipt of the samples, the results being entered directly to the GEMM database.

As development of the initial exploration project at the Pallancata Property has moved through the stages of resource definition and feasibility study, into the stage of mine development and mineral production, the objectives of sampling have changed. They have become more directly focused on the requirements to support mineral resource and mineral reserve modeling and progressive upgrade of resources to reserves status. They have also focused on the requirement to monitor mine development in mineralized areas for reconciliation with the reserve model and optimization of mine production plans. The distribution and frequency of drill hole intersections and the policy of calculating composite sample grade values are discussed below with reference to the estimation of resources and reserves.



13.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

The assay results which form part of the database for mineral resource modeling and mineral reserve estimation include results from a number of phases of ownership and exploration, which have given rise to a number of changes in laboratory management and corresponding procedures.

13.1 EXPLORATION PROGRAMS

13.1.1 Exploration Program Conducted by Oro Vega 2003 to 2006

All samples taken during the period 2003 to September, 2006 were sent to the ALS Chemex laboratory in Lima, for preparation using standard industry practices. Assays of prepared pulps were undertaken by ALS Chemex. All samples were assayed for gold and silver using conventional atomic absorption (AA) and/or fire assay techniques. Samples over the detection limit were assayed using fire assay with a gravimetric finish. The preparation and assay steps used during this period have been described by Cannuli (2005, 2006).

13.1.2 Exploration Program Conducted by Oro Vega and Suyamarca 2003 to 2007

Initially, Pallancata exploration samples and, specifically, sealed half-core samples were submitted to SGS Laboratories in Lima, for preparation and assay. As the Suyamarca program developed under Hochschild management, and capacity at the Hochschild-owned Selene Mine laboratory was expanded, Pallancata samples were submitted to the Selene Mine laboratory. During 2007, virtually all assays for the Pallancata program were undertaken at the Selene Mine laboratory, though there were some exceptions.

The Selene Mine laboratory had been under the management of SGS Laboratories since August, 2003. SGS had responsibility for development of appropriate procedures and day-to-day management of the sample preparation and assay tasks. All personnel within the laboratory with responsibility for sample handling assay and reporting were SGS employees. However, the QA/QC responsibilities were effectively divided between SGS laboratory management and the Hochschild Geology Department, which managed the Pallancata sample submissions on behalf of Suyamarca. SGS managed an internal system of standards and assay duplicates. The Hochschild Geology Department specified which samples should be prepared as duplicates after crushing (preparation duplicates) and also indicated where standard samples from two standards in the ownership of Hochschild should be inserted in the assay sequence.

The preparation duplicates prepared as stipulated by Geology Department were sent to the SGS laboratories for assay. The Hochschild standards, inserted where requested by the Geology Department comprise Standard No. 7 (with recommended values of gold = 2.784 ppm ± 0.038 and silver = 353 ppm ± 2) and Standard No. 8 (with recommended values of gold = 3.844 ppm ± 0.059 and silver = 612 ppm ± 5). These were prepared by ALS Chemex from representative material from the Selene Mine area and were formally certified by ALS Chemex on the basis of verification by five other accredited laboratories.



The Selene Mine laboratory, together with other Hochschild assay laboratories, was the subject of technical performance review and audit by Smee and Associates Consulting Ltd. of Vancouver, Canada in August, 2007 (Smee, 2007). The Smee report highlighted a number of significant issues related to equipment maintenance, performance and calibration, good practice procedures and the interpretation and corrective actions arising from QA/QC records. Recommendations have been implemented through change of management and the revision of laboratory and assay procedures. A follow-up visit was conducted by Smee in January, 2009, the results of which were provided in a report that highlights the improvements that have been made to the Selene laboratory (Smee, 2009). See Section 13.2.

13.1.3 Selene Mine Laboratory Under Hochschild Management in 2008

The Selene Mine laboratory wasunder the management of SGS Laboratories from August, 2003. From 1 January, 2008 the operation of the Selene Mine laboratory has been under the direct management of the mine operator, Ares. Procedures have been reviewed and redocumented as discussed below, and have been inspected as part of the current report. All current laboratory personnel are employees of Ares.

The assay process remains that which has been used since 2003; fire assay with gravimetric finish for gold and silver, and AA analysis for copper, lead, and zinc. Revised or redocumented procedures currently in place cover the following areas:

- Laboratory reception of geological samples.
- Drying of geological samples (including specification of internal control and insertion of a laboratory duplicate sample every 20 samples and insertion of blanks, on basis one blank every 40 samples).
- Crushing and splitting of geological samples (including selection of a crushed duplicate to be inserted every 20 samples).
- Grinding of pulps.
- Fusion and cupellation.
- Preparation of doré buttons for partition.
- Partition of doré by gravimetric method.
- QA/QC procedures.

13.2 CONCLUSIONS OF THIRD PARTY AUDIT OF SELENE LABORATORY, JANUARY 2009

The following is quoted from the report prepared by Smee in January, 2009 (Smee, 2009). Information in square brackets is provided for purposes of clarity.

"The Selene laboratory manager and the QC manager guided the independent audit, which was assisted by Mr. Walter Montoya and Mr. Jose Dapello of Hochschild.



"The laboratory has been re-designed and refurbished since the first audit visit [i.e., September, 2007] and is greatly improved. Samples are received in a clean room with sorting tables. Paperwork accompanies the samples and the numbers are checked against the paperwork. Errors are rectified by the clients before samples are processed. The sample numbers are entered into an Excel spreadsheet, as the LIMS [Laboratory Information Management System] was removed by SGS. QC sample positions are placed in the worksheet. Labels are still done manually however.

"Samples are placed on new stainless steel pans that are lined with paper between each sample. The lab has two new Essa driers that take trolleys and a small dryer that is used for plant samples. The temperature for drying geology samples is near 125 C, which is found to be a bit high - the temperature for geological samples should not exceed 95 C. The dryers have dust filters over the air intakes.

"The lab now operates a Rhino as the primary crusher and a Terminator as a secondary crusher. Both were in good condition and were free from grease. The dust collection system was in operation and worked well. The lab now has a large riffle splitter with new pans and is in good order. A dust control hood needs to be installed for the splitter.

"Quartz cleaning material is used for the crushers every 10 samples and for the pulverizers between every sample. As with the other labs, the LM-2 pulverizers could use the larger B1000 bowls to make a 500 g pulp.

"The quality control on the crusher and pulverizer includes a screen test of 3 samples per batch of 48, and a preparation duplicate in every batch. A quartz cleaning blank is assayed every batch as well. The specification for the crusher is now 85 % -10 mesh, and the pulp is 90 % -200 mesh. The lab uses a separate balance for the QC [QA/QC]. This balance must be placed on a level table and be calibrated as are the other balances. The data is placed in a book, and plotted in Excel. The charts are displayed on the wall of the lab.

"The fire assay balance weighs 30 g to 2 decimals for the geology, heads and tails samples and 7 g for the concentrate. The weighing room is sealed and the balances calibrated twice per day with three weights. The base metal balance is also calibrated twice per day with four weights. The data is placed in a book. All balances are certified once per year and have a maintenance check twice per year. This again is a big improvement since the last visit.

"The fire assay room contains the flux addition, and furnace equipment. The flux formula is now satisfactory and the source of the litharge is from Anachemia. The button weights are also satisfactory. The furnaces are operated at the required temperatures for the required amount of time. The sample templates have been adjusted to the required sample batch size to avoid sample mis-ordering errors.

"The lab now uses an industry accepted practice for pouring the slag and lead into the iron moulds. This is a big improvement over the SGS method. Assay crucibles are used only one time to avoid cross contamination. However, the prills should be picked in the fire assay lab and not another part of the laboratory. This will keep the Pb-rich cupels in the fire assay lab and avoid possible safety hazards and contamination.



"The wet laboratory contains three fume hoods with one being used for parting and one for acid digestions. One is used for acid storage. Parting is done with 15 % HNO₃ [nitric acid] at 130 C for 30 minutes, while aqua regia digestion for base metals is done at 250 C. Three drops of HF [hydrofluoric acid] are now used in the base metal analytical process, but the lab does not have any Teflon containers. The temperature on the hot plates is now monitored with an IR [infra-red] gun and the data recorded. As with the other labs, a sand bath could be used to distribute heat evenly to all containers. Care should be taken to ensure that the digital temperature controllers are accurately showing the temperatures of the hot plates.

"The laboratory now uses deionized water that is monitored for conductivity. The data are recorded in a book. The auto-dispensers are calibrated in the laboratory but must be done each day using the actual acids that are being dispensed.

"The laboratory uses a single AAS [atomic absorption spectroscopy] for all base metal assays and the Au and Ag are finished by gravimetric methods. The calibration standards are now made each week and the absorbances are recorded in a book. However the lab manager must check that the absorbances are actually within the required limits. The present book should be adjusted to show when new standards are being introduced.

"The lab now inserts two certified standards for each batch of 48 samples. A single CDN standard [purchased certified reference material from CDN Resource Laboratories of Langley, British Columbia] per batch of 30 is inserted for base metals. The Selene internal standards should be certified for base metals as well as for Au and Ag. The lab also inserts a preparation duplicate, a pulp duplicate and two forms of blanks per batch of 48 samples or a QC frequency of 23 %. This is above the average for commercial laboratories.

"The laboratory has a full time QC manager to review data. However, the night shift supervisor must allow the data to be examined by the QC manager before sending to the client in the morning. The lab monitors accuracy, bias and contamination with each batch and have acceptable rules for passing and failing the QC samples. However the duplicates are monitored for compliance within 20 % of each other. This should be changed to record the actual differences and the data used for a precision calculation. QC charts are done monthly and will be done on a continuous long term basis as well."

13.3 CURRENT SAMPLE MANAGEMENT AND ASSAY FLOWSHEET

The assay process at the Selene Mine laboratory (managed by Ares since January, 2008) remains the same as has been used since setting up the laboratory in 2003. Under the present management system sample reception, handling, preparation, assay and data reporting is undertaken by employees of Ares.

The Selene Mine laboratory is not certified and, under laboratory management procedures, samples are not sent to outside laboratories for any check assay procedure. However, the Suyamarca Geology Department requests duplicate samples to be prepared as preparation duplicates for specified samples and these are sent directly to SGS Laboratories, Lima for assay. The Geology Department aims to send 2% of all samples for assay to an outside laboratory.



The current assay procedure is summarized on Figure 13.1.

13.4 QUALITY CONTROL EVALUATION

As stated previously, since June, 2006, the primary laboratory for the assay of geological samples (from surface drilling, underground drilling, underground channel samples and surface channel samples), collected under the management of Suyamarca by Ares has been the Selene Mine laboratory. Quality control on the performance of the Selene Mine laboratory has been monitored by the Hochschild/Ares Geology Department through the regular submission of standard samples from four certified standards, by inclusion of blanks in the assay sequence and by selecting preparation duplicates which were sent to SGS Laboratories, Lima for check assay against the duplicate pair analyzed at Selene. The Quality Control results in the period 1 January, 2008 to 31 December, 2008 have been reviewed prior to commencing an audit of the mineral resource estimates.

Blank samples have been prepared from quartzite which contains no significantly detectable metal content, such that on analysis, values for gold must be equal to or less than 200 ppb and silver must be equal to or less than 400 ppb. Where analysis of a blank sample exceeds these values an anomaly is identified which must be investigated. In general failure of the assay to fall within a warning limit based on the detection limits requires re-assay of the complete batch of samples.

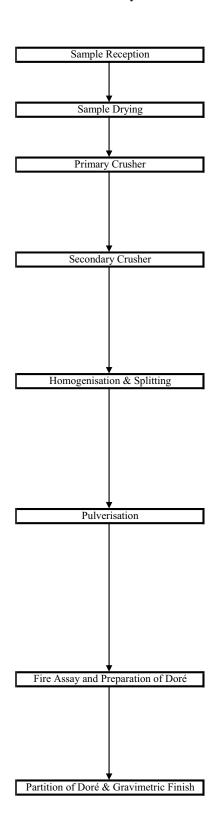
The Hochschild Geology Department has been responsible for the regular insertion into the sample flow for assay of certified standards. The "Failure Logic" applied by Hochschild is that accepted values should fall within a band defined by plus or minus three Standard Deviations of the results on either side of the normative value of the standard.

In general terms, the QA/QC results demonstrate that, apart from a few excursions below the Lower Control Limit for silver (5 samples for Standard #2), Micon notes that the standard reference and blank materials are showing acceptable performance for the 2008 coverage period. Micon recommends that, if not already implemented as standard policy, re-assaying programs for samples associated with failures of standards be undertaken immediately as a routine matter and corrective measures applied to the assay data.

The Geology Department have been responsible for dispatch of the duplicates from the Selene Laboratory to the SGS Laboratory located in Lima, where assaying of the samples parallel to those of the Selene Mine laboratory were performed. The results are presented in Figures 13.2 and 13.3.



Figure 13.1
Assay Flowsheet for Gold and Silver at the Selene Mine Laboratory (2008)



In the process of receiving the samples, the Shift Manager will identify in the sample number sequence where duplicate samples (preparation duplicates) will be prepared, on the basis of one every twenty samples; also insertion of standards and blanks.

Citesa Jaw Crusher; only used where material contains fragments $>\frac{1}{2}$ inch. A sample of clean quartz to be passed at the beginning of each batch and thereafter after every 10 samples. Crush entire sample.

Citesa Jaw Crusher: all feed must be $<\frac{1}{2}$ inch. Product must be 85% passing -10 mesh. QC requires granulometry to be checked on three dry samples in every batch, at the beginning middle and end of the batch; results to be reported immediately and corrections made. A sample of clean two inches quartz to be passed at the beginning of each batch and thereafter after every ten samples

Jones Splitter with 12 slits of $\frac{3}{4}$ inch aperture. Using full width of the splitter, crushed material is reduced by half at each pass and at least three passes through the splitter are made; on one of which the collecting tray orientation is turned, to ensure consistent homogenisation. The final pass aims to obtain a sample weight of 150 g - 200 g. Where a duplicate sample (coarse or preparation sample) is required both portions of the final split are retained.

Labtech Essa Pulverizer: pulverizer set for standard three minute cycle, product must be 90% passing -200 mesh. QC requires granulometry to be checked on three dry samples in every batch, at the beginning middle and end of the batch; results to be reported immediately and corrections made. Before each sample bowl to be cleaned by passing clean crushed silica the cleaning with compressed air and brush. Weight check on bowl and discs or rings to be made at least each week and recorded. Geology pulps retained in store for one month.

A 30 g sample of pulp is weighed and recorded prior to admixture with a standard flux mixture of 160 g, homogenised by shaking and then placed in a labelled fusion crucible; each batch is heated in the fusion furnace in graduated steps to 1050°C; after cooling lead button is removed and cleared of slag by hammering, then weighed. Weight must be 25 to 35 g; otherwise process repeated. Lead buttons transferred to cupellation furnace operated at 950°C; after oxidation of lead, extract doré prills. QC requires that a certified standard (STD GEO) is included in each batch of pulps submitted to the fusion; also a re-assay sample (pulp duplicate) is selected and submitted with each batch of pulps.

In number sequence the prills are cleaned and weighed; digestion with nitric acid; after controlled reaction rinse with ammonium hydroxide then water; dry and weigh the gold button



Figure 13.2 Comparison of the Duplicate Assay Results, Silver (Regression Line Shown in Pink, ±30% Variance in Red)

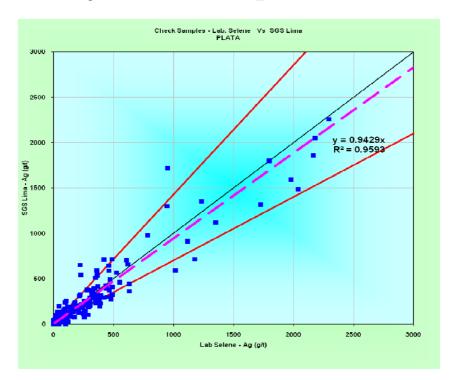
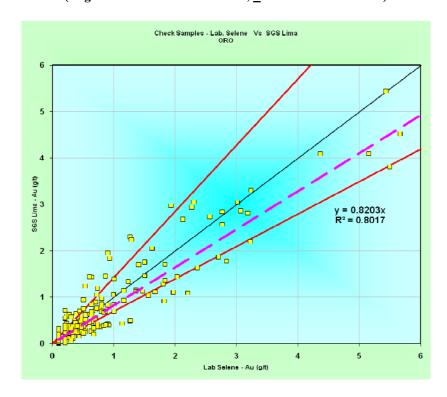


Figure 13.3 Comparison of the Duplicate Assay Results, Gold (Regression Line Shown in Pink, ±30% Variance in Red)





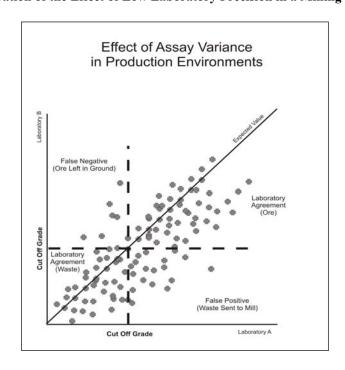
The scatter plot for gold values shows a very wide dispersion. For silver values a more acceptable relationship exists with only few exceptions falling outside a 30% variation. Although there is broad correlation between the laboratories, the Selene Mine laboratory is indicated to yield an overestimation bias of approximately 6% for silver assays and approximately 18% for gold assays, as compared to the SGS Laboratory.

The degree of variance in these data may be cause for concern, as there may be ramifications from a production perspective due to false positives or false negatives (see Figure 13.4). This figure demonstrates the impact of a variance in assay values between two laboratories in that where both laboratories agree on the ore and waste classifications, there is no impact upon the operational performance. However false positives (from the perspective of Laboratory A) will result in potentially sending waste grade material to the mill, and false negatives will result in potentially leaving economic material in place. Micon therefore offers the following recommendations:

- In conducting an examination of precision between two laboratories, the sample pulps should be used rather than coarse rejects from the drill core.
- Any such programs of duplicate assaying should be carried out using Certified Reference Materials to monitor the accuracy of the resulting data.
- The QA/QC program should be expanded to include duplicate pulps for re-assay by the primary laboratory (using Certified Reference Materials as a monitor) to examine the precision of the primary laboratory.

Figure 13.4

Demonstration of the Effect of Low Laboratory Precision in a Mining Operation





Based on its review of the QA/QC program, Micon considers that, on an overall basis, the QA/QC program operated by Hochschild/Ares is adequate to give sufficient confidence in the assay data for use in resource and reserve estimations.



14.0 DATA VERIFICATION

Independent data verification as performed by the authors involves five steps:

- Review of the quality control exercised by the project staff for acquisition of basic data.
- Conducting a site visit to the Pallancata Mine by independent Qualified Persons, Messrs. Harris and Pressacco of Micon, in order to confirm the geologic setting and obtain a brief overview of the mining methods and overall rock conditions.
- Conducting a site visit to the Selene milling facility by independent Qualified Person, Mr. Gowans of Micon, in order to review the overall process.
- Conduct a detailed review of the major steps involved in the generation of the mineral resource and mineral reserve estimates to identify any major discrepancies.



15.0 ADJACENT PROPERTIES

The nearest mine is Hochschild's (Ares) Selene-Explorador silver-gold mine, located approximately 22 km by road to the northeast of the Pallancata Mine. The mine, which was opened in 2003, suspended operations in May, 2009. The Selene-Explorador Mine is situated on the Selene Vein System, comprising a number of mineralized epithermal veins, several of which were worked over about a decade. IMZ owns no interest in the Selene-Explorador Mine or processing facility.



16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

16.1 METALLURGICAL TESTING

Prior to start up of operations at the Pallancata Mine, metallurgical testwork was undertaken in 2006 for IMZ by McClelland Laboratories in Sparks Nevada USA (MLI) and by Metso, in York, Pennsylvania, USA (Metso). MLI carried out flotation and cyanidation testwork, while Metso carried out grinding and abrasion testing.

Also in 2006, The Tecsup Laboratory, in Lima, Peru (Tecsup) owned by Hochschild, carried out flotation and cyanidation testing and Laboratorio Metalúrgico Chapi, (Chapi) also in Lima, completed grinding testwork, both on behalf of Hochschild.

Test results were generally comparable but, as noted below, they have been superseded by information gathered from commercial operations. Additional testwork is underway to better evaluate the metallurgical characteristics of new mineralized zones in the Pallancata Mine, primarily the Central Vein, and final results are anticipated in the third quarter of 2009.

16.2 MINERAL PROCESSING

All ore from the Pallancata Mine is toll-treated through the Hochschild process plant located at Hochschild's Selene Mine. The ore is delivered by 32-t haulage trucks to a dedicated storage area at the Selene plant-site and processed in batches equivalent to approximately 10 to 15 days of plant operation. The plant, which produces a single silver-gold flotation concentrate, comprises crushing, grinding, flotation, concentrate dewatering and tailings disposal.

The mill at Selene has operated continuously since November, 2003 and has toll-treated Pallancata Mine ore since start-up in September, 2007. Initially the Selene plant was designed to process ore from the Selene Mine at a rate of 750 t/d but its capacity has subsequently been expanded in several stages. The additional capacity was required to accommodate toll treatment of Pallancata ore. Modifications designed to increase throughput to 2,000 t/d, were commissioned in August, 2007 and additional expansion activity commenced in 2008 to increase the capacity to 3,000 t/d in order to accommodate the planned increased output from the Pallancata Mine.

Total production from the Pallancata Mine from September, 2007 to December, 2008 totalled 546,460 t of ore and 4,913 t of concentrate. The average head-grade for silver was 312 g/t and the average head grade for gold was 1.5 g/t. Overall average "effective" silver and gold recoveries were 88% and 73% respectively based on mass-balance calculations. The silvergold concentrate, averaging 27,000-30,000 g/t silver and 100-125 g/t gold, is shipped off-site for processing and sale to smelters in North America and/or Europe.

While it is possible that not all rock assemblages have been tested or processed to date, the operating results are considered to provide a reasonable basis for future forecasts of Pallancata ore throughput and concentrate production.



A description of the Selene process plant and a discussion of the plant performance are included in Section 21.3 of this report.

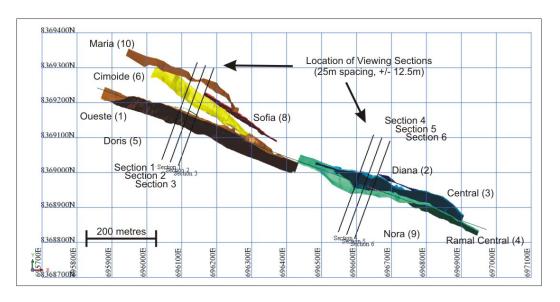


17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

17.1 INTRODUCTION

The Mineral Reserves and Resources estimates presented in this report have been prepared by Hochschild Geology Department, on behalf of the joint venture company. The mineral resources have been checked and validated by Micon by means of random spot checks that are designed to locate any areas of significant systematic errors. In respect of the mineral resource estimates, these spot checks consisted of constructing two groups of three cross sections at a spacing of 25 m (±12.5 m viewing windows) through the central portions of the following veins: Veta Oeste, Veta Cimoide and Veta Central and Veta Ramal (Figure 17.1). These four veins were selected for examination, as in total they comprise the majority of the tonnage of the mineral resources. Vein numbers shown in Figure 17.1 are as per Suyamarca designations, the location of the test section planes are as shown.

Figure 17.1
Plan View of the Distribution of the Various Mineralized Solid Models Comprising the Pallancata
Deposit, Peru



The Hochschild Geology Department employs the MineSight software package for preparation of the mineral resource and mineral reserve models.

17.2 DATABASE

Ares, as operator and site manager on behalf of Suyamarca, has prepared an up-to-date geological database that incorporates the Oro Vega exploration records dating back to the middle of 2006 as well as the more recent program managed by Ares. The database includes surface-and underground-based drill hole records, and surface and underground channel samples. As is the common convention in the mining industry, all underground chip/channel samples are entered into the drill hole database as "pseudo-drill holes", or composites.



Geological records and assay data are handled through the GEMM data entry system which performs basic data validation before input to the database which is managed within a Geographical Information System (GIS) system. The database comprises three main datasets, these are:

- Drill core and channel sampling databases.
- Topographic database.
- Geological map information.

These datasets are held and managed within the ArcView software package. Ares runs the MineSight mine planning software for creation and management of a mineralization solid and block model for each of the recognized veins and orebodies. At the mine site the mineralization solid and block model is updated on a monthly basis with the new sample and topographic data acquired during the month. A summary of the drill hole database as of December 31, 2008 is presented in Table 17.1 and plan and longitudinal views of the drilling and chip sampling locations are shown in Figures 17.2 and 17.3, respectively. In general terms the surface-based drill holes have achieved a nominal sample density of approximately 50-m centres. Chip samples in the mineralized zones are collected on a regular basis as mine development advances and are nominally spaced at a distance of approximately 2 m.

Table 17.1
Description of the Drill Hole Database as at December 31, 2008, Pallancata Deposit

Table Name	Data Type	No. of Records		
Assay_raw	interval	48,344		
Collar		4,985		
Survey		5,308		

The drill hole database, the sample composite files, solids models of the mineralization and mine excavations and the topographic surface were supplied to Micon in generic digital formats, whereupon Micon proceeded to convert the files for use in the Surpac mine modeling software package (version 6.1.1).

17.3 RESOURCE MODELING

All the resources and reserves quoted in this report fall only within the Pallancata Vein System. Within this vein system, mineral resources are recognized within eleven separate veins, some of which are branches ("ramales"), or sub-parallel veins within the major vein system. The West Vein system includes the following veins: Veta Maria, Veta Cimoide, Veta Sofia, Veta Doris, Veta Isabella and Veta Oeste. The Central Vein system includes the following veins: Veta Diana, Veta Central, Veta Tensional, Veta Nora and Veta Ramal Central. Mineral reserves are estimated within five of the veins: Veta Oeste, Veta Cimoide, Veta Central, Ramal Central and Veta Isabella. Micon notes that the majority of the mineral resources and mineral reserves are contained within four of the eleven named veins. Consequently, Micon elected to focus its audit activities upon the four veins: Vetas Oeste, Cimoide, Central, and Ramal Central.



Figure 17.2
Plan View of the Distribution of Drill Holes and Channel Samples as at December 31, 2008, Pallancata
Deposit

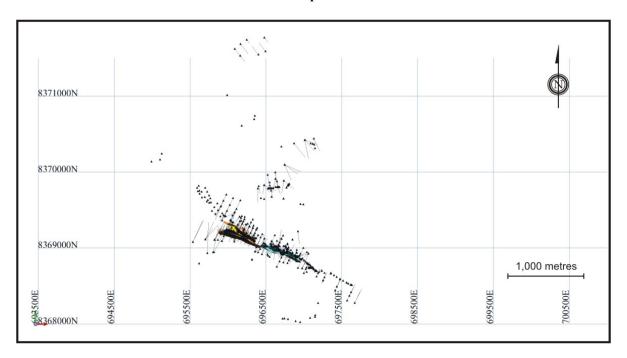
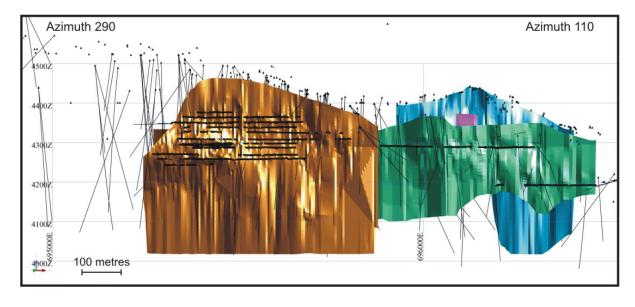


Figure 17.3
Longitudinal View of the Modeled Mineralized Zones Pallancata Deposit (Looking to Azimuth 020°)



17.3.1 Economic Cut-Off Grade Protocol

From an economic perspective, the Pallancata deposit can be considered as a precious metal deposit wherein revenues are derived from the recovery and sale of both silver and gold. The sale of silver provides the majority of the revenue from the operation, with significant revenue being realized from the sale of gold as a by-product.



The economic cut-off grade policy adopted by the Hochschild Geological Department recognizes that revenues are attained from the sale of the two metals, and has adapted its modeling approach by applying a net smelter return concept (herein referred to as a Valor de Punto, or Point Value). In this method, a factor to derive the net dollar value for each estimated block (or core/chip sample) is determined by consideration of such factors as metallurgical recovery, smelter-payable amount, freight, selling and refining charges and, in the case of the Pallancata deposit, an additional discount of 5% to account for market volatility and a potential short-term down-trend in metal prices. The economic cut-off value is expressed as a net dollar value per tonne, but it can also be expressed as a silver equivalent.

A cut-off grade based on the marginal cost of production to produce a tonne of ore is then applied to aid in the identification of that material which contains sufficient silver or gold contents to offer a reasonable prospect of economic return.

The calculation of the Point Value factor for the December, 2008 mineral resource model was done as follows:

i. Determination of a long-term projected sales price for silver and gold. This has been established by taking a consensus of up to eight independent analyst forecasts of metal prices projected for three years into the future from the reference date. For the current estimates as at 31 December, 2008, the reference prices are:

Silver US\$12/oz. Gold US\$800/oz.

- ii. Determination of an in-situ value of the metal content in an average run-of-mine tonne of ore produced at the mine. The average head grade of silver content is assumed to be 312 g/t; the average head grade of gold content is assumed to be 1.5 g/t.
- iii. The representative value of the metal content in an average run-of-mine tonne of ore is adjusted to reflect losses due to metallurgical recoveries and commercial recoveries. Metallurgical recovery for silver is assessed at 89% and for gold 72% on the basis of historical recoveries that have been attained by processing of the material through the Selene mill.
- iv. Commercial recovery reflects contract terms for sales to the smelter, transport and insurance. For silver this is assessed as 96% and for gold, also 96%.

With reference to the initial determination of an average head-grade for each metal, the value of the metal content of an in-situ estimation block can be estimated on the basis of a Point Value of:

Silver US\$0.299/g. Gold US\$15.73/g.



The marginal cost cut-off is determined as the variable cost to produce one tonne of run-of-mine ore. For the Pallancata Mine this has been determined as at 31 December, 2008 as US\$46.10/t on the basis of the actual site costs that were incurred for calendar 2008. The marginal production cost is determined on a site-specific basis only and does not include any corporate overheads or Suyamarca expenses that may be incurred off-site.

With reference to the Point Value for silver content, this presently represents an economic cut-off grade of 158 g/t silver equivalent.

Micon agrees that the application of the Point Value approach to an economic cut-off grade is appropriate for the Pallancata deposit, has reviewed the input parameters and agrees that the derivation of the metal factors and cut-off grade are reasonable.

Micon points out, however, that the metal factors which are derived during this process are affected by such parameters as the actual plant recovery attained to produce the concentrate. For the purposes of this mineral resource estimate, the silver and gold recoveries that were achieved during fiscal 2008 were utilized, during which time the mill head grade was well above the marginal cost cut-off grade. In general terms, the recoveries achieved by processing plants employing a flotation flowsheet normally decline with decreasing mill head grades such that the utilization of such metallurgical recoveries as above may not be appropriate. Although a grade-recovery relationship has not yet been identified at Pallancata, Micon recommends that if such a relationship is established, then the metallurgical recoveries that are associated with marginal cut-off grade mill head grades be utilized in the estimation of metal factors in future mineral resource estimates.

17.3.2 Mineralized Domain Modeling

The first modeling step completed by the Hochschild Geology Department is the construction of a three-dimensional envelope or domain which essentially defines the extent of mineralization for each vein. Drill hole records and samples are coded with respect to lithology, vein material, mineralized material and wall-rock lithologies, supported by geological cross-sections and longitudinal profiles. The MineSight program was used to define the mineralized domain envelopes which are then used as constraints in future steps.

In order to examine the reasonableness of the interpretations for these four veins, two sets of three cross-sections (see Figure 17.1) each were sliced through the digital models in a semi-random fashion. The results for Sections 1, 2 and 3 (the Veta Oeste or West Vein system) are presented in Figures 17.4, 17.5 and 17.6, respectively. In reviewing these figures, it is important to keep in mind that the interpretation of the mineralized solids are slices of the three-dimensional solid models on the section plane rather than the actual interpretation data or strings, while the drill hole information is situated in its correct three-dimensional position. Consequently, the relationship between the mineralization interpretation and the drill hole grades may not exactly coincide due to the fact that the drill hole data may be as much as 12.5 m on either side of the viewing plane.



Figure 17.4 Cross Section #1 Veta Oeste (West Vein) System, Pallancata Deposit (Looking to Azimuth 110°)

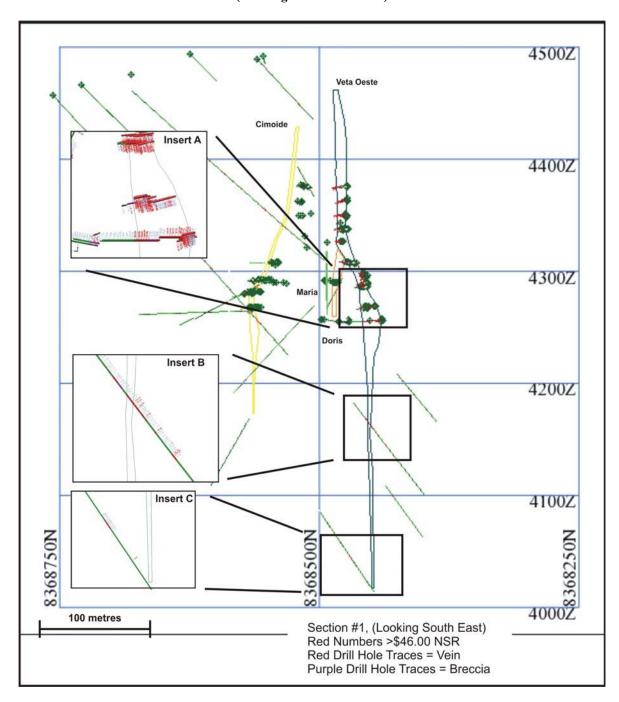




Figure 17.5 Cross Section #2 Veta Oeste (West Vein) System, Pallancata Deposit (Looking to Azimuth 110°)

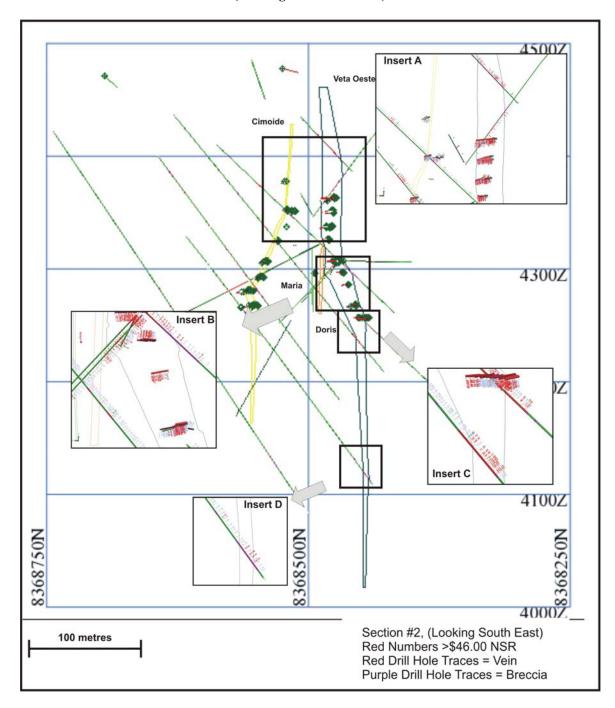
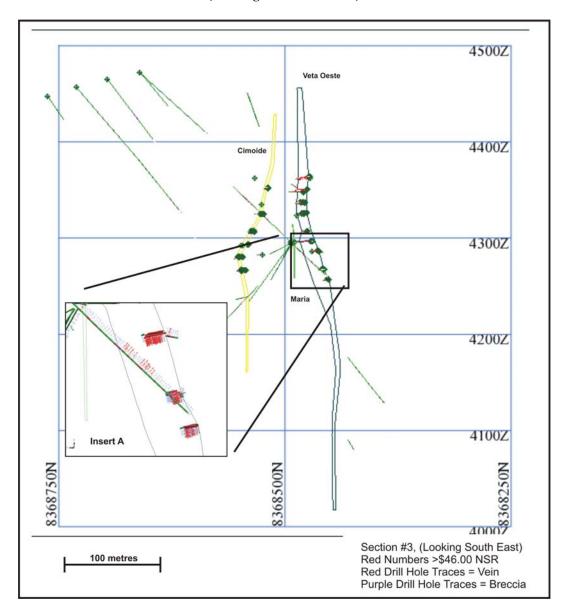




Figure 17.6 Cross Section #3 Veta Oeste (West vein) System, Pallancata Deposit (Looking to Azimuth 110°)



It can be seen that while a number of veins (coloured red on the drill hole traces) and vein breccias (coloured purple on the drill hole traces) of, at times, significant widths are encountered by the drill holes, in many cases the entire width of the vein or vein breccias do not contain sufficient silver and gold grades to surpass the cut-off grade criteria. This is a common occurrence in this epithermal deposit type, reflecting the effect of possible multiple hydrothermal events and fluctuations in fluid chemistries that affect the precipitation of metals from solution.

Micon observes that the interpretations of the mineralized zones have been created so as to outline those portions of the veins, vein breccias and mineralized wall rocks that do meet the cut-off grade criteria and, therefore, offer the potential to be mined profitably. Micon agrees that this approach is appropriate for the Pallancata deposit.



For the most part, Micon observes that there is good agreement between the surface-based drill holes, the chip sample results and the mineralized outlines for Sections #1 (Figure 17.4) and #2 (Figure 17.5). However it is observed that there is a poor agreement between the surface-based drill hole and the chip sample results for Veta Oeste (West Vein) in Section #3 (Figure 17.6), possibly due to a survey error in either the collar location or the down-hole deviation data. Should such an error exist, then the impact would likely be a minor reduction in the tonnage interpreted on that section. Micon recommends that the survey information for both the surface-based drill hole and chip sample results be re-examined for accuracy.

In addition, Micon notes that the up-dip and down-dip limits of the mineralized zones are defined by projections using the drill hole information from the last known points, as has long been the industry practice. Micon notes that the majority of the mineralized material contained within these vein extremities has been classified in the Inferred resource category. While Micon supports this approach, it believes that the level of confidence in respect of the material in these extremities can be improved by application of slightly more stringent interpretation parameters in future mineral resource estimates.

The results for Sections #4, #5 and #6 (the Veta Central, or Central Vein system) are presented in Figures 17.7, 17.8 and 17.9, respectively. Once again, in reviewing these figures it is important to keep in mind that the interpretation of the mineralized solids are slices of the three-dimensional solid models on the section plane rather than the actual interpretation strings, while the drill hole information is situated in its correct three-dimensional position. Consequently, the relationship between the mineralization interpretation and the drill hole grades may not exactly coincide due to the fact that the drill hole data may be as much as 12.5 m on either side of the viewing plane.

In general, Micon observes that there is good agreement between the drill hole and chip sample data and the interpretation of the mineralized outlines for the central portions of Central Vein and the Ramal Central Vein. However, Micon notes that alternate interpretations are possible for the down-dip extensions for these two veins for the three test sections examined in the Central Vein system. Micon recommends that consideration be given to the possibility of alternate interpretations of the mineralized outlines for the mineralization outlines in the Veta Central system in the preparation of future mineral resource estimates.

In addition, Micon notes that the up-dip and down-dip limits of the mineralized zones are defined by projections using the drill hole information from the last known points, as has long been the industry practice. Micon notes that the majority of the mineralized material contained within these vein extremities has been classified in the Inferred resource category. While Micon supports this approach, it believes that the level of confidence in respect of the material in these extremities can be improved by application of slightly more stringent interpretation parameters in future mineral resource estimates.



Figure 17.7 Cross Section #4 Veta Central (Central Vein) System, Pallancata Deposit (Looking to Azimuth 110°)

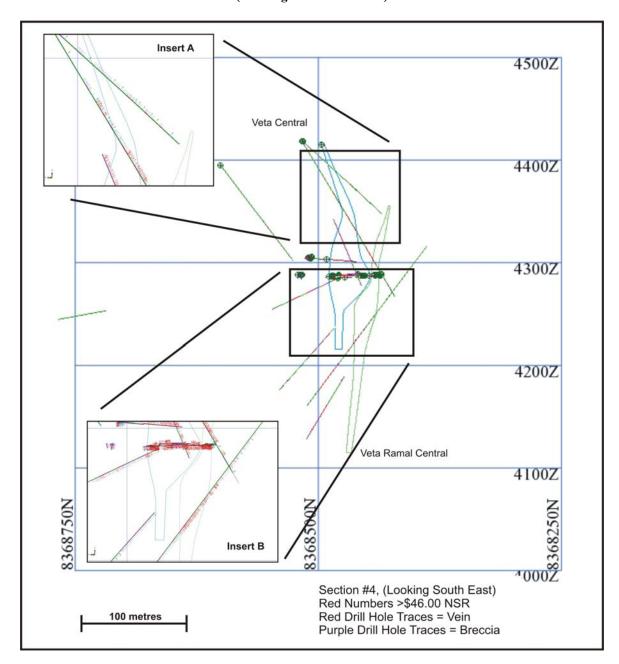
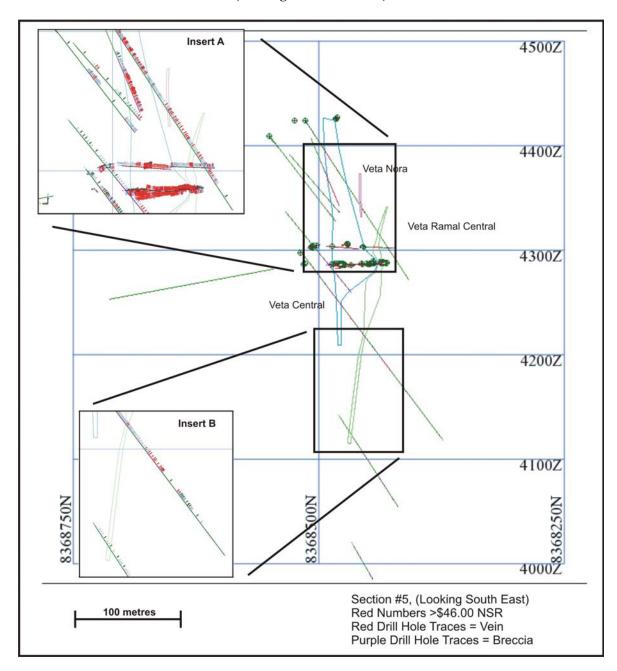




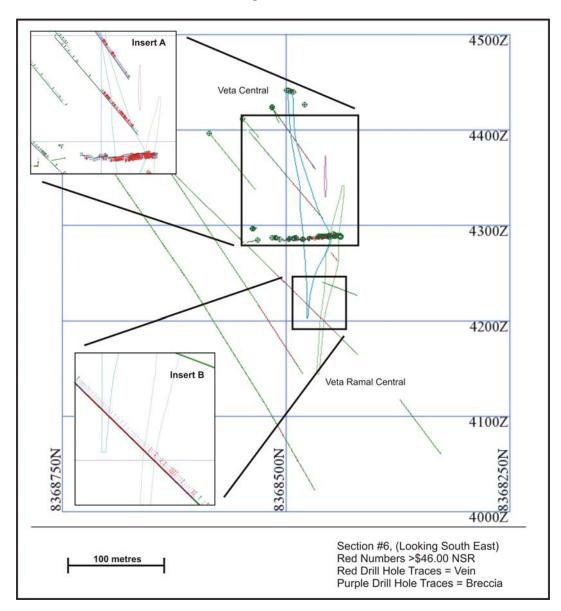
Figure 17.8 Cross Section #5 Veta Central (Central Vein) System, Pallancata Deposit (Looking to Azimuth 110°)



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Figure 17.9 Cross Section #6 Veta Central (Central Vein) System, Pallancata Deposit (Looking to Azimuth 110°)



17.3.3 Down Hole Composites

Assays of samples of different lengths are composited to standard length pseudo-samples (composites) by simple length-weighted averaging. Hochschild practice is to use a standard composite length of 2 m within the established mineralized envelopes. In this function, compositing begins at the point at which the drill hole first enters the mineralized solid, and continues until the lower contact is reached. As commonly occurs, the length of the mineralized interval in any particular drill hole will not be an even multiple of the composite length, consequently some intervals will be present along the lower contacts which will not match an equal composite length. In these cases, the length of the last composite sample was



increased to match the lower contact of the mineralization domain in the interests of providing a more accurate estimate of block grades along those edges.

17.3.4 Grade Capping

Grade capping is an industry practice of replacing high assay grades (principally in precious metals deposits) by a lower maximum grade before estimating block grades as one method of restricting the influence of isolated high grade samples, and is applied by Hochschild to composited assay values. Hochschild's practice is to prepare probability plots of gold and silver grades for all the composites in each vein model. By observation of breaks in slope at the high end of the curve that may be indicative of anomalous populations, decisions were made as to the appropriate maximum grade cap to be used for each set of composites. Table 17.2 indicates the grade cap applied to each of the veins which have been modeled for these resource and reserve estimates. Micon has conducted an independent review of potential grade caps from first principles for the following veins, West, Cimoide, Central and Ramal Central, and agrees that the selection of the capping grades is reasonable. Descriptive statistics of the composite samples of selected veins are presented in Table 17.3.

Table 17.2 Grade Caps for Modeled Veins, Pallancata Deposit

Veta	Capping Grade Silver	Capping Grade Gold	Number of	
	(g/t)	(g/t)	Samples	
Oeste	3,800	14	4,929	
Central	2,500	12	1,006	
Cimoide	2,600	17	2,535	
Diana	550	3	40	
Doris	600	2	37	
Isabella	2,000	5	128	
Maria	600	3.2	90	
Nora	2,000	2	4	
Ramal Central	2,000	10	856	
Sofia	1,250	6	368	

Table 17.3

Descriptive Statistics for Veta Oeste (West Vein), Cimoide, Central and Ramal Central, Pallancata
Deposit

		Silver		Gold				
Item	Uncapped	Capped	Block Model	Uncapped	Capped	Block Model		
	Veta Oeste							
Mean	433.1	422.3	394.1	1.88	1.82	1.56		
Standard Error	8.9	7.4	2.4	0.04	0.03	0.01		
Median	261.1	261.1	295.4	1.15	1.15	1.17		
Mode	155.3	3800.0	152.0	0.20	0.20	0.36		
Standard Deviation	622.1	521.4	349.6	2.63	2.12	1.30		
Coefficient of Variation	1.4	1.2	0.9	1.40	1.17	0.83		
Sample Variance	387,019	271,880	122,252	6.93	4.50	1.69		
Kurtosis	65.1	15.5	15.1	71.31	11.73	10.95		
Skewness	6.2	3.4	3.0	6.27	3.02	2.46		



		Silver			Gold	
Item	Uncapped	Capped	Block Model	Uncapped	Capped	Block Model
Range	11,348	3,800	3,284	55.86	14.00	14.00
Minimum	0.0	0.0	1.1	0.00	0.00	0.00
Maximum	11,348	3,800	3,285	55.86	14.00	14.00
Count	4,929	4,929	21,277	4,929	4,929	21,277
		Veta Cin	10ide			
Mean	375.9	366.5	334.7	2.59	2.53	2.07
Standard Error	9.7	8.4	5.7	0.07	0.06	0.04
Median	233.3	233.3	264.9	1.53	1.53	1.52
Mode	61.1	2600.0	2.2	0.20	0.20	0.20
Standard Deviation	488.2	424.4	262.6	3.33	2.99	1.70
Coefficient of Variation	1.3	1.2	0.8	1.29	1.18	0.82
Sample Variance	238,377	180,131	68,952	11.10	8.95	2.88
Kurtosis	26.7	9.9	4.1	19.41	7.97	2.62
Skewness	4.3	2.9	1.5	3.65	2.63	1.56
Range	5,596	2,599	2,325	33.76	16.96	8.50
Minimum	1.0	1.0	2.2	0.04	0.04	0.10
Maximum	5,597	2,600	2,327	33.80	17.00	8.60
		Veta Cei				
Mean	459.5	440.9	312.7	2.36	2.24	1.38
Standard Error	18.8	14.1	2.7	0.10	0.08	0.01
Median	295.8	295.8	264.4	1.32	1.32	1.05
Mode	520.9	2500.0	10.0	0.20	0.20	0.01
Standard Deviation	595.2	447.2	274.6	3.15	2.48	1.29
Coefficient of Variation	1.3	1.0	0.9	1.34	1.11	0.94
Sample Variance	354,285	199,992	75,428	9.90	6.16	1.66
Kurtosis	83.5	7.6	14.2	24.70	4.76	14.34
Skewness	6.8	2.5	2.9	4.08	2.12	2.85
Range	10,267	2,498	2,434	31.09	11.99	11.99
Minimum	2.0	2.0	2.0	0.01	0.01	0.01
Maximum	10,269	2,500	2,436	31.10	12.00	12.00
Count	1,006	1,006	10,087	1,006	1,006	10,087
	Γ	Veta Ramal		1	T	ı
Mean	446.0	418.8	383.6	2.06	1.99	1.43
Standard Error	20.4	13.8	3.0	0.09	0.07	0.01
Median	299.3	299.3	297.9	1.22	1.22	1.00
Mode	459.3	2000.0	130.0	0.20	0.20	0.79
Standard Deviation	595.7	403.0	306.1	2.54	2.11	1.21
Coefficient of Variation	1.3	1.0	0.8	1.23	1.06	0.85
Sample Variance	354,864	162,440	93,675	6.44	4.46	1.47
Kurtosis	79.8	4.9	4.4	24.10	3.19	3.77
Skewness	6.9	2.1	1.8	3.73	1.78	1.71
Range	9,498	2,000	2,000	26.94	10.00	8.33
Minimum	0.0	0.0	0.0	0.00	0.00	0.00
Maximum	9,498	2,000	2,000	26.94	10.00	8.33
Count	856	856	10,121	856	856	10,012



17.3.5 Variography

For the 2008 mineral resource estimate, Hochschild conducted variographic analyses on following veins, Vetas Oeste (West Vein), Cimoide, Central and Ramal Central, using the MineSight software program, the results of which are presented in Table 17.4.

Table 17.4 Summary of Variographic Models for Veta Oeste (West Vein), Cimoide, Central and Ramal Central, Pallancata Deposit

Veta Oeste	Silv	er	Gold				
Variogram Type	Covar	iance	Covarianc	e			
Structure	1	2	1	2			
Model Type	Spherical	Spherical	Spherical	Spherical			
Nugget	0.7	75	0.75				
Sill	0.14	0.11	0.17	0.08			
Range of Major Axis	10	80	10	80			
Range of Minor Axis	7	65	10	70			
Direction of Major Axis	130	130	130	130			
Plunge of Major Axis	-40	-40	-40	-40			
Dip of Minor Axis	-60	-60	-60	-60			
Total Sill	1.0	1.0	1.0	1.0			
Veta Central	Silv		Gold	1.0			
Variogram Type	Covar		Covarianc	e			
Structure	1	2	1	2			
Model Type	Spherical	Spherical	Spherical	Spherical			
Nugget	0.61	Spherical	0.75	Spliciteat			
Sill	0.20	0.19	0.12	0.13			
Range of Major Axis	23	60	35	58			
Range of Minor Axis	9	30	10	48			
Direction of Major Axis	110	110					
Plunge of Major Axis	0	0	0	110			
Dip of Minor Axis	-75	-75		-75			
Total Sill	1.0	1.0	1.0	1.0			
Veta Ramal Central	Silv		Gold	1.0			
Variogram Type	Covar		Covarianc	<u> </u>			
Structure	1	2	1	2			
Model Type	Spherical	Spherical	Spherical	Spherical			
Nugget	0.5	Sphericar	0.5	Spherical			
Sill	0.3	0.2	0.3	0.2			
Range of Major Axis	30	80	32	65			
Range of Minor Axis	20	65	32	35			
Direction of Major Axis	90	90	110	110			
Plunge of Major Axis	35	35	0	0			
Dip of Minor Axis	-90	-90	-92	-92			
Total Sill	1.0	1.0	1.0	1.0			
Veta Cimoide	Silv		Gold	1.0			
Variogram Type	Covar		Covarianc	2			
<u> </u>			1	2			
Ctmactana	1						
Structure Model Type	1 Spherical	2 Spherical	Sphorical	Spharical			
Model Type	Spherical	Spherical Spherical	Spherical 0.73	Spherical			
Model Type Nugget	Spherical 0.75	Spherical	0.73	•			
Model Type Nugget Sill	Spherical 0.75 0.15	Spherical 0.10	0.73 0.08	0.19			
Model Type Nugget Sill Range of Major Axis	Spherical 0.75 0.15 10	Spherical 0.10 60	0.73 0.08 17	0.19			
Model Type Nugget Sill Range of Major Axis Range of Minor Axis	Spherical 0.75 0.15 10 5	Spherical 0.10 60 20	0.73 0.08 17 26	0.19 60 60			
Model Type Nugget Sill Range of Major Axis Range of Minor Axis Direction of Major Axis	Spherical 0.75 0.15 10 5 125	Spherical 0.10 60 20 125	0.73 0.08 17 26 125	0.19 60 60 125			
Model Type Nugget Sill Range of Major Axis Range of Minor Axis Direction of Major Axis Plunge of Major Axis	Spherical 0.75 0.15 10 5 125	Spherical 0.10 60 20 125 10	0.73 0.08 17 26 125 0	0.19 60 60 125			
Model Type Nugget Sill Range of Major Axis Range of Minor Axis Direction of Major Axis	Spherical 0.75 0.15 10 5 125	Spherical 0.10 60 20 125	0.73 0.08 17 26 125	0.19 60 60 125			

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17.3.6 Density

Bulk densities were determined separately by the Pallancata Mine staff for each of the 10 veins (and their enclosing wall rocks) that form the Pallancata deposit using selected pieces of available drill cores. A summary of the resulting densities is provided in Table 17.5.

Table 17.5
Summary of the Bulk Densities of the Veins and Wall Rocks of the Pallancata Deposit

Vein	Vein Material (g/cm³)	No. of Samples	Wall Rock (g/cm ³)	No. of Samples
Ramal Central	2.40	19	2.40	34
Central	2.45	17	2.46	35
Diana	2.50	4	2.42	6
Pallancata Oeste	2.51	29	2.42	50
Cimoide	2.47	1	2.45	1
Maria	2.54	2	2.33	4

Micon has examined the background density data and notes that the median (the middle value in an ordered series) of a given data set was chosen to represent the bulk density of that material. On the basis of its own independent analysis of the representative bulk density using the mean value (corrected for outlier data), Micon finds no significant difference in the representative bulk densities. Micon notes that the bulk densities for Cimoide, Maria and Diana Veins are based on a small number of observations and recommends that additional density information continue to be collected for these veins. As well, Micon notes that no density information appears to be available for Nora, Isabella, Sofia and Doris Veins and recommends that density data be gathered in support of future mineral resource estimates. Micon also recommends that the methodology for determination of the average bulk densities of the mineralized zones in the Pallancata deposit be modified to identify and account for outlier data points, as such data points may have an undue influence on the determination of the average bulk densities on small sample populations.

On the basis of observations made during its site visit to the active mining area in Central Vein, Micon notes that significant local variations in the bulk densities for that vein can be anticipated. These variations are believed to be due to the varying degree of clay and void space development resulting from alteration of the primary host rocks (andesites, quartz veins and quartz breccias). Micon recommends that the bulk densities from samples of the Central Vein be determined on a regular basis to enable a more accurate estimate of the tonnages on a local scale.

17.3.7 Block Model

Separate block models have been constructed by Hochschild for each of the mineralized domains using the MineSight software package. Block dimensions for all of the veins have been set at 5 m x 5 m x 5 m except for Cimoide Vein, for which the block dimensions were set at 10 m x 10 m x 5 m (height), and the block model framework has been rotated 20 degrees clockwise so as to parallel the overall strike of the mineralized system. A series of attributes were created to store such information as estimated silver and gold grades, number



of informing samples, mineralization domain code, partial percentages of vein material in any given block, partial percentages for any unmined material in any given block, as shown in Table 17.6.

Table 17.6
List of Block Model Attributes Created by the Suyamarca JV for the Pallancata Deposit

Attribute Name	Description
AU	Estimated Gold grade (g/t)
AG	Estimated Silver Grade (g/t)
AUD	Diluted Gold grade (g/t)
AGD	Diluted Silver Grade (g/t)
AUNN	NN Gold Grade
AGNN	NN Silver Grade
DISTP	Average interpolation distance
NMUE	Number of samples
ORER	Remaining Ore
%ORER	Percentage of Remaining Ore
ORE	Economic Orebody code
%ORE	Ore Percent inside Total Ore Solid
FD	Dilution Factor
POT	Vein thickness
POTD	Diluted Vein thickness
VAR	Variance
JORC	Mineral Resource Classification (1=Measured, 2=Indicated, 3=Inferred)
NDRIL	Number of drill holes
LGEO	Geological Limit (Inside LGEO=1)

Gold and silver grades were interpolated into the individual blocks in two passes using the parameters presented in Table 17.7. Hard domain boundaries were used only that data contained within the domain models (i.e., the 2-m composite samples) were allowed to be used to estimate the grades of the blocks, and only those blocks within the domain limits were allowed to receive grade estimates. For those areas of the mineralization domain models that were less than 0.8 m in thickness, a dilution factor was applied to the block model grades to achieve a minimum width of 0.8 m.

Table 17.7 Block Model Interpolation Parameters, Pallancata Deposit

	Vein											
		Central		Sofi	a	Ramal	Ramal Central		Oeste		Nora	
Pass Number		1	2	1	2	1	2	1	2	1	2	
Estimation Method		OK	OK	ID3	ID3	OK	OK	OK	OK	ID3	ID3	
Minimum Number of Composites		1	1	1	1	1	1	1	1	1	1	
Maximum Number of Composites		4	8	4	8	4	8	4	8	4	8	
Length of Major Axis (m)	1.	75	50	75	50	70	45	90	60	60	40	
Length of Minor Axis (m)	Au	50	40	50	40	55	35	75	50	60	40	
Vertical Search Distance	1	20	20	20	20	30	20	25	15	20	10	
Azimuth of Major Axis	1	110	110	125	125	110	110	130	130	110	110	
Plunge of Major Axis]	0	0	0	0	0	0	-40	-40	0	0	
Dip of Minor Axis]	-75	-75	-80	-80	-92	-92	-60	-60	-90	-90	
Search Strategy		Quadı	rant	Quadı	ant	Qua	drant	Qua	drant	Quadr	ant	

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				V	ein							
		Cent	ral	Sofi	ia	Ramal	Central	Oe	este	Nor	a	
Maximum Samples/Quadrant		1	2	1	2	1	2	1	2	1	2	
Pass Number		1	2	1	2	1	2	1	2	1	2	
Estimation Method]	OK	OK	ID3	ID3	OK	OK	OK	OK	ID3	ID3	
Minimum Number of		1	1	1	1	1	1	1	1	1	1	
Composites]											
Maximum Number of		4	8	4	8	4	8	4	8	4	8	
Composites]											
Length of Major Axis (m)	1. 1	75	50	75	50	90	60	90	60	60	40	
Length of Minor Axis (m)	Ag	60	40	50	40	70	45	75	50	60	40	
Vertical Search Distance]	20	20	20	20	30	20	25	15	20	10	
Azimuth of Major Axis]	110	110	125	125	90	90	130	130	110	110	
Plunge of Major Axis		0	0	0	0	35	35	-40	-40	0	0	
Dip of Minor Axis		-75	-75	-80	-80	-90	-90	-60	-60	-90	-90	
Search Strategy]	Quadrant		Quadi	Quadrant		Quadrant		Quadrant		Quadrant	
Maximum Samples/Quadrant		1	2	1	2	1	2	1	2	1	2	

				V	ein						
		Mar	·ia	Isabe	ella	Do	ris	Dia	ana	Cimo	ide
Pass Number		1	2	1	2	1	2	1	2	1	2
Estimation Method	Ī	ID3	ID3	ID3	ID3	ID3	ID3	ID3	ID3	OK	OK
Minimum Number of]	1	1	1	1	1	1	1	1	1	1
Composites]										
Maximum Number of		4	8	4	8	4	8	4	8	4	8
Composites	[
Length of Major Axis (m)]	60	40	80	55	60	40	60	40	60	40
Length of Minor Axis (m)		60	40	70	50	60	40	60	40	60	40
Vertical Search Distance		20	10	20	10	20	10	20	10	20	10
Azimuth of Major Axis	Au	110	110	100	100	120	120	115	115	125	125
Plunge of Major Axis	Au	0	0	0	0	0	0	0	0	0	0
Dip of Minor Axis]	75	75	-90	-90	-90	-90	-90	-90	-80	-80
Search Strategy		Quadi	rant	Quadi	rant	Qua	drant	Qua	drant	Quadr	ant
Maximum Samples/Quadrant		1	2	1	2	1	2	1	2	1	2
Pass Number		1	2	1	2	1	2	1	2	1	2
Estimation Method		ID3	ID3	ID3	ID3	ID3	ID3	ID3	ID3	OK	OK
Minimum Number of		1	1	1	1	1	1	1	1	1	1
Composites											
Maximum Number of		4	8	4	8	4	8	4	8	4	8
Composites]										
Length of Major Axis (m)]	60	40	80	55	60	40	60	40	60	40
Length of Minor Axis (m)]	60	40	65	45	60	40	60	40	45	30
Vertical Search Distance]	20	10	20	15	20	10	20	10	15	10
Azimuth of Major Axis	Ag	110	110	100	100	120	120	115	115	125	125
Plunge of Major Axis] ^*s	0	0	0	0	0	0	0	0	10	10
Dip of Minor Axis]	75	75	-90	-90	-90	-90	-90	-90	-80	-80
Search Strategy]	Quadi	rant	Quadi	rant	Qua	drant	Qua	drant	Quadr	ant
Maximum Samples/Quadrant		1	2	1	2	1	2	1	2	1	2

Validation efforts for the mineral resource estimate for the Pallancata deposit began with a comparison of the average block grades for the capped and uncapped gold and silver values against the respective informing composite samples as shown in Table 17.3 above. The volumes reported from the block model were compared to the volumes of the pre-mining geologic solid models. A good correlation is observed for the average estimated block grades with the informing composite samples and for the various mineralization domain models and the block model report.

Micon then proceeded to conduct a visual comparison of the estimated block grades against the nearby composite samples and found a general good agreement. However some significant local variations between the informing composite samples and the estimated block grades were observed in the upper portions of the domain models of Central and Ramal Central Veins.



Micon recommends that, given the relationship of the block sizes to the length of the composite samples, the block model interpolation parameters be modified in future updates such that the minimum number of samples required be increased from one to two.

In addition, Micon has noted that negative values have been chosen as default values (a placeholder value assigned to a given attribute if no data is available for that block) for such block attributes as silver and gold grades. Micon discourages this practice and recommends that zero values be used instead, as the presence of negative values results in erroneous block model reports, the degree of which will be proportional to the number of occurrences of the negative values.

Micon notes that, while a reconciliation program is in place to examine the mine-to-mill operational performance, no systems are in place that allow an examination of the accuracy of the block model estimates or forecasted mine production. Micon recommends that a program of draw point sampling and bucket counts (i.e., accounting for material removed from stopes), supported by volumetric surveys of the mined out stopes, be implemented.

17.3.8 Mineral Resource Estimates

The mineral resources reported herein comprise a report of all blocks and partials that are contained within the respective mineralized domains that possess a net value greater than the marginal cost of production of US\$46.10/t, corresponding to a silver equivalent of approximately 158 g/t silver equivalent (AgEq). The mineral resource estimates are quoted on an in-situ basis that reflect the amount of remaining un-mined material but do not include any allowances for mining dilution or mining recovery (Table 17.8).

Table 17.8
Mineral Resources for the Pallancata Mine as at December 31, 2008

			Silver	Gold	Silver	Gold
Orebody	Classification	Tonnes	(g/t)	(g/t)	(oz)	(oz)
	Measured	865,000	422	1.77	11,737,000	49,200
Oeste	Indicated	876,000	449	1.76	12,647,000	49,600
Oeste	M and I	1,741,000	436	1.76	24,408,000	98,500
	Inferred	631,000	392	1.43	7,953,000	29,000
	Measured	112,000	442	2.70	1,592,000	9,700
Cimoide	Indicated	107,000	443	2.77	1,524,000	9,500
Cillioide	M and I	219,000	442	2.73	3,112,000	19,200
	Inferred	80,000	367	2.41	944,000	6,200
	Measured	371,000	381	1.85	4,545,000	22,100
Central	Indicated	727,000	343	1.52	8,018,000	35,500
Central	M and I	1,098,000	356	1.63	12,569,000	57,500
	Inferred	260,000	347	1.24	2,901,000	10,400
	Measured	558,000	480	1.75	8,612,000	31,400
Ramal Central	Indicated	484,000	433	1.45	6,739,000	22,600
Kaillai Celluai	M and I	1,042,000	458	1.61	15,345,000	53,900
	Inferred	178,000	507	2.07	2,902,000	11,800
	Measured	42,000	418	1.24	565,000	1,700
Isabella	Indicated	14,000	362	1.10	163,000	500
18a0011a	M and I	56,000	404	1.20	727,000	2,200
	Inferred	<1,000	363	1.47	-	-



			Silver	Gold	Silver	Gold
Orebody	Classification	Tonnes	(g/t)	(g/t)	(oz)	(oz)
Sofia	Measured	20,000	312	1.51	201,000	1,000
	Indicated	20,000	270	1.15	174,000	700
	M and I	40,000	291	1.33	374,000	1,700
	Inferred	4,000	250	1.06	32,000	100
Diana	Measured	Nil			-	-
	Indicated	50,000	233	0.99	375,000	1,600
	M and I	50,000	233	0.99	375,000	1,600
	Inferred	9,000	324	1.70	94,000	500
Nora	Measured	Nil			-	-
	Indicated	6,000	822	1.60	159,000	300
	M and I	6,000	822	1.60	159,000	300
	Inferred	3,000	876	1.65	85,000	200
Doris	Measured	Nil			-	-
	Indicated	11,000	225	0.76	80,000	300
	M and I	11,000	225	0.76	80,000	300
	Inferred	<1000	337	337	-	-
Maria	Measured	Nil			-	-
	Indicated	41,000	240	1.46	316,000	1,900
	M and I	41,000	240	1.46	316,000	1,900
	Inferred	58,000	323	1.78	602,000	3,300
	Measured	1,968,000	431	1.82	27,274,000	115,200
Total All	Indicated	2,336,000	402	1.63	30,195,000	122,400
Structures 1	M and I	4,304,000	415	1.72	57,433,000	238,000
	Inferred	1,224,000	395	1.57	15,546,000	61,800

- 1. Measured and Indicated Resources include Proven and Probable Reserves.
- 2. Metal prices used are US\$12.00/oz for silver and US\$800/oz for gold.
- 3. Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- 4. Tonnages have been rounded in all categories to the nearest thousand tonnes to reflect the precision of the estimates, silver and gold grades are reported to three significant figures. Totals may not sum due to rounding.
- 5. The Qualified Person is Reno Pressacco of Micon International Limited.

Micon recommends that the reporting criteria be modified slightly in subsequent mineral resource statements to incorporate the use of clipping polygons that define those portions of the veins that contain sufficient silver and gold grades to provide a potential economic return. The reporting criteria would then report all blocks and block partials (i.e., all blocks regardless of their NSR value) within these clipping polygons so as to include blocks that may be mined as internal (or planned) dilution.

The conclusions from investigation of the semi-variograms for the various mineralization domain models are used as the bases for the mineral resource classification for the Pallancata deposit. The approach adopted by Hochschild applies two levels of constraints that are based on the variogram distances and the number of informing drill holes. The variograms generated for silver are utilized as part of the classification criteria, as silver accounts for the majority of the revenue stream for the Pallancata deposit. The classification criteria are summarized as follow and are shown in detail in Table 17.9:

• Measured Resources are defined by composite samples that are spaced no greater than \(^{1}\)_3 of the variogram range. Samples are required from three separate drill holes.



- Indicated Resources are defined by composite samples that are spaced no greater than ²/₃ of the variogram range. Samples are required from two separate drill holes.
- Inferred Resources are defined by composite samples that are spaced no greater than 100% of the variogram range.

Table 17.9
Classification Scheme for the Mineral Resources of the Pallancata Deposit, December, 2008

Mineral Resource Category	Measured	Indicated	Inferred							
Maximum Variogram Distance	1/3 of Range	² / ₃ of Range	100% of Range							
Number of Drill Holes	3	2	1							
I	Maximum Distance	es								
(m)										
Veta Oeste	35	55	80							
Veta Cimoide	20	40	60							
Veta Central	20	40	60							
Veta Ramal Central	30	60	90							
Veta Sofia	20	40	60							
Veta Isabella	25	50	75							
Veta Nora	N/A	40	60							
Veta Maria	N/A	40	60							
Veta Doris	N/A	40	60							
Veta Diana	N/A	40	60							

The mineral resources in this report were estimated in accordance with the definitions contained in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). The estimate of the mineral resources present at the Pallancata deposit were audited by Mr. Reno Pressacco, M. Sc (A)., P. Geo., of Micon who is independent of both IMZ and Suyamarca. The effective date of the mineral resource estimate is 31 December, 2008 which is also the cut-off date for data on which the estimate is based.

There is a degree of uncertainty to the estimation of mineral reserves and mineral resources and corresponding grades being mined or dedicated to future production. The estimating of mineralization is a somewhat subjective process and the accuracy of estimates is a function of the accuracy, quantity and quality of available data, the accuracy of statistical computations, and the assumptions used and judgments made in interpreting engineering and geological information. There is significant uncertainty in any mineral resource/mineral reserve estimate, and the actual deposits encountered and the economic viability of mining a deposit may differ significantly from the estimates presented herein. Until mineral reserves or mineral resources are actually mined and processed, the quantity of mineral resources/mineral reserves and their respective grades must be considered as estimates only. In addition, the quantity of mineral reserves and mineral resources may vary depending on, among other things, metal prices. Fluctuation in metal or commodity prices, results of additional drilling, metallurgical testing, receipt of new information, and production and the evaluation of mine plans subsequent to the date of any mineral resource estimate may require revision of such estimate.



17.4 MINERAL RESERVE ESTIMATE

Mineral Reserves are currently identified where the level of geological investigation has supported identification of Measured and Indicated Resources.

Where Measured and Indicated Resources are encompassed within plans for economic extraction, the Measured Resources have been converted to Proven Reserves and Indicated Resources to Probable Reserves through the application of modifying factors which reflect the impact of the mining extraction process.

Hochschild used mine design MineSight software to define economically mineable areas, based on the geology solids and the block model resource. These economically mineable areas are termed 'tajos'. The tajos were wrapped around blocks which gave an in-situ value greater than the required cut-off value, as discussed in Section 17.3.1. The block grades were based on dilute values which Micon assumes were calculated based on the minimum mining thickness of 0.8 m. Micon was unable to determine the basis for this diluted block value. However, where it differed from the in-situ grade the diluted grades were lower, thus indicating dilution.

The geometry of these tajos was based on practical mining constraints such as equipment dimensions, proximity to mine infrastructure and general mine design principles. Tajos that were uneconomic to extract or that were required as long term pillars were removed from the reserve estimate. Micon reported a selection of the tajos against the block model and found an acceptable correlation between these results and those of the Hochschild estimate, which formed the basis of the reserve.

Being based on a mineable geometry the tonnes and grades reported for the tajos included an adjustment for planned mining dilution and planned mining losses. These tonnes and grades were then adjusted for unplanned mining dilution and mining losses in a spreadsheet. The factors used in estimating the unplanned losses and dilution were based on the mining equipment dimensions, mining method, dimensions of the tajo, the drill and blast technique employed, geotechnical conditions of the surrounding ground and the ability of the equipment to adequately muck the stope. Micon understands that the basis for losses and dilution was gained from survey measurements of previously mined stopes.

The Mineral Reserves estimate for Pallancata Mine (Pallancata Vein System only), using an economic cut-off of US\$61.5/t (total cost of operation) and a marginal economic cut-off value of US\$46.10/t (variable cost of operation), as of 31 December, 2008, is presented in Table 17.10.



Table 17.10
Mineral Reserves for the Pallancata Mine as at 31 December, 2008

	Pro	oven		Pro	bable		Proven ar	d Prob	able
Orebody	Tonnage	Ag	Au	Tonnage	Ag	Au	Tonnage	Ag	Au
	(tonnes)	(g/t)	(g/t)	(tonnes)	(g/t)	(g/t)	(tonnes)	(g/t)	(g/t)
Cimoide	97,740	360	2.25	108,241	380	2.39	205,981	371	2.32
Diana	0	0	0.00	56,966	181	0.78	56,966	181	0.78
Isabela	43,968	356	1.06	19,062	264	0.80	63,030	328	0.98
María	0	0	0.00	22,090	165	1.01	22,090	165	1.01
Nora	0	0	0.00	5,681	780	1.52	5,681	780	1.52
Pallancata Central	403,497	360	1.75	722,883	308	1.37	1,126,380	327	1.50
Pallancata Oeste	807,230	360	1.51	897,211	381	1.50	1,704,441	371	1.50
Ramal Central	591,658	429	1.56	486,662	396	1.32	1,078,320	414	1.45
Sofía	21,269	269	1.30	17,878	195	0.80	39,147	235	1.07
TOTAL	1,965,363	380	1.60	2,336,674	354	1.43	4,302,037	366	1.51

- 1. A marginal cut-off value of US\$46.10/t, where infrastructure was present, and an economic cut-off value of US\$61.9/t, in undeveloped areas, was used in calculating the Reserves
- 2. Measured and Indicated Resources include Proven and Probable Reserves.
- 3. Metal prices used are US\$12/oz for silver and US\$800/oz for gold.
- 4. The estimated Reserves include 12% for ore loss during mining and 13% for dilution assigned using zero grade.
- 5. Numbers have been rounded in all categories to reflect the precision of the estimates.
- 6. The mineral reserves were estimated from the life-of-mine plan, which defined sustaining capital requirements and mine operating costs, to demonstrate that the these reserves can be economically extracted and processed. Mining losses and dilution were determined based on subsurface geotechnical conditions and the specific mining technique and equipment limitations for each area of the mine.
- 7. Contained metal in estimated reserves remains subject to metallurgical recovery losses.
- 8. The resource and reserve estimates reflect the deposit at Pallancata as of 31 December, 2008.
- 9. The minimum mining width used to calculate Reserves was 0.8 m. Mineralization thinner than this was diluted by the addition of material at zero grade.
- 10. The Qualified Person for the mineral reserve estimate is Geraint Harris of Micon International Limited.

The mineral reserves in this report were estimated in accordance with the definitions contained in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). The estimate of the mineral reserves present at the Pallancata deposit were audited by Mr. Geraint Harris, C. Eng., MAusIMM, of Micon who is independent of IMZ and Suyamarca. The effective date of the mineral reserve estimate is 31 December, 2008 which is also the cut-off date for data on which the estimate is based.



18.0 OTHER RELEVANT DATA AND INFORMATION

All relevant data and information are presented in other sections of this report.



19.0 INTERPRETATION AND CONCLUSIONS

The updated mineral reserve estimates in the proven and probable category (Mineral Reserves), on a 100% basis, comprise an aggregate of 4.3 million tonnes at an average grade of 366 g/t silver and 1.5 g/t gold, containing a total of 50.6 million ounces of silver and 209,000 ounces of gold. The mineral reserve estimates are inclusive of the mineral resources described below. The current mineral reserves are sufficient for the Pallancata mine to operate until mid- to late-2013.

The updated mineral resource estimates in the measured and indicated categories (M&I Resources), on a 100% basis, comprise an aggregate of 4.3 million tonnes at an average grade of 415 g/t silver and 1.7 g/t gold, containing a total of 57.5 million ounces of silver and 238,000 ounces of gold. An additional 1.2 million tonnes at an average grade of 395 g/t silver and 1.6 g/t gold containing a total of 15.5 million ounces of silver and 62,000 ounces of gold are estimated in inferred category. See Table 19.1.

Table 19.1
Pallancata Mine Mineral Reserve and Resource Estimates as at December 31, 2008

Reserve Category	Tonnes	Average Grade (g/t silver)	Average Grade (g/t gold)	100% Basis Contained Silver Ounces	100% Basis Contained Gold Ounces	IMZ 40% Attributable Silver Ounces	IMZ 40% Attributable Gold Ounces
Proven Reserves	1,965,000	380	1.60	24,011,000	101,000	9,605,000	40,000
Probable Reserves	2,337,000	354	1.43	26,595,000	107,000	10,638,000	43,000
Total Reserves	4,302,000	366	1.51	50,606,000	209,000	20,242,000	83,000
Resource Category	Tonnes	Average Grade (g/t silver)	Average Grade (g/t gold)	100% Basis Contained Silver Ounces	100% Basis Contained Gold Ounces	IMZ 40% Attributable Silver Ounces	IMZ 40% Attributable Gold Ounces
Measured Resources	1,968,000	431	1.8	27,270,000	115,000	10,908,000	46,000
Indicated Resources	2,336,000	402	1.6	30,194,000	122,000	12,077,000	49,000
Total Measured and Indicated Resources	4,304,000	415	1.7	57,464,000	238,000	22,985,000	95,000
Inferred Resources	1,224,000	395	1.6	15,543,000	62,000	6,217,000	25,000

Notes:

- 1. Measured and Indicated Resources include Proven and Probable Reserves.
- 2. Metal prices used are US\$12/oz for silver and US\$800/oz for gold.
- 3. The estimated reserves include 12% for ore loss during mining and 13% for dilution assigned using zero grade.
- 4. The estimated mineral resources are not mineral reserves and do not have demonstrated economic viability.
- 5. Numbers have been rounded in all categories to reflect the precision of the estimates.
- 6. The mineral resources were estimated using ordinary kriging for the major vein units and inverse distance to the power of three for peripheral veins.
- 7. The mineral reserves were estimated from the life of mine plan, which defined sustaining capital requirements and mine operating costs, to demonstrate that the these reserves can be economically extracted and processed. Mining losses and dilution were determined based on sub-surface geotechnical conditions and the specific mining technique and equipment limitations for each area of the mine.
- 8. Contained metal in estimated reserves remains subject to metallurgical recovery losses.
- 9. The resource and reserve estimates reflect the deposit at Pallancata as of 31 December, 2008.
- 10. The minimum mining width used to calculate Reserves was 0.8 m. Mineralization narrower than 0.8 m was diluted by the addition of material at zero grade.

Mine development and production at Pallancata has progressed well ahead of the schedule in the JV and in-line with Hochschild's technical projections.



A full reconciliation between plant processing data and mine production data has not yet been conducted, but head-grades to the plant do appear to be within the predicted ranges from the mine model. This fact gives additional confidence in the reserve estimations.

The exploration potential at the Pallancata Mine, with several additional mineralized veins already identified, is considered to be good and the chances of extending the mine life even further are considered to be high.

The Selene plant now has a two-year history worth of operating records for processing Pallancata ore, with consistent performance in terms of relatively high recovery of silver and gold. Throughput rates at times have been challenged at times by high moisture content clay material, but this appears to have been remedied as part of the current mill modifications.



20.0 RECOMMENDATIONS

Micon has the following recommendations:

Sampling and Assaying Quality Control

- If not already implemented as part the standard QA/QC policy, re-assaying programs for samples associated with failures of standards should be undertaken immediately as a routine matter and corrective measures applied to the assay data.
- In conducting an examination of precision between two laboratories, the sample pulps should be used rather than coarse rejects from the drill core.
- Any such programs of duplicate assaying should be carried out using Certified Reference Materials to monitor the accuracy of the resulting data.
- The QA/QC program should be expanded to include duplicate pulps for re-assay by the primary laboratory (using Certified Reference Materials as a monitor) to examine the precision of the primary laboratory.

Mineral Resource Modeling

- Micon recommends that the metallurgical recoveries that are associated with marginal cut-off grade mill head grades be utilized in the estimation of metal factors in future mineral resource estimates.
- The survey information for both the surface-based drill hole and chip sample results should be re-examined for accuracy.
- Consideration should be given to the possibility of alternate interpretations of the mineralized outlines in the Central Vein system in the preparation of future mineral resource estimates.

Bulk Densities

- Micon notes that the bulk densities for the Cimoide, Maria and Diana Veins are based on a small number of observations and recommends that additional density information continue to be collected for these veins. In addition, Micon notes that no density information appear to be available for the Nora, Isabella, Sofia and Doris Veins and recommends that density data be generated in support of future mineral resource estimates. Also, the bulk densities from samples of the Central Vein should be determined on a regular basis to enable a more accurate estimate of the tonnages on a local scale.
- The methodology for determination of the average bulk densities of the mineralized zones in the Pallancata deposit should be modified to identify and account for outlier data points, as such data points may have an undue influence on the determination of the average bulk densities on small sample populations.



Block Model

- Micon recommends that, given the relationship of the block sizes to the length of the
 composite samples, the block model interpolation parameters be modified in future
 updates such that the minimum number of composited samples required be increased
 from one to two.
- Micon has noted that negative values have been chosen as default values (a placeholder value assigned to a given attribute if no data is available for that block) for such block attributes as silver and gold grades. Micon discourages this practice and recommends that zero values be used instead, as the presence of negative values results in erroneous block model reports, the degree of which will be proportional to the number of occurrences of the negative values.
- Micon notes that, while a reconciliation program is in place to examine the mine-to-mill operational performance, no systems are in place that allow an examination of the accuracy of the block model estimates or forecasted mine production. Micon recommends that a program of draw point sampling and bucket counts, supported by volumetric surveys of the mined out stopes, be implemented.

Mineral Resource Estimate

• Micon recommends that the reporting criteria be modified slightly in subsequent mineral resource statements to incorporate the use of clipping polygons that define those portions of the veins that contain sufficient silver and gold grades to provide a potential economic return. The reporting criteria would then report all blocks and block partials (i.e., all blocks regardless of their NSR value) within these clipping polygons so as to include blocks that may be mined as internal (or planned) dilution.

Mining and Mineral Reserve Estimate

- Rigorous geotechnical and mine planning measurement, assessment and design for the Central Vein must take place to secure an economic mining method to allow extraction of this reserve.
- Capital and operating costs must be examined and reflected in the life-of-mine plan to reflect the ground conditions experienced and mine design employed in the Central Vein.
- Cut-off values should be modified to reflect appropriate operating costs in relevant areas to ensure an optimized mining plan is developed.
- A realistic mining schedule should be developed to reflect the physical development rates which are achievable in the Central Vein and its impact on the run-of-mine production and grade profile.



21.0 SIGNATURES

The da	ıta use	d in	the	preparation	of	this	Technical	Report	are	current	as	of	the	end	of
Decem	ber 31,	200	8.												

"Reno Pressacco" {signed and sealed}

Reno Pressacco, P.Geo., Micon International Limited June 26, 2009

"Geraint Harris" {signed}

Geraint Harris, C.Eng., MAusIMM, Micon International Limited June 26, 2009

"Richard Gowans" {signed and sealed}

Richard Gowans, P.Eng., Micon International Limited June $26,\,2009$



22.0 REFERENCES

Technical Report on the Pallancata Mine, Peru, prepared on behalf of International Minerals Corporation by Nicholas Appleyard, Anthony Brown and Mark Cannuli, dated 9 October, 2008.

Technical Report on the Pallancata Mine, prepared for International Minerals by the UK-based IMC Group Consulting Limited, dated 21 May, 2008.

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Metallurgical Balance Spreadsheet – from start-up in September, 2007 to December, 2008.

Joint Venture Agreement, dated 30 June 2006 between Ares, Ludlow Corporation (100%-owned by Hochschild), IMZ and IMZ's wholly-owned Peruvian subsidiary, Minera Oro Vega.

Geomechanical Evaluation of the Mining Method for the Pallancata Central Vein, by David Cordova Rojas dated October, 2008 (preliminary report).

Regional Geological Mapping and Prospecting at Pallancata, Southern Peru, Pratt, W. And Crummy, J., dated January, 2005.

Smee and Associates Consulting Ltd., A Review of the Arcata, Ares and Selene Mine laboratories (internal report prepared for Hochschild Mining plc), dated September, 2007.

Smee and Associates Consulting Ltd., A Review of the Arcata, Ares and Selene Mine laboratories (internal report prepared for Hochschild Mining plc), dated January, 2009.



23.0 ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS AND DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

23.1 PRODUCTION

Total output from the start of commercial production at the Pallancata Mine on 9 September 2007 until 31 December 2008, is summarized in Table 23.1.

Table 23.1 Life of Mine Production Data

	Q3 2007	Q4 2007	2007	Q1 2008	Q2 2008	Q3 2008	Q4 2008	2008
Tonnes mined	11,125	65,174	76,299	66,408	88,033	154,301	209,297	518,039
Tonnes Processed	14,723	63,612	78,335	50,893	83,517	88,247	245,468	468,125
Head grade Ag (g/t)	256	323	310	340	339	337	288	312
Head grade Au (g/t)	1.3	1.5	1.5	1.61	1.7	1.6	1.4	1.5
Conc produced (t)	79	560	639	541	847	909	1,968	4,265
Conc grade Ag (kg/t)	41.6	33.3	34.3	28.7	30.5	30.8	31.0	30.6
Conc grade Au (kg/t)	0.17	0.13	0.1	0.12	0.12	0.11	0.12	0.12
Ag produced (koz)	105	599	704	500	829	899	1,959	4,187
Au produced (koz)	430	2,330	2,760	1,930	3,230	3,350	7,655	16,165
Recovery Ag ¹ (%)	87	91	90	90	91	94	86	89
Recovery Au 1 (%)	72	74	74	73	71	75	71	72

The plant recoveries do not take into account changes in inventory within the concentrator

23.2 MINING OPERATIONS

The Pallancata Mine is an underground operation with production sourced from a number of veins associated with the Pallancata Vein System, the principal orebody currently being mined being the western part of the Pallancata Vein (Veta Oeste or West Vein).

The mine started in production from the West Vein in September, 2007 at a nominal rate of 500 t/d. Commercial production (as defined in the JV agreement at 500 t/d average plant throughput for 30 days) was achieved on September 9, 2007). Production increased to a nominal 1,000 t/d in the second calendar quarter of 2008. Subsequent expansion has seen current mine production levels rise to approximately 2,400 t/d. It is planned to increase mine production to a nominal 3,000 t/d by the end of 2009.

All ore from the Pallancata Mine is transported by 32-t haul trucks, to the Hochschild-owned Selene flotation plant, a distance of about 22 km by a well-maintained gravel road. The silver-gold concentrate produced at the plant is transported to smelters in North America and/or Europe.

As described earlier, the Selene flotation plant was expanded to a capacity of 3,000 t/d to handle both this increased tonnage of Pallancata ore together with the remaining ore from the existing Hochschild Selene mine.



The principal access into the mine is via the Santa Angela ramp. A second ramp access, the Orion ramp, is being constructed in the eastern part of the mine and a third ramp, Don Enrique, is being constructed to access the lowest currently identified levels of the mine.

The principal mining method in use in the steeply-dipping veins is the Avoca method, which is mechanized cut-and-fill with ascending stopes. Fill material used is discarded mine waste and dewatered cycloned tailings which are back-hauled from the Selene plant.

Drilling in the stopes utilizes longhole drills to drill vertical holes. Drilling drifts are mined in the vein, nominally 12 m apart vertically, leaving a pillar of ore approximately 8 m in height between the drifts. This pillar is drilled from the upper level with a long-hole machine, drilling down-holes in a series of fans or parallel holes. Holes are drilled on a square pattern of 1.5 m by 1.5 m, burden and spacing.

The stope is started at a slot raise in the center of the stope and progresses, fan by fan, along the length of each stope half, retreating from the center of the stope. The ore falls to the lower drift where it is loaded by diesel LHD (load haul dump truck) to an ore-pass. An additional drive in the waste is mined to allow access to the stope once blasting has commenced. As the ore is removed, waste rock fill is progressively loaded into the void from the upper level, to ensure wall stability, and to provide a floor for the next stope above. To reduce the dilution effect from the fill material mixing with the blasted rock, a plastic sheet is used to cover the fill material before blasting.

Ore is then hauled by LHDs to ore-passes located at one of the internal access ramps. From these ramps, ore is loaded into road-type haul trucks for transportation to surface.

Extracted ore is stored on surface at the Pallancata mine site in one of a series of stockpiles to enable ore blending to take place. Blended ore is hauled, by a fleet of diesel 32-t haul trucks over approximately 22 km of well-maintained gravel road to the Selene processing plant, where it is either hauled directly to the crusher (during those periods when Pallancata ore is being treated) or stockpiled on a dedicated stockpile to await treatment.

It is estimated that stoping widths will be in the order of 15 to 35 m in the Pallancata Central Vein area, which is not currently being mined. The Avoca method has been tried at the Central Vein but adverse ground conditions prevented the use of this method. Hochschild is currently evaluating several different mining methods for this area. The options considered are sub-level caving and overhand cut-and-fill mining. Both have the potential to be able to exploit the Central Vein in a more economical fashion, taking into account both production requirements, dilution and worker safety. Hochschild has employed an independent geotechnical consultant to work with the Pallancata mining staff with the aim of further developing these mining methods.

However, the development of these methods in the Central Vein is at an early stage and requires substantial geotechnical and mine design analysis before being put into practice. That being said, Micon agrees that the reserves in this area are mineable; which is significant as they account for 26% of the existing reserve tonnage, as at 31 December, 2008. The lowest risk, but highest cost option will be via the overhand cut-and-fill method, using cemented backfill. It is also assured that whichever method is selected significant quantities



of ground support will be required in the man-access drives. For both of these reasons, Micon considers that the planned mine operating costs are underestimated in this area. Therefore, Micon has made an 'order of magnitude' estimated increase to the potential mining cost in relation to the mining of Central Vein. This is reflected in Sections 23.8 and 23.9. If this is the case, additional capital will also be required to install a backfill plant and reticulation system capable of delivering cemented backfill to the underground. Also required, will be a more robust shotcreting system than is currently operation at the mine.

Based on the increased process plant capacity at Selene that came on stream at the end of 2008, Hochschild management has projected further increased mine production at Pallancata up to approximately 3,000 t/d by the end of 2009, which will then remain constant for subsequent years.

A summary of the detailed planned production from Pallancata from 2009 through to the end of 2013 is presented in Table 23.2. It is noted that the tonnages shown in this table are based on the Hochschild production plan, but have been discounted by 10% by IMZ in order to more accurately account for development rates, equipment productivity and availability.

Table 23.2 Suyamarca Forecast for Pallancata Mine Production

	Units	2009	2010	2011	2012	2013	Total
Production Schedule	Tonnes	858,780	953,100	953,100	953,101	643,488	4,361,570
	Ag g/t	372	378	365	349	339	362
	Au g/t	1.62	1.61	1.51	1.39	1.31	1.50
Ounces Produced	Ag oz	8,930,875	10,070,149	9,737,809	9,302,643	6,097,695	44,139,170
	Au oz	32,554	35,939	33,832	31,096	19,818	153,240
Concentrate	Tonnes	10,372	11,511	11,511	11,511	2,504	47,408

The Pallancata Mine is in a stable production state and these proposed production rates are sustainable with the current mine equipment and personnel resources. The ability to continue producing at the forecast rates is dependent on a number of factors. These include:

- a) The continuity of designed working places.
- b) The development of mine stope accesses for equipment and personnel in a timely fashion.
- c) The provision of personnel and supplies to operate the mine.
- d) Access to mineral processing plant capacity to handle the mined ore.

Figure 23.1, through Figure 23.4 show schematic representations of the Pallancata Mine, with the annual production schedule through 2013. The mined-out areas are coloured in grey, non-economic resources are shown in yellow and inaccessible areas (pillars et cetera) are shown in light blue.



Figure 23.1 Schematic of Pallancata Central Vein Showing Production Schedule Through 2013

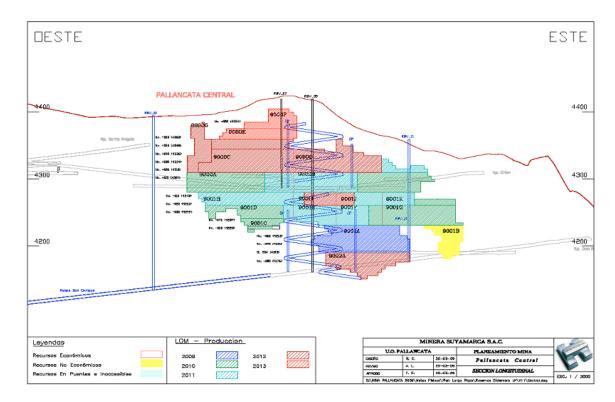


Figure 23.2 Schematic of Pallancata West Vein Showing Production Schedule Through 2013

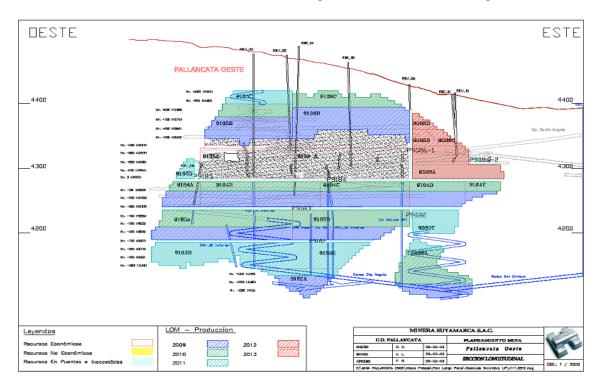




Figure 23.3 Schematic of Ramal Central Showing Production Schedule Through 2013

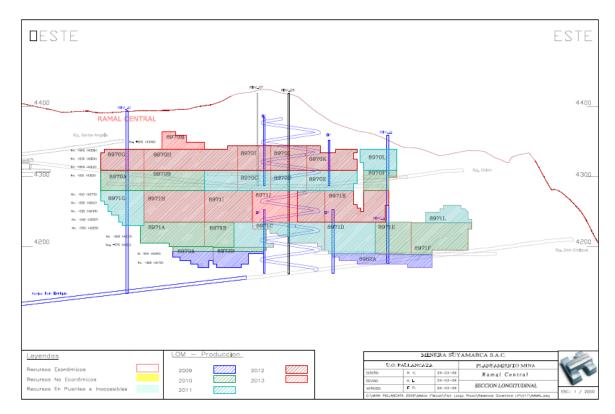
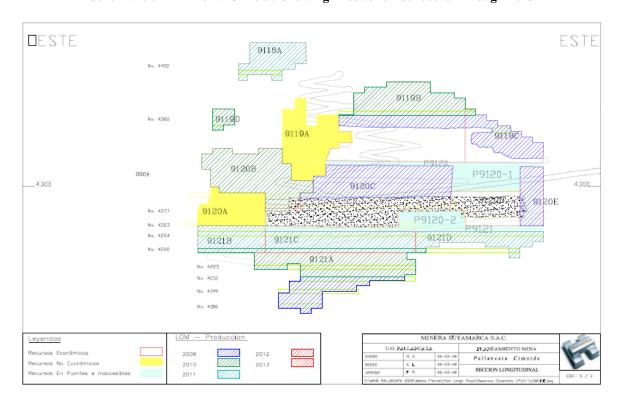


Figure 23.4 Schematic of Pallancata Cimoide Showing Production Schedule Through 2013





The continuity of working places is dependent on the availability of Proven and Probable Mineral Reserves and also the technical capacity to be able to adapt a suitable mining method to the given conditions of geology and rock-mass strength. Given the nature of the vein system, and the body of knowledge established, the geologic knowledge should be a reliable element of the mining cycle. The ability to be able to mine economically in the problematic ground of the Central Vein carries significant risk. However, it is Micon's opinion that, considering the operating experience of Hochschild, the ground support adaptations that have already taken place at the mine, and the continued implementation of sound geotechnical recommendations, this risk can be minimized. Depending upon the mining method finally implemented in the Central Vein, a backfilling system may be required to be installed; this may well incur capital cost in addition to that allowed for in the life-of-mine plan.

The development of mine stope access areas depends, amongst other things, on the availability of personnel and equipment. These are supplied on contract to the mine and the performance of the contractor in the past is satisfactory in this respect. The situation is not considered likely to change. The rate of access development can be affected by ground conditions and the ability to remove the blasted rock. Shotcrete technology is available to deal with difficult ground conditions and it is being used on a trial basis at the mine. Micon has viewed the resulting drift development and, although there is room for improvement, it looks to be successful in controlling the ground in the Central Vein. The net effect of deteriorating conditions will be to increase the cost of development and possibly reduce the rate at which it is advanced. Micon has made an allowance for increased ground support in the operating costs. If a sustainable development rate is to be maintained then a more modern and robust shotcreting system will be required at the mine, if this is not currently available to Hochschild then additional capital cost will be incurred.

23.3 PROCESS PLANT

All ore from the Pallancata Mine is toll-treated at the Selene flotation plant, 22 km to the north by road. The ore is delivered by 32-t haul trucks to a dedicated storage area at the Selene facility and processed in batches typically equivalent to approximately 10 to 15 days of plant operation.

23.3.1 Process Plant Flowsheet, 2,000 t/d

The 2,000 t/d flowsheet includes:

- Two- stage crushing.
- Grinding.
- Flotation of silver-gold concentrate.
- Concentrate de-watering.
- Tailings disposal.



23.3.2 Throughput and Recoveries

In the period September, 2007 to 31 December, 2008, 546,460 t of Pallancata ore was treated for the production of 4,913 t (dry) of concentrate. The average head-grade for silver was 312 g/t and the average head grade for gold was 1.5 g/t. Overall average "effective" silver and gold recoveries were 89% and 72%, respectively, based on mass-balance calculations.

23.3.3 Metallurgical Monitoring and Control

At the beginning of any treatment campaign at the Selene plant there is a relatively short period of time when Pallancata ore displaces Selene ore in the grinding, flotation, thickening and filtration circuits (and vice versa, when Selene ore displaces feed from Pallancata). The following sampling regimes are operated continuously during each Pallancata and Selene campaign to provide data for production reconciliation:

- Before treating Pallancata ore, the coarse-ore bin ahead of the primary crusher and one of the fine-ore bins ahead of each grinding line is emptied. Pallancata ore is crushed, screened and transferred to the empty fine ore bins. No samples are taken at this stage.
- Selene ore is fed from the fine-ore bins until all such ore has been processed. The "dead-bed" load remaining in "empty" bins is noted. When the last bin on each grinding line has been emptied of Selene ore, mill feed switches over to Pallancata ore and the grinding line is considered to have started a new campaign.
- The weightometer totalizer on each mill feed belt is recorded to allow the measurement of the total quantity treated for each campaign. The weightometers are recorded hourly to determine the wet metric tons for each grinding line. The same procedure is followed for both grinding lines.
- One feed sample is collected hourly from both grinding circuits to determine the moisture content. Dry tonnage is calculated from this and the weightometer readings.
- A combined flotation feed sample is taken approximately every 15 minutes using an automatic sample cutter located before the conditioners. Samples are assayed for gold and silver and the results used for calculating the metallurgical balance for each shift and day.
- Flotation tailings are sampled approximately every 15 minutes using an automatic sampler cutter installed before the thickeners. Samples are assayed for gold and silver and the results used to calculate the metallurgical balance for each shift and for each day.
- Flotation concentrate is collected using an automatic sampler cutter installed after ahead of the concentrate thickener. A sample is collected approximately every ten minutes generating approximately 4 kg of concentrate sample per day. Average grades and daily concentrate tons are calculated to derive the theoretical "metallurgical" values for the total campaign.
- Concentrate packs and bags are tared, sampled and weighed and the results recorded to define the moisture content of concentrate produced per day. Representative samples from each package are combined on a shift basis, homogenized and



quartered in order to obtain two sub-samples, one for moisture determination and the other for analyzing gold and silver. The resulting "effective" grades and weight are considered as the final product shipped from the Selene plant to the smelter(s).

• Production of "effective" concentrates is considered to be complete four hours after the campaign finishes. During this time the concentrate thickener feed will be bypassed to the filter feed holding tank.

Monthly reports are prepared that include the metallurgical balance for the month and addresses any operating problems. The current schedule supplied by Hochschild shows the process facility treating only Pallancata ore commencing in mid-2009, this will end the requirement to campaign the mill and will improve the quality and ease of metallurgical accounting.

23.3.4 Selene Plant Expansion Project (3,000 t/d)

The Selene flotation plant capacity was recently expanded to a rated throughput of 3,000 t/d ore.

The plant modifications that were required to increase capacity to 3,000 t/d of ore are summarized below:

Crushing Circuit

The circuit has been modified from two-stage to three-stage crushing and a washing circuit is being considered to remove clays from primary crushed ore ahead of secondary crushing. The circuit includes:

- Aprimary crushing system comprising a grizzly screen and a Metso C100 crusher, nominal capacity of 145 t/h at a three-inch setting, is retained.
- A single, standard HP200 crusher is installed as a new secondary crusher.
- The existing secondary HP200 shorthead crushers are converted to tertiary crushing duty and a third HP200 has been added to the circuit.
- Two additional fine ore bins are provided, each 300-t capacity.

Grinding Circuit

- Milling Circuit No. 1 remains unchanged.
- Milling Circuit No. 2 is expanded by installing a 9.5 ft by 12 ft diameter ball mill to provide secondary grinding following the existing primary mill.

Flotation Circuit

• A third flotation circuit is installed including one conditioner tank and additional rougher, scavenger and cleaner flotation cells.



Concentrate Dewatering and Tailings Handling

- The capacity for concentrate dewatering is increased by the addition of a 20-ft diameter concentrate thickener and a new twenty plate, one-meter by one-meter pressure filter.
- A third, 50-ft diameter tailings thickener has been added.

Metallurgical Accounting and Reporting

Procedures established and proven for the 2,000 t/d operation are also applied to the expanded production rate of 3,000 t/d.

23.3.5 Process Review

Material handling problems associated with high clay/high moisture feed that caused loss of production during the first wet season the plant was treating feed from the Pallancata Mine have been addressed, with additional crushing and screening capacity installed in the most recent expansion to 3,000 t/d. In the absence of those problems in the dry season, mill throughput has averaged 1,860 t/d of feed from the Pallancata Mine over six continuous campaigns (77 days in total) in 2008. This is approximately 7% less than the (then) "name plate" capacity of 2,000 t/d.

Manufacturer's handbook information indicates that the combined theoretical power draw of all of the existing grinding mills (operating at 40% ball charge and 70% critical speed) is 900 kW. Under the same operating conditions, the new mill installed in the second grinding line is capable of drawing 369 kW, an overall increase in grinding power of 41%. This suggests that theoretically the expanded grinding circuit will pose a bottleneck at about 1.41 x 1,860 (say 2,623) t/d, which is about 13% less than the 3,000 t/d target.

23.4 MARKETING

Marketing of the Pallacanta Mine concentrate produced at the Selene plant is handled on behalf of Suyamarca by Hochschild. Payment for the Pallancata silver-gold concentrates is based on two current contracts between Hochschild and smelters in North America and Europe.

Final payments to Suyamarca are based on settlement with the smelters for the agreed-upon metal contents, metal prices and the respective smelter deductions. Final metals pricing for each shipment is based on the average metal prices for silver and gold on the London Metal Exchange. There are no penalties for deleterious elements in the concentrate.

The terms of payment by the smelters are reflected in the discounted cash flow shown in Tables 23.3 and 23.8.



The silver-gold concentrate typically averages 27,000-30,000 g/t silver and 100-125 g/t gold. Average concentrate shipment weights to 31 December, 2008 were approximately 250 t (dry), but more recent shipment weights have averaged 450 t (dry).

Table 23.3 shows a summary of concentrate sales from mine start-up in September, 2007 to December 31, 2008.

23.5 CONTRACTS

23.5.1 Mine Management and Operation

The Pallancata Mine is operated on behalf of the joint venture by Ares, the Hochschild 100%-owned subsidiary, in general accordance with the provisions of the Suyamarca JV.

The scope and remuneration of the operator has been refined in two recent contracts, both dated 31 December, 2007, as follows:

- 1. Contract for technical and management services for operation of the mine (Contract No. 1013-0017/2007), which defines the specific areas of responsibility in:
 - Human resources.
 - Logistics and materials management.
 - General services including document control.
 - Safety, Health and Environment.
 - Community Relations.
 - Geology and Exploration.
 - Mine development.
 - Mine operation.



Table 23.3 Summary of Concentrate Sales

		Weight	Shipment Pr	hipment Prices (US\$/oz) Ounces S		s Sold	
Quarter	Date	DMT	Au	Ag	Au	Ag	US\$
	9-Nov-07	15.7	831.50	15.15	45.6	10,762	229,864
4Q07	14-Dec-07	438.1	800.00	13.70	1,655.8	446,601	7,007,877
	31-Dec-07	91.5	840.00	14.90	378.6	103,307	1,761,018
		545.4			2,080.0	560,670	8,998,759
4000	21-Feb-08	271.2	945.00	17.98	877.7	230,435	4,848,718
1Q08	6-Mar-08	183.4	972.50	20.22	558.9	160,378	3,701,209
		454.6			1,436.6	390,813	8,549,928
	25-Apr-08	239.4	891.50	16.68	782.7	201,358	3,947,698
	28-Apr-08	437.0	923.29	17.57	57.6	4,043	2,054,464
	19-May-08	271.2	906.50	17.18	0.0	600	-196,486
	27-May-08	183.4	906.75	18.14	0.0	0	0
2Q08	2-Jun-08	91.4	888.89	17.05	18.2	661	268,044
	6-Jun-08	15.7	815.58	14.95	-0.8	-426	-12,010
	6-Jun-08	207.3	890.50	17.19	782.3	204,269	4,102,794
	25-Jun-08	225.0	909.50	16.88	798.7	213,731	4,223,091
	30-Jun-06	213.0	930.25	17.65	691.7	171,746	3,539,375
		1883.5			3,130.4	795,980	17,926,970
	24-Jul-08	233.2	960.50	18.35	903.1	227,939	4,880,431
	22-Aug-08	231.5	827.00	13.05	733.3	205,113	3,174,555
3Q08	5-Sep-08	269.4	888.66	17.05	-6.0	-1,961	-94,677
	17-Sep-08	449.6	869.00	12.15	1,325.2	378,560	5,547,697
	24-Sep-08	182.0	889.49	16.97	65.8	14,624	103,776
		1365.7			3,021.4	824,274	13,611,783
	3-Oct-08	238.3	829.93	12.37	-3.8	-986	-930,277
	3-Oct-08	206.4	829.93	12.37	-3.4	-888	-1,044,700
	3-Oct-08	223.9	829.93	12.37	-4.1	-1,098	-1,043,261
	3-Oct-08	212.2	829.93	12.37	-2.7	-664	-985,618
	27-Oct-08	238.3	829.93	12.37	0.9	2,586	-59,405
	5-Nov-08	231.8	806.62	10.44	-5.2	-1,323	-1,958,715
	14-Nov-08	206.4	829.93	12.37	-8.8	1,306	8,477
4Q08	21-Nov-08	230.2	760.86	9.87	-4.2	-1,182	-715,010
	26-Nov-08	223.9	829.93	12.37	-21.8	2,177	8,190
	3-Dec-08	446.6	760.86	9.87	1,316.1	375,971	4,510,221
	31-Dec-08	446.5	816.09	10.29	-9.4	-2,673	-809,731
	17-Nov-08	464.8	730.00	9.75	1,642.5	460,768	5,351,715
	2-Dec-08	491.1	778.00	9.91	2,310.4	508,111	6,572,378
	29-Dec-08	483.7	869.75	10.83	1,804.3	469,007	6,299,372
	30-Dec-08	483.7	869.75	10.83	1,526.0	405,880	5,219,302
		4827.65			8,536.7	2,216,993	20,422,937

Note: Figures shown in green are first provisional payment, with yellow being the second provisional payment and final settlement shown in red. DMT is Dry Metric Tonnes.

- 2. Remuneration for the services will be on the basis of the actual cost of the services plus 10%. These include but are not limited to:
 - Legal consultancy.
 - Internal Audit.
 - Accounts.
 - Human Resources.
 - Logistics.
 - Cost management and financial planning.
 - Information systems and communications.
 - Insurance.



- General Services.
- Safety, health and environment.
- Community relations.

23.5.2 Mine Contract Services

Two principal mining activities provided through contract services are drilling services and ore and rock waste transport, including transfer of ore to the Selene process plant.

An additional contract covers transport of Pallancata concentrate from Selene plant to a designated central storage and sales dispatch site.

Drilling services are provided under a contract, in line with international practice and standards, with Boart-Longyear of Lima, Peru.

Provision of mine and mine-site transport services is under contract (Contract No. 1002-0014/2007) with Transdir SRL of Lima. This contract includes the provision of a Volvo front-loader and four trucks for transport of ore and rock waste from underground locations at the mine to designated disposal sites for waste and for ore, direct transport to the stocking area at the Selene process plant. The renewable contract duration is currently valid until 30 June, 2010.

The Pallancata Mine concentrate is transported by road from the Selene plant to the coastal port of Matarani (department of Arequipa) under a contract between Suyamarca and Sofia Irene Valencia de Sueros. This contract (Contract No. 1002-0012/2008) dated 31 March, 2008, covers the transport of approximately 2,500 wet tonnes of concentrate in the one-year period to 31 March, 2009 and includes the provision of a minimum eight Volvo tractor-trailer units and a minimum eight semi-articulated Indio trucks.

23.5.3 Toll Processing of Pallancata Ore at the Selene Plant

This service is covered by the JV agreement of June, 2006. It covers the processing of ore at Selene plant by Ares, for which it charges Suyamarca a tolling fee comprised of four components, these are:

- Treatment charge.
- General service charge.
- Tailings disposal.
- Asset depreciation.

23.6 ENVIRONMENTAL CONSIDERATIONS

In common with other natural resources and mineral processing companies, the Pallancata operations generate hazardous and non-hazardous waste materials, liquid effluents and emissions to the atmosphere. There are numerous environmental laws in Peru applicable to mining projects concerning protection of the natural environment, air and water quality and emissions standards and disposal of waste.



To mitigate risks of environmental damage and to comply with Peruvian regulations, international standards and good practice, Hochschild has implemented an Environmental Management System, which is certified according to ISO 14001:2004, at all of its mining operations in Peru. Pallancata operations have been incorporated into this system.

The Environmental Management System is centralized with direction from a corporate Head of Environment assisted by an Environmental Controller based in the Lima office of Hochschild, plus an Environmental Officer located at and having responsibility for each operating site.

The system is used to monitor and control all environmental aspects of the group and includes:

- A corporate environmental policy.
- Routine auditing of the standards twice a year.
- Clear objectives and programs.
- Emergency response procedures.
- A centralized, computerized data base for storage and easy access of all environmental data such as permits, licenses, impact assessments, standards and monitoring results.

The Hochschild company policy, applied by Ares on behalf of Suyamarca at Pallancata, is to promote active long-term engagement with local communities and other stakeholders. Hochschild is engaged in a number of different projects with the local communities around all of the operating mines. A manager, based in Lima, has been appointed to oversee community relations. Access to healthcare, good education and self-sustainability have been identified as fundamental requirements for improving the lives of local communities and the social and community programs have been tailored accordingly.

Pallancata has implemented appropriate management and control techniques for mitigating potential impacts and undertakes routine monitoring according to the terms of the approved Environmental Impact Assessment (EIA).

The key environmental issues are:

- Discharge of treated waste water to local surface waters.
- Collection and settlement of drilling waste water.
- Storage of ore and waste rock.
- Safe storage of hazardous materials such as explosives and fuel.
- Dust emissions from material handling and vehicle movements.
- Management of non-mining waste materials.
- Noise.
- Rehabilitation of disturbed areas.



Domestic waste water is treated using an aeration/filtration system before discharge to a local stream.

Water spraying is used for dust suppression on haulage routes during the dry season.

Under the terms of the approved EIA, monitoring of air and water must be carried out at the Pallancata Mine every quarter. However, in compliance with internal standards, water monitoring is conducted on a monthly basis. The monitoring points are:

- Ambient air quality at two positions within the property and one position approximately 4 km to the west.
- Local surface waters at five points, upstream and downstream of influence from the operating areas and one point in a wetland area approximately 2 km north of the Pallancata Property.
- Effluent from the domestic water treatment systems.
- Potable water.

Although the results indicate relatively low (acidic) pH values in some of the surface water samples, this occurs in samples taken upstream of any influence from Pallancata activities and can be attributed to natural conditions.

Suyamarca is also responsible for the funding of the estimated US\$1.70 million for mine reclamation at the end of the mine life.

23.7 TAXES AND ROYALTIES

Peruvian state corporate income tax is charged on net profits at 30% of the annual net income.

The maximum allowed annual depreciation rates for relevant asset categories for the development of the Pallancata Mine are shown in Table 23.4.

Table 23.4
Maximum Annual Depreciation Rates

Assets	Maximum Annual Depreciation (%)
Buildings and constructions	3
Land transportation vehicles (except trains), ovens and the like	20
Machinery and equipment used in mining, oil and construction activities	20
Data processing equipment	25
Other fixed assets	10

Land is not subject to depreciation.



The value added tax (Impuesto General a las Ventas, IGV) rate is 19%, which is applied on the net sale price, including any applicable excise taxes. IGV is refundable for mining companies (see Section 23.7.1).

Customs duty is applied on the cost, insurance and freight (CIF) value of imported industrial (mining and processing) machinery, equipment, and materials at different rates, which are summarized in Table 23.5.

For imported goods and services, IGV is calculated on the CIF value plus duty and excise.

Table 23.5
Customs Duties Applicable to Specific Categories of Imported Goods

Item	Rate (%)
Consumer goods	20
Certain types of plaster, lime, cement, pneumatics, building materials, special equipment	12
Raw materials, spare, parts and other inputs for industry	4
Capital goods and industrial raw materials	0

The Peruvian Income Tax Law provides that local companies have to pay a "Temporary Tax On Net Assets" with a rate levied at 0.5% on the excess of 1,000,000 Peruvian Soles (approximately US\$365,000) based on the net assets of the company, regardless of its liabilities.

23.7.1 Mining Tax Special Features

Mining companies are subject to the general tax regime except for certain special rules. Special tax features affecting a mining project in its different stages (Exploration, including the Feasibility Study, Development and Construction and Exploitation) are summarized below.

Exploration and Feasibility Study Stage

IGV on mining exploration expenditures is refunded by the State, or is a credit against corporate income tax for producers.

Development Stage

Once a Project Feasibility Study is completed and approved, a Mining Stability Agreement (MSA) may be executed with the State.

At this stage, a company is entitled to execute an MSA that covers taxation, foreign exchange and trade guarantees for a term of 15 years that will begin in the year that the committed investments are completed and approved. The MSA will guarantee the local subsidiary the stability of the tax regime, the tax refund mechanisms, custom duties, municipal taxes, water license and mining good standing fees. The local subsidiary would only be subject to the tax



regime in force on the date of execution of the MSA, and will not be subject to any other tax created at a later date.

Changes that may be introduced to the tax system after execution of the MSA will not be applicable to the project while the MSA is in place, unless the company elects to drop the stability regime, in which case the common tax regime shall be applicable. An increment of 2% is added to the applicable Corporate Income Tax (currently 30%) for mining projects with a MSA.

The MSA also allows for the refund of the IGV that has been levied on imports and/or local acquisitions of new capital goods, new intermediate goods, services and construction contracts, made in the pre-production stage.

At this stage, there is no MSA in place for the Pallancata mine.

Exploitation (Production) Stage

The purchase value of a mineral concession may be amortized from that year in which the minimum required production is deemed to be met, through to the probable lifetime of the mining deposit, as fixed by the concession holder, calculated on the basis of proven and probable reserves.

Investments made by mining companies in public service infrastructure may be deducted from their taxable income.

Other financial charges which apply during the Exploitation Stage are summarized as follows:

Peruvian Government Royalties

Once a mine is in production, the concession holder (in this case, Suyamarca at the Pallancata Mine) must pay to the Peruvian Government a royalty to be determined in reference to the value of the concentrates, less the costs for indirect taxes, insurance, freight and storage in ports. The following categories apply to establish the royalty to be paid annually:

Up to US\$60 million in value - 1 % royalty. Above US\$60 million up to US\$120 million in value - 2% royalty. Above US\$120 million in value - 3% royalty.

License Fees

Mineral right holders must pay US\$3.00/ha per year (Derecho de Vigencia).



Worker's Profit Sharing Scheme

Peruvian law grants employees a participation in the company's annual profits. For the mining industry, the share is calculated at 8% of the net pre-tax profit up to a maximum of eighteen salaries per year. Profit sharing is an operating cost for corporate income tax purposes.

Other Taxes

Mining companies are also subject to certain other taxes and contributions, such as water license fees and municipal taxes on urban property and on vehicles.

23.8 CAPITAL AND OPERATING COSTS

23.8.1 Capital Cost Estimate

Capital expenditure at the Pallancata Mine for 2009 is estimated at US\$37 million. Mine cash flows are expected to fund these expenditures without additional direct cash contributions by Hochschild or IMZ.

As noted above, Suyamarca is also responsible for the funding of the estimated US\$1.70 million for mine reclamation at the end of the mine life.

Sustaining capital has been determined from the life-of-mine plan developed by Ares to cover all mine development and infrastructure required to extract the current reserves.

As discussed in Section 23.2, there may a requirement for additional capital to increase and improve the shotcreting and general ground support capacity of the mine. This is largely dependent on the mining method selected for the Central Vein orebody. Micon has not made an adjustment to reflect this additional cost as it is not known whether Ares (via Hochschild) is able to transfer this equipment from existing operations within the group or whether it will be need to be purchased.

23.8.2 Operating Cost Estimate

Operating costs in the cash flow model are based on current mine operating costs provided to IMZ by Ares/Hochschild. These costs and the cash flow model were reviewed by Micon.

Suyamarca will pay Ares (as operator) the costs associated with the operation. These have been estimated by Hochschild and are based on contract rates for the mining operations, a tolling fee for the use of the Selene process facility, a cost for general services and a management fee of 10%. In addition, royalties are payable to the Peruvian Government as described above.

IMZ has used the per tonne costs estimated by Hochschild for this financial model. As the contracts and tolling fee are generally on a per tonne basis, it has been considered reasonable to use these figures even though the tonnage mined in the model used in this study differs slightly from those in the Hochschild production model since IMZ has reduced the planned



tonnage by 10% in order to more accurately account for development rates, equipment productivity and availability. The cash operating costs based on the IMZ projection for the Pallancata Mine are summarized in Table 23.6.

Micon has reviewed the historic costs which form the basis of the life-of-mine cost predictions and finds them to be reasonable and based on what appears to be actual costs incurred at the operation.

Table 23.6
Cash Operating Costs Estimated by IMZ for the Pallancata Mine
(Thousand US\$)

Area	2009	2010	2011	2012	2013	Total	US\$/t
Mine/geology	23,273	25,829	25,829	25,829	17,439	118,199	27.10
Plant	21,014	23,322	23,322	23,322	15,746	106,728	24.47
Royalty	1,800	1,829	1,800	1,800	1,800	9,029	2.07
General Serv	2,147	2,383	2,383	2,383	1,609	10,904	2.50
Mine admin	3,435	3,812	3,812	3,812	2,574	17,446	4.00
Opex	945	1,048	1,048	1,048	708	4,798	1.10
Sub-Total	52,614	58,224	58,195	58,195	39,875	267,103	61.24
Mgt Fee	5,081	5,639	5,639	5,640	3,808	25,807	5.92
Total	57,695	63,863	63,834	63,835	43,683	292,910	67.16

The pre-tax cash operating cost (including geology, mining, processing, general services, management fee, cost of sales and government royalty) per ounce of silver, net of gold credit, is estimated by IMZ at US\$6.23/t.

For reasons discussed in Section 23.2, Micon considers that additional mining cost is likely to be incurred during the development and mining of the Central Vein. Micon has made an 'order of magnitude' estimate to determine what these increased mining costs may be. These are shown in Table 23.7. These costs are dependent upon the mining method selected, and the extent of the poor ground conditions currently experienced in the Central Vein.

Table 23.7
Cash Operating Costs Estimated by IMZ and Modified by Micon for the Pallancata Mine (Thousand US\$)

Area	2009	2010	2011	2012	2013	Total	US\$/t
Mine/geology	23,273	38,743	51,658	42,618	21,798	178,090	40.83
Plant	21,014	23,322	23,322	23,322	15,746	106,728	24.47
Royalty	1,800	1,829	1,800	1,800	1,800	9,029	2.07
General Serv	2,147	2,383	2,383	2,383	1,609	10,904	2.50
Mine admin	3,435	3,812	3,812	3,812	2,574	17,446	4.00
Opex	945	1,048	1,048	1,048	708	4,798	1.10
Sub-Total	52,614	71,138	84,024	74,984	44,235	326,995	74.97
Mgt Fee	5,081	6,931	8,222	7,318	4,244	31,797	7.29
Total	57,695	78,069	92,247	82,302	48,479	358,791	82.26

Using these modified operating costs the comparative pre-tax cash operating cost per ounce of silver, net of gold credit, is estimated at US\$7.89/t. Micon notes that despite the increase



in mine operating costs, the operation still demonstrates a strong positive cash flow and robust economics.

23.9 ECONOMIC ANALYSIS

The cash flow of the Pallancata Project, presented as Table 23.8, is based upon the assessment of proven and probable reserves scheduled for extraction. The model does not assume or allow for additional reserves that could be found in the mine area. This analysis has been prepared on a pre-tax basis and assesses the project as single Suyamarca-owned unit (100% basis) without allocation of the benefits between the two joint venture partners, IMZ and Hochschild.

Internal rate of return (IRR) for the project has not been calculated in this analysis as the net cash flow projected in each year is positive.

This cash flow, which was developed by IMZ, assumes a 10% reduction in Hochschild's production tonnages, as noted above, but does not reflect the modified operating costs shown in Table 23.7. The gold and silver prices used are US\$800/oz and US\$12/oz, respectively, and the feed grades remain the same.



Table 23.8 Cash Flow of the Pallancata Project

Pallancata Mine													
T unumoutu mme				2009		2010	2011		2012		2013	Tot	al
Mine from HOC	Tonnes			994,700		1,059,000	1,059,001		1,059,002		247,053		4,418,755
(not used here)	Ag g/t			372		380	361		343		335		362
	Au g/t			1.6		1.6	1.5		1.3		1.3		1.5
Plant from HOC Schedule	e Tonnes			954,200		1,059,000	1,059,001		1,059,002		230,368		4,361,570
(not used here)	Ag g/t			372		378	362		343		331		362
	Au g/t			1.6		1.6	1.5		1.3		1.3		1.497
Plant Schedule IMZ	10	1%	8	358.780		953,100	953,100		953,101		643,488		4,361,570
Tonnage has been red	uced by the perc	entage		372		378	365		349		339		362
	ated.	Ü		1.6		1.6	1.5		1.4		1.3		1.5
	tpd			2,433		2,700	2,700		2,700		2,700		
Ounces Produced	Ag Oz		8,9	30,875		10,070,149	9,737,809		9,302,643	6	6,097,695		44,139,170
	Au Oz		-,-	32.554		35.939	33.832		31.096		19.818		153,240
Ounces Prod IMZ 40%		40%	3,5	72,350		4,028,060	3,895,123		3,721,057	2	2,439,078		17,655,668
				13,022		14,376	13,533		12,439		7,927		61,296
Composition	Tannas			0.225		10.200	10.200		10.200		0.004		47 400
Concentrate	Tonnes			9,335		10,360	10,360		10,360		6,994		47,408
Gross Sales	US\$ '000	s	\$ 1	33,214	\$	149,593	\$ 143,920	\$	136,509	\$	89,027	\$	652,262
Discounts	Pay Fact	or	\$	5.329	\$	5,984	\$ 5,757	\$	5,460	\$	3,561	\$	26.090
	Treatmer		\$	1,867	\$	2,072	\$ 2,072	\$	2,072	\$	1,399	\$	9,482
	Refining		\$	3,679	\$	4.143	\$ 3.999	\$	3,811	\$	2.494	\$	18,126
	Total		\$	10,875	\$	12,199	\$ 11,828	\$	11,343	\$	7,454	\$	53,698
Net Sales	. 01.0.			22,339	\$	137,395	\$ 132,092	\$	125,165	\$	81,573	\$	598,564
Sales Expense	Fees		\$	611.69	\$	686.97	\$ 660.46	\$	625.83	\$	407.87	\$	2.993
Sales Experise	Insurano		\$ \$	122.34	\$	137.39	\$ 132.09	\$	125.17	\$	81.57	\$	599
	Transpor		\$ \$	1,568	\$	1,740	\$ 1,740	\$	1,740	\$	1,175	\$	7.965
	Total		\$	2,302	\$	2,565	\$ 2,533	\$	2,491	\$	1,175	\$	11,556
Gross Revenue			\$ 1	20,037	\$	134,830	\$ 129,559	\$	122,674	\$	79,909	\$	587,008
Opex	Mine/geo	logy	\$	27.10	\$	27.10	\$ 27.10	\$	27.10	\$	27.10		
Орсх	Plant		\$	24.47	\$	24.47	\$ 24.47	\$	24.47	\$	24.47		
G and A	Royalty		\$	2.10	\$	2.36	\$ 2.19	\$	1.97	\$	2.80		
S and A	General	Serv	\$	2.50	\$	2.50	\$ 2.50	\$	2.50	\$	2.50		
	Mine adn		\$	4.00	\$	4.00	\$ 4.00	\$	4.00	\$	4.00		
	Opex		\$	1.10	\$	1.10	\$ 1.10	\$	1.10	\$	1.10		
	sub-Tota	ıl	\$	61.27	\$	61.53	\$ 61.36	\$	61.14	\$	61.97		
	Mgt Fee		\$	5.92	\$	5.92	\$ 5.92	\$	5.92	\$	5.92		
	Total		\$	67.18	\$	67.44	\$ 67.28	\$	67.06	\$	67.88		
Total production Cost			\$	82.53	\$	82.93	\$ 82.34	\$	81.58	\$	82.05	\$	14.17
Breakeven Silver price			\$	5.34	\$	5.30	\$ 5.56	\$	5.86	\$	6.09	•	1-1.11
2. Canto von Girvon pinco	Total		\$	57,696	\$	64,279	\$ 64,121	\$	63,915	\$	43,683	\$	293,694
Mine Sustaining Capital			\$	37,404	\$	17,537	\$ 13,833	\$	6,295			\$	75,068
Pre-Tax operating profit	US\$ '000		\$	62,340	\$	70,551	\$ 65,437	\$	58,759	\$	36,226	\$	293,313
			ֆ \$	37,404	э \$,	\$,	\$ \$	6,295	э \$	30,220	\$ \$	293,313 75,068
Capex	US\$ '000			,		17,537	13,833		,		26 226		
Economic Cash Flow	US\$ '000	5	\$	24,936	\$	53,014	\$ 51,605	\$	52,464	\$	36,226	\$	218,245
	NPV	5% 10%		,958.34 ,580.97	9	\$75,183.33							
		15%	\$143	,707.97									



23.9.1 Sensitivity Analysis

Sensitivity to silver and gold price is shown in Table 23.9 and Table 23.10 with respect to cash flow (NPV at 5% per year discount rate). The sensitivities are calculated on a pre-tax basis for the single Suyamarca-owned operation.

Table 23.9
Sensitivity to Gold and Silver Prices

NPV	7 5%		Gold Price per Ounce									
In U	S\$ 000's	\$600	\$700	\$800	\$ 900	\$1,000						
၂ ၅	\$9.00	52,982	65,731	78,512	91,293	104,074						
Ounce	\$10.00	89,672	102,453	115,234	128,015	140,728						
	\$11.00	126,393	139,125	151,806	164,410	177,014						
e p	\$12.00	162,817	175,421	187,958	200,400	212,842						
Price per	\$13.00	198,831	211,273	223,715	236,157	248,599						
	\$14.00	234,588	247,030	259,472	271,913	284,355						
Silver	\$15.00	270,344	282,786	295,228	307,670	320,112						

Table 23.10 Sensitivity to Gold and Silver Prices for IMZ's 40% Ownership Interest

NPV 5%		Gold Price per Ounce								
In U	S\$ 000's	\$600	\$700	\$800	\$ 900	\$1,000				
ce	\$9.00	21,193	26,293	31,405	36,517	41,630				
Ounce	\$10.00	35,869	40,981	46,093	51,206	56,291				
•	\$11.00	50,557	55,650	60,722	65,764	70,806				
Price per	\$12.00	65,127	70,169	75,183	80,160	85,137				
Pric	\$13.00	79,532	84,509	89,486	94,463	99,440				
ver]	\$14.00	93,835	98,812	103,789	108,765	113,742				
Silv	\$15.00	108,138	113,114	118,091	123,068	128,045				

23.9.2 Payback and Mine Life

Payback is not considered in this study as any capital prior to 2009 has not been included in the cash flow model and subsequent cash flows are all positive on a year-by-year basis.

Mine life, based upon extraction of currently recognized proven and probable reserves under the current base case production schedule, extends to the year 2013.



24.0 CERTIFICATES

CERTIFICATE OF AUTHOR

RICHARD M. GOWANS P.Eng.

As a co-author of this report entitled "Technical Report on the Mineral Resource and Mineral Reserve Estimates, Pallancata Mine, Peru", dated June 26, 2009 I, Richard M. Gowans, P. Eng. do hereby certify that:

1. I am employed by, and carried out this assignment for

Micon International Limited Suite 900, 390 Bay Street Toronto, Ontario M5H 2Y2

tel. (416) 362-5135 fax (416) 362-5763 e-mail: rgowans@micon-international.com

2. I hold the following academic qualifications:

B.Sc. (Hons) Minerals Engineering, The University of Birmingham, U.K.

1980

- 3. I am a registered Professional Engineer of Ontario (membership number 90529389); as well, I am a member in good standing of the Canadian Institute of Mining, Metallurgy and Petroleum.
- 4. I have worked as an extractive metallurgist in the minerals industry for over 28 years.
- 5. I do, by reason of education, experience and professional registration, fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes the management of technical studies and design of numerous metallurgical testwork programs and metallurgical processing plants.
- 6. I visited the Pallancata project site on December 7, 2008.
- 7. I am responsible for the preparation of parts of Section 1, and Sections 2, 3, 16 and 18, parts of Section 19, parts of Section 20, Section 22, and Sections 23.1, 23.3, 23.4, 23.5, 23.6, 23.7, parts of Section 23.8 and Section 23.9 of this report entitled "Technical Report on the Mineral Resource and Mineral Reserve Estimates, Pallancata Mine, Peru", dated June 26, 2009.
- 8. I am independent of International Minerals Corporation, as defined in Section 1.4 of NI 43-101.
- 9. I have had no prior involvement with the mineral property in question.
- 10. I have read NI 43-101 and the portions of this report for which I am responsible have been prepared in compliance with the instrument.
- 11. As of the date of this certificate, to the best of my knowledge, information and belief, the sections of this Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make this report not misleading.

Effective date: December 31, 2008 Signing date: June 26, 2009

"Richard M. Gowans" {signed and sealed}

Richard M. Gowans, P.Eng.



CERTIFICATE FOR RENO PRESSACCO

As the author of this report entitled "Technical Report on the Mineral Resource and Mineral Reserve Estimates, Pallancata Mine, Peru" dated June 26, 2009 I, Reno Pressacco, do hereby certify that:

- 1. I carried out this assignment for, Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. (416) 362-5135, fax (416) 362-5763, e-mail rpressacco@micon-international.com;
- 2. I hold the following academic qualifications:

CET (Geological Engineering)	Cambrian College	1982
B.Sc (Geology)	Lake Superior State College	1984
M.Sc(A). (Mineral Exploration)	McGill University	1986

3. I am a registered Professional Geoscientist with the Association of Professional Geoscientists of Ontario (Registration Number 0939); as well, I am a member in good standing of other technical associations and societies, including:

The Prospectors and Developers Association of Canada

- 4. I have worked as a geologist in the minerals industry for 27 years. My experience includes mineral exploration, advanced exploration and mine development, open pit production, environmental compliance, financial evaluation and mine commissioning with a variety of deposit types including gold, silver, copper, zinc, lead, uranium, nickel, platinum-group metals, and industrial minerals;
- 5. I visited the subject property and reviewed data and drill core on December 7th, 2008;
- 6. I am responsible for the preparation of parts of Section 1, Sections 4 through 15, Section 17.1, Section 17.2, Section 17.3, and parts of Sections 19 and 20 of this Technical Report;
- 7. I am independent of the issuer, applying the tests contained in Section 1.4 of the Instrument;
- 8. I have had no prior involvement with the mineral property in question;
- 9. I have read the Instrument and the Technical Report has been prepared in compliance with the Instrument;
- 10. 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.

Effective date December 31, 2008 Dated this 26th day of June, 2009

"Reno Pressacco" (signed and sealed)

Reno Pressacco, P.Geo. Senior Geologist



CERTIFICATE of GERAINT HARRIS

As a co-author of this report entitled "TECHNICAL REPORT ON THE MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES, PALLANCATA MINE, PERU", dated June 26, 2009 I, Geraint W. Harris, M. AusIMM. do hereby certify that:

1. I am employed by, and carried out this assignment for

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- 2. I hold the following academic qualifications:
 - i. B.Eng. (Hons) Mining Engineering, The University of Nottingham, U.K., 1995 In addition, I have obtained a :
 - ii. M.Sc Mining Engineering, The University of Nevada-Reno, USA, 1997
- 3. I am a registered member of the Australasian Institute of Mining and Metallurgy (membership number 227565) and also the Institute of Engineers of Ireland (membership number 042467)
- 4. I have worked as a mining engineer in the minerals industry for over 13 years.
- 5. I do, by reason of education, experience and professional registration, fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes the management of and participation in numerous technical studies involving underground mining methods.
- 6. I visited the Pallancata project site on December 7, 2008.
- 7. I am responsible for the preparation of Sections 17.4 and portions of Sections 1, 19, 20 and 23 of this report entitled "TECHNICAL REPORT ON THE MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES, PALLANCATA MINE, PERU", dated June 26, 2009.
- 8. I am independent of International Minerals Corporation, as defined in Section 1.4 of NI 43-101.
- 9. I have had no prior involvement with the mineral property in question.
- 10. I have read NI 43-101 and the portions of this report for which I am responsible have been prepared in compliance with the instrument.
- 11. As of the date of this certificate, to the best of my knowledge, information and belief, the sections of this Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make this report not misleading.

Effective date: December 31, 2008 Signing date: June 26th, 2009

"Geraint W. Harris" {signed}

Geraint W. Harris, C.Eng., M.AusIMM