

Zacks Small-Cap Research

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Petaquilla Minerals Ltd. (T.PTQ – TSE)

T.PTQ: Updated 43-101 report increases Palmilla deposit's reserves by 120%

Current Recommendation

Prior Recommendation
Date of Last Change

Outperform

Neutral
02/23/2012

Current Price (10/15/13)

\$0.34

Six- Month Target Price

\$1.04

SUMMARY DATA

52-Week High	\$0.66	Risk Level	Above Average				
52-Week Low	\$0.28	Type of Stock	Small - Value				
One-Year Return (%)	-45.2	Industry	Mining - Gold				
Beta	2.00	Zacks Rank in Industry	N/A				
Average Daily Volume (shrs.)	235,806						
Shares Outstanding (million)	222.33	ZACKS ESTIMATES					
Market Capitalization (\$ mil.)	\$75.6	Revenue (in millions of \$)					
Short Interest Ratio (days)	N/A	Q1 (Aug)	Q2 (Nov)	Q3 (Feb)	Q4 (May)	Year (May)	
Institutional Ownership (%)	21.2	2012	26.2 A	25.3 A	18.8 A	24.0 A	94.3 A
Insider Ownership (%)	2.0	2013	25.9 A	29.5 A	27.5 A	24.1 A	110.7 A
Annual Cash Dividend	\$0.00	2014	26.5 E	27.5 E	29.5 E	30.5 E	114.0 E
Dividend Yield (%)	0.00	2015	28.5 E	29.5 E	31.7 E	32.8 E	122.5 E
5-Yr. Historical Growth Rates		Earnings per Share (EPS is operating earnings before non recurring items)					
Sales (%)	N/A	Q1 (Aug)	Q2 (Nov)	Q3 (Feb)	Q4 (May)	Year (May)	
Earnings Per Share (%)	N/A	2012	\$0.03 A	\$0.03 A	\$0.02 A	\$0.02 A	\$0.10 A
Dividend (%)	N/A	2013	\$0.02 A	\$0.01 A	\$0.07 A	-\$0.11 A	-\$0.02 A
P/E using TTM EPS	N/M	2014	-\$0.02 E	-\$0.02 E	-\$0.01 E	\$0.00 E	-\$0.05 E
P/E using 2014 Estimate	N/M	2015	\$0.01 E	\$0.01 E	\$0.02 E	\$0.02 E	\$0.06 E
P/E using 2015 Estimate	5.7	Zacks Projected EPS Growth Rate - Next 5 Years %		15.0			
Zacks Rank	3	Fiscal years ended May 31 st prior to 2013.					

KEY POINTS

- Petaquilla Minerals is a junior gold production and exploration company with a producing mine in Panamá and numerous mineral exploration properties in Panamá, Spain and Portugal. The **Molejón gold project** in north-central **Panamá** achieved commercial production in January 2010 and **has poured 245,686 ounces of gold**. Approximately **482,486 ounces** have yet to be monetized from the proven and probable reserve delineated in the most recent 43-101 compliant mineral reserve report at Molejón. Within 20 kilometers, the company controls the **Palmilla gold deposit** (M&I resource of **509,000 ounces Au**) and the **Botija Abajo deposit** (proven and probable resource of **106,739 ounces Au**).
 - Petaquilla Minerals holds the mineral exploration and development rights to 842 square kilometers of concession lands that contain gold, copper and molybdenum deposits in Panamá. Oro del Norte and Brazo, continue to be advanced with exploration programs.
 - **NI 43-101 compliant estimates for the Botija Abajo and Palmilla deposits** were released in the early 2013 adding \$34.5 million (or \$0.12 per diluted share) to the NPV to our valuation model.
 - An **updated NI 43-101 compliant estimate** on the **Palmilla gold deposit** was announced on October 9, 2013. The report expanded and upgraded the resources from an estimated inferred resource of 502,800 gold equivalent ounces (using a cutoff grade of 0.30 g/t Au Eq.) to an estimated **measured & indicated resource of 841,000 gold equivalent ounces and an inferred resource of 269,000 gold equivalent ounces** (using a cutoff grade of 0.35 g/t Au Eq. Without even considering the significant upgrade of the resource, it can be stated that **the estimate increased 120%**. The updated estimate added \$39.3 million (or \$0.15 per diluted share) to the NPV to our valuation model.
 - Petaquilla successfully asserted its rights over claims in the area of the Cobre Panamá copper project being advanced by First Quantum Minerals. In consideration for land access, Petaquilla received (through PDI) a \$75 million contract for aggregate procurement (which was subsequently increased to \$100 million), \$13 million for 10 years of land lease, \$13.3 million waiver of royalties, etc., all of which total approximately \$150 million.
 - **On/off leach pads** have been constructed at Molejón. During fiscal 2012, the on/off leach operation produced approximately 300 ounces. The start-up and construction of the operation continues, though no additional production was reported during fiscal 2013. Management expects this incremental leach operation to be commissioned during calendar 2014.
 - In **Spain**, Petaquilla Minerals owns a 100% interest in **Lomero-Poyatos** through the acquisition of Iberian Resources. Based on historical drilling results, a NI 43-101 compliant Technical Report (dated May 21, 2012) estimates that the inferred mineral resource in an underground mining scenario contains **830,000 ounces Au and 17.3 ounces Ag**.
 - During the fourth fiscal quarter, the status of the Forward Gold Purchase Agreement with Deutsche Bank required the declassification of PDI as held-for-distribution despite management's continued plans for a spin-out. Therefore, the company is pursuing a course to refinance and close the gold and silver contracts. Also, both events had impacts on the balance sheet and income statement.
 - Management's focus during fiscal 2014 lies in boosting gold production at Molejón gold project to approximately 100,000 ounces, advancing the Lomero-Poyatos concessions to production, continuing exploration at Brazo and Oro del Norte, and the continued exploration of Jales-Gralheira in Portugal, along with pursuing the termination of the gold and silver contracts with Deutsche Bank.
 - We maintain our Outperform rating on Petaquilla Minerals and increase our target to \$1.04 due to several factors, including increased working capital deficiency, the updated resource estimate of Palmilla, higher prices of gold, silver and copper and the resolution of deferred revenue.

RECENT NEWS

Palmilla Gold Project (Panamá)

On October 9, 2013, Petaquilla announced the completion of an updated NI 43-101 compliant technical report on its **Palmilla gold project**. The report expanded and upgraded the resources from an estimated inferred resource of 502,800 gold equivalent ounces (using a cutoff grade of 0.30 g/t Au Eq.) to an estimated **measured & indicated resource of 841,000 gold equivalent ounces and an inferred resource of 269,000 gold equivalent ounces** (using a cutoff grade of 0.35 g/t Au Eq.). Tables of both resource estimates can be found in the Palmilla Gold Project Section below. Without even considering the significant upgrade of the resource, it can be stated that **the estimate increased 120%**. The updated estimate added \$39.3 million (or \$0.15 per diluted share) to the NPV to our valuation model.

Results for fourth fiscal quarter and fiscal year

On October 8, 2013, Petaquilla Minerals reported fourth fiscal quarter and fiscal year results for the period ending June 30, 2013. Since the company changed its fiscal year-end from May 31st to June 30th, the fourth quarter covers a four-month period and the 2013 fiscal year 2013 encompasses 13 months.

For the fourth fiscal quarter, gold equivalent production declined 32.3% sequentially from 18,013 ounces to 12,191 ounces. Gold production declined due to the disruptions in mining operations from the reassignment of some mining and crushing equipment towards the efforts to make timely deliveries of aggregate to the Cobre Panamá copper project. Additional equipment has been procured to alleviate the situation. In addition, the average realized gold equivalent price declined 10.6% sequentially to \$1,473. With the company drawing upon inventoried bullion and selling 14,196 gold equivalent ounces, along with \$4.366 million in incremental revenues from aggregate sales, sequentially revenues increased 1.0%. Also, revenues from the aggregate business, along with silver sales, helped in the recovery of mining costs at the Molejón mine since the sales of silver and aggregates are considered to be by-products from the extraction of gold. For the quarter, the company reported a loss of \$25,715,278 (\$0.11 per diluted share), primarily due to the higher expenses related to the classification of forward agreements as derivatives (\$9.8 million) and the declassification of PDI as held-for-distribution, namely higher production costs (approximately an incremental \$11 million) and greater depreciation & depletion (approximately an incremental \$6.5 million adjustment).

For the full fiscal year, gold equivalent production declined only 0.5% from 69,503 ounces to 69,181 ounces, and gross operating profit increased 3.0% to \$35,992,420. During fiscal 2013, Petaquilla Minerals benefitted substantially through Inmet's waiver of 5% royalty on Molejón mine by \$13,348,341, which was somewhat offset by a \$9,815,975 loss on the classification of forward agreements as derivatives. The company's working capital deficiency expanded to \$85,608,791, primarily as a result of an IAS requirement that the Forward Gold Purchase Agreement with Deutsche Bank totaling \$32,250,000 be classified as a current liability, since the decline in gold production during the fourth fiscal quarter contributed to the company missing the gold delivery requirements to Deutsche Bank that are required under its Forward Gold Purchase Agreement. Despite Petaquilla Minerals having belatedly satisfied the delivery requirements for December 2012 and June 2013 with cash payments, the company appears to be in arrears for the September 2013 delivery. Petaquilla Minerals and Deutsche Bank are in discussions to remediate the situation.

During fiscal 2014, management expects Molejón's cash costs to be reduced to the \$550 to \$600 range since supplying aggregate to the Cobre Panamá copper project should generate approximately \$40 million in revenues.

Cobre Panamá copper project benefitting Petaquilla Minerals

Beginning in September 2012, the controlling partner of the \$6.18 billion Cobre Panamá copper project, Inmet Mining, attempted to takeover Petaquilla Minerals, targeting its Panamanian assets. Petaquilla's lands, mining concessions and licenses are critical to the advancement of the Cobre Panamá project. On February 25, 2013, Petaquilla Minerals and Inmet Mining reached a binding agreement which resolved the issues.

The terms of the agreement include an annual rental of \$1.3 million for certain lands to be used for camp space, a three-year contract for aggregates totaling between \$75 million and \$100 million for the Cobre Panamá project and forgiveness of royalties and release of certain monetary claims by Inmet. The value of the arrangements is estimated to total approximately \$150 million. Petaquilla immediately received a **\$13 million payment** from Inmet for the in-advance payment of a 10-year land lease. In addition, Inmet waived its right on a 5% royalty from sales at the Molejón mine, resulting in a **reversal of a \$13.3 million accrual**. On May 23, 2013, the agreement was amended to include the contemplation of joint venture agreements.

On April 30, 2013, First Quantum Minerals Ltd. (FM: TO) acquired Inmet Mining. Inmet Mining is now known as FQM (Akubra) Inc, a wholly owned subsidiary of First Quantum Minerals. Minera Panama, S.A., which is now 80% owned by FQM (Akubra), remains as the entity charged with the development of the Cobre Panamá project. After discussions with First Quantum, Petaquilla and Minera Panama executed a contract for the purchase of \$75 million of aggregate and screened rock over three years from Petaquilla's wholly owned subsidiary, Panama Desarrollo de Infraestructuras, S.A. (PDI). The contract included the option to purchase up to an additional \$25 million of aggregate and screened rock, which was exercised during the fourth fiscal quarter of 2013.

Expected NI 43-101 reports

Management expects additional NI 43-101 compliant resource reports to be completed, specifically for Oro del Norte and Brazo in Panamá and Lomero-Poyatos in Spain.

Share Repurchase

During fiscal 2013, the company repurchased \$257,652 worth of treasury shares, including the \$91,000 spent acquiring treasury shares during the fourth fiscal quarter.

Miscellaneous

On August 19, 2013, Petaquilla announced that the company has changed its fiscal year from May 31 to June 30. As a result, the company will have a transitional 13-month financial year ending June 30, 2013 including a transitional 4-month fourth fiscal quarter.

It was disclosed in the fiscal year-end report that the spin-out of Panamanian Development of Infrastructures, S.A. can only be executed upon the repayment of all the outstanding Deutsche Bank debt.

OVERVIEW

Based in Vancouver, British Columbia, Petaquilla Minerals Ltd. (PTQ: TO, PTQMF: OTCOB) is a junior gold production and exploration company with a producing gold concession located in the Republic of Panamá and with numerous mineral exploration properties in Panamá and Spain. Management expects to reach a production level of 90,000 gold equivalent ounces in fiscal 2014 and plans for an updated NI 43-101 compliant estimated resource on the Lomero-Poyatos concessions during calendar 2013.

Management continues to focus on expanding production capacity at the **Molejón** mine. Molejón is situated in one of the four zones of the Cerro Petaquilla Concession which operates under a unique set of rules and regulations known as **Ley Petaquilla No. 9**. Having successfully reached commercial production in January 2010, **Molejón poured gold 67,493 ounces during the fiscal 2013 year** from a carbon-in-pulp (CIP) leaching process and a carbon-in-column (CIC) gold adsorption stack.

Management believes that the low grade gold resource (between 0.2 g/t and 1.0g/t) at Molejón can be economically processed through on/off pad leaching. After conducting column leach tests on the low grade material at laboratory facilities in Arizona, an on/off pad leach project was advanced, and a stockpile of low grade ore is being accumulated. The leach pad and a pregnant solution processing plant have been constructed, and management expects the leach operation to be commissioned during calendar 2014.

In total, Petaquilla Minerals Ltd. holds gold exploration and development rights to 842 square kilometers of concession lands in north-central Panamá, including the Cerro Petaquilla Concession, and Oro del Norte. Exploration programs at Botija Abajo and Palmilla resulted in the completion of NI 43-101 compliant resource estimates for both deposits. Exploration continues at Brazo and Oro del Norte.

On September 1, 2011, Petaquilla Minerals **acquired Iberian Resources Corp., which holds a 100% interest in the Lomero-Poyatos concessions in Spain**. Located in the northeast part of the Iberian Pyrite Belt, Lomero-Poyatos contains an estimated inferred mineral resource of **830,000 ounces Au** and **17.3 ounces Ag** **2.07 million ounces Au** and **41.98 million ounces Ag** in an underground mining scenario. Though the acquisition provides geographic diversification, the transaction is indicative of the opportunistic nature of management.

The company has been successful in obtaining capital through equity and debt offerings. During fiscal 2010, Petaquilla Minerals not only raised equity capital, but also entered into a \$45,000,000 prepaid Forward Gold Purchase Agreement with Deutsche Bank AG, requiring Petaquilla Minerals to deliver 66,650 ounces of gold to Deutsche Bank over a five-year period. With the cash flow from gold sales, successful equity offerings and the proceeds from the Forward Gold Purchase Agreement, management was able to retire most of the debt issued in fiscal 2008 and 2009. The acquisition of Iberian Resources was financed through the issuance of 44,635,225 newly issued common shares, along with warrants and options exercisable into 4,997,732 shares. The closing of a CAD\$6,000,000 Convertible Loan Agreement and a US\$11,300,000 Forward Silver Purchase Agreement in March 2012 enabled the company to retire the remainder the debt issued in fiscal 2008 and 2009. Subsequently, the company has entered into a series of bank loan facilities with MetroBank S.A. finance leaseback arrangements with Caterpillar and gold prepayment facilities with Auramet.

MOLEJÓN MINE (PANAMÁ) - GOLD

Petaquilla Minerals acquired 100% of the gold rights and related surface rights on the Cerro Petaquilla Concession, including the Molejón gold property (Zone 3) from an **Agreement** among Teck Cominco (now Teck Resources Ltd. - TCK-A & TCK-B: TSE), Inmet Mining Corporation (IMN: TSE) and Petaquilla Minerals in June 2005. Located in the Republic of Panamá (District of Donoso, Province of Colon), the Molejón property is approximately 130 kilometers west of Panama City, 20 kilometers inland from the Caribbean coast and 54 kilometers from the Penonomé exit of the Pan-American Highway (13 kilometers by paved road and 41 kilometers by a maintained gravel road¹). **Since 2009 through the fiscal year of 2013, the Molejón gold property has produced 245,686 poured ounces of gold, of which 233,423 ounces have been sold** by the company.

¹ The gravel road was constructed in 2006, and later bridges spanning the San Juan and Coclesito rivers were built.

Reserves

The most recent 43-101 compliant mineral reserve report for the Molejón project area was completed in May 2012 by Behre Dolbear with a revised reserve estimated as of January 1, 2011. The proven and probable gold reserve totals **643,266 ounces Au** (15.33 million tonnes graded at 1.305 g/t), along with proven and probable silver reserves of **1,008,693 ounces Ag** (15.33 million tonnes graded at 2.05 g/t). Since January 1, 2011 (the effective date of the Behre Dolbear revised resource estimate), approximately 160,780 ounces Au have been poured, leaving about **482,486 ounces yet to be monetized**.

The Behre Dolbear 43-101 Technical Report outlines **two processes at Molejón**:

- 1) milled ore with an average grade of 1.77 g/t processed through the carbon-in-pulp (CIP) column leaching process with an expected 93% recovery rate and
- 2) leached ore with an average grade of 0.56 g/t with an expected peak recovery rate of 82%².

Proven and Probable Reserves (as of January 1, 2011)					
	Tonnes (000s)	Grade (g/t)	GOLD Contained (oz)	SILVER Contained (oz)	
Gold Mineralization					
Proven	9,072	1.549	451,884	2.39	697,315
Probable	6,259	0.951	191,382	1.55	311,378
Total	15,330	1.305	643,266	2.05	1,008,693
Measured and Indicated Mineral Resources (as of January 1, 2011)					
Category	Tonnes (000s)	GOLD Grade (g/t)	Contained (oz)	Tonnes (000s)	SILVER Grade (g/t)
Measured	14,743	1.09	514,500	11,417	2.23
Indicated	16,843	0.56	302,900	14,968	1.31
Total	31,586	0.80	817,400	26,385	1.74
					1,447,200

The Molejón deposit contains zones of both high-grade and low-grade gold mineralization. With the availability of multiple grades of ore at the Molejón project, low-grade material is blended with high-grade tonnage which enhances the recovery of gold resources by the CIP process. In addition, management has embarked on the construction of leach pad for low-grade ore (between 0.2 g/t to 1.0 g/t). As a result, the 43-101 Technical Report revised in 2012 conclude that the Molejón deposit contains **817,400 ounces Au** (31.6 million tonnes graded at 0.80 g/t) and **1,447,200 ounces Ag** (26.4 million tonnes graded at 1.74 g/t) in the measured and indicated categories utilizing a cut-off grade of **0.20 g/t**. Management believes that resources with a cut-off grade of 0.18 g are economically recoverable through on/off pad leaching. The **revised technical report on the Molejón project** also identifies 61.4 million tonnes of waste material as construction-grade aggregate.

NI 43-101 compliant estimates for the Botija Abajo deposit and the Palmilla project have also been completed (see below). In the future, management expects that NI 43-101-compliant technical reports will be completed on adjacent exploration targets, namely Brazo and Oro del Norte.

Production

After Petaquilla Minerals obtained the gold rights for Molejón, the open pit gold project officially began in September 2005 when governmental approval was attained for the Mine Development Plan. In 2008 and 2009, Petaquilla Minerals developed the Molejón open pit mine and constructed the gold processing plant. During the commissioning period, which included the testing of gold room recovery processes, approximately 29,500 ounces of gold were poured. In November 2009, the project received an operating

² Molejón NI 43-101 Technical Report, May 2012, page 108.

permit from the Government of the Republic of Panamá to advance to **commercial production**, which **was achieved on January 8, 2010**³.

The following tables detail the metrics of the Molejón mine's gold production. Due to the addition of significant NI 43-101 compliant silver reserves, management is now reporting gold-equivalent production, sales, realized prices and cash costs.

Gold Poured

Molejón Gold poured (ounces)	1Q (Aug)	2Q (Nov)	3Q (Feb)	4Q (May)	Total (May)
FY 2009	0	0	0	2,973	2,973
FY 2010	13,256	10,482	13,756	14,158	51,652
FY 2011	10,738	15,268	12,825	16,735	55,566
FY 2012	18,014	18,100	14,163	17,725	68,002
FY 2013	17,882	20,025	17,674	11,912	67,493

Gold Equivalents Poured

Molejón Gold poured (ounces)	1Q (Aug)	2Q (Nov)	3Q (Feb)	4Q (May)	Total (May)
FY 2011 (Equivalents)	10,864	15,451	13,020	17,240	56,575
FY 2012 (Equivalents)	18,458	18,496	14,427	18,122	69,503
FY 2013 (Equivalents)	18,459	20,518	18,013	12,191	69,181

Gold Equivalents Sold

Molejón Gold sold (ounces)	1Q (Aug)	2Q (Nov)	3Q (Feb)	4Q (May)	Total (May)
FY 2011 (Equivalents)	12,390	13,320	14,064	14,843	54,617
FY 2012 (Equivalents)	17,987	16,297	13,040	15,546	62,870
FY 2013 (Equivalents)	17,597	17,905	14,598	14,196	64,296

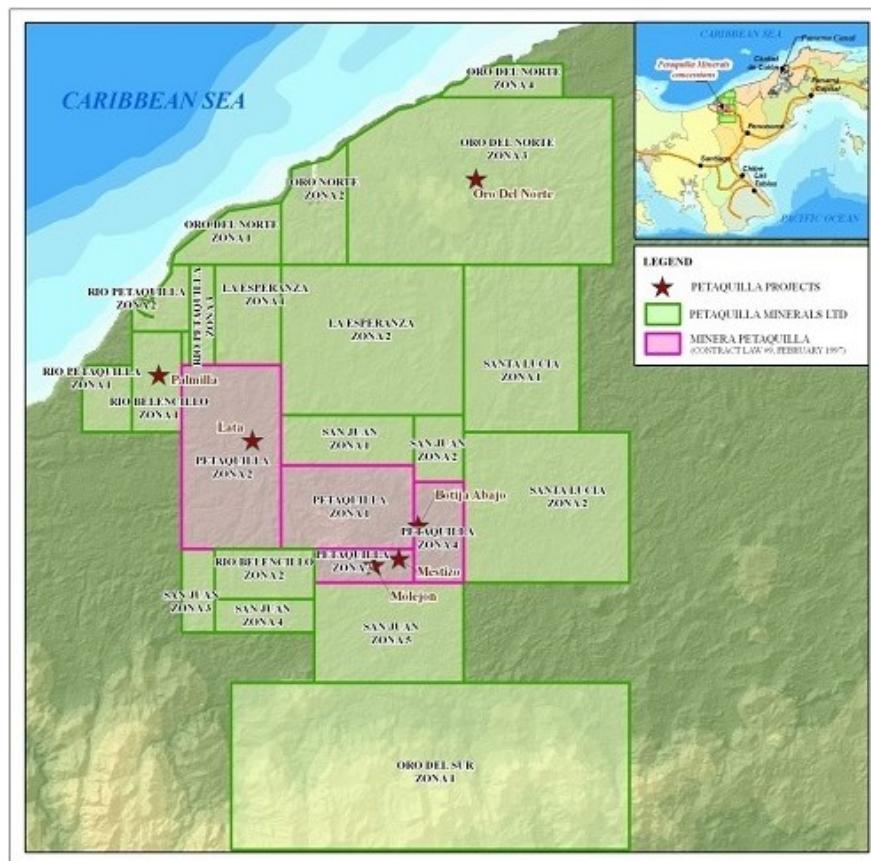
Average Realized Prices - Equivalents

Molejón Avg. realized gold price	1Q (Aug)	2Q (Nov)	3Q (Feb)	4Q (May)	Total (May)
FY 2011 (Equivalents)	\$1,206	\$1,328	\$1,377	\$1,472	\$1,348
FY 2012 (Equivalents)	\$1,600	\$1,717	\$1,622	\$1,617	\$1,640
FY 2013 (Equivalents)	\$1,595	\$1,724	\$1,647	\$1,473	\$1,601

³ In January 2010, the Molejón Gold project continuously maintained a processing rate of 1,500 tonnes per day or an operating rate of approximately 70% of the designed capacity 2,200 tonnes per day for a period of 30 days with metallurgical recoveries approaching forecast levels.

Cash Cost - Equivalents

Molejón Cash cost per oz. Au sold ⁴	1Q (Aug)	2Q (Nov)	3Q (Feb)	4Q (May)	Total (May)
FY 2011 (Equivalents)	\$729	\$640	\$627	\$525	\$625
FY 2012 (Equivalents)	\$537	\$546	\$616	\$612	\$574
FY 2013 (Equivalents)	\$524	\$444	\$637	\$540	\$569



Botija Abajo Gold Project (Panamá)

A NI 43-101 compliant estimate for the Botija Abajo deposit was released in September 2012 **adding \$12.8 million (or \$0.05 per diluted share) to the NPV calculated by our valuation model.** The resource and reserve estimate was completed by Behre Dolbear & Company (USA) Inc. with an effective date of September 1st. The estimate adds 210,000 gold equivalent ounces (110,042 ounces Au and 50,225,000 pounds Cu) to Petaquilla's Molejón project. Ultimately, these reserves and resources will be processed through the facilities at Molejón.

The Botija Abajo deposit contains zones of low-grade gold mineralization with an *in situ* value greater than the value of the copper. If other deposits in the Cerro Petaquilla Concession exhibit the same characteristic, by contract, those gold deposits will no longer be under the purview of Cobre Panamá but rather will become mineable assets of Petaquilla Minerals. The reserve and resource estimates are included into our valuation model.

⁴ Cash cost includes mine site operating costs (such as mining, processing and administration) but does not include amortization, depletion, reclamation, capital costs, exploration costs, corporate administration costs and royalties. Contrary to most mining companies, Petaquilla Minerals began excluding royalties from cash cost in FY 2011, restating FY 2010's cash cost to \$590 from \$681.

BOTIJA ABAJO						
Category	Gold			Copper		
	Tonnes 000s	Grade g/t	Contained oz	Tonnes 000s	Grade %	Contained 000s
<i>Mineral Reserves</i>						
Proven	4,752	0.52	79,448	1,82	0.44%	17,747
Probable	1,970	0.43	27,291	3,181	0.44%	30,972
Total	6,722	0.49	106,739	5,001	0.44%	48,719
<i>Mineral Resources (inclusive of Mineral Reserves)</i>						
Measured	4,454	0.57	81,906	1,705	0.49%	18,296
Indicated	1,846	0.47	28,136	2,981	0.49%	31,929
Total	6,300	0.54	110,042	4,686	0.49%	50,225

Palmilla Gold Project (Panamá)

On October 9, 2013, Petaquilla announced the completion of an updated NI 43-101 compliant technical report on its **Palmilla gold project**. The report expanded and upgraded the resources from an estimated inferred resource of 502,800 gold equivalent ounces (using a cutoff grade of 0.30 g/t Au Eq.) to an estimated **measured & indicated resource of 841,000 gold equivalent ounces and an inferred resource of 269,000 gold equivalent ounces** (using a cutoff grade of 0.35 g/t Au Eq.). The measured & indicated resource is composed of 509,000 ounces gold (27,020,000 tonnes grading 0.59 g/t Au), 755,800 ounces silver (27,020,000 tonnes grading at 0.87 g/t Ag) and 143,900,000 pounds of copper (27,020,000 tonnes grading 0.24% Cu). Below are the tables of both estimates for comparative purposes. Without even considering the significant upgrade of the resource, it can be stated that **the estimate increased 120%**. The updated estimate added \$39.3 million (or \$0.15 per diluted share) to the NPV to our valuation model.

Inferred Mineral Resources Within Whittle Shell Design (As of October 26, 2012)

Gold Cut-off Grade (g/t Au)	Kt	Au Contained		Cu Contained		Ag Contained		Au Equivalent Contained oz
		g/t	oz	%	K lbs	g/t	oz	
>0.3	13,499	0.64	276,,800	0.20	60,908	0.60	261,400	416,500

Mineral Resources Within Whittle Shell (As of October 9, 2013)

Resources Categ.	Kt	Au g/t	Cu %	Ag g/t	AuEq. g/t	Contained Au (oz.)	Contained Cu (Klbs.)	Contained Ag (oz.)	Contained AuEq. (oz.)
MEASURED	2,500	0.81	0.29	0.99	1.26	64,700	16,000	79,700	101,000
INDICATED	24,530	0.56	0.24	0.86	0.94	444,700	128,000	676,100	740,000
MEAS. + IND.	27,020	0.59	0.24	0.87	0.97	509,400	143,900	755,800	841,000
INFERRRED	11,060	0.40	0.22	0.67	0.76	144,000	54,600	239,200	269,000

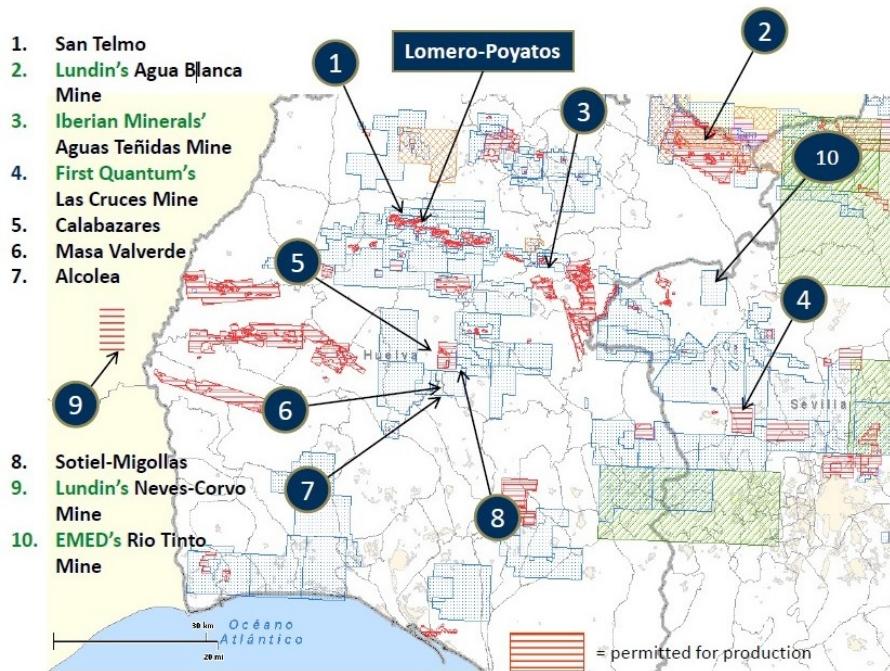
cutoff grade of 0.35 g/t AuEq.

LOMERO – POYATOS MINING CONCESSIONS (SPAIN) - GOLD

Petaquilla Minerals acquired a 100% interest in the Lomero-Poyatos concessions through the acquisition of Iberian Resources Corp. by way of a “three-cornered amalgamation” in September 2011⁵. Located in the Kingdom of Spain (Huelva Province, Andalusia Autonomous Community), Lomero-Poyatos is approximately 85 kilometers northwest of Seville and 60 kilometers north of the major port of Huelva. Though first worked by the Romans, the mine was rediscovered in 1853 by Ernesto Deligny and mining re-commenced in the late 1850’s. The mining complex includes two open pits (one at Lomero and the other at Poyatos) and a six level underground mine⁶ with a central shaft between the open pits. At least 2.6 million tonnes of massive sulphide ore was mined for pyrite content, which was smelted to manufacture sulfuric acid. Lomero-Poyatos was mined continuously from 1905 to 1982 solely as a sulphide (pyrite) mine. Since then, several companies, including the pyrite smelter⁷, have investigated Lomero-Poyatos as a possible gold-silver deposit and/or a base metal (copper-lead-zinc) deposit. The project is currently at the exploration stage with an inferred mineral resource estimate based on historical data and relatively wide-spaced drilling.

Management estimated that approximately \$80 million will be required for the further development of the Lomero-Poyatos mine, namely drilling, metallurgical test work and process flow-sheet and engineering design for a full feasibility study, along with the construction of water treatment plants and a floatation circuit. Management expects that the Lomero-Poyatos project should achieve on-site production in mid-2014.

Lomero-Poyatos is situated in the **Iberian Pyrite Belt** (IPB), which is located in southwestern part of the Iberian Peninsula. The IPB contains volcanic massive sulphide (VMS) deposits that host gold, copper and other base metal mineralizations in an arch about 240 kilometers long and roughly 35 kilometers wide between Seville in Spain and Grândola in Portugal. The Iberian Pyrite Belt is one of the most important VMS districts in the world, and has been mined for over 5,000 years. Major mines are depicted below.



⁵ On September 1, 2011, Petaquilla Minerals acquired Iberian Resources Corp. for 44,635,225 newly issued common shares and 1,511,248 warrants to purchase 1,640,419 shares at prices between US\$0.14 and US\$0.60, along with options to purchase 3,357,313 shares between CAD\$0.10 and US\$0.60.

⁶ The underground mine was begun in 1905.

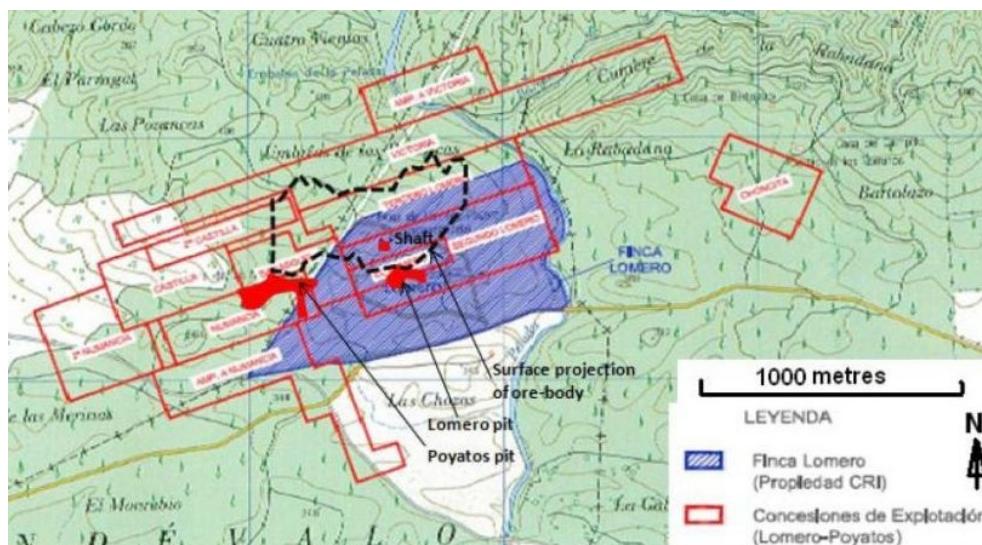
⁷ Indumetal, the smelting company that treated the roasted pyrite residue from Lomero-Poyatos, conducted some underground mapping and sampling in 1986 in order to assess the gold grades and delineate the gold reserves.

Description

Lomero-Poyatos is a poly-metallic, massive-sulphide deposit, in which pyrite is the predominant sulphide. When mined for pyrite, sulfur mineralization greater than 43% sulfur was regarded as ore. However, the sulphide zones are significantly enriched in gold with two drill holes assaying with grades above 14 g/t⁸. According to work by University of Madrid in April 2011, there are at least three different ore types at Lomero-Poyatos: cupriferous ore assaying 1.0% to 1.5% Cu, arsenic/pyrite ore containing gold and massive sulphide ore containing copper, lead and zinc (with silver associated with lead and gold associated with sulphides). The cupriferous ore lies predominately in the central area while the zinc-lead-gold enrichment is predominate at the eastern and western borders.

Located in the northeast part of the Iberian Pyrite Belt, the Lomero-Poyatos permit block consists of **13 concessions** (El Lomero, Ampliación a Numancia, Segundo Lomero, Castilla, Numancia, San Miguel, Ampliación Victoria, Victoria, Segunda A Castilla, Demasía San Miguel, Segunda Numancia, Tercer Lomero and Conchita). In mid-2001, the Andalusia Autonomous Community granted a consolidation of these concessions, which are valid until August 2033.

Lomero-Poyatos contains two independent ore bodies (Lomero and Poyatos) that form a single ore body at depth, over 800 meters in strike. Initially, each ore body was opened to the surface by small open pit mines. Later, in the twentieth century, a main shaft and an underground mine complex with at least six levels that intersected both ore bodies was developed. The underground mine has been flooded for the about 20 years.



Resources

During the last decade, the mineral resources at the Lomero-Poyatos concessions have been reviewed and estimated by three consultant companies: Steffen Robertson and Kirsten Ltd. (SRK) in 2002⁹, Wardell Armstrong International (WAI) in 2005 and 2007¹⁰ and Behre Dolbear International Ltd. in 2011 and 2012. Primarily based on the 2,490 meter diamond drill hole program conducted by Newmont Mining, in 2002, SRK estimated an inferred mineral resource of 2.05 million ounces Au under an open-pit mining scenario (20.6 million tonnes at an average grade of 3.1 g/t Au), which included an indicated resource of 389,894 ounces Au attainable by underground mining (3.71 million tonnes at an average grade of 3.26 g/t Au at 1.5 g/t Au cut-off). Also, SRK estimated that Lomero-Poyatos contains 46.3 million

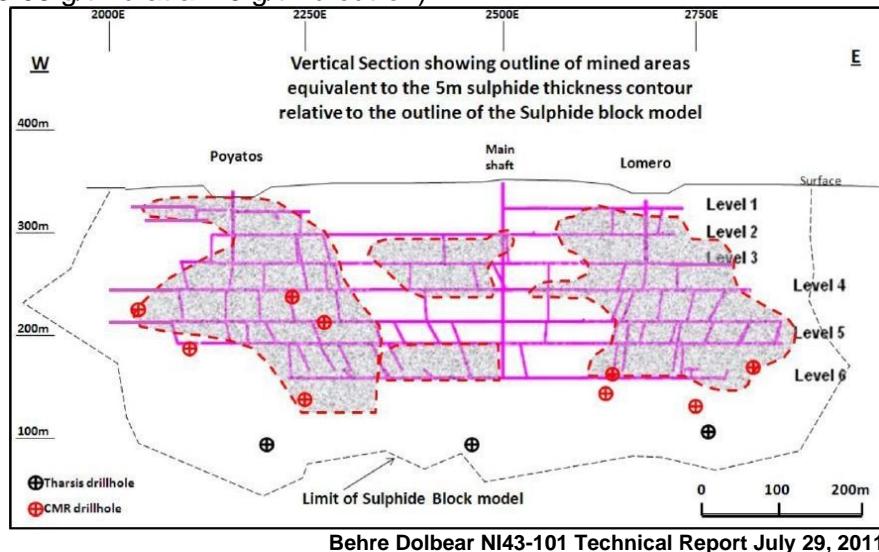
⁸ During the drilling program of Cambridge Mineral Resources, a drill hole returned 14.1 g/t Au over 2.0 meters and another assayed 0.55m at 16.84 g/t Au over 0.55 meters within a northeast target.

⁹ This upgraded Conceptual Mining Study was completed in 2002; SRK produced another updated report in September 2010.

¹⁰ In 2005, WAI completed a NI 43-101 compliant pre-feasibility study and in April 2007 a Competent Persons Report based upon the 2005 resource data.

ounces Ag, 675,000 tonnes Zn and 250,000 tonnes Cu. SRK indicated that expected recoveries were approximately 76% for gold, 78% for zinc and 50% for copper.

Behre Dolbear International Limited completed a NI 43-101 compliant Technical Report on the Lomero-Poyatos in July 2011. Based primarily on historical drill-hole data of the 124 known drill holes (roughly one-half surface and one-half underground) and augmented by mineral resource estimation reviews generated by Gemcom's deposit block model software, Behre Dolbear estimated an inferred mineral resource of 2.07 million ounces Au under an open-pit mining scenario (20.93 million tonnes at an average grade of 3.08 g/t Au at a 1.0 g/t Au cut-off)¹¹.



However, the open pit scenario is currently considered uneconomic, for various reasons including that the depth of the deposit would require an open-pit depth of at least 250 meters, which is on the verge of the transition depth from open-pit to underground mining. As a consequence, the permitting would be difficult, and the waste:ore ratio would probably exceed 50:1. Subsequently, a revised NI 43-101 compliant Technical Report was completed by Behre Dolbear in May 2012 in which inferred resources were estimated to be approximately **830,000 ounces Au and 17.3 ounces Ag** in the underground mining scenario (6.07 million tonnes at an average grade of 4.25 g/t Au at a 1.0 g/t Au cut-off and 88.74 g/t Ag).

Lomero-Poyatos Project Resources¹²

(underground mining scenario)
(Behre Dolbear NI 43-101 compliant Technical Report dated May 21, 2012)

Cut-off Grade (g/t)	Inferred tonnes	Grade (g/t Au)	Contained ounces Au	Grade (g/t Ag)	Contained ounces Ag
> 6.0	590,000	6.51	123,500	124.57	2,363,000
≥ 5.0	1,920,000	5.77	356,000	111.60	6,890,000
≥ 4.0	3,630,000	5.16	602,000	102.24	11,930,000
≥ 3.0	4,890,000	4.74	745,000	96.47	15,168,000
≥ 2.0	5,660,000	4.45	810,000	92.33	16,800,000
≥ 1.0	6,070,000	4.25	830,000	88.74	17,320,000

¹¹ The 2011 estimate also included 62.38 g/t Ag.

¹² Lomero-Poyatos NI 43-101 Technical Report, May 21, 2012, Table 12, page 59.

According to the most recent NI 43-101 compliant Technical Report by Behre Dolbear International, the mineral resource at Lomero-Poyatos deposit has been categorized as an Inferred Mineral Resource since the estimate is based on relatively wide-spaced drilling. The revised Behre Dolbear NI 43-101 Technical Report again recommends drilling an additional 20,080 meters of drill holes to better define the deposits in two parts: a scoping study and a pre-feasibility study. The Phase 1 drilling program would be composed of drilling at 50 meter intervals along N-S lines 100 meters apart (10,040 meters) and a scoping study (costing €6 million). The drilling results of Phase 1 should be sufficient to upgrade the inferred resource to the indicated resource classification. Phase 2 consists of a pre-feasibility study that would require in-fill drilling at 50 meter intervals along N-S section lines 50 meters apart (10,040 meters costing €7 million).

The revised Behre Dolbear Technical Report replaces and supersedes the report completed in July 2011. The revised report omits the preliminary economic valuation of the Lomero-Poyatos deposit based on equal weightings of 1) average global stock market valuations per ounce of in-situ gold resources and 2) the value of comparable acquisition transactions.

The titling process for the Lomero-Poyatos project was completed in November 2012. Having secured the initial environmental permit to dewater the pit and the submerged galleries and the Andalusian Autonomous Government's administrative authorization, Petaquilla is constructing a mine access ramp, after which the wastewater will be discharged from the pit and underground mine so that the shaft and headgear can be refurbished and further drilling can be completed to help confirm historical results and upgrade the Inferred Resource to Measured and Indicated Resources. An updated NI 43-101 compliant estimated resource is expected during calendar 2013. Management's goal is to initiate commercial on-site production during the first half of fiscal 2015.

PORUGAL

By virtue of its **unique geologic history**, Portugal is home to **two world class mines**. The country is one of the leading producers of mined copper, silver, tin and zinc in the European Union and continues to be one of the world's largest producers of tungsten outside of China, ranking fifth after Russia, Bolivia, and Australia.¹³ Still rich in these minerals and others, Portugal has considerable mining potential, especially since the **Portuguese Government encourages mineral exploration and development**. Portugal is a modern, industrial country with **well-developed infrastructure** (excellent road, power and communication networks) to support mine operations. The nation's mining laws are favorable towards the development of mines with reasonable regulations. Both the **Ministério da Economia** and its subordinate agency, the **Direcção-Geral de Energia e Geologia**, may grant exploration and mining rights. The government's geology and mining agency (the **Instituto Geológico e Mineiro** or IGM) encourages and promotes the advancement of projects geared toward the exploitation of the country's mineral resources.

Geologically, during the Hercynian-Variscan age (between 380 and 300 million years ago), a complicated series of tectonic microplate collisions occurred in the area of present day Portugal. The resulting crustal deformations created a variety of complex structures, which were formed by folding, metamorphism, fracturing, shearing and magmatization. The multifaceted and diverse **geologic history** created an environment conducive for the formation of considerable mineral deposits. In the north and central part of the country, granite intrusions and associated vein/hydrothermal mineralizations created tungsten, tin and gold deposits along the contact zones. In the south, the Iberian Pyrite Belt (IPB) contains volcanic massive sulphide (VMS) deposits that host gold, copper and other base metal mineralizations. The IPB is one of the most mineralized areas of Western Europe.

¹³ USGS 2010 Minerals Yearbook - Portugal.

With abundant mineral occurrences, Portugal has a remarkable mining history. Mining began in the Copper Age around 5,000 BC as evidenced by archeological finds of copper utensils. Later, from 700 BC to 300 BC, copper, iron, tin, gold and silver was extracted by the Phoenicians, followed by more intense operations by the Romans until approximately 400 AD. The Romans exploited gold, pyrite and copper deposits on large scales. For example, approximately 10 million tons of ore and overburden was extracted from the Três Minas gold deposits in northern Portugal. In southern Portugal, the Romans excavated 120-meter mine shafts at the Aljustrel zinc and copper mine. Also, the Romans mined copper and pyrite at São Domingos in the Iberian Pyrite Belt. Slag piles at São Domingos indicate the excavation of an estimated 750,000 tons of ore between 12 AD and 397 AD.

Little mining occurred during the Middle Ages; however, around the beginning of the Industrial Revolution, the first mining concessions were granted in 1836. By 1900, about 300 concessions had been granted. The main minerals mined were polymetallic sulphides [galena (lead), sphalerite (zinc) and chalcopyrite (copper)] at Aljustrel and São Domingos in the IPB, tungsten and tin at Panasqueira and gold at Jales- Gralheira, Castromil, Freixeda and Santo Antonio (Penedono). For example, between 1933 and 1992, 830,000 ounces of gold and 3 million ounces of silver were extracted from the Jales-Gralheira mine¹⁴. Demand for tungsten increased during the Second World War with Portugal supplying both the Allied and the Axis Powers.

Today, there are **two active world class metal ore mines** in Portugal: **Neves-Corvo** (copper and tin) in the Iberian Pyrite Belt and **Panasqueira** (tungsten and tin) in the Central Iberian Zone (CIZ). With mineral deposits discovered in 1977, Neves-Corvo commenced commercial production in 1989 with the support of the Portuguese government. Cited as a mining project that helped rejuvenate the Portuguese mining industry, Neves-Corvo was acquired by Lundin Mining (LUN: TO) in 2006.

The **Aljustrel** mining area is in the Iberian Pyrite Belt, which is one of the most mineralized areas in the European Union. Copper, zinc, lead and silver mineral deposits were discovered at several areas at Aljustrel (namely, Moinho in 1955, Feitais in 1963, Estacão in 1968 and Gavião in 1970). In late 2008, zinc production at Aljustrel was suspended due to the decline in zinc prices, and Lundin Mining sold the mine to a private firm (MTO SGPS) in early 2009. However, targeting copper-rich zones, production of copper-silver ores recommenced in late 2010. Silver Wheaton (SLW: NYSE and TO) owns the silver stream at both Neves-Corvo and Aljustrel at a cash cost of \$3.98 and \$3.94 per ounce, respectively.

In addition, **in testament to the country's mineral resources, Portugal has approximately 175 abandoned or inactive mine sites**. Examples include polymetallic sulphides mines in the IPB (Aljustrel and São Domingos), tungsten and/or tin mines (Covas, Borrinha, Argozelo and Montesinho), gold and/or silver mines (Castromil, Jales-Gralheira, Penedono and Freixedo), and copper mines (São Domingos).

Portugal's Important Mines

Mine	Zone	Type	Dates	Minerals
Covas - Três Minas	GTMZ	Open Pit/adit	Roman only	Gold
Ribeirinha - Três Minas	GTMZ	Open Pit/adit	Roman only	Gold
Lagoinhos - Três Minas	GTMZ	Underground	Roman only	Gold
Freixeda	GTMZ	Underground	1952 - 1955	Gold, Silver & Lead
Covas	GTMZ	Underground	N/A	Tungsten & Tin
Jales - Gralheira	GTMZ	Underground	Romans, 1933-1992	Gold & Silver
Castromil	CIZ	Open Pit/adit	Romans, -1940	Gold
Santo António-Penedono	CIZ	Underground	Romans, 1954-1957	Gold
Panasqueira	CIZ	Underground	1898 - present	Tungsten & Tin
São Domingos	IPB	Open Pit	Romans, 1855-1966	Copper & Pyrite (Sulfur)
Aljustrel	IPB	Underground	Romans, 1955-2008	Copper, Zn, Pb, Silver & Pyrite
Neves-Corvo	IPB	Underground	1989 - present	Copper, Zn, Silver, Tin, Lead

¹⁴ SEG newsletter 80, Society of Economic Geologists, January 2010, page 14.

The Portuguese Government encourages mineral exploration and mine development. Having implemented several reforms to improve the economic environment for foreign investment, major and junior mining and exploration companies from North America, Europe and Australia have been granted concessions and have conducted exploration programs in search of base and precious metals. Managements of many mining companies have reported that interaction with the Portuguese Government and its mining agencies have been positive, constructive and productive. During the exploration phase, the Government of Portugal benefits directly from the annual payments based on the surface area of the concession contracts, and the economy is stimulated through the required exploration expenditures to maintain the contracts in good standing. Once a mine is in production, the government receives royalty rates (a 3% net smelter return) and corporate taxes. Officially entitled República Portuguesa, Portugal has been a stable constitutional democratic republic since 1976.

The mining laws of Portugal were updated and modernized on March 16, 1990 by Decree-Law No. 88/90 and Decree-Law No. 90/90 (Decreto-Lei no 88/90¹⁵ and Decreto-Lei no 90/90). Since the minerals in Portugal are owned by the State, mining activity (including exploration, development, production, environmental protection and royalties) is regulated by the Ministry of Economy (**Ministério da Economia**). Both the Ministry of Economy and its subordinate agency, the General Directory of Geology and Energy (**Direcção-Geral de Energia e Geologia** or **DGGE**) are empowered to grant exploration and mining concessions. The DGGE also oversees the extraction and processing of ore and is responsible for amassing the geological data and research on the country's geological resources. Exploration contracts are processed and monitored by the Geological and Mining Institute (**Instituto Geológico e Mineiro** or **IGM**). The IGM also promotes the development of mineral resources by providing access to maps and technical documentation (geological, geophysical, geochemical and drilling data) resident in the Portuguese archives. In addition, the IGM offers technical and administrative assistance in the submission of the applications, the definition of exploration targets and the formulation of exploration strategies.

Exploration concessions (rights) are granted by the Ministry of Economy or the DGGE. A prospecting and exploration **contract** defines the land boundaries of the concession, the mineral resources to be explored, the initial duration period, renewal terms, the annual surface area fee and the minimum exploration work expenditures required to maintain the concession. Though the terms of the exploration contract are negotiated with Portuguese authorities, generally the duration period (including optional renewals periods) for mineral resources is **five years** with the initial period being two or three years and subsequent renewals thereafter. **At the time of each renewal, the concession land area is reduced by 50%**. During the term of the contract, the licensee must semiannually submit progress reports detailing the work completed and the expenditures made. After the fifth year, in order to maintain the concession either a new exploration contract or an exploitation concession must be applied for and granted. During the life of the exploration contract, the licensee has the option to apply for and upgrade to either an experimental mining license or a mining contract.

Mining (or exploitation) concessions are governed by mining contracts which entitle the licensee the sole right to exploit specific mineral deposits within a defined area for a duration period, usually determined by the estimated life of mine under normal operating conditions and with conditions for renewal. For example, the mining concession of Neves-Corvo grants the rights to exploit the deposits for copper, zinc, lead, silver, gold, tin and cobalt for an initial period of fifty years with two further extensions of twenty years. The application must include a geological report, preliminary feasibility study, mining plan and an environmental impact assessment. An **experimental mining license** may be granted for operations covering 5 hectares or less, not located in an area of protected landscape identified in the law and with expected production of less than 150,000 tonnes.

¹⁵ Decreto-Lei no 88/90 applies to ore deposits, including all metallic and radioactive ores, coal, graphite, pyrites, phosphates, asbestos, talcum, kaolin, diatomite, quartz, feldspar, precious and semi-precious stones, potassium salts and rock-salt.

Production from mineral concessions granted in Portugal since 1990 is subject to a **net smelter return (NSR) of 3%** payable to the DGGE (the Portuguese government).¹⁶ However, the Government may opt for a profit-related royalty of 10% of the net mining income (after income tax and charges).¹⁷ Some mining contracts include a reduction of revenue-based royalty payments for mining development investment.

The total corporate tax rate for commercial and industrial activity in Portugal is 27.5% composed of a standard corporate tax rate 25% and a 2.5% local tax. The tax code allows for full deductibility of capital expenditures and also provides for an annual deduction for future expenses related to the mine site's environment recovery plan, including landscaping.

Canada and the United States have tax treaties with Portugal by which earnings may be repatriated subject to a 10% withholding tax.

JALES-GRALHEIRA & BANJAS-POCO ROMANO (PORUGAL) - GOLD

The **Jales-Gralheira** concession is located in Vila Real District of northern Portugal, approximately 330 kilometers north-northeast of Lisbon. The concession encompasses 1,540 hectares and contains an area of historic mining operations. Petaquilla is advancing studies toward an updated NI 43-101 compliant resource estimate.

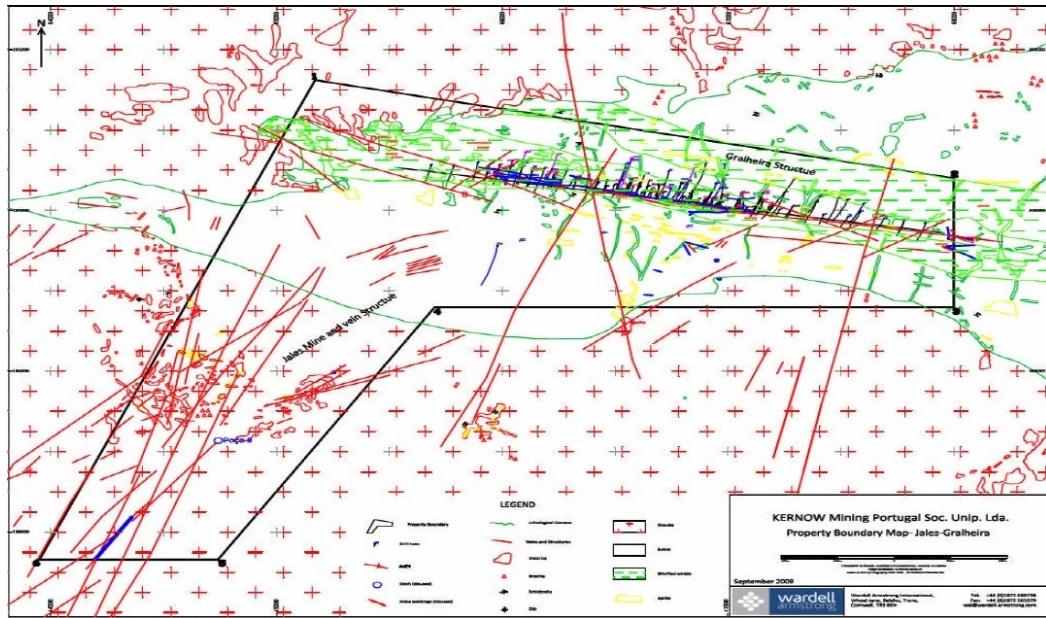
Almada Mining, a wholly owned subsidiary of Petaquilla, in joint venture (JV) with Portuguese Mining Development Company (EDM) was granted the mineral rights to the Jales-Gralheira concession through a prospecting and exploration license agreement with the government of Portugal. The Direcção Geral de Energia e Geologia awarded the concession contract for an initial three-year period for an area of 1,540 hectares. During this initial probationary period, the JV must make at least certain exploration expenditures, including €4,395,000 for 29,300 meters of surface exploration, €750,000 for 5,000 meters in the mine's gallery and €20.4 million for work in the gallery. The required minimum work requirement during this first three-year phase is slightly above €26 million, after which a mining license can be sought after completing an Environmental Impact Study. The Jales-Gralheira concession is subject to a 4% Net Smelting Royalty (NSR) on mineral production or a 10% royalty of the concession's net profit.



¹⁶ The Aljustrel mining concession was granted prior to 1990 and is exempt from the governmental royalty (NSR).

¹⁷ For example, the Portuguese Government elected the profit-related royalty of 10% of the net income at Neves-Corvo in 2005.

The first mining operations at Jales-Gralheira date back to the 1st and 2nd centuries A.D. when Romans excavated down to a vertical depth of 120 meters. In modern times, the Jales mine has produced 830,000 ounces of gold and almost 3 million ounces of silver between 1933 and 1992. The mine was operated by Minas de Jalles Lda and exploited gold-bearing quartz veins to vertical depths up to 620 meters below surface. The average vein width was 1.0 meter which produced ore averaging 12.9 g/t Au, though the grade was fairly irregular with some areas reaching up to 30-to-40 g/t Au.



The Gralheira concession was last controlled by Kernow Mining between 2002 and 2010, during which time three 43-101 compliant technical reports were filed. As of November 2007, the Gralheira resource was estimated to contain in the combined **Measured and Indicated** categories (at a 3 g/t Au cut-off) 599 kilotonnes grading 5.27 g/t Au and 23.18 g/t Ag representing *in situ* **101,593 ounces Au and 446,567 ounces Ag**. The **Inferred resource** estimate was 975 kilotonnes grading 4.72g/t Au and 15g/t Ag, containing **147,786 ounces Au and 483,621 ounces Ag**.

Evaluation Summary (WAI 2007) Top Cut Applied														
Classification	No Cut-Off							1 g/t Cut-Off						
	Tonnes (kt)	Au			Ag			Tonnes (kt)	Au			Ag		
		g/t	kg	oz	g/t	kg	oz		g/t	kg	oz	g/t	kg	oz
Measured	69	3.68	255	8,190	21.18	1,466	47,148	66	3.84	252	8,109	22.10	1,451	46,641
Indicated	2,169	2.39	5,179	166,514	11.50	24,956	802,357	1,584	3.07	4,855	156,095	14.40	22,806	733,221
Measured+Indicated	2,239	2.43	5,434	174,705	11.80	26,423	849,504	1,649	3.10	5,107	164,204	14.71	24,256	779,862
Inferred	7,663	1.61	12,370	397,696	8.55	65,515	2,106,340	4,316	2.46	10,599	340,774	10.8	46,716	1,501,950
	2g/t Cut-Off							3g/t Cut-Off						
Measured	51	4.51	229	7,351	24.43	1,239	39,844	30	5.92	179	5,768	29.8	904	29,067
Indicated	953	4.12	3,921	126,066	18.71	17,825	573,101	569	5.24	2,980	95,825	22.8	12,986	417,500
Measured+Indicated	1,003	4.14	4,150	133,417	19.00	19,065	612,945	599	5.27	3,160	101,593	23.18	13,890	446,567
Inferred	2,088	3.49	7,278	233,981	13.57	28,323	910,597	975	4.72	4,597	147,786	15	15,042	483,621
	4g/t Cut-Off							6g/t Cut-Off						
Measured	23	6.66	155	4,974	32.7	761	24,453	13	7.95	101	3,235	39.7	503	16,157
Indicated	340	6.45	2,192	70,473	26.7	9,082	291,982	129	9.07	1,175	37,776	33.6	4,347	139,767
Measured+Indicated	363	6.47	2,347	75,447	27.12	9,842	316,435	142	8.97	1,276	41,010	34.12	4,850	155,924
Inferred	468	6.11	2,861	91,967	16.34	7,649	245,924	159	8.84	1,409	45,310	16	2,584	83,076

Banjas-Poco Romano concession is located in the municipalities of Maia and Walls. Almada Mining was awarded this concession in Banjas area, which is situated in the counties of Gondomar, Valongo, Paredes Penafiel, Castelo de Paiva, Vila Nova de Gaia and Santa Maria da Feira. To remain in good standing, the concession requires a minimum investment of €160,000 toward exploratory work.

VALUATION

Managements of mineral production and exploration companies create value through evaluating, acquiring, exploring and/or developing mining properties. In the case of Petaquilla Minerals, management's strategy is to increase shareholder value through developing the Molejón gold project and other properties in north-central Panamá, along with evaluating and acquiring other projects, such as Lomero-Poyatos in Spain. Also, Petaquilla Minerals has achieved the status of an exploration/production company, in which the reserves at Molejón warrant a higher valuation than typical junior gold exploration companies. Therefore, we believe it would be inappropriate to value Petaquilla Minerals on a current earnings, cash flow or book value basis. Both earnings and cash flow are ramping up and do not adequately capture the value of the company's resource base. Book value can often represent the value of a junior gold exploration company, but **Molejón mine has evolved well beyond the exploration phase** and **Petaquilla Minerals has the potential to become a mid-tier producer**.

Our calculation of **share value of attributable reserves and resources** is based on the ascertained value of each property plus balance sheet adjustments for working capital, PPE (property, plant and equipment) and marketable securities. **The value of each individual property is determined by adjusting the value of current reserves/resources for the expected recovery rate, mining/processing costs and royalties, if any.** The reserves/resources are assigned a **confidence factor** that attempts to take into account the risks of each project, such as the locality of the deposits, the assurance level of the reserves/resources, various technical mining/production risks, etc. The current price of gold is utilized. The reserve/resource valuation methodology involves the following assumptions:

- 1) At Molejón, a 90% confidence factor is applied to proven and probable reserves with an average grade of 1.305 g/t since the production facility has been operating consistently since 2009. The grade of ore is quite high for an open pit mine.
- 2) At Molejón, a 60% confidence factor is applied to measured & indicated reserves with an average grade of 0.70 g/t for a combination of factors, but primarily since the on/off leach operations have begun recently and the company has yet to report production from the process.
- 3) At Molejón, only a 10% confidence factor is applied to measured & indicated reserves with an average grade of 0.50 g/t. According to laboratory column leach tests, only low grade oxide materials can be processed economically on the on/off leach pads. The low recovery rate of fresh ore in the laboratory (between 38% and 53%) impedes its profitable extraction. A breakdown of low grade oxide materials and fresh ore is not available.
- 4) At Botija Abajo, an 80% confidence factor is applied to the proven & probable reserve and measured & indicated resource. The recovery rates for gold and copper are 76% and 72%, respectively, which are derived from the NI 43-101 compliant report. Production is not expected until 2015.
- 5) At Palmilla, an 80% confidence factor is applied to the measured & indicated resource. The recovery rates for gold and copper are 76% and 72%, respectively. A 35% confidence factor is applied to the inferred resource of Palmilla. The resource estimates are NI 43-101 compliant, and production is expected to begin in 2015.
- 6) At Oro del Norte, a 20% confidence factor is applied to inferred resource. The inferred resource is not yet NI 43-101 compliant, and production is not expected until 2016.
- 7) At Lomero-Poyatos, a 35% confidence factor is applied to inferred resource. The property was previously mined for pyrite, but not for precious metals. The copper, lead and zinc deposits are currently not included in the valuation; however, when a feasibility study provides sufficient information for their evaluation, they will be included. We conservatively estimate the life of mine (LOM) to be nine years (conservative in comparison to management's six year goal).

- 8) The royalties and Net Smelter Return for Molejón include both the Government of Panamá's 2% royalty on gold and silver sold and the graduated 1% to 5% NSR provided by the June 2005 agreement. The royalty on copper is 5%.
- 9) In the case of PDI Panama, only the announced contracts are being used to value the operations on a price-to-sales (P/S) basis. Small-capitalization companies with a sales profile that should grow and expand over time historically are valued in a P/S range between 1.1 and 3.2. Given the limited information on PDI Panama, the valuation target is based on a third quartile 1.6 price-to-sales ratio valuation. Only Petaquilla's percentage interest in PDI is attributed in the valuation model.
- 10) With the issuance of a significant number of warrants and options, we use fully diluted shares instead of shares outstanding.

Since our last report, the following **important modification** affected our valuation model:

- 1) The updated resource estimate of Palmilla added \$0.15 per diluted share to the price target.
- 2) The increase in the prices of gold, silver and copper increased the price target by \$0.12.
- 3) The increased working capital deficiency reduced the target by \$0.22.
- 4) The removal of deferred revenue added \$0.05.

Based on our calculation of share value of attributable resources (see table below), **our adjusted target for Petaquilla Minerals stock is \$1.04.**

Petaquilla Minerals Ltd.

Projects	Metal	Proven & Probable Reserve (oz or lb)	Measured & Indicated Resource (oz)	Grade (g/t or %)	Inferred Resource (oz or lb)	Recovery Rate	Average Production Costs (per oz)	Current Price	Royalties & Net Smelter Return (NSR)	% Ownership	Net Value to PTQ	Net Present Value to PTQ
PANAMA												
Molejón (CIP/CIC)	Au	482,486		1.305	37,100	90%	600	1,281	4.0%	100%	266,412,862	201,339,811
	Ag	756,577		2.050		85%	15.00	21.30	4.0%	100%	3,500,470	2,645,458
Molejón (on/off leach)	Au	163,130		0.700		70%	625	1,281	4.0%	100%	43,147,754	28,870,112
Molejón (on/off leach)	Au	191,669		0.500		45%	650	1,281	4.0%	100%	5,224,744	3,495,870
Belencillo (on/off leach)	Au			0.500	318,500	45%	650	1,281	4.0%	100%	34,728,221	23,358,517
PDI Panama	N/A								47.48%		5,348,147	5,348,147
BALANCE SHEET ADJUSTMENTS												
Working capital											(85,608,791)	(85,608,791)
Convertible senior secured notes											0	0
Community support obligation											(5,681,936)	(5,681,936)
Asset retirement obligation											(12,997,029)	(12,997,029)
									Net Assets & Resources Fully Diluted Shares		254,074,442	160,770,159
											268,010,372	268,010,372
PANAMA												
Oro Del Norte	Au			0.47	276,383	85%	800	1,281	4.0%	100%	37,967,728	6,940,871
Botija Abajo	Au	106,739	3,303	0.49		76%	800	1,281	4.0%	100%	30,894,300	8,227,551
Botija Abajo	Cu	48,718,000	1,507,000	44%		72%	2.06	3.30	5.0%	100%	31,704,488	8,443,314
Palmilla	Au	509,400	0.59	144,000	76%	800	1,281	4.0%	100%	160,701,346	34,237,474	
Palmilla	Ag	755,800	0.87	239,200	76%	15.00	21.30	4.0%	100%	2,990,332	637,091	
Palmilla	Cu	143,900,000	24%	54,600,000	72%	2.06	3.30	5.0%	100%	106,920,979	22,779,549	
SPAIN												
Lomero-Poyatos	Au			3.080	829,502	75%	725	1,281	0.0%	100%	121,065,817	29,814,510
	Ag			88.740	17,320,000	75%	15	21.30	0.0%	100%	28,642,950	7,053,812
									Discounted Asset Value			1.04

PROJECTED INCOME STATEMENT

Petaquilla Minerals Ltd.

Consolidated Statements of Operations and Retained Earnings (US \$)

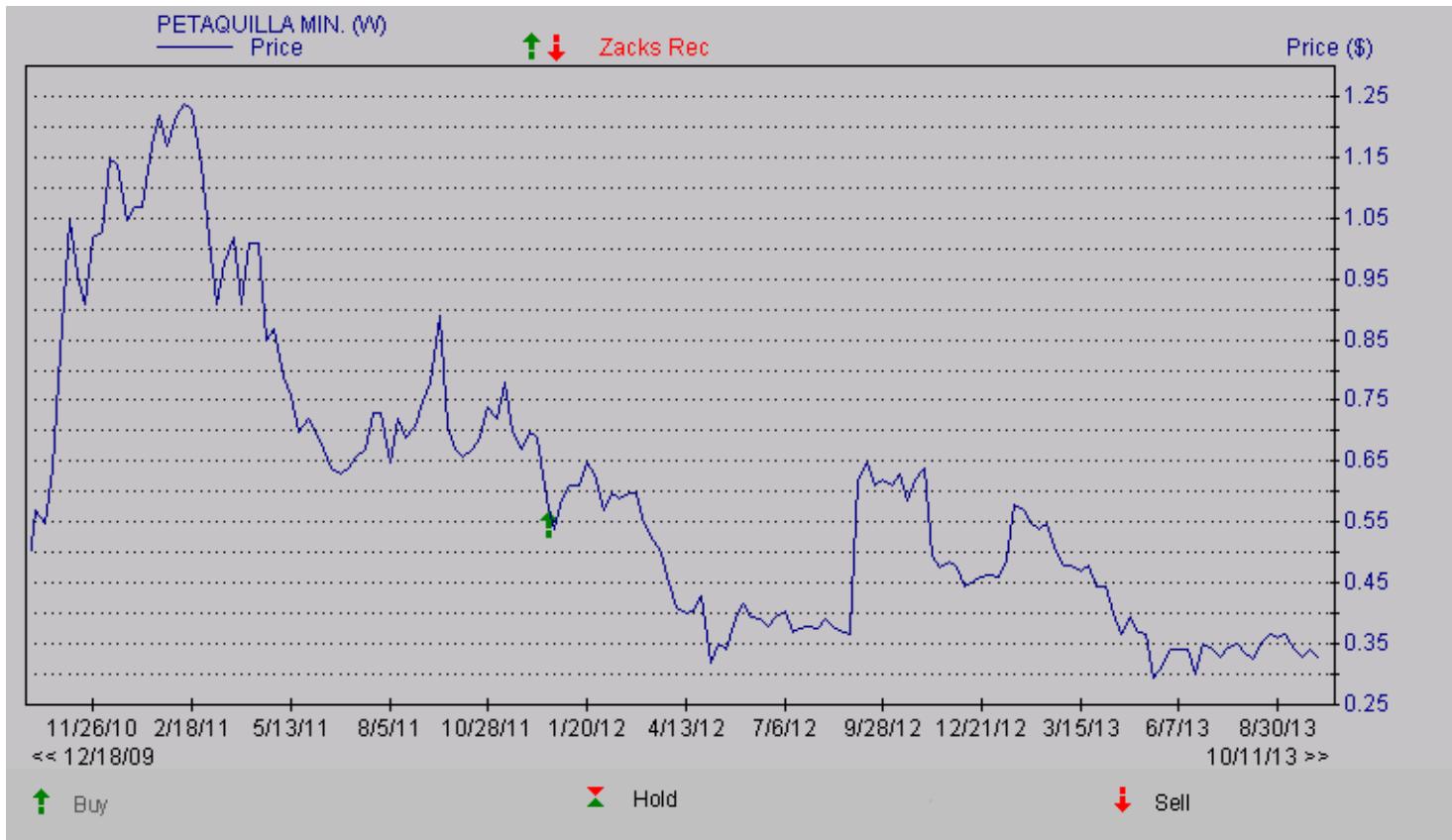
	IFRS Year (May) 2012	IFRS 2013 JJA 1Q	IFRS 2013 SON 2Q	IFRS 2013 DJF 3Q	IFRS 2013 MAMJ 4Q	IFRS Year (June) 2013	IFRS Year (June) 2014 E
For the years ending June 30 (and May 31 prior to 2013)							
Gold poured (ounces)	68,002	17,882	20,025	17,674	11,912	67,493	86,100
Gold equivalent ounces poured	69,503	18,459	20,518	18,013	12,191	69,181	88,253
Gold sold (ounces)	61,259	16,109	17,545	14,323	13,901	61,878	78,937
Gold equivalent ounces sold	62,870	17,597	17,905	14,598	14,196	64,296	82,022
Avg. realized gold price	\$1,520	\$1,595	\$1,695	\$1,647	\$1,473	\$1,601	\$1,390
Revenue	94,297,396	25,925,176	29,463,602	27,498,989	27,779,254	110,667,021	114,010,060
Production costs	44,064,034	10,810,988	10,772,638	10,188,141	21,168,741	52,940,508	66,727,500
Depreciation and depletion	15,301,328	4,503,543	3,833,829	3,270,436	10,126,285	21,734,093	19,381,710
Gross operating profit	34,932,034	10,610,645	14,857,135	14,040,412	(3,515,772)	35,992,420	27,900,850
General and administrative	14,228,500	3,025,648	4,307,117	3,787,856	6,272,261	17,392,882	17,018,266
Donations and community relations	1,542,860	275,537	477,061	413,408	4,394,993	5,560,999	6,560,375
Exploration and development costs	9,903,665	1,983,809	2,008,241	3,131,931	3,991,432	11,115,413	15,000,000
Stock-based compensation	514,799	108,365	59,782	126,319	297,952	592,418	700,000
Debt issuance costs	-	-	-	-	-	-	-
Other operating expenses	0	0	0	0	0	0	0
Operating expenses	26,189,824	5,393,359	6,852,201	7,459,514	14,956,638	34,661,712	39,278,641
Gain (loss) from operations	8,742,210	5,217,286	8,004,934	6,580,898	(18,472,410)	1,330,708	(11,377,791)
Finance (expense)	(2,174,462)	(735,124)	(440,439)	(187,201)	(3,122,623)	(4,485,387)	(3,500,000)
(Loss) on equity investments	(485,104)	0	0	0	0	0	0
Inmet's waiver of 5% royalty on Molejon mine	-	-	-	9,373,191	3,975,150	13,348,341	-
Gain on disposal of Vintage Mining Corp	-	-	-	-	-	-	-
Gain on expiry of deferred services contract	-	-	-	-	-	-	-
Mark-to-market gain (loss) on share purchase warrants	10,564,194	0	0	0	0	0	0
Mark-to-market gain (loss) on share embedded derivatives	3,265,000	-	-	-	-	0	0
Mark-to-market gain (loss) on share conversion feature	866,963	-	-	-	-	0	0
Mark-to-market gain (loss) on senior & conv. secured notes	(505,523)	0	0	0	0	0	0
Non-operating income (expenses)	2,146,356	(761,790)	(5,502,823)	0	(8,530,740)	(14,795,353)	0
Total other income (expense)	13,677,424	(1,496,914)	(5,943,262)	9,185,990	(7,678,213)	(5,932,399)	(3,500,000)
Income (loss) before minority interest and income taxes	22,419,634	3,720,372	2,061,672	15,766,888	(26,150,623)	(4,601,691)	(14,877,791)
Non-controlling interests	1,793,434	(29,421)	(7,632)	(41,127)	(435,345)	(513,525)	(997,629)
Shareholders income (loss) before income taxes	20,626,200	3,749,793	2,069,304	15,808,015	(25,715,278)	(4,088,166)	(13,880,162)
Other comprehensive income	(5,187,200)	558,460	1,085,646	183,686	(237,716)	1,590,076	0
Net comprehensive income (continuing operations)	15,439,000	4,308,253	3,154,950	15,991,701	(25,952,994)	(2,498,090)	(13,880,162)
Net income per common share (diluted) - continuing ops.	0.10	0.02	0.01	0.07	(0.11)	(0.02)	(0.05)
Net comprehensive income per share (diluted)	0.07	0.02	0.01	0.07	(0.11)	(0.01)	(0.05)
Weighted average common shares outstanding - diluted	206,560,782	230,200,617	226,222,082	231,651,958	226,825,979	214,891,382	265,000,000
Gross margin (net of amortization & depletion)	53.27%	58.30%	63.44%	62.95%	23.80%	52.16%	41.47%

BALANCE SHEET

Petaquilla Minerals Ltd.

	Canadian GAAP 2006 ending 1/31		Canadian GAAP 2007 ending 4/30		Canadian GAAP 2008 ending 4/30		Canadian GAAP 2009 ending 5/31		IFRS 2010 ending 5/31		IFRS 2011 ending 5/31		IFRS 2012 ending 5/31		IFRS 2013 ending 6/30	
Consolidated Balance Sheets (in \$ US) (as reported prior to application of IFRS) (in Canadian \$ prior to FY 2009, in US \$ starting in FY 2009)																
For the years ending as noted																
ASSETS																
Cash and cash equivalents	9,171,318	665,290	12,850,137	3,575,168	4,625,649	5,712,792	4,625,649	5,712,792	1,975,660	1,855,544						
Short-term investments	-	-	-	-	-	200,000	-	200,000	340,000	340,000						
Accounts receivable	32,188	100,410	450,885	144,225	116,326	460,324	116,326	-	-	-						
Prepaid expenses	36,650	452,718	310,255	591,847	690,152	1,138,977	690,152	-	1,599,301	4,525,236	5,732,751					
Accounts receivable, prepaids, etc.	-	-	-	1,038,999	3,634,715	11,613,321	3,634,715	11,657,676	15,446,317	27,349,785						
Inventory and stockpiled ore	-	-	-	-	-	-	-	-	-	16,532,176	-					
Assets (PDI) held for distribution to owners	-	-	-	-	-	-	-	-	-	-						
Current Assets	9,240,156	1,218,418	13,611,277	5,350,239	9,066,842	19,125,414	9,066,842	19,169,769	38,819,389	35,278,080						
Other Assets																
Restricted cash - reclamation obligations	892,242	1,188,026	670,175	707,480	566,708	255,091	566,708	-	2,300,000	2,300,000						
Long term investments	-	1,807,000	2,408,443	-	-	2,400,000	-	2,400,000	-	-						
Inventories (stockpiled ore)	-	-	-	1,762,945	1,107,316	2,228,405	1,107,316	2,228,405	14,077,466	35,348,467						
Advances to suppliers	-	-	-	-	816,461	3,509,817	816,461	-	-	-						
Other assets	-	4,582,937	-	-	-	6,616,964	-	10,381,872	6,710,884	708,123						
Property, plant and equipment (net)	285,005	5,343,147	16,779,149	12,879,658	9,916,595	14,713,518	-	-	-	-						
Mineral properties	2,389,769	31,236,455	37,739,133	60,843,501	58,788,273	66,670,067	-	-	-	-						
Exploration and evaluation assets (primarily Iberian)	-	-	-	-	-	-	-	-	31,170,407	32,947,253						
Mineral property, plant & equipment	-	-	-	-	-	-	78,700,875	94,553,369	93,173,045	111,394,926						
Total Assets	12,807,172	45,375,983	71,208,177	81,543,823	80,262,195	115,519,276	90,258,202	128,733,415	186,251,191	217,976,849						
LIABILITIES																
Accounts payable and accrued liabilities	551,096	4,951,297	8,493,460	8,746,892	17,586,683	30,318,558	17,586,683	30,318,558	44,211,407	61,640,691						
Deferred services and materials	-	-	248,786	120,000	3,153,394	-	-	-	-	-						
Current obligations under capital leases	-	-	2,174,903	5,054,987	4,136,032	1,468,561	4,136,032	1,468,561	-	-						
Current portion of long-term debt	-	487,882	436,151	160,993	35,465	435,733	-	-	4,927,642	19,635,805						
Current portion of bank loans	-	-	-	-	-	-	35,465	435,733	-	-						
Current other liabilities - Community support	-	-	-	-	-	-	5,184,816	1,424,290	1,396,856	6,560,375						
Current portion of deferred revenue	-	-	-	-	-	9,246,437	0	9,246,437	14,216,977	800,000						
Current portion of derivative obligation	-	-	-	-	-	-	-	-	-	32,250,000						
Bank overdraft	-	-	2,100,000	-	-	-	-	-	-	-						
Operating credit line facility	-	-	3,872,434	-	-	-	-	-	-	-						
Senior secured notes	-	-	-	15,653,483	26,646,631	217,984	26,646,631	217,984	-	-						
Convertible senior secured notes	-	-	-	44,837,991	276,983	45,094,084	276,983	-	-	-						
Liabilities (PDI) held for distribution to owners	-	-	-	-	-	-	-	-	-	15,841,613	-					
Current Liabilities	551,096	5,439,179	17,325,734	29,736,355	96,396,196	41,964,256	98,683,711	43,388,546	80,594,495	120,886,871						
Long term debt	-	699,185	162,568	-	80,235	1,840,500	-	-	-	-	15,357,903					
Bank loans	-	-	-	-	-	80,235	1,840,500	8,430	-	-						
Accounts payable and accrued liabilities	-	-	-	-	-	1,866,667	-	1,866,667	-	-						
Obligations under capital leases	-	-	3,991,743	-	440,229	3,850,475	440,229	3,850,475	801,750	-						
Senior secured notes	-	-	26,785,359	13,754,019	-	2,906,453	-	2,906,453	-	-						
Convertible senior secured notes	-	-	-	34,794,455	-	3,693,111	0	3,693,122	4,705,428	-						
Other liabilities - Community support obligation	-	-	4,391,168	-	-	6,453,281	6,703,799	5,681,936	15,424,746							
Share purchase warrants	-	-	4,003,423	3,123,394	-	33,390,472	5,030,904	11,064,020	499,826	749						
Deferred revenue	-	-	-	-	-	-	33,390,472	-	26,750,484	-						
Derivative obligation	-	-	-	-	-	-	-	-	217,000	-						
Asset retirement obligation	-	4,400,000	4,333,216	4,664,720	4,698,650	5,687,236	4,816,121	9,630,851	11,062,579	12,997,029						
Long-term Liabilities	0	5,099,185	39,276,309	60,727,756	5,219,114	53,234,914	16,820,770	74,946,359	49,727,433	43,780,427						
Share capital (no par value)	62,977,209	101,482,015	89,002,273	89,208,668	102,334,997	131,078,574	(25,246,279)	7,891,354	48,454,407	46,348,220						
Treasury shares	(166,981)	(166,981)	(122,193)	(122,193)	(122,193)	(122,193)	N/A	N/A	N/A	N/A						
Warrants	-	-	11,771,374	14,109,097	13,209,412	26,874,201	N/A	N/A	N/A	N/A						
Shares subscribed	-	150,000	-	-	-	-	-	-	-	-						
Additional paid-in capital	1,004,480	12,893,667	14,714,276	13,897,197	16,219,808	17,367,137	N/A	N/A	N/A	N/A						
Equity component of cv. sr. secured notes	-	-	-	495,121	495,121	42,817	N/A	N/A	N/A	N/A						
Accumulated comprehensive income	-	-	(2,084,526)	(6,733,242)	(6,733,242)	(6,733,242)	N/A	N/A	N/A	N/A						
Retained earnings (deficit)	(51,558,632)	(79,521,082)	(98,675,070)	(119,774,936)	(146,757,018)	(150,694,344)	N/A	N/A	N/A	N/A						
Equity attributed to non-controlling interests	-	-	-	-	-	2,507,156	-	2,507,156	7,474,856	6,961,331						
SHAREHOLDERS' EQUITY	12,256,076	34,837,619	14,606,134	(8,920,288)	(21,353,115)	20,320,106	(25,246,279)	10,398,510	55,929,263	53,309,551						
Total Liabilities and Equity	12,807,172	45,375,983	71,208,177	81,543,823	80,262,195	115,519,276	90,258,202	128,733,415	186,251,191	217,976,849						
Common shares outstanding	89,876,951	89,876,951	95,958,641	96,040,121	125,281,951	176,429,501	125,281,951	176,429,501	221,863,781	222,330,161						

HISTORICAL ZACKS RECOMMENDATIONS



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