

SOLITARIO EXPLORATION & ROYALTY CORP.  
Form 10-K  
March 12, 2012

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

**FORM 10-K**

(Mark One)

Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2011

or

Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number **001-32978**

**SOLITARIO EXPLORATION & ROYALTY CORP.**

(Exact name of registrant as specified in charter)

**Colorado**

(State or other jurisdiction of incorporation or organization)

**4251 Kipling St. Suite 390, Wheat Ridge, CO**

(Address of principal executive offices)

Registrant's telephone number, including area code

**84-1285791**

(I.R.S. Employer Identification No.)

**80033**

(Zip Code)

(303) 534-1030

Securities registered pursuant to Section 12(b) of the Act:

Title of each class                      Name of exchange on which registered  
Common Stock, \$0.01 par value   NYSE Amex Equities

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

YES [ ] NO [X]

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Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

YES  NO

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

YES  NO

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

YES  NO

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained to the best of registrant's knowledge in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.:

Non-accelerated Filer

Large accelerated filer  Accelerated filer  (Do not check if a smaller reporting company)  Smaller Reporting Company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

YES  NO

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of the last business day of the registrant's most recently completed second fiscal quarter, based upon the closing sale price of the registrant's common stock on June 30, 2011 as reported on NYSE Amex Equities was approximately \$91,841,000.

There were 34,229,958 shares of common stock, \$0.01 par value, outstanding on March 8, 2012.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the definitive Proxy Statement for the Registrant's Annual Meeting of Shareholders, which is expected to be filed by April 30, 2012, have been incorporated by reference into Part III of this Annual Report on Form 10-K

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## **PART I**

This Annual Report on Form 10-K contains statements that constitute "forward-looking statements" within the meaning of section 27A of the Securities Act of 1933 and section 21E of the Securities Exchange Act of 1934. These statements can be identified by the fact that they do not relate strictly to historical information and include the words "expects", "believes", "anticipates", "plans", "may", "will", "intend", "estimate", "continue" or other similar expressions. These forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from those currently anticipated. These risks and uncertainties include, but are not limited to, items discussed below in Item 1A "Risk Factors" in this Form 10-K. Forward-looking statements speak only as of the date made. We undertake no obligation to publicly release or update forward-looking statements, whether as a result of new information, future events or otherwise. You are, however, advised to consult any further disclosures we make on related subjects in our quarterly reports on Form 10-Q and any reports made on Form 8-K to the United States Securities and Exchange Commission (the "SEC").

### **Item 1. Business**

#### The Company

Solitario Exploration & Royalty Corp. ("Solitario") is, as of February 22, 2012, a development stage company (prior to February 22, 2012 we were an exploration stage company) with a focus on the acquisition of precious and base metal properties with exploration potential and the development or purchase of royalty interests. We acquire and hold a portfolio of exploration properties for future sale, joint venture, or to create a royalty prior to the establishment of proven and probable reserves. However, in August 2010 we signed a Letter of Intent related to the Mt. Hamilton project and in December 2010 we signed a Limited Liability Company Operating Agreement to form Mt. Hamilton LLC ("MH-LLC"). Furthermore, we announced on February 22, 2012 the completion of a feasibility study on our Mt. Hamilton project (the "Feasibility Study"), prepared by SRK Consulting (US), Inc. of Lakewood, Colorado ("SRK"). As a result of the completion of the Feasibility Study, we have earned an 80% interest in MH-LLC, the owner of the Mt. Hamilton project, and we intend to develop the Mt. Hamilton project, subject to a number of factors including obtaining necessary permits and availability of required capital, none of which is currently in place. The Mt. Hamilton project, located in Nevada, is discussed below under "Ely Gold Investment and the Mt. Hamilton Joint Venture." However, we have never developed a mineral property. We are exploring on other mineral properties that may be developed in the future by us or through a joint venture. We may also evaluate mineral properties to potentially buy a royalty.

We have been actively involved in mineral exploration since 1993. We have recorded revenues from joint venture delay rental payments of \$200,000 each year, respectively, related to our Bongará project in Peru during 2011, 2010 and 2009, and during 2011 recorded \$42,000 of payment revenue related to our Mercurio project in Brazil. Previously, our last significant revenues were recorded in 2000 upon the sale of the Yanacocha property for \$6,000,000. Future revenues from joint venture payments or the sale of properties, if any, will also occur on an infrequent basis. At

December 31, 2011, we had 12 mineral exploration properties in the United States, Peru, Bolivia, Mexico and Brazil and our Yanacocha and La Tola royalty properties in Peru. We are conducting exploration activities in all of those countries.

Solitario was incorporated in the state of Colorado on November 15, 1984 as a wholly owned subsidiary of Crown Resources Corporation ("Crown"). In July 1994, we became a publicly traded company on the Toronto Stock Exchange (the "TSX") through our Initial Public Offering. On July 26, 2004, Crown completed a spin-off of its holdings of our shares to its shareholders as part of the acquisition of Crown (the "Crown - Kinross Merger") by Kinross Gold Corporation ("Kinross"). On June 12, 2008, our shareholders approved an amendment to the Articles of Incorporation of Solitario to change the name of the corporation to Solitario Exploration & Royalty Corp. from Solitario Resources Corporation.

Our corporate structure is as follows: All of the subsidiaries are 100%-owned, with the exception of Minera Chambara, which is 85%-owned by Solitario, and Mt. Hamilton LLC, which is now 80%-owned by Solitario.

Solitario Exploration & Royalty Corp. [Colorado]

- Altoro Gold Corp. [British Columbia, Canada]

- Altoro Gold (BVI) Corp. [British Virgin Islands]

- Minera Altoro (BVI) Ltd. [British Virgin Islands]

- Minera Andes (BVI) Corp. [British Virgin Islands]

- Compañía Minera Andes del Sur S.A. [Bolivia]

- Minera Altoro Brazil (BVI) Corp. [British Virgin Islands]

- Altoro Mineração, Ltda. [Brazil]

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- Minera Chambara, S.A. [Peru] (85%-owned)
- Minera Solitario Peru, S.A. [Peru]
- Minera Bongará, S.A. [Peru]
- Minera Soloco, S.A. [Peru]
- Mineração Solitario Brazil, Ltd [Brazil]
- Minera Solitario Mexico, S.A. [Mexico] – 100%
- Mt. Hamilton, LLC [Colorado] 80%, as of February 22, 2012, upon the completion of the Feasibility Study

General

Our principal expertise is in identifying mineral properties with promising mineral potential, acquiring these mineral properties and exploring them to enable us to sell, joint venture or create a royalty on these properties prior to the establishment of proven and probable reserves. We also have used the same expertise to obtain royalty interests. As of December 31, 2011, we had no mineral properties with reserves. However, the Feasibility Study, completed February 22, 2012, reported proven and probable reserves of 22,527,000 tons of ore at a grade of 0.022 ounces of gold per ton for 487,100 contained ounces of gold and a grade of 0.136 ounces of silver per ton for 3,028,200 ounces of silver as discussed below under Item 2, “Properties, The Mt. Hamilton gold property.”

We are currently working on development activities related to our Mt. Hamilton project and intend to develop the Mt. Hamilton project, subject to a number of factors including obtaining necessary permits and availability of required capital, none of which is currently in place. In addition, we have never developed a property in our history. In addition to our activities at Mt. Hamilton, one of our primary goals is to discover economic deposits on our mineral properties and advance these deposits, either on our own or through joint ventures, up to the development stage (development activities include, among other things, completion of a feasibility study for the identification of proven and probable reserves, as well as permitting and preparing a deposit for mining). At that point, or sometime prior to that point, we would attempt to either sell our mineral properties, or pursue their development either on our own or through a joint venture with a partner that has expertise in mining operations, or create a royalty with a third-party that continues to advance the property.

In analyzing our activities, the most significant aspect relates to results of our exploration activities and those of our joint venture partners' on a property-by-property basis. When our exploration activities, including drilling, sampling and geologic testing, indicate a project may not be economic or contain sufficient geologic or economic potential, we may impair or completely write-off the property. Another significant factor in the success or failure of our activities is the price of commodities. For example, when the price of gold is up, the value of gold-bearing mineral properties

increases; however, it may also become more difficult and expensive to locate and acquire new gold-bearing mineral properties with potential to have economic deposits.

The potential sale, joint venture or development, either on our own or through a joint venture of our mineral properties will occur, if at all, on an infrequent basis. Accordingly, while we conduct exploration activities and planned development of the Mt. Hamilton project, we need to maintain and replenish our capital resources. We have met our need for capital in the past through (i) sale of our investment in Kinross common stock; (ii) issuance of short-term margin debt secured by our investment in Kinross; (iii) joint venture delay rental payments, including payments of \$200,000 each year, respectively, in 2011, 2010, and 2009 on our Bongará property and a \$50,000 delay rental payment on our Mercurio project during 2011; (iv) previous payments on our exploration properties which occurred during the years from 1996 through 2000; (v) the sale of properties, which last occurred in 2000 with the sale of our Yanacocha property for \$6,000,000; (vi) issuance of common stock, including the exercise of options. In the past and with the exception of the Mt. Hamilton project, we have reduced our exposure to the costs of our exploration activities through the use of joint ventures. We anticipate these practices will continue for the foreseeable future.

We operate in one segment, mining geology and mineral exploration. We currently conduct exploration in Peru, Brazil, Mexico, Nevada in the United States and, to a limited extent, Bolivia. As of March 8, 2012, we had five full-time employees, located in the United States and 23 full-time employees, located in Latin America outside of the United States. We extensively utilize contract employees and laborers to assist us in the exploration on most of our projects.

A large number of companies are engaged in the exploration and development of mineral properties, many of which have substantially greater technical and financial resources than we have and, accordingly, we may be at a disadvantage in being able to compete effectively for the acquisition, exploration and development of mineral properties. We are not aware of any single competitor or group of competitors that dominate the exploration and development of mineral properties. In acquiring mineral properties for exploration and development, we rely on the experience, technical expertise and knowledge of our employees, which is limited by the size of our company compared to many of our competitors who may have either more employees or employees with more specialized knowledge and experience.



## Governmental Regulations

Mineral exploration activities are subject to various national, state/provincial, and local laws and regulations, which govern prospecting, development, mining, production, exports, taxes, labor standards, occupational health, waste disposal, protection of the environment, mine safety, hazardous substances and other matters. Similarly, if any of our properties are developed and/or mined those activities are also subject to significant governmental regulation and oversight. We are required to obtain the licenses, permits and other authorizations in order to conduct our exploration program.

## Environmental Regulations

Our current and planned activities are subject to various national and local laws and regulations governing protection of the environment. These laws are continually changing and, in general, are becoming more restrictive. We intend to conduct business in a way that safeguards public health and the environment. We will be required to conduct our operational compliance with applicable laws and regulations.

Changes to current state or federal laws and regulations in each jurisdiction in which we conduct our exploration activities could, in the future, require additional capital expenditures and increased operating and/or reclamation costs. Although we are unable to predict what additional legislation, if any, might be proposed or enacted, additional regulatory requirements could impact the economics of our projects.

During fiscal 2011, we had no material environmental incidents or non-compliance with any applicable environmental regulations.

## Ely Gold Investment and the Mt. Hamilton Joint Venture

On August 26, 2010, we signed a Letter of Intent (“LOI”) with Ely Gold and Minerals, Inc., (“Ely”) to make certain equity investments into Ely and to joint venture Ely’s Mt. Hamilton gold project, which was wholly-owned by DHI-Minerals (US) Ltd. (“DHI-US”), an indirect wholly-owned subsidiary of Ely. On August 26, 2010 and October 19, 2010, we made private placement investments of Cdn\$250,000 each in Ely securities. We received a total of 3,333,333 shares of Ely common stock and warrants to purchase a total of 1,666,667 shares of Ely common stock (the “Ely Warrants”) for an exercise price of Cdn\$0.25 per share, which expire two years from the date of purchase. The private placements were pursuant to the LOI to joint venture Ely’s Mt. Hamilton gold project. On November 12, 2010, we made an initial contribution of \$300,000 for a 10% membership interest in, upon the formation, of Mt. Hamilton

LLC (“MH-LLC”), which was formed in December 2010. The terms of the joint venture are set forth in the Limited Liability Company Operating Agreement of MH-LLC between Solitario and DHI-US (the “MH Agreement”). MH-LLC owns 100% of the Mt. Hamilton gold project. Pursuant to the MH Agreement, as a result of the completion of the Feasibility Study, Solitario has earned an 80% interest in MH-LLC, and indirectly, the Mt. Hamilton project. See a more complete discussion of Ely and MH-LLC below in Note 12 to the consolidated financial statements, “Ely Gold investment and the Mt. Hamilton joint venture” in Item 8 “Financial Statements and Supplementary Data.”

#### Investment in Kinross

We have a significant investment in Kinross at December 31, 2011, which consists of 850,000 shares of Kinross common stock. In August 2006, we received 1,942,920 shares in exchange for 6,071,626 shares of Crown common stock we owned on the date of the Crown - Kinross Merger. Subsequent to the Crown - Kinross Merger, we have sold 1,092,920 shares of Kinross common stock to fund our operations. As of March 8, 2012, we own 820,000 shares of Kinross common stock that have a value of approximately \$8.9 million based upon the market price of \$10.91 per Kinross share. Any significant fluctuation in the market value of Kinross common stock could have a material impact on Solitario's liquidity and capital resources.

#### Mineral Properties - General

We have been involved in the exploration for minerals in Latin America, focusing on precious and base metals, including gold, silver, platinum, palladium, copper, lead and zinc. We have held concessions in Peru since 1993 and in Bolivia and Brazil since 2000. During 2004 we began a reconnaissance exploration program in Mexico and acquired mineral interests there in 2005. In 2010 we acquired a 10% interest in MH-LLC with an option to earn up to the 80% interest which we now hold as a result of completion of the Feasibility Study. MH-LLC owns the Mt. Hamilton mining claims located in Nevada, USA.

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Financial Information About Geographic Areas

Included in the consolidated balance sheets at December 31, 2011 and 2010 are total assets of \$2,251,000 and \$2,791,000, respectively, related to Solitario's foreign operations, including our investment in PBM, located in Brazil, Peru, Mexico and Bolivia.

Available Information

We file our Annual Report on Form 10-K, our quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports electronically with the SEC. The public may read and copy any materials we file with the SEC at the SEC's public reference room at 100 F Street NE, Washington, DC 20549 or by calling the SEC at 1-800-SEC-0330. In addition the SEC maintains an internet website, <http://www.sec.gov>, which contains reports, proxy information and other information regarding issuers that file electronically with the SEC.

Paper copies of our Annual Report to Shareholders, our Annual Report on Form 10-K, our quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports are available free of charge by writing to Solitario at its address on the front of this Form 10-K. In addition, electronic versions of the reports we file with the SEC are available on our website, [www.solitarioxr.com](http://www.solitarioxr.com), as soon as practicable, after filing with the United States Securities and Exchange Commission.

**Item 1A. Risk Factors**

In addition to considering the other information in this Form 10-K, you should consider carefully the following factors. The risks described below are the significant risks we face and include all material risks. Additional risks not presently known to us or risks that we currently consider immaterial may also adversely affect our business.

*During 2010 we entered into an agreement with Ely Gold and Minerals, Inc. ("Ely") and as a result of completion of the Feasibility Study in February 2012 have earned an 80% interest in the Mt. Hamilton project through our membership interest in MH-LLC. We currently intend to develop this property. The potential development of the Mt. Hamilton project adds new risks to Solitario including permitting, finance, mining operations and closure, for which Solitario has limited experience, resources and personnel. Failure on any of these or other components of the planned development of the Mt. Hamilton project could contribute to our inability to profitably develop, operate and close the Mt. Hamilton project, which could result in the loss of our investment in MH-LLC, and the loss of all or a significant portion of our financial reserves.*

The development of mining properties involves a high degree of risk including the requirement to obtain permits, the need for significant financial resources for the construction and development of an operating mine, operational expertise and reclamation. Permitting of a mine for development can be an expensive and uncertain endeavor, with no assurance of receiving required permits in a timely manner, if ever. We do not have a history of developing or operating mines and may not be able to acquire the additional personnel to adequately manage such operations. In addition, the financial resources required to put a mine into production and to sustain profitable operating mines are significant and far exceed our existing financial resources, and there can be no assurance that we could obtain such financial resources. Should we fail to timely complete any of the activities required for the planned development of the Mt. Hamilton project, or if upon completion of the development of the Mt. Hamilton project we are unable to operate the project profitably, it could result in the loss of our investment in MH-LLC, the loss of all or a significant portion of our financial reserves and be a detriment to our other exploration assets. The failure to permit, develop, operate and close the Mt. Hamilton project on a timely and profitable basis could negatively affect our stock price and our financial position and operational results.

***Our development and operational plans for Mt. Hamilton as well as projected economic results rely substantially upon the Feasibility Study prepared by SRK Consulting (US). The Feasibility Study makes certain assumptions regarding the mining, processing and environmental reclamation parameters, as well as estimates for capital costs to build the mine, costs to operate the mine, environmental regulations to build, operate and reclaim the mine, and revenues generated based upon the assumed grade of ore, recovery of gold and silver, as well as future market price of gold and silver. There are significant risks that the assumptions made in the Feasibility Study may not be accurate when, and if, we build and operate the mine, or that we may not be able to achieve the results anticipated in the Feasibility Study.***

The Feasibility Study relies substantially upon many assumptions, including, but not limited to, the accuracy of the estimated proven and probable reserves, the estimated versus actual recovery of gold and silver, the requirements and timing for environmental approvals, the cost to build the mine and processing plant, the cost of operating the mine, closure costs, and availability of necessary personnel to operate the mine. We can give no assurance the assumptions built into the Feasibility

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Study are achievable now or in the future. Costs estimated in the feasibility will change with time, and historically have escalated. Environmental requirements also will change, and usually requirements have become more strict and costly. Should we fail to timely complete any of the development components recommended in the Feasibility Study, or if upon completion of the development of the Mt. Hamilton project we are unable to operate the project as described in the Feasibility Study, it could result in the loss of our investment in MH-LLC, the loss of all or a significant portion of our financial reserves and could negatively affect our stock price, our financial position and operational results.

***Our mineral exploration activities involve a high degree of risk; a significant portion of our business model envisions the sale or joint venture of mineral property, prior to the establishment of reserves. If we are unable to sell or joint venture these properties, the money spent on exploration may never be recovered and we could incur an impairment on our investments in our projects.***

The exploration for mineral deposits involves significant financial and other risks over an extended period of time. Few properties that are explored are ultimately developed into producing mines. Major expenses are required to determine if any of our mineral properties may have the potential to be commercially viable and be salable or joint ventured. Prior to completion of the Feasibility Study, we never established reserves on any of our properties. Significant additional expense and risks, including drilling and determining the feasibility of a project, are required prior to the establishment of reserves. These additional costs potentially diminish the value of our properties, other than Mt. Hamilton, for sale or joint venture. It is impossible to ensure that the current or proposed exploration programs on properties in which we have an interest will be commercially viable or that we will be able to sell, joint venture or develop our properties. Whether a mineral deposit will be commercially viable depends on a number of factors, some of which are the particular attributes of the deposit, such as its size and grade, costs and efficiency of the recovery methods that can be employed, proximity to infrastructure, financing costs and governmental regulations, including regulations relating to prices, taxes, royalties, infrastructure, land use, importing and exporting of gold or other minerals, and environmental protection.

We believe the data obtained from our own exploration activities or our partners' activities to be reliable; however the nature of exploration of mineral properties and analysis of geological information is subjective and data and conclusions are subject to uncertainty from invalid data as a result of many reasons, including sample contamination, analysis variation, extrapolation, undetected instrumentation malfunctions and the use of geologic and economic assumptions.

Even if our exploration activities determine that a project is commercially viable, it is impossible to ensure that such determination will result in a profitable sale of the project or development by a joint venture in the future and that such project will result in profitable commercial mining operations. If we determine that capitalized costs associated with any of our mineral interests are not likely to be recovered, we would incur an impairment of our investment in such property interest. All of these factors may result in losses in relation to amounts spent, which are not recoverable. We have experienced losses of this type from time to time including during 2011 when we wrote down our investment in our Paria Cruz project, recoding a mineral property impairment of \$10,000 and in 2010 when we wrote down our investment in our Santiago, Cajatambo, La Noria and Palmira projects, recording mineral property impairment of

\$55,000. We recorded mineral property impairment of \$51,000 during 2009.

***We have a significant investment in Kinross Gold Corporation ("Kinross") common stock. We have no control over fluctuations in the price of Kinross common stock and reductions in the value of this investment could have a negative impact on the market price of our common stock.***

We have a significant investment in Kinross as of March 8, 2012. A significant fluctuation in the market value of Kinross common stock could have a material impact on our investment in Kinross, the market price of our common stock and our liquidity and capital resources.

***During 2010 and 2011 we have borrowed money using short-term margin accounts, secured by our investment in Kinross. In the event this borrowing increases, or the price of a share of Kinross common stock decreases, we may be subject to a margin call against our investment in Kinross.***

As of March 8, 2012, we have outstanding borrowing of \$2,500,000 in short-term margin loans, secured by our investment in Kinross. These margin loans provide that if the net equity in our investment in Kinross, defined as the market value our equity holdings, consisting primarily of Kinross common stock, falls below a minimum margin equity level of 35%, the lender of the short-term margin loan may demand immediate payment or sell as much Kinross stock as necessary to repay the margin loan (a "Margin Call"). A significant decline in the market value of Kinross could result in the sale of some or all our investment in Kinross at a steep discount to the current investment balance. Such a Margin Call could have a negative effect on our liquidity, capital resources and results of operations.

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***The market for shares of our common stock has limited liquidity and the market price of our common stock has fluctuated and may decline.***

An investment in our common stock involves a high degree of risk. The liquidity of our shares, or ability of a shareholder to buy or sell our common stock, may be significantly limited for various unforeseeable periods. The average combined daily volume of our shares traded on the Toronto Stock Exchange and NYSE Amex Equities during 2011 was approximately 94,000 shares, with no shares traded on many days. The market price of our shares has historically fluctuated within a wide range. The price of our common stock may be affected by many factors, including an adverse change in our business, a decline in gold or other commodity prices, and general economic trends.

***Our mineral exploration and potential development activities are inherently dangerous and could cause us to incur significant unexpected costs including legal liability for loss of life, damage to property and environmental damage, any of which could materially adversely affect our financial position or results of operations.***

Our operations are subject to the hazards and risks normally related to exploration or development of a mineral deposit including mapping and sampling, drilling, road building, trenching, assaying and analyzing rock samples, transportation over primitive roads or via small contract aircraft or helicopters and severe weather conditions, any of which could result in damage to life or property, environmental damage and possible legal liability for such damage. Any of these risks could cause us to incur significant unexpected costs that could have a material adverse effect on our financial condition and ability to finance our exploration activities.

***We have a history of losses and if we do not operate profitably in the future it could have a material adverse effect on our financial position or results of operations and the trading price of our common stock would likely decline.***

We have reported losses in 16 of our 18 years of operations. We reported losses of \$3,377,000, \$4,066,000 and \$1,786,000, respectively, for the years ended December 31, 2011, 2010 and 2009. We can provide no assurance that we will be able to operate profitably in the future. We have had net income in only two years in our history, during 2003, as a result of a \$5,438,000 gain on derivative instrument related to our investment in certain Crown Resources Corporation warrants and during 2000, when we sold our Yanacocha property. We cannot predict when, if ever, we will be profitable again. If we do not operate profitably, the trading price of our common stock will likely decline.

***Our operations outside of the United States of America may be adversely affected by factors outside our control, such as changing political, local and economic conditions, any of which could materially adversely affect our financial position or results of operations.***

Our mineral properties located in Latin America consist primarily of mineral concessions granted by national governmental agencies and are held 100% by us or under lease, option or purchase agreements. Our mineral properties are located in Peru, Bolivia, Mexico and Brazil. We act as operator on all of our mineral properties that are not held in joint ventures. The success of projects held under joint ventures that are not operated by us is substantially dependent on the joint venture partner, over which we have limited or no control.

Our exploration activities and mineral properties located outside of the United States of America ("United States") are subject to the laws of Peru, Bolivia, Brazil and Mexico, where we operate. Exploration and potential development activities in these countries are potentially subject to political and economic risks, including:

- cancellation or renegotiation of contracts;
- disadvantages of competing against companies from countries that are not subject to US laws and regulations, including the Foreign Corrupt Practices Act;
- changes in foreign laws or regulations;
- changes in tax laws;
- royalty and tax increases or claims by governmental entities, including retroactive claims;
- expropriation or nationalization of property;
- currency fluctuations (particularly related to declines in the US dollar compared to local currencies);
- foreign exchange controls;
- restrictions on the ability for us to hold US dollars or other foreign currencies in offshore bank accounts;
- import and export regulations;
- environmental controls;



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- risks of loss due to civil strife, acts of war, guerrilla activities, insurrection and terrorism; and
- other risks arising out of foreign sovereignty over the areas in which our exploration activities are conducted.

During 2006 the government of Bolivia took steps toward the nationalization of its oil and gas industry by unilaterally increasing taxes payable by private owners of oil and gas properties. In 2007 the government effectively increased corporate taxes on mining companies from 25% to 37.5% of profits. More recently, the government has proposed sweeping changes in the mining law concerning the amount of mining rights private companies may own, and the potential for the Bolivian government to effectively become a carried 50% partner in mining operations. These political and legal uncertainties could have an adverse effect upon our projects in Bolivia. We have significantly reduced our activities in Bolivia, while monitoring this situation. Our capitalized costs in Bolivia are approximately \$25,000 as of December 31, 2011 and December 31, 2010.

Consequently, our current exploration activities outside of the United States may be substantially affected by factors beyond our control, any of which could materially adversely affect our financial position or results of operations. Furthermore, in the event of a dispute arising from such activities, we may be subject to the exclusive jurisdiction of courts outside of the United States or may not be successful in subjecting persons to the jurisdictions of the courts in the United States, which could adversely affect the outcome of a dispute.

***We may not have sufficient funding for exploration and development, which may impair our profitability and growth.***

The capital required for exploration and development of mineral properties is substantial. We have financed operations through utilization of joint venture arrangements with third parties (generally providing that the third party will obtain a specified percentage of our interest in a certain property or a subsidiary owning a property in exchange for the expenditure of a specified amount), the sale of interests in properties or other assets, the sale of strategic investments in other companies such as Kinross, short-term margin loans and the issuance of common stock. At some point in the future, we will need to raise additional cash, or enter into joint venture arrangements, in order to fund the exploration activities required to determine whether mineral deposits on our projects are commercially viable and in the case of MH-LLC, potential funding for development activities to place the project into production. New financing or acceptable joint venture partners may or may not be available on a basis that is acceptable to us. Inability to obtain new financing or joint venture partners on acceptable terms may prohibit us from continued exploration or development of such mineral properties. Without successful sale or future development of our mineral properties through joint ventures, or on our own, we will not be able to realize any profit from our interests in such properties, which could have a material adverse effect on our financial position and results of operations.

***Our investment in MH-LLC includes the obligation to make payments necessary to provide Ely with the funds to repay a long-term loan secured by the assets of the Mt. Hamilton project; failure to make all of the payments***

***associated with MH-LLC including those due to underlying leaseholders may result in losing all of our interest in the Mt. Hamilton project.***

In connection with the formation of MH-LLC, the Mt. Hamilton properties contributed by DHI-US to MH-LLC were subject to a security interest granted to Augusta Resource Corporation ("Augusta") related to Ely's acquisition of the Mt. Hamilton properties. Pursuant to the Limited Liability Company Operating Agreement of MH-LLC, as part of our earn-in, we agreed to make payments of \$3,750,000, with \$1,250,000 of that in cash to DHI-US and \$2,500,000 of that in the form of private placement investments in Ely common stock. As of December 31, 2011 we are committed to making \$3,250,000 of the cash payments. These payments are being made to provide Ely with the funds necessary for Ely to make the loan payments due to Augusta. Failure to make any of the payments or investments necessary to provide Ely with funds to make the required payments due to Augusta may result in the loss of all of our interest in the Mt. Hamilton project. In addition we have agreed to make additional payments to DHI-US and to certain underlying holders of leases at Mt. Hamilton as further described in Note 12 to the consolidated financial statements, "Ely Gold investment and the Mt. Hamilton joint venture" in Item 8 "Financial Statements and Supplementary Data." Failure to make any of these additional payments to either DHI-US or to underlying leaseholders may result in our losing all or part of our 80% interest in MH-LLC and the Mt. Hamilton project.

***A large number of companies are engaged in the exploration of mineral properties, many of which have substantially greater technical and financial resources than us and, accordingly, we may be unable to compete effectively in the mining industry which could have a material adverse effect on our financial position or results of operations.***

We may be at a disadvantage with respect to many of our competitors in the acquisition and exploration of mining projects. The marketing of mineral properties is affected by numerous factors, many of which are beyond our control. These include the price of the raw or refined minerals in the marketplace, imports of minerals from other countries, the availability of adequate milling and smelting facilities, the number and quality of other mineral properties that may be for sale or are being explored. Our competitors with greater financial resources than us will be better able to withstand the uncertainties and fluctuations associated with the marketing of exploration projects. In addition, we compete with other mining companies to

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attract and retain key executives and other employees with technical skills and experience in the mineral exploration business. We also compete with other mineral exploration and development companies for exploration projects. There can be no assurance that we will continue to attract and retain skilled and experienced employees or to acquire additional exploration projects. The realization of any of these risks from competitors could have a material adverse effect on our financial position or results of operations.

***The title to our mineral properties may be defective or challenged which could have a material adverse effect on our financial position or results of operations.***

In connection with the acquisition of our mineral properties, we conduct limited reviews of title and related matters, and obtain certain representations regarding ownership. These limited reviews do not necessarily preclude third parties from challenging our title and, furthermore, our title may be defective. Consequently, there can be no assurance that we hold good and marketable title to all of our mineral interests. If any of our mineral interests were challenged, we could incur significant costs in defending such a challenge. These costs or an adverse ruling with regards to any challenge of our titles could have a material adverse effect on our financial position or results of operations.

***We have no reported mineral reserves, other than at our Mt. Hamilton project, and if we are unsuccessful in identifying mineral reserves in the future, we may not be able to realize any profit from these property interests.***

None of our Latin American projects have reported mineral reserves. Any mineral reserves on these projects will only come from extensive additional exploration, engineering and evaluation of existing or future mineral properties. The lack of reserves on these mineral properties could prohibit us from sale or joint venture of our mineral properties. If we are unable to sell or develop these mineral properties either on our own or through a joint venture, we will not be able to realize any profit from our interests in such mineral properties, which could materially adversely affect our financial position or results of operations. Additionally, if we or partners to whom we may joint venture these mineral properties are unable to develop reserves on our mineral properties we may be unable to realize any profit from our interests in such properties, which could have a material adverse effect on our financial position or results of operations.

***Our operations could be negatively affected by existing as well as potential changes in laws and regulatory requirements that we are subject to, including regulation of mineral exploration and land ownership, environmental regulations and taxation.***

The exploration and development of mineral properties is subject to federal, state, provincial and local laws and regulations in the countries in which we operate in a variety of ways, including regulation of mineral exploration and land ownership, environmental regulation and taxation. These laws and regulations, as well as future interpretation of or changes to existing laws and regulations, may require substantial increases in capital and operating costs to us and

delays, interruptions, or a termination of operations.

In the countries in which we operate, in order to obtain permits for exploration or potential future development of mineral properties, environmental regulations generally require a description of the existing environment, both natural, archeological and socio-economic, at the project site and in the region; an interpretation of the nature and magnitude of potential environmental impacts that might result from such activities; and a description and evaluation of the effectiveness of the operational measures planned to mitigate the environmental impacts. The permitting expenditures on our Mt. Hamilton project are budgeted to be approximately \$500,000 during 2012, and could increase as a result of permitting delays or challenges in the years to come, which we cannot accurately predict. Currently the expenditures to obtain exploration permits to conduct our exploration activities are not material to our total exploration cost.

The laws and regulations in all the countries in which we operate are continually changing and are generally becoming more restrictive, especially environmental laws and regulations. As part of our ongoing exploration activities, we have made expenditures to comply with such laws and regulations, but we cannot predict that the regulatory environment in which we operate could change in ways that would substantially increase our costs to achieve compliance. Delays in obtaining or failure to obtain government permits and approvals or significant changes in regulation could have a material adverse effect on our exploration activities, our ability to locate economic mineral deposits, and our potential to sell, joint venture or eventually develop our properties, which could have a material adverse effect on our financial position or results of operations.

***Occurrence of events for which we are not insured may materially adversely affect our business.***

Mineral exploration is subject to risks of human injury, environmental liability and loss of assets. We maintain limited insurance coverage to protect ourselves against certain risks related to loss of assets for equipment in our operations; however,

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we have elected not to have insurance for other risks because of the high premiums associated with insuring those risks or for various other reasons including those risks where insurance may not be available. There are additional risks in connection with investments in parts of the world where civil unrest, war, nationalist movements, political violence or economic crisis are possible. These countries may also pose heightened risks of expropriation of assets, business interruption, increased taxation and a unilateral modification of concessions and contracts. We do not maintain insurance against political risk. Occurrence of events for which we are not insured could have a material adverse effect on our financial position or results of operations.

***Severe weather or violent storms could materially affect our operations due to damage or delays caused by such weather.***

Our exploration activities in Peru, Bolivia, Brazil and Mexico as well as our activities associated with the exploration and development of the Mt. Hamilton project are subject to normal seasonal weather conditions that often hamper and may temporarily prevent exploration or development activities. There is a risk that unexpectedly harsh weather or violent storms could affect areas where we conduct these activities. Delays or damage caused by severe weather could materially affect our operations or our financial position.

***Our business is extremely dependent on the market price of gold and other commodities and currency exchange rates over which we have no control.***

Our operations are significantly affected by changes in the market price of gold and other commodities since the evaluation of whether a mineral deposit is commercially viable is heavily dependent upon the market price of gold and other commodities. The price of commodities also affects the value of exploration projects we own or may wish to acquire. These prices of commodities fluctuate on a daily basis and are affected by numerous factors beyond our control. The supply and demand for gold and other commodities, the level of interest rates, the rate of inflation, investment decisions by large holders of these commodities, including governmental reserves, and stability of exchange rates can all cause significant fluctuations in prices. Such external economic factors are in turn influenced by changes in international investment patterns and monetary systems and political developments. Currency exchange rates relative to the United States dollar can affect the cost of doing business in a foreign country in United States dollar terms, which is our functional currency. Consequently, the cost of conducting exploration in the countries where we operate, accounted for in United States dollars, can fluctuate based upon changes in currency exchange rates and may be higher than we anticipate in terms of United States dollars because of a decrease in the relative strength of the United States dollar to currencies of the countries where we operate. We currently do not hedge against currency fluctuations. The prices of commodities have fluctuated widely and future significant price declines could have a material adverse effect on our financial position or results of operations.

***Our business is dependent on key executives and the loss of any of our key executives could adversely affect our business, future operations and financial condition.***

We are dependent on the services of key executives, including our Chief Executive Officer, Christopher E. Herald, our Chief Financial Officer, James R. Maronick, and our Chief Operating Officer, Walter H. Hunt. All of the above named officers have many years of experience and an extensive background in Solitario and the mining industry in general. We may not be able to replace that experience and knowledge with other individuals. We do not have "Key-Man" life insurance policies on any of our key executives. The loss of these persons or our inability to attract and retain additional highly skilled employees may adversely affect our business, future operations and financial condition.

***In addition to our Mt. Hamilton project, we may look to joint venture with another mining company in the future to develop and/or operate one of our foreign projects; therefore, in the future, our results may become subject to additional risks associated with development and production of our foreign mining projects.***

We are not currently involved in mining development or operating activities at any of our properties located outside of the United States. In order to realize a profit from these mineral interests we either have to: (1) sell such properties outright at a profit; (2) form a joint venture for the project with a larger mining company with greater resources, both technical and financial, to further develop and/or operate the project at a profit; (3) develop and operate such projects at a profit on our own; or (4) create and retain a royalty interest in a property with a third party that agrees to advance the property toward development and mining. However, we have never developed a mineral property. In the future, if our exploration activities show sufficient promise in one of our foreign projects, we may either look to form a joint venture with another mining company to develop and/or operate the project, or sell the property outright and retain partial ownership or a retained royalty based on the success of such project. Therefore, in the future, our results may become subject to the additional risks associated with development and production of mining projects in general.

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***In the future, we may participate in a transaction to acquire a property, royalty or another company that requires a substantial amount of capital or Solitario equity to complete. Our acquisition costs may never be recovered due to changing market conditions, or our own miscalculation concerning the recoverability of our acquisition investment. Such an occurrence could adversely affect our business, future operations and financial condition.***

We have been involved in evaluating a wide variety of acquisition opportunities involving mineral properties and companies for acquisition and we anticipate evaluating potential acquisition opportunities in the future. Some of these opportunities may involve a substantial amount of capital or Solitario equity to successfully acquire. As many of these opportunities do not have reliable feasibility-level studies, we may have to rely on our own estimates for investment analysis. Such estimates, by their very nature, contain substantial uncertainty. In addition, economic assumptions, such as future costs and commodity prices, also contain significant uncertainty. Consequently, if we are successful in acquiring any new acquisitions and our estimates prove to be in error, either through miscalculations or changing market conditions, this could have a material adverse effect on our financial position or results of operations.

***Failure to comply with the United States Foreign Corrupt Practices Act (FCPA) could subject us to penalties and other adverse consequences.***

As a Colorado corporation, we are subject to the FCPA and similar worldwide anti-bribery laws, which generally prohibit United States companies and their intermediaries from engaging in bribery or other improper payments to foreign officials for the purpose of obtaining or retaining business. Foreign companies, including some that may compete with our company, are not subject to U.S. laws and regulations, including the FCPA, and therefore our exploration, development, production and mine closure activities are subject to the disadvantage of competing against companies from countries that are not subject to these prohibitions.

In addition, we could be adversely affected by violations of the FCPA and similar anti-bribery laws in other jurisdictions. Corruption, extortion, bribery, pay-offs, theft and other fraudulent practices may occur from time-to-time in the countries outside of the United States in which we operate. Our mineral properties are located in countries that may have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. Our policies mandate compliance with these anti-bribery laws; however, we cannot assure you that our internal controls and procedures always will protect us from the reckless or criminal acts committed by our employees or agents. We can make no assurance that our employees or other agents will not engage in such conduct for which we might be held responsible. If our employees or other agents are found to have engaged in such practices or we are found to be liable for FCPA violations, we could suffer severe criminal or civil penalties or other sanctions and other consequences that may have a material adverse effect on our business, financial condition and results of operations.

**Item 1B. Unresolved Staff Comments**

None

## **Item 2. Properties**

### **Joint Ventures and Strategic Alliance Properties**

#### **Mt. Hamilton Gold Project (Nevada, USA)**

##### **1. Property Description and Location**

The consolidated Mt. Hamilton project property consists of 254 unpatented mining claims, 9 patented mining claims and 241 acres of fee land. One hundred forty one of these claims and 121 acres of the private surface rights are subject to underlying leases. The unpatented claims are also subject to the US Mining Law of 1872 and US Department of Agriculture - Forest Service administration. The property is located in White Pine County, eastern Nevada.

On August 26, 2010, we signed the LOI with Ely to earn up to an 80% interest in DHI-US's Mt. Hamilton property. In December 2010, we entered into the MH Agreement with DHI-US with respect to MH-LLC, which now holds the Mt. Hamilton project assets. Per the terms of the MH Agreement, DHI-US contributed all of its interests in the Mt. Hamilton project to MH-LLC for a 90% initial interest in MH-LLC and Solitario had a 10% initial interest in MH-LLC by virtue of its initial \$300,000 advance royalty payment in November 2010 to one of the underlying property owners. On signing the LOI,

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Solitario subscribed for a private placement of 3,333,333 units of Ely at a price of CDN\$0.15 per Unit for an aggregate consideration of approximately CDN\$500,000. Each unit consists of one common share and one-half share purchase warrant entitling the holder of a whole warrant to purchase an additional share of Ely for CDN\$0.25, with such warrant expiring two years from the subscription date. The private placement consisted of two tranches. The first tranche of CDN\$250,000 was funded on August 31, 2010, and the second tranche of CDN\$250,000 was funded on October 19, 2010. Solitario also committed to spend \$1.0 million on exploration and feasibility work during the first year and has met this spending requirement as of February 28, 2011. Solitario may elect to terminate its interest in the Mt. Hamilton project at any time and have no further earn-in obligations on the project.

Solitario earned an 80% interest in the project, through its ownership in MH-LLC, upon completion of the Feasibility Study in February 2012. To maintain our interest in MH-LLC as of December 31, 2012, Solitario is further required to make all of the payments listed below, pursuant to the MH Agreement and the LOI.

Year	Cash Payments to DHI-US	Private Placement Funding to Ely(2)	Shares of Solitario Stock Issued to DHI-US	Cash payments to Royalty Owner (3)
2012	\$1,050,000(1)		50,000	\$300,000
2013	\$500,000	\$750,000	100,000	\$300,000
2014	\$500,000	\$750,000	100,000	\$300,000
2015		\$1,000,000		\$300,000

Royalty reduction (6.0% to 2.75% NSR) payment paid prior to commencement of commercial production	\$3,500,000
Royalty reduction (2.75% to 1.0% NSR) payment paid within one year after commercial production commences	\$1,500,000

(1) Includes \$750,000 to be distributed by DHI-US to Ely to enable Ely to make payment to Augusta on long-term debt.

(2) Payments are to enable Ely to make payment to Augusta for long-term debt; see Note 4, to the consolidated financial statements, in Item 8, below.

(3) Annual minimum advance royalty payments are due through production.

Upon completion of a bankable feasibility study, all construction and permitting costs will be shared pro-rata. However, DHI-US may elect to have Solitario fund DHI-US's 20% share of all such costs, with Solitario to be repaid by DHI-US, with interest, out of 80% of DHI-US's share of net proceeds from MH-LLC. As of March 8, 2012, DHI-US has not exercised its option to have Solitario fund its share of all costs subsequent to February 22, 2012.

All currently stated reserves and resources lie within the Centennial Minerals Company LLC ("Centennial") underlying mining lease that originally had an 8.0% Net Smelter Return ("NSR") Royalty. In April 2010, Ely amended the lease to allow for a reduction in the NSR Royalty from 8.0% to 3.0% by staging cash payments totaling \$5.0 million (see above chart of payments we are required to make) to Centennial. In May 2011, MH-LLC purchased an additional

2.0% of the NSR royalty for \$1.52 million in cash and 344,116 shares of Solitario. Assuming the 5.0% NSR Royalty is purchased, the effective NSR Royalty rate on the currently defined reserves will be 1.0%, less advanced royalties already paid. See “Royalty buy-down” Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” under (b), “Recent Developments.”

We are the manager of MH-LLC under the terms of the MH Agreement, which provides that prior to our earn-in we have authority for all significant operating decisions. After earn-in, with a few limited exceptions that require unanimous consent, we will control all decisions under the MH Agreement, as a result of our ownership of a majority of the voting membership interests in MH-LLC.

## 2. Accessibility, Climate, Local Resources, Infrastructure and Physiology

Access to the Mt. Hamilton project is relatively good from either of the two closest towns, Ely or Eureka, Nevada. From Ely, the property is accessed by traveling 45 miles west on paved Highway 50 and then traveling 10 miles south via a County maintained gravel road. From Eureka, the property is accessed by traveling 50 miles east on Highway 50 and then traveling 10 miles south via a County maintained gravel road.

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The climate is typical for high-desert, semiarid regions of Nevada with summer high temperatures averaging around 85° F and the winter lows averaging 10° F. Average precipitation is approximately 10 inches per year, and occurs mainly in the winter and spring seasons. Ely, the County Seat of White Pine County, has a population estimated at about 4,000 and offers the most services to the project area, with sufficient housing, schools, hospital and commercial business capable of servicing the needs of a mine at Mt. Hamilton. Quadra FNX Mining operates the Robinson open pit copper mine with over 500 employees eleven miles east of Ely. Additionally, Eureka, Nevada with a population of about 2,000, offers services and is also host to other mining operations.

With the exception of relatively good road access to the Mt. Hamilton property, and existing water wells with sufficient water to supply anticipated processing needs, there is no other infrastructure at the project site. The nearest power line to the property is approximately 17 miles away.

The property lies within the Basin and Range physiographic province of Nevada on the western flanks of the White Pine Mountains and the eastern margin of the topographically flat and broad Newark Valley. The Centennial gold deposit, which constitutes the main area of interest, is situated at an elevation of about 8,700 feet. The location of the proposed heap leach pads is located about one mile southwest of the Centennial gold deposit at an elevation of approximately 7,500 feet in a relatively flat area.

### 3. History

The general area reportedly produced 20 to 40 million ounces of silver and a limited amount of gold from 1868 to 1880. Phillips Petroleum acquired the property in 1968 and explored for tungsten, molybdenum and copper. In 1984 Westmont Gold Inc. entered into a joint venture with Phillips and Queenstake Resources Ltd. and commenced a large-scale exploration program focused on gold. In 1993 the property was fully transferred to Westmont. In June 1994 Rea Gold Corp. (“Rea”) acquired the property and began production of the NE Seligman deposits in November 1994. Rea mined five small Seligman area deposits to June 1997, when Rea suspended mining. Rea filed for bankruptcy in November 1997.

In 2002 the US Bankruptcy Trustee abandoned all of the unpatented claims allowing them to lapse for failure to pay the annual maintenance fees. Centennial Minerals Company LLC (“Centennial”) staked the claims covering the Centennial deposit in late 2002, and in 2003 purchased all of the patented and fee lands. Augusta acquired a 100% leasehold interest in the property, subject to an underlying royalty, from Centennial in late 2003. In November 2007, Augusta sold to Ely 100% of the shares of DHI Minerals, Ltd., of which DHI-US, its wholly-owned subsidiary, held the Mt. Hamilton property. From 2008 through August 2010, Ely engaged SRK Consulting (US), Inc. (“SRK”), an independent full-service mining engineering consulting company, to complete a detailed NI 43-101 compliant Preliminary Economic Assessment Study of the Centennial gold and silver deposit. The study was completed in May 2009, and updated in July 2010. In August 2010, Solitario signed the LOI to joint venture the Mt. Hamilton property with Ely, through DHI-US. In February 2012, the Mt. Hamilton Feasibility Study was completed.

#### 4. Geologic Setting

The Mt. Hamilton property is located near the southern end of the Battle Mountain Gold Trend, a northwest-oriented trend that contains several major gold mines as well as dozens of smaller mines and prospects. The property's underlying geology is dominated by Cambrian-age sedimentary rocks that include the Eldorado Dolomite, Secret Canyon Shale and Dunderberg Shale. The sedimentary sequence has been intruded by two igneous stocks of Cretaceous-age: the Seligman granodiorite stock and the Monte Cristo granite stock, both of which are slightly over 100 million years in age. These two stocks variably altered the surrounding sedimentary rocks by metamorphic processes to skarn (calc-silicate mineral assemblage) and hornfels.

#### 5. Prior Exploration

Prior to 1968, very little is known about exploration activities on the property. Phillips Petroleum acquired the property in 1968 and drilled over 100,000 feet by the early 1980's. The focus of Phillips' work was to evaluate tungsten-molybdenum-copper mineralization in a skarn geologic setting.

In 1984 Westmont Gold Inc. entered into a joint venture with Phillips and Queenstake Resources Ltd. and commenced a large-scale exploration program focused on gold. By early 1989, this work defined the NE Seligman deposits and the Centennial deposit. Westmont conducted feasibility and permitting studies from 1990 through 1994, when the property was sold to Rea Gold Corp. Rea did not conduct any exploration on the project, but focused solely on placing the NE Seligman deposits into production and mining activities. Augusta, after acquiring the project in late 2003, conducted a limited

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confirmation drilling program and pre-feasibility related studies on the property for the next several years. Ely conducted a limited amount of confirmatory infill drilling in 2008. Solitario completed two rounds of infill and extension drilling (18 holes) in late 2010 and 2011, as well as geotechnical, metallurgical and hydrologic drilling for feasibility-related issues.

## 6. Mineralization

There are two primary styles of mineralization at Mt. Hamilton: early skarn-hosted tungsten +/- molybdenum +/- copper ("WQ-Mo-Cu") style, and, a later-stage epithermal gold style of mineralization. The likely source for both the WO<sub>3</sub>-Mo-Cu skarn mineralization and precious metal bearing late-stage hydrothermal fluids was the Seligman granodiorite stock that is Cretaceous in age (105 million years). Early metasomatic alteration converted shales to hornfels and silty carbonates to calc-silicate skarn. Mineralization is primarily hosted in a 200-300 foot thick skarn horizon.

Mineralization at the Centennial gold deposit, which is the primary focus of current Solitario activities, is controlled by stratigraphy, structure and magmatic hydrothermal alteration. Gold and silver are concentrated along two shallowly dipping sub-parallel faults and associated multiple fracture zones that penetrate the skarn horizon and provided pathways for hydrothermal fluids from the Seligman stock situated to the north. The faulting also appears to have controlled oxidation of the gold zone. The Centennial gold deposit is a north-south oriented body that is about 2,200 feet long, approximately 1,200 feet wide and ranges from 20 feet to over 350 feet in thickness.

## 7. Drilling

The Centennial gold deposit has been defined by 306 reverse circulation ("RC") drill holes totaling approximately 138,440 feet and 28 core holes totaling 13,411 feet. RC recovery averages in excess of 90% and core recovery is generally near 100%, with few exceptions.

Drill data included in resource and reserve modeling by SRK utilized historical data generated by Phillips Petroleum, Westmont Gold Inc. and Rea Gold. SRK concluded, with confirmatory drilling by both Ely and Solitario, that the data from all three previous operators of the project to be valid and sufficiently well documented to provide a reasonable representation of the Centennial gold deposit and sufficiently verifiable for use in a mineral resource estimate and classification of resources in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves: Definitions and Guidelines, dated November 27, 2010.

## 8. Sampling, Analysis and Sample Security

SRK reviewed in detail procedures utilized by all prior managers of the project for drill hole sampling methods, including RC and core splitting, and sample preparation and analyses, including check assay procedures and qualifications of the laboratories used for assay analyses. Methodology used by previous project managers included check assays by a second laboratory, insertion of standard and duplicate samples to the assay lab, and photography of core samples. SRK also undertook an independent evaluation to verify data. This program consisted of field verifications, independent assay analysis, comparison of electronic drill-hole data to paper data, and checking the electronic assay database against original assay certificates.

SRK opined that the sampling and analyses methodology utilized for both RC and core drilling were appropriate for the style of mineralization at the Centennial gold deposit and of sufficient quality to incorporate into a NI 43-101 compliant resource estimate. Furthermore, SRK believes the Centennial gold deposit drill hole assay database has been verified with substantial QA/QC checks, by both the original project managers and SRK's independent work, including the location of drill cuttings, core, analytical laboratory assay certificates, and that all aspects of the database are satisfactory for use in resource estimation.

Because much of the work at Mt. Hamilton was conducted prior to chain-of-custody/sample security methodology becoming an integral part of standard industry practice quality control procedures, it is difficult to assess pre-1998 sample security. However, Solitario believes that no serious sample security breaches occurred or are known to have occurred based upon other sample quality control procedures that all past project managers employed, such as splitting of core and splitting of RC course rejects and pulp samples to allow for subsequent new independent assay verification.

## 9. Feasibility Study

MH-LLC engaged SRK to complete the Feasibility Study on the Centennial gold and silver deposit located on the Mt. Hamilton property. Work began in November 2010 and the Feasibility Study was completed in February 2012. The Feasibility Study projects positive economic returns under a recommended development plan of the Centennial gold-silver

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deposit by conventional open pit mining followed by crushing and then heap leach processing for both gold and silver. The economic analysis in the Feasibility Study assumes a declining price curve for gold and silver. Realized gold/silver prices are assumed to be \$1,600/\$35.45 per ounce for the first year of production, \$1,420/\$28.25 for the second year, and \$1,280/\$23.90 per ounce for all subsequent years. These prices are based on the 12-month, 24-month and 36-month trailing average of gold and silver prices, respectively. This declining gold price scenario results in an average life-of-mine price of \$1,323 per ounce for gold and \$25.34 per ounce for silver.

The Feasibility Study assumes the following mining methods. Mining within the open pit will be conducted on 20-foot high benches with a 50° high wall. Mining will utilize five 100-ton haul trucks and a 14 cubic yard shovel and loader for loading. The waste to ore ratio is 2.4 tons waste to 1.0 ton ore. Non-mineralized rock will be hauled to a permanent storage area approximately 1,000 to 3,000 feet north of the open pit. Ore will be hauled approximately 2,000 feet to the southwest to the primary crusher. After crushing to minus-4 inch, the ore is dropped down a 350-foot vertical shaft onto a 3,400-foot long underground conveyor. Just outside the conveyor tunnel the ore is then fed into a secondary crusher that crushes the rock to 80% passing minus-¾ inch. From the secondary crusher the ore is conveyed 500 to 1,000 feet to the heap leach pad where it is stacked and then subjected to a weak-cyanide solution that dissolves the gold and silver. The solution from the heap leach is piped to a standard ADR-processing plant where the precious metals are recovered by a conventional carbon tank circuit. A gold-silver doré will be produced on the property and shipped to a refiner periodically. The Feasibility Study also developed a comprehensive reclamation plan designed to conform with current environmental regulations, both on the operational side and mine closure issues.

Reserves were estimated using a \$1,200 per ounce gold price and a \$20 per ounce silver price. A cutoff grade of 0.006 opt gold equivalent was utilized based on a breakeven economic analysis. Key economic results of the Feasibility Study include:

### **Feasibility Study Highlights:**

- Production Rate: 8,500 tons ore per day
- Mine Life: 8.0 years
- Average Gold Recovery: 79% (70% of recoverable gold in the first 30 days )
- Average Silver Recovery: 90% of soluble silver (~ 36% of total contained silver)
- Life of Mine Strip Ratio: 2.4:1.0 (waste ore)
- Initial Capital Cost: \$71.9 M (including \$6.3 M contingency)
- Sustaining Capital: \$35.3 M (including \$4.3 M contingency and \$10.3 M end-of-mine closure costs)
- Working Capital: \$7.1 M
- Operating Cash Costs per Gold-Equivalent Ounce Recovered: \$535 (Mining: \$5.75/t ore; Processing: \$3.89/t; G&A: \$0.69/t);
- Total Cash Costs per Gold-Equivalent Ounce Recovered: \$589 (includes operating cash costs, royalty, refining and transportation and Nevada Net Proceeds and property taxes)
- Average Annual Gold Production: 48,000 ounces
- Average Annual Silver Production: 330,000 ounces
- Average Annual Gold-Equivalent Production: 54,000 ounces (at a 52:1 silver to gold ratio)

10. Mineral Proven and Probable Ore Reserves

Recoverable proven and probable reserves summarized below have been calculated as of February 22, 2012, in accordance with Industry Guide 7 as required by the Securities Exchange Act of 1934 and Canadian National Instrument 43-101 "Standards of Disclosure for Mineral Projects." The reserves were estimated by SRK as part of the Feasibility Study. SRK is an independent and internationally recognized mine engineering firm with experts in mining, geology and reserve determination.

Proven and probable reserves were determined by the use of mapping, drilling, sampling, assaying and evaluation methods generally applied in the mining industry, as more fully discussed below. The term "reserve," as used in the reserve data presented here, means that part of a mineral deposit that can be economically and legally extracted or produced at the time of the reserve determination. The term "proven reserves" means reserves for which (1) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; (2) grade and/or quality are computed from the results of detailed sampling; and (3) the sites for inspection, sampling and measurements are spaced so closely and the geologic character is sufficiently defined that size, shape, depth and mineral content of reserves are well established.



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The term “probable reserves” means reserves for which quantity and grade are computed from information similar to that used for proven reserves but the sites for sampling are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation. Our reserve estimates are based on the latest available geological and geotechnical studies. In the future, we may periodically conduct studies of our ore bodies to optimize economic values and to manage risk. We may revise our mine plans and estimates of recoverable proven and probable mineral reserves as required in accordance with the latest available studies.

Mineral reserves were estimated from a pit design based on \$1,200/oz. gold and \$20/oz. silver prices, which at the time were approximately the average prices of gold and silver over a three-year look-back period. The cutoff grade used to estimate reserves was 0.006 oz/t gold equivalent (0.20 grams/tonne) and is the internal cutoff grade. Equivalent gold grade was calculated using a 52:1 silver to gold ratio. Multiple pit scenarios were evaluated using these criteria under a range of gold prices to determine the most favorable pit design for both optimal resource extraction and cash flow.

Below is a summary of the mineral proven and probable ore reserves as of February 22, 2012.

**Mineral Reserves Statement Centennial Gold-Silver Deposit,****White Pine County, Nevada****SRK Consulting (Inc.)**

Reserve Category	Tons (millions)	Gold Grade		Silver Grade*		Contained Gold (koz)**	Contained Silver (koz)**
		oz/ton	g/tonne	oz/ton	g/tonne		
Proven	0.923	0.032	1.10	0.155	5.31	29.3	142.7
Probable	21.604	0.021	0.72	0.134	4.59	457.8	2,884.3
Proven + Probable	22.527	0.022	0.75	0.136	4.66	487.1	3,028.2

\*Reported silver grade is cyanide soluble. \*\*Some numbers may not add due to rounding.

**11. Mining Operations**

No mining operations have occurred on the project within the past 15 years.

## 12. Planned Exploration, Development and Permitting

Solitario's focus for 2012 is to advance environmental permitting for the project. The most important component of permitting will be approval of the Plan of Operations and receipt of the Record of Decision. The Plan of Operations is anticipated to be submitted to the US Department of Agriculture - Forest Service, Ely District in April 2012.

Other planned activities for 2012 are additional drilling peripheral to the Centennial reserves with the objective of adding reserves, confirmatory drilling in the historic drilling in the Seligman pit area and metallurgical testing of mineralized rocks in the Seligman pit area. Plans for these activities are still under review and timing of each of these activities is dependent upon permitting approvals.

### **Bongará Zinc Project (Peru)**

#### 1. Property Description and Location

The Bongará project consists of 16 concessions comprising 12,800 hectares of mineral rights granted to Minera Bongará S.A., a subsidiary of ours incorporated in Peru. The property is located in the Department of Amazonas, northern Peru. On August 15, 2006 Solitario signed a Letter Agreement with Votorantim Metais Cajamarquilla, S.A., a wholly owned subsidiary of Votorantim Metais (both companies referred to as "Votorantim"), on Solitario's 100%-owned Bongará zinc project. On March 24, 2007, Solitario signed a definitive agreement, the Framework Agreement for the Exploration and Potential Development of Mining Properties, (the "Framework Agreement") pursuant to, and replacing, the previously signed Bongará Letter Agreement with Votorantim Metais. Solitario's and Votorantim's property interests are held through the ownership of shares in Minera Bongará S.A., a joint operating company that holds a 100% interest in the mineral rights and other project assets. Solitario currently owns 100% of the shares in Minera Bongará S.A.

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Votorantim can earn up to a 70% shareholding interest in the joint operating company by funding an initial \$1.0 million exploration program (completed), by completing future annual exploration and development expenditures until a production decision is made or the agreement is terminated. The option to earn the 70% interest can be exercised by Votorantim any time after the first year commitment by committing to place the project into production based upon a feasibility study. The Framework Agreement calls for Votorantim to have minimum annual exploration and development expenditures of \$1.5 million in each of years two and three, and \$2.5 million in all subsequent years until a minimum of \$18.0 million has been expended by Votorantim. Through December 31, 2011, Votorantim has met all minimum annual exploration and development commitments. Votorantim is the project manager. Votorantim, in its sole discretion, may elect to terminate the option to earn the 70% interest at any time. In addition, Votorantim is required to make annual delayed rental payments of \$200,000, until Solitario receives notice that certain expenditure minimums have been met or a production decision is made. Once Votorantim has fully funded its \$18.0 million work commitment and committed to place the project into production based upon a feasibility study, it has further agreed to finance Solitario's 30% participating interest through production. Solitario will repay the loan facility through 50% of Solitario's cash flow distributions from the joint operating company.

According to Peruvian law, concessions may be held indefinitely, subject only to payment of annual fees to the government. Each year a payment of \$3.00 per hectare must be made by the last day of June to keep the claims in good standing. Because some of the Bongará concessions are more than six years old beginning in 2005, there is a \$6.00 surcharge per hectare, if less than \$100 per hectare is invested in exploration and development of the claim. Peru also imposes a sliding scale net smelter return royalty (NSR) on all precious and base metal production. This NSR assesses a tax of 1% on all gross proceeds from production up to \$60,000,000, a 2% NSR on proceeds between \$60,000,000 and \$120,000,000 and a 3% NSR on proceeds in excess of \$120,000,000. In June 2012 payments of approximately \$102,000 to the Peruvian government will be due in order to maintain the mineral rights of Minera Bongará.

Votorantim signed a new surface rights agreement with the local community in 2009, which controls the surface of the primary area of interest of our Bongará joint venture. This agreement provides for an annual payment of \$31,250 and funding for mutually agreed social development programs in return for the right to perform exploration work including road building and drilling. From time to time we enter into surface rights agreements with individual landowners or communities to provide access for exploration work. Generally, these are short-term agreements. Votorantim is responsible for all joint venture costs as part of the Framework Agreement.

Environmental permits are required for exploration and development projects in Peru that involve drilling, road building or underground mining. The requisite environmental and archeological studies were completed for all past work, but new studies are ongoing to allow for the expanded activities planned for future years. Although we believe that these permits will be obtained in a timely fashion, the timing of government approval of permits remains beyond our control.

## 2. Accessibility, Climate, Local Resources, Infrastructure and Physiology

The Bongará property is accessed by the paved Carretera Marginal road, which provides access from the coastal city of Chiclayo. The nearest town is Pedro Ruiz located 15 kilometers southeast of the property and the Carretera Marginal is situated approximately eight kilometers south of the deposit. The area of the majority of past drilling and the most prospective mineralization, Florida Canyon, is currently inaccessible by road, the work to date having been done by either foot or helicopter access. Votorantim began construction of a road to the deposit in October 2010. Work is continuing on the road with approximately 15 kilometers completed as of March, 2012. Votorantim maintains project field offices in Pedro Ruiz and a drill core processing facility and operations office in the nearby community of Shipasbamba. The climate is tropical and the terrain is mountainous and jungle covered. Seasonal rains hamper exploration work for four to five months of the year by limiting access. Several small villages are located within five kilometers of the drilling area.

### 3. History

We discovered the Florida Canyon mineralized zone of the Bongará Project in 1996. Subsequently, we optioned the property in December 1996 to Cominco (now Teck Resources). Cominco withdrew from the joint venture in February 2001. We maintained the claims from 2001 to 2006, until the Votorantim Letter Agreement was signed. All of the significant work on the property has been conducted by Cominco, and more recently by Votorantim, and is described below in Section 5, "Prior Exploration."

### 4. Geological Setting

The geology of the Bongará area is relatively simple consisting of a sequence of Jurassic and Triassic clastic and

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carbonate rocks which are gently deformed. The Mississippi Valley type zinc-lead mineralization occurs in the carbonate facies of the Chambara (rock) Formation. This sedimentary sequence is part of what is referred to as the Pucura Group that hosts mineral deposits throughout Peru.

### 5. Prior Exploration

We conducted a regional stream sediment survey and reconnaissance geological surveys leading to the discovery of the Florida Canyon area in 1996. The discovered outcropping mineralization is located in two deeply incised canyons within the limestone stratigraphy.

Subsequent to our initial work, Cominco conducted extensive mapping, soil and rock sampling, stream sediment surveys and drilling. This work was designed to determine the extent and grade of the zinc-lead mineralization, the controls of deposition and to identify areas of potential new mineralization. Votorantim began work in the fall of 2006 and has worked continuously on the project since then. All work performed by us, Cominco or Votorantim was done by direct employees of the respective companies with the exception of the drilling which was performed by a third-party drilling company.

### 6. Mineralization

Mineralization occurs as massive to semi-massive replacements of sphalerite and galena localized by specific sedimentary facies (rock strata) within the limestone stratigraphy and by structural feeders and karst breccias. A total of eleven preferred beds for replacement mineralization have been located within the middle unit of the Chambara Formation. Mineralization is associated with the conversion of limestone to dolomite, which creates porosity and permeability within the rock formations, promoting the passage of mineralizing fluids through the rock formations forming stratigraphically controlled near-horizontal manto deposits and structurally controlled near-vertical replacement deposits. Drilling of stratigraphic targets has shown that certain coarser facies of the stratigraphy are the best hosts for mineralization.

Karst features are localized along faults and locally produce "breakout zones" where mineralization may extend vertically across thick stratigraphic intervals along the faults where collapse breccias have been replaced by ore minerals. Mineralized karst structures are up to fifty meters in width. The stratigraphically controlled mineralization is typically one to several meters in thickness, but locally attains thicknesses of eight to ten meters. Generally the stratigraphic mineralization, while thinner, is of higher grade and laterally more extensive. Evidence for these breakout zones is provided by the following drill holes from various locations on the property:

Breakout Zone Name	Drill Hole Number	Intercepts (meters)	Zinc %	Lead %	Zinc+Lead %
Sam	GC-17	58.8	12.0	2.8	14.8
	FC-23	81.5	4.8	0.8	5.6
Karen	A-1	36.2	12.8	2.7	15.5
North Zone	V-21	92.0	5.5	1.7	7.2
	V-44	28.3	15.2	0.8	16.0
South Zone	V-169	51.6	7.1	0.7	7.8

The middle unit of the Chambara formation, where mineralized, is commonly dolomitized within the zone of highest sedimentary-induced permeability. Dolomitization reaches stratigraphic thicknesses in excess of 100 meters locally. This alteration is thought to be related to the mineralizing event in most cases and is an important exploration tool. Continuity of the mineralization is thought to be demonstrable in areas of highest drilling density by correlation of mineralization within characteristic sedimentary facies typical of specific stratigraphic intervals or within through-going observable structural zones in drill core.

## 7. Drilling

A total of 305 diamond drill holes (HQ and NQ size) have been completed by Cominco and Votorantim since the project's inception. These holes vary in depth up to 610 meters. A total of 82,604 meters were drilled from the surface through the end of 2011. The mineralized area that has been drilled measures approximately two by two kilometers. A summary of drilling by year is provided in the table below:

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Operator	Year	Number of Holes	Meters Drilled
Cominco	Pre-2006	80	24,696
Votorantim	2006-2010	167	48,118
	2011- surface	39	9,790
	2011 - underground	19	2,935
Project Total		305	85,539

Underground drilling was conducted for the first time in 2011. Votorantim's drilling during 2011 was both infill drilling designed to better define mineralization and demonstrate continuity and also step-out drilling to define new resources. The infill drilling program has served to better define the quality and spatial distribution of mineralization. The underground drilling is designed to establish reserves.

8. Sampling, Analysis and Security of Samples

Core samples were transported from the drill by helicopter in sealed boxes to the processing facility in Shipasbamba where they were split by a diamond saw. Half of the core was taken of intervals selected according to geologic criteria under the supervision of the geologist in charge and shipped in sealed bags by land. Cominco used SGS Laboratories and Votorantim used ALS-Chemex, both in Lima, Peru, where all samples were analyzed by ICP. Any samples that contained greater than 1% zinc were then analyzed by wet chemistry assay for zinc and lead to provide a more accurate analysis of grade.

Since August 2006, Votorantim has been in control of all field activities on the project and is responsible for the security of samples. Votorantim has indicated to us that there have been no breaches in the security of the samples. We have reviewed Votorantim's sampling procedures and believe that adequate procedures are in place to ensure the future security and integrity of samples. No breaches of security of samples are known to have occurred prior to Votorantim's work on the project.

9. Pre-Feasibility Studies

Votorantim has engaged independent mining engineering and metallurgical firms to conduct and update scoping-level studies to provide order-of-magnitude estimates of deposit size and grade, sizing of appropriate scale of operations, infrastructure, and order-of-magnitude capital and operating cost estimates. The metallurgical testing has provided an evaluation of the mineralized material at Florida Canyon. Votorantim has reported to us that the results of this work has indicated that a standard flotation process on sulfide ore would achieve zinc recoveries of 93% and lead recoveries of 85% with 88% of the recoverable silver reporting to the lead concentrate.

10. Mineralized Material Estimations

There are no reported mineral reserves.

11. Mining Operations

No commercial mining operations to recover metals have occurred on the project. However, in September 2010 Votorantim initiated an underground tunneling program to access mineralization. As of December 31, 2011 590 meters of tunneling were completed.

12. Planned Exploration and Development

Permitting has been initiated to construct a new tunnel to provide underground access and drilling platforms in the Karen-Milagros zone of the Florida Canyon deposit scheduled to begin construction in late 2012 or early 2013. Ongoing work in 2012 includes additional metallurgical testing, and other pre-feasibility activities in preparation for completion of a full feasibility report in 2013. Additionally, 20,000 meters of drilling to further define mineralization is planned in 2012 from both the surface at San Jorge and Karen-Milagros and the existing underground workings at San Jorge. Votorantim will also continue road construction to the project area with the objective of completing access to the San Jorge area late in the year. To date, access to the deposit has occurred via helicopter and foot-trails. Permitting and social development activities with surrounding communities will also continue throughout 2012.



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**Pedra Branca Platinum Group Metals Project (Brazil)**

1. Property Description and Location

We have been exploring the Pedra Branca property through a management services agreement for platinum and palladium mineralization (platinum group metals, or "PGM"). Pedra Branca do Mineração S.A. ("PBM"), a Brazilian entity in which we hold a 49% interest and which holds a 100%-interest in all Pedra Branca project concessions. Anglo Platinum Ltd. ("Anglo") owns a 51% interest in PBM as of December 31, 2011. At December 31, 2011, the Pedra Branca project consisted of 57 exploration concessions totaling approximately 70,000 hectares in Ceará State, Brazil. PBM has applied to the National Department of Mineral Production ("DNPM") to convert three exploration concessions to mining concessions. These applications are under review by the DNPM. Eldorado Gold Corporation is entitled to a 2% NSR royalty on 10 of the concessions totaling 10,000 hectares.

On January 28, 2003, we entered into a Letter Agreement with Anglo whereby Anglo could earn various incremental interests in PBM up to a 65% interest. On July 14, 2006, we signed the Pedra Branca Framework Agreement with Anglo that specified actions we and Anglo would take to establish and govern PBM, the corporate entity that now holds 100% title to all the assets of the Pedra Branca project, and the mechanics for Anglo's continued funding of Pedra Branca operations. On April 24, 2007, we signed the definitive Shareholders Agreement with Anglo for the exploration and development of the Pedra Branca Project. The Shareholders Agreement provides for Solitario's and Anglo's property interests to be held through the ownership of shares in PBM.

Anglo earned a 51% interest in PBM by funding \$7.0 million as of July 21, 2010. We deconsolidated our interest in PBM as a result of Anglo earning its additional interest. Anglo can earn an additional 9% interest in PBM (for a total of 60%) by completing either (i) a bankable feasibility study or (ii) spending an additional \$10.0 million on exploration or development, whichever comes first. Anglo can also earn an additional 5% interest in PBM (for a total of 65%) by arranging for 100% financing to put the project into commercial production. We also entered into a Services Agreement with Anglo whereby Solitario (and/or our subsidiaries) would act as an independent contractor directing the exploration and administrative activities for PBM and its shareholders. Solitario receives a 5% management fee based upon total expenditures. Anglo will be taking over all administrative functions and operations at PBM during the second quarter of 2012 and Solitario will no longer manage PBM nor receive the 5% management fee.

PBM's land payments for 2012 are projected to be approximately \$117,000 including annual claim maintenance payments and smaller surface rights payments to local landowners. The mineral interests currently held by PBM are subject to the mining regulations of Brazil. These rights are granted by the Brazilian government and administered by DNPM. To initially obtain mineral concessions from the DNPM, PBM must provide the DNPM with work plans and

pay an initial fee of approximately \$370 per concession, depending upon the Brazil-U.S. exchange rate. To keep the concessions in good standing, PBM must continue to pay regular annual fees of \$1.32 per hectare for the first three years and approximately \$1.95 per hectare thereafter and provide the DNPM with annual progress reports.

Exploration concessions are granted by the DNPM for a maximum period of three years with the right of the applicant to apply for an extension which may be granted for up to an additional three years. Upon expiration of the exploration concession the concessionaire must apply for conversion of the claim to a mining concession or abandon the property. PBM has applied for the conversion of five claims to mining concessions. Unlike exploration concessions, mining concessions do not expire, but do have requirements for advancing feasibility and development work toward production. Approval of the conversion is at the discretion of the DNPM and we can give no assurance that the conversion of the concessions will be granted.

Prior to mining on the claims PBM must reach an agreement with the surface rights owners of the affected land. Additionally, PBM must pay a royalty to governmental agencies based on the materials produced. This amount is 0.2% of the sales for precious metals excluding gold, which is subject to a 3% royalty. PBM currently holds no surface rights to the property but has entered into short-term agreements with the surface rights owners to compensate for exploration activities.

## 2. Accessibility, Climate, Local Resources, Infrastructure and Physiology

Access to the project is by paved road from the state capital of Fortaleza in Ceará State and by local farm roads. Local access is constructed where necessary. The largest towns in the immediate vicinity of the project are Pedra Branca and Boa Viagem. A field camp is located at the small community of Capitaó Mor. The climate is warm and dry for eight months of the year with a warm wet season prevailing for the remaining four months (December-March). Year-round operations can be conducted. The topography is rolling to flat and vegetation is sparse to heavy brush. The elevation ranges from 500 to 800 meters.

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### 3. History

In the 1980's Rio Tinto Ltd., ("Rio Tinto") and Gencore, Ltd. ("Gencore") performed exploration work, including drilling, on part of the project now operated by us. In October 2000, we completed a Plan of Arrangement whereby we acquired Altoro Gold Corp. ("Altoro"). In 1999, Altoro had acquired concessions from the government over some of the property previously held by Rio Tinto. We have since acquired additional concessions through our subsidiary Altoro Mineração, Ltda. to cover extensions of the mineralized trend.

Altoro, prior to the Plan of Arrangement with us, conducted surface work, drilled 18 core holes and entered into a Joint Venture agreement with Rockwell Ventures, Inc. ("Rockwell") of Vancouver, British Columbia. Rockwell conducted further surface exploration and drilled an additional 31 holes. Rockwell terminated its agreement with us in June 2001. From July 2001 until late 2002, we conducted geochemical sampling and geophysical surveys and independently drilled 22 diamond drill holes. From January 2003 to date, Anglo has funded six drilling programs that focused on better defining the Esbarro and Curiu deposits, further testing the Cedro, Trapia and Santo Amaro prospects, and initial drill testing of 20 other target areas.

### 4. Geological Setting

The project lies within an Archean-aged block in the Brazilian shield, which is characterized by amphibolite grade metamorphic rocks of various compositions. The most common rock types in the area are unmineralized intermediate to felsic composition gneisses and granitic intrusive phases. PGM mineralization occurs in specific stratigraphic intervals within a segmented mafic-ultramafic layered complex. All of the rocks have been folded and faulted to differing degrees during dynamic metamorphism in the area.

### 5. Prior Exploration

Surface exploration conducted, initially by Altoro, and subsequently by Rockwell, us and then PBM, consists of:

Reconnaissance geologic mapping and rock sampling

Systematic line cutting, soil sampling and geologic mapping of lines

Ground magnetics and induced polarization ("IP") geophysical surveys

Stream sediment and panned-concentrate geochemistry

Core drilling of 26 prospect areas

All of the above work has been conducted directly by us or PBM, our predecessor or its partners with the exception of core drilling which was performed by contracted independent drilling companies and a third-party geophysical contractor conducted the IP survey. Surface work has generally been focused to identify outcroppings of ultramafic rocks, detect anomalous concentrations of PGM in soils or rocks, and determine if magnetic minerals are present in bedrock. Detailed geologic mapping has been conducted over some of the known ultramafic rock outcroppings to determine the source of anomalous PGM values. The targeted ultramafic rocks are generally more magnetic than the surrounding rocks and magnetometry has been shown to be effective at locating these bodies, though magnetometry and surface geochemical sampling do not determine the PGM content of an ultramafic body with certainty.

## 6. Mineralization

PGM mineralization occurs in specific stratigraphic intervals within a segmented mafic-ultramafic layered complex. The mineralized intervals comprise concordant layers, originally of composition varying from peridotite to dunite. These layers contain chromite and/or minor sulfides of iron, copper and/or nickel. In many cases the PGM grade is associated with the mineral chromite. In other areas the PGM is more closely related with minor sulfide concentration. The primary silicate ultramafic minerals in the rocks have been variably converted to amphibole, serpentine or talc. Within PGM-enriched ultramafics, grade and thickness can vary considerably. Widths encountered vary from less than a meter to tens of meters in interpreted true thickness. A number of separate ultramafic bodies have been delineated, some of which contain the PGM-bearing stratigraphic intervals. Approximately 26 prospects have been located within the project area. All of these identified prospects display either anomalous PGM values in soils or rocks and/or magnetic signatures indicating the presence of magnetic minerals. Drilling has intersected significant mineralization on 13 of the prospects.

## 7. Drilling

Through the end of 2011, a total 343 holes totaling 25,461 meters of core drilling were completed on the project. Of this, 3,217 meters were drilled by Rio Tinto and Gencore for which the core itself is not available, nor are the procedures documented under which the holes were completed. A limited drilling program was completed in 2011 and consisted of 25 core holes totaling 1,650 meters. The table below summarizes the various drilling programs conducted on the property.

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Operator	Year	Number of Holes	Meters Drilled
Rio Tinto, Gencore	Pre-1999	50	3,320
Altoro	1999-2000	18	1,200
Rockwell	2001	31	2,132
Solitario	2002	22	2,363
Solitario & PBM - funded by Anglo	2003-2010	197	14,796
	2011	25	1,650
Project Total	-	343	25,461

In the case of holes drilled by Altoro, Rockwell, us and PBM, the following procedures were followed. Drill holes were either of NQ (1 and 7/8 inch) or HQ (2 and 1/2 inch) diameter and were boxed in the field under the supervision of the geologist in charge.

The Esbarro prospect, with 107 holes, has the largest database of information of the drilled prospects. Drilling was conducted on approximately 30 to 50-meter spaced centers. The Curiu prospect is the second most detailed prospect drilled with 50 holes completed to date. Drilling was conducted on generally 25-meter spaced centers. Fifteen drill holes have been completed at Santa Amaro, 13 at Trapia I, 18 at Trapia West and 94 on the Cedro I through Cedro IV prospects. Drill spacing on these latter four prospects range from 50 to 200 meters. Although significant mineralized material was encountered in many of the drill holes within these nine deposits, PBM has not undertaken a formal estimate of reserves or resources as PBM believes additional work is required to make such an estimate. Based on drill results to date, PBM believes the prospects Esbarro, Cedro I, II, III and IV, Curiu, Trapia I, Trapia West and Santo Amaro exhibit results that may warrant further definition drilling.

#### 8. Sampling, Analysis and Security of Samples

Sampling at Pedra Branca generally consisted of composited and selective surface rock samples, soil samples, and stream sediment and panned concentrate samples of both active wet stream beds and dry stream beds. No known significant factors relating to sampling, drilling or recovery exist that are thought to have an impact on interpreted results. Drill core recovery is rarely less than 90%.

Assaying for PGM was done by Bondar Clegg Laboratories of Vancouver, British Columbia, Canada or its successor, ALS Chemex Laboratories prior to 2008. Since early 2008 assaying for PGM was done by SGS Laboratories. All of PBM's programs are conducted under a quality control program utilizing standards samples, duplicate samples and check assaying of selected samples that are periodically sent to a third party laboratory (Lakefield Laboratories, SGS Laboratories or ALS Chemex Laboratories).

Core samples are transported to the field camp in sealed core boxes where processing takes place under the supervision of the geologist in charge. Core samples are sawed on site into two halves, one submitted to the laboratory

and one kept in a secure location on site. The half-core selected for assay is sealed on site and sent by land or air to the sample preparation laboratory in Belo Horizonte, Brazil operated by SGS Laboratories. The laboratory is instructed to report any breaks in the seal to the Project Manager. No such security breaches have been noted since Solitario or PBM has been in operation of the project.

9. Mineral Resource and Mineral Reserve Estimations

There are no reported reserves.

10. Mining Operations

There are no current mining operations associated with this project.

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11. Planned Exploration

Anglo will be managing the 2012 work program. Anglo has indicated the program will consist of a helicopter-borne geophysics on closely spaced flight lines traversing areas potentially underlain by ultramafic rocks. Ultramafic rocks are highly magnetic and detectable by geophysics. Ultramafic rocks are also the host to all PGM mineralization identified on the property to date. Anglo has indicated it will re-log selected drill core to better interpret the geology and geometry of the mineralization. If the geophysical program is successful in identifying new ultramafic bodies, Anglo has indicated PBM may also drill certain areas at Pedra Branca during 2012; however Anglo has not finalized their work program for 2012.

**Pachuca-Real Silver-Gold Property (Mexico)**

1. Property Description and Location

As of year-end 2011 the Pachuca-Real property consisted of approximately 31,300 hectares of mineral rights encompassing about 10% of the historic Pachuca-Real del Monte silver-gold mining district of central Mexico, but mainly areas situated to the north and northwest of the historic district, termed the North District, and areas east of the historic district. Solitario owns 100% of the property, except for the 6,240-hectare El Cura claim, that is subject to an Option to Purchase Agreement (the "Agreement") with a private Mexican party completed in May 2006. The Agreement was amended in May 2009, April 2009 and again in October 2011. Under the revised terms, Solitario is required to pay \$15,000 every six months, starting in May 2012, to the underlying owner to keep the option in good standing. By October 2014, Solitario must either exercise the option to acquire 100% interest in the concession by paying the underlying owner \$500,000, or the option will terminate. Solitario may terminate its option at anytime without any further costs. Concession fees due to the government of Mexico totaling approximately \$76,000 were paid in 2011 and were funded by our former joint venture partner. Additionally, our former joint venture partner paid \$40,000 in option payments to private individuals in 2011 to keep properties in good standing.

On September 25, 2006, we signed a definitive venture agreement regarding the Pachuca project with Newmont de Mexico, S.A. de C.V. ("Newmont"), a wholly owned subsidiary of Newmont Mining Corporation. In December 2008 Newmont terminated its right to earn an interest in the property and Solitario retained its 100% interest in the property. On April 27, 2010, Solitario signed a definitive Venture Agreement with Compañía de Minas Buenaventura S.A.A. ("Buenaventura"). In December 2011 Buenaventura terminated its right to earn an interest in the property and Solitario retained a 100% interest in the property.

2. Accessibility, Climate, Local Resources, Infrastructure and Physiology

The project is located about 80 kilometers north of Mexico City near the city of Pachuca. Access is excellent throughout much of the project area with moderately maintained gravel roads. The city of Pachuca, with excellent modern infrastructure, lies in the southern portion of the property. The project topography ranges in elevation from 2,100 to 3,000 meters. The climate ranges from semi-arid in the lower elevations, which tend to be sparsely vegetated to temperate in the higher elevations, that tend to be well-forested.

3. History

The Pachuca district has a long, nearly unbroken history of silver and gold production beginning somewhere around 1550 by the Spaniards. Total silver production during this five and a half-century period is estimated at approximately 1.4 billion ounces of silver and more than seven million ounces of gold. Nearly 80% of its total production occurred during a 60-year period from 1900 to 1960. Mining in the old district ceased in 2004 due to the depletion of ore reserves. Our claim position, predominantly situated north of the historic district, was held by the Mexican government from 1947 to the early 1990's, whereupon the concessions were sold to a private Mexican company and held by that same company until early 2006, when the land became free to staking. We immediately applied, and were granted, title to the concessions.

4. Geological Setting

The geology of the Pachuca-Real project area is dominated by a thick sequence of Tertiary-aged volcanic and volcanic-related rock formations of dominantly andesitic composition. This thick pile of volcanic rocks is cut by a series of younger east-west trending and northwest-southeast trending quartz porphyry and dacite porphyry dikes. The volcanic rocks are gently dipping on a regional scale, but locally display moderate dips of up to 40 degrees. In the old district, structures typically have a west-northwest to east-southeast trend, except in the Real del Monte area that has a north-south trend. Basement rocks within



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the project area consist of Cretaceous-aged sedimentary rocks. Overlying the thick andesitic pile of volcanic rocks is another sequence of volcanic and volcanic-related rocks that are thin to moderately thick formations of primarily dacitic composition. These rocks are generally post-mineralization in age.

## 5. Prior Exploration

The old Pachuca-Real del Monte mining district has been intensely explored and mined throughout its long history, but this is not the area of our current exploration focus. We believe the area of greatest potential lies about 10 kilometers north of the main district and an area immediately east of the historic district. Exploration in this area (North District) during the past 60 years was restricted to mainly surface sampling with a very limited amount of drilling and tunneling. We compiled all the historical data that we were able to obtain and conducted a limited surface rock and soil sampling program in the first half of 2006, prior to Newmont becoming our joint venture partner.

Newmont collected a total of 2,865 geochemical samples from outcrops, dumps, old mine workings, and channel samples and also conducted detailed geologic mapping to define drill targets. Newmont also completed two campaigns of core drilling from mid-2007 to mid-2008, believed to have been the first ever drilling by a modern exploration company in the North District. In 2010 Buenaventura collected approximately 1,700 geochemical samples from the surface and existing underground workings. In 2011 Buenaventura completed a 38-hole core drilling program.

## 6. Mineralization

The historic Pachuca-Real del Monte mining district is a classic large-scale vein district nearly 11 kilometers in an east-west direction and 7 kilometers in a north-south direction. Hundreds of near-vertical veins associated with fractures, faults and dikes occur throughout the district. The major veins have productive stopes in excess of a kilometer in length, up to 600 meters in vertical extent and 1-5 meters in average width. The veins are characterized by low sulfide and base metal content and weak wallrock alteration. Historical average grades for the district are 500 g/t silver and 2.5 g/t gold.

In the North District, discrete vein systems are distributed over an area 20 kilometers long in an east-west direction and 10 kilometers wide in a north-south direction. Thirty-eight separate vein swarms have been identified and mapped. Geologically the mineralization both at surface and in drill core is very similar to the historic district. Specifically, mineralization consists of veins characterized by low sulfide and base metal content with weak alteration. Veins identified to date tend to be narrow, generally a meter or less thick. Some vein systems, however, display multiple parallel vein structures with over 10 separate vein intercepts.

## 7. Drilling

Newmont tested 11 different target areas in 2007 and 2008 by completing 19 core holes totaling 7,873 meters. Ten of the holes intersected significant mineralization in six different prospects. Better intercepts included:

Prospect Name	Drill Hole	From-To (m)	Width (m)*	Gold g/t	Silver g/t
San Juan Gallo	PAC-08	266.4 – 267.3	0.90	2.03	754.0
El Escribano	PAC-09	129.3 – 129.9	0.6	0.19	144.0
		245.0 – 245.5	0.5	0.75	468.0
		323.3 – 323.8	0.5	0.26	163.0
Tierras Colorados	PAC-10	380.3 – 381.7	1.4	0.03	119.3
Investigadora	PAC-11	314.4 – 315.25	0.85	1.28	173.0
San Juan Gallo	PAC-13	156.9 – 158.85	1.95	0.63	144.8
		158.4 – 158.85	0.45	1.98	335.0
		235.0 – 236.0	1.0	0.44	141.8
El Escribano	PAC-18	73.1 – 73.4	0.3	1.37	1685
		274.65 – 276.05	1.4	1.00	458.4

\*True thickness has not been determined and could be substantially less than the drill width for some intervals

Buenaventura completed a 38-hole core drilling program totaling 13,489 meters on the project in 2011. Twenty of the holes intersected at least one interval grading in excess of 100 grams per tonne silver equivalent. Most of the holes were widely spaced on 17 separate vein prospects scattered over an area measuring 14 kilometers by 8 kilometers. The 10 best drill hole intercepts are presented in the table below.

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Prospect Name	Drill Hole	From-To (m)	Width (m)*	Gold g/t	Silver g/t
Investigadora	Pan11-12	217.75-218.60	0.85	1.95	271.47
Investigadora	Pan11-18	236.25-237.00	0.75	0.97	317.00
San Marcial	Pan11-19	225.15-225.60	0.45	0.75	657.00
La Perla	Pan11-22	344.90-345.90	1.00	6.30	53.48
Santa Rosa	Pan11-25	252.60-255.00	2.40	1.43	158.27
Santa Rosa	Pan11-27	144.90-145.50	0.60	5.60	837.00
Sumbimbliá	Pan11-28	46.30-47.35	1.05	16.40	238.86
Escribano Norte	Pan11-29	444.45-445.05	0.60	2.60	834.00
Escondida	Pan11-31	250.30-251.15	0.85	8.40	283.00
Escribano Sur	Pan11-34	238.85-240.40	1.55	0.90	165.00

\*True thickness has not been determined and could be substantially less than the drill width for some intervals

8. Sampling, Analysis and Security of Samples

From September 2006 to December 2008, and from September 2009 to December 2011, our joint venture partners, Newmont and Buenaventura, controlled all field activities on the project and were responsible for the security of samples. Newmont and Buenaventura have indicated to us that there were been no breaches in the security of the samples. We retained control of all samples from December 2008 to April 27, 2010, and believe that adequate procedures were in place to ensure the security and integrity of samples.

Assaying was done by ALS Chemex Laboratories for both Newmont and Buenaventura. Both companies maintained a quality assurance program for assaying utilizing standard samples, duplicate samples and check assaying of selected samples at third party laboratories. We have reviewed both Newmont's and Buenaventura's sampling procedures and believe they meet or exceed industry and regulatory quality control standards.

9. Mineral Resource and Mineral Reserve Estimations

There are no reported reserves or resources.

10. Mining Operations

There are no current mining operations associated with this project.

## 11. Planned Exploration

We are currently reviewing the results of Buenaventura's exploration results to determine our next course of action. We may seek a new joint venture partner in 2012.

### **Chambara Zinc Property (Peru)**

In September 2006, we acquired 3,700 hectares of 100%-owned mineral rights through concessions for our Chambara (formerly called Amazonas) property in northern Peru. We formerly held 300 hectares in the project since 1997. In 2007 we acquired new concessions covering an additional 5,600 hectares at the Chambara project. At December 31, 2007, the Chambara project consisted of six widely spaced areas where previous sampling had identified high-grade zinc mineralization at surface similar to that found at Florida Canyon, discussed above under our Bongará zinc property. The land holdings consisted of 13 concessions totaling 9,600 hectares.

On April 4, 2008 we signed the Minera Chambara shareholders agreement with Votorantim Metais Cajamarquilla, S.A., a wholly owned subsidiary of Votorantim Metais (both companies referred to as "Votorantim") for the exploration of a large area of interest in northern Peru measuring approximately 200 by 85 kilometers. Votorantim is the project manager, and funds and conducts all exploration on the project. Votorantim contributed 52 mineral concessions within the area of interest totaling 52,000 hectares to Minera Chambara for a 15% interest in Minera Chambara. We contributed 9,600 hectares of mineral claims and certain exploration data in our possession for an 85% interest in Minera Chambara. Existing and future acquired properties

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subject to the terms of the shareholders agreement will be held by Minera Chambara. As of December 31, 2011, Minera Chambara's only assets are the properties and Minera Chambara has no debt. Votorantim may increase its shareholding interest to 49% by expending \$6,250,000 over seven years and may increase its interest to 70% by funding a feasibility study and providing for construction financing for Solitario's interest. If Votorantim provides such construction financing, we would repay that financing, including interest, from 80% of Solitario's portion of the project cash flow.

In 2010 Votorantim placed the project on care and maintenance, focusing all of their efforts on the Bongará project. The only field work conducted in 2011 and planned for 2012 is social work in preparation for any future exploration programs. Minera Chambara now controls 190 concessions totaling approximately 167,000 hectares of mineral rights. In June 2012 payments of approximately \$522,000 to the Peruvian government will be due by Votorantim in order to maintain the mineral rights.

### **Newmont Alliance (Peru)**

On January 18, 2005, we signed a Strategic Alliance Agreement (the "Alliance Agreement") with Newmont Overseas Exploration Limited ("Newmont"), to explore for gold in South America (the "Strategic Alliance"). Prior to the definitive agreement, we had signed a Letter of Intent on November 17, 2004, with Newmont. Concurrent with the signing of the Alliance Agreement, Newmont Mining Corporation of Canada purchased 2.7 million shares of Solitario (at the time, an approximately 9.9% equity interest) for Cdn\$4,590,000. As part of the Alliance Agreement we spent \$3,773,000 on exploration on Strategic Alliance areas covered by the Alliance Agreement. Under the terms of the Alliance Agreement, we granted Newmont a 2% net smelter royalty on five properties ("Strategic Alliance Properties") that fall within Strategic Alliance areas. If we meet certain minimum exploration expenditures on Strategic Alliance Properties, Newmont will have the right to joint venture acquired properties and earn up to a 75% interest by taking the project through feasibility and financing Solitario's retained 25% interest into production. Newmont may elect to earn a lesser interest or no interest at all, in which case it would retain its 2% net smelter return royalty.

As of December 31, 2011 we retain three property positions that fall within Strategic Alliance areas and are subject to the provisions of the Newmont Alliance as discussed above. These include the La Promesa, Excelsior and Cerro Azul properties. The Cerro Azul property was staked in 2007, the La Promesa and Excelsior properties were staked in early 2008. All three properties are 100%-owned, subject to the Alliance Agreement, and are situated within the central Peru mineral belt that is proximal to the giant Cerro de Pasco silver-base metal district.

During 2010, we recorded a mineral property write-down on Strategic Alliance Properties of \$16,000 for the Santiago property and \$28,000 related to the Cajatambo property. In 2011, we recorded a mineral property write-down of \$10,000 for the Paria Cruz property.

1. La Promesa

The La Promesa property, acquired in 2008, consists of three concessions totaling 2,600 hectares. No payments are due to third parties so the only holding costs for the mineral rights are annual payments of three dollars per hectare to the Peruvian government during the first six years that the claims are held. In February 2012 Newmont waived its right to joint venture La Promesa and allowed us to potentially joint venture the project with another company. During 2012 we hope to secure a joint venture partner to advance the project.

At least five high-grade polymetallic veins have been identified and sampled at surface. Although sampling on the project is limited to date, it is encouraging. Two of the veins, about 300 meters apart, have been traced for at least 400 meters along strike. There appears to be a systematic trend towards greater vein thickness with depth, as the widest observed vein in outcrop occurs at the lowest elevation sampled to date. Channel sampling along 300 meters of strike length from the best exposed vein yielded the following high-grade results:

Chip Channel True	Silver	Zinc	Lead	Indium	
Number	Width	grams/t	%	%	grams/t
A	2.8	758	19.4	7.2	153
B	1.1	181	21.0	2.4	190
C	0.5	433	10.5	6.3	23
D	0.4	458	10.2	10.8	15
E	1.0	346	5.9	3.4	27
F	1.2	1975	33.1	5.6	430

Table of Contents2. Cerro Azul

The Cerro Azul property acquired in 2007 consists of three concessions totaling 2,400 hectares. The geology of the property consists of Tertiary volcanics cut by a system of parallel quartz veins. Veins are up to two meters wide and can be traced along strike up to 1.2 kilometers. Some of the veins are polymetallic in character, within a low-sulfidation geologic environment. Other veins are gold-rich and locally occur in sheeted zones of up to 80 meters in width.

In 2011 we completed 11 core holes totaling 2,016 meters on four different vein systems. The holes were widely scattered over an area measuring 2,200 meters long by 1,400 meters wide. Seven of the drill holes intersected mineralization. The six best drill holes are provided in the table below.

Drill Hole	From-To (m)	Width (m)	Gold gpt	Silver gpt	Zinc+Lead %
AZ-001	80.30-84.80	4.50	1.16		
	113.55-117.50	3.95	1.91	90.4	2.50%
AZ-002	92.60-93.60	1.00	3.10		
	112.20-115.10	2.90	1.35	64.10	2.30%
AZ-003	119.10-173.55	54.50	0.46	7.30	0.40%
Incl.	123.20-128.00	6.90	1.46		
Incl.	165.82-168.54	2.70	1.80	42.90	2.60%
AZ-004	30.37-31.30	0.93		273.90	
	166.00-171.00	5.00	1.40	22.60	
AZ-005	133.80-134.65	0.85	0.73	88.10	2.90%
AZ-011	29.00-30.30	1.30	7.60	32.20	

3. Excelsior

The Excelsior property, acquired in 2008, consists of two concessions totaling 2,000 hectares. The geology of the property consists of a sequence of metamorphosed Ordovician sedimentary formations. Mineralization consists of gold-bearing massive and stockwork quartz-iron replacements associated with an intrusive dike in phyllites. The quartz replacements can be traced intermittently over a length of eight kilometers and a width of up to one kilometer. Mineralization is also associated with regional faulting along the hinge of an anticline. No work was conducted on the property in 2011.

Royalty Properties

### **Yanacocha Royalty Property (Peru)**

The Yanacocha royalty property consists of 69 concessions totaling approximately 61,000 hectares in northern Peru, 25 kilometers north of the city of Cajamarca. The property position consists of a rectangular-shaped contiguous block of concessions nearly 50 kilometers long in an east-west direction and 25 kilometers wide in a north-south direction. The southern boundary of the royalty property abuts Newmont Mining Corporation's Minera Yanacocha mining operation, a large gold mine currently in operation. The majority of concessions were acquired in 1993, with several concessions added in 1994 and 1995. From 1994 through 2000, exploration work, including drilling, was conducted by us, or our joint venture partners, Barrick Gold Corporation, Rio Tinto, Ltd., and Placer Dome, Inc., at various times. All three companies terminated their respective option to earn an interest in the property.

We held the concessions until April 2000, at which time we signed an agreement with Newmont Peru, Ltd., a wholly-owned subsidiary of Newmont Mining Corporation (both companies referred to as "Newmont"), whereby we sold our Yanacocha Property to Newmont for \$6,000,000 and a sliding scale net smelter return royalty ("NSR-Royalty") that varied from two to five percent, depending on the price of gold.

In January 2005 we signed an Amended and Restated Royalty Grant with Minera Los Tapados S.A., a subsidiary of Newmont Peru Limited, Minera Yanacocha S.R.L., and Minera Chaupiloma Dos de Cajamarca, S.R.L. (affiliates of Newmont Peru, Ltd., collectively "Newmont Peru") to modify the NSR-Royalty schedule. The modified royalty structure is classified into several categories, depending on the type of process used to recover each metal, gold and copper prices, as well as any government royalty burden imposed by Peru on the project ores. Assuming the current maximum royalty due the government



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of Peru and gold prices above \$500 per ounce, our gold royalty ranges from 1% to 2¾%, our silver royalty would be 2% and our copper royalty would be 1%.

As part of the NSR-Royalty modification, Newmont Peru, through its subsidiaries and/or affiliates, agreed to spend an aggregate of \$4.0 million on Solitario's royalty property during the next eight years. Details of the work commitment calls for the following expenditure schedule:

<u>Period</u>	<u>Amount</u>	<u>Cumulative</u>
Between 1/1/05 to 12/31/06	\$1,000,000	\$1,000,000
Between 1/1/07 to 12/31/08	\$1,000,000	\$2,000,000
Between 1/1/09 to 12/31/10	\$1,000,000	\$3,000,000
Between 1/1/11 to 12/31/12	\$1,000,000	\$4,000,000

Newmont has met all of its required expenditure requirements through December 31, 2011. No resources or reserves have been reported by Newmont, nor has any mining been conducted on the property,

**Mercurio Gold Property (Brazil)**

The Mercurio gold property is located in Para State in Northern Brazil approximately 250 km south of the town of Itaituba. It consists of three exploration concessions totaling 8,476 hectares. An option agreement dated March 14, 2005 with the underlying claim and surface rights holder provides for transfer of a 100% interest of the mineral estate to Solitario and payment by Solitario of approximately \$350,000 over a period of 60 months.

In November 2010 Solitario signed a definitive agreement with Regent Holdings, Ltd., a wholly-owned subsidiary of Brazilian Gold Corporation, ("Regent"), whereby Solitario agreed to transfer its rights to the property to Regent, providing that Regent complete the following: (i) take over Solitario's obligations under the option agreement; (ii) pay Solitario \$1,000,000 over the next four years, in annual amounts of \$50,000, \$100,000, \$200,000 and \$650,000 beginning upon the Brazilian government issuing title to one of the concessions; and (iii) invest a minimum of \$900,000 in exploration expenditures over the same period. Regent made its initial payment of \$50,000 in October 2011. Upon the completion of all payments, Regent will own Mercurio and Solitario will retain a 1.5% NSR royalty on all ounces of gold produced at Mercurio up to 2 million ounces and Solitario will retain a 2.0% NSR royalty on all ounces of gold produced at Mercurio over 2 million ounces. Regent may terminate the agreement at any time after six months from the date of signing the agreement. Regent will be responsible for all payments to keep the Mercurio claims in good standing during the period of the agreement. No mineral reserves or resources are reported on the property. With exception of small scale artisanal mining for gold by gravity methods that has been conducted on the property for 10 years, there are no mining operations on the property. Regent completed a drilling program in 2011 and plans to conduct additional drilling in 2012.

### **La Tola Royalty Property (Peru)**

In October 2003, we acquired the La Tola project Peru to explore for gold and possibly silver. The 1,000-hectare project is located in southern Peru. In February 2011 we signed a definitive agreement with Estrella Gold Corp. ("EGC"), successor to Canadian Shield Resources allowing EGC to earn a 100%-interest in the property, subject to a 2% NSR royalty to our benefit. To earn its interest, EGC is required to spend \$2.0 million in exploration by December 31, 2015. EGC has the right to purchase the 2% NSR royalty for \$1.5 million anytime before commercial production is reached. Because the agreement with EGC provides that our ending interest in La Tola will be a 2% NSR royalty, rather than a working interest, we currently classify the La Tola gold property as a royalty property interest.

### **100%-Owned Properties**

#### **Jaripo Silver-Zinc Property (Mexico)**

In December 2011 we optioned the 775-hectare Jaripo silver-zinc project in Sonora, Mexico, from a private Mexican concern. We paid \$5,000 initially, and a further \$25,000 in December 2011. To acquire a 100% interest in the property without any retained royalty due the underlying owner, Solitario must make the following future option payments: 2012-\$75,000; 2013-\$50,000; 2014-\$100,000; 2015-\$1.75 million. We can elect to terminate the option at any time without any future obligations.

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The property is characterized by a vein system that has been traced over a length of 1,500 meters. Another company drilled 12 core holes totaling 1,503 meters in 2010. All the drill holes, except one, intersected mineralization. The best drill-hole intercept was 4.6 meter grading 0.47 gpt gold, 179.5 gpt silver and 3.03% zinc + lead. Since optioning the property, we have conducted detailed surface sampling and mapping. We are planning a 10-hole drilling program in 2012.

**Aconchi Copper Property (Mexico)**

The 8,200-hectare Aconchi property in northern Sonora, Mexico, was acquired in October 2010. It is an early-stage property that displays copper and other trace element anomalies in soils. Most of the area is covered by pediment gravels. We plan to conduct further geochemical surveys, and possibly conduct a geophysical survey in 2012. We may also seek a joint venture partner to more aggressively test the property.

**Norcan Copper Property (Mexico)**

In June 2010 we applied for 16,350 hectares of mineral rights in the state of Sonora north of the Cananea copper mine. We expect to receive title to the two concessions by the second quarter of 2012. Geochemical and biogeochemical surveys in this area exhibit locally anomalous copper values. Most of the area is covered by recent gravel deposits. We are in discussions to joint venture the property.

**Atico Gold-Copper Property (Peru)**

In April 2010 we acquired 1600 hectares by staking at the Atico property in southern Peru. Rock sampling has identified anomalous gold and copper values in skarn alteration of carbonate and intrusive rocks. Surface exploration will continue in 2012.

**Triunfo Gold-Silver-Lead-Zinc Property (Bolivia)**

We signed an Option to Purchase a 100% interest in the mineral rights on the 256-hectare gold, silver, lead and zinc Triunfo property in Bolivia in July 2003. The option, as amended, calls for Solitario to spend up to \$2.3 million on exploration activities over a five-year period and make payments to the underlying owners of up to \$170,000 over the first four years, with an option for us to acquire a 100% interest in the property by making a one-time payment of \$1.0

million by the fifth anniversary of the signing of the option. In June 2008 we amended the agreement to suspend all future payments until such time as we decide to continue exploration drilling. For the right to suspend payments we are required to pay \$5,000 per year. We may elect to terminate the option at any time without any additional payment or work commitment obligations due to the underlying owner.

The project is located about 50 kilometers east of the Bolivian capital of La Paz. The project hosts a large mineralized area extending for at least 800 meters in length and up to 200 meters in width. Mineralization occurs as a stockwork zone of veining within a sequence of Paleozoic shales, siltstones and quartzites. In mid-2007 we completed three core holes totaling 679 meters. All three holes intersected significant widths of low-grade polymetallic mineralization. Drill hole T-1 intersected 94.2 meters grading 0.65% lead, 0.39% zinc, 21.8 gpt silver and 0.39 gpt gold. We currently have the project on care and maintenance status until the political situation in Bolivia becomes sufficiently positive to justify a more significant exploration program.

### **Española (Bolivia)**

We optioned the 1,800-acre Española gold-copper property in western Bolivia from a private third party in July 2008. The initial option payment was \$5,000, with annual payments of \$10,000 until drilling commences. Subsequent to the initiation of drilling, payments escalate over a five-year schedule totaling \$1,000,000 for acquisition of an 85% interest in the mineral rights on the property. For 2012 we are evaluating the possibility of drilling several holes. Our decision on whether or not to drill is mainly dependent upon final changes to the proposed new Bolivian mining law, prioritization with other projects and personnel, and the availability of a drill rig.

The geology of the Española property consists of Tertiary volcanic and sub-volcanic rocks that have been intensely altered over widespread areas. Geologic mapping and geochemical sampling were undertaken by a major mining company in 1993. A limited drilling program yielded several holes that intersected widespread anomalous gold and copper values.

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**Discontinued Projects**

During the fourth quarter of 2011 we abandoned the Paria Cruz project and recorded a mineral property write down of \$10,000. The Paria Cruz property, staked in 2008, consisted of three concessions totaling 3,000 hectares. Exploration results did not support continued work on the property.

During the third quarter of 2010 we abandoned the Santiago prospect and recorded a mineral property write down of \$16,000. The Santiago prospect was acquired in 2007 and consisted of one mining concession totaling 1,000 hectares. Exploration results did not support continued work on the property.

During the second quarter of 2010 we abandoned the Cajatambo, La Noria and Palmira properties and recorded a mineral property write down of \$28,000, \$6,000 and \$5,000, respectively. The Cajatambo property consisted of 11 concessions totaling 10,500 hectares that were acquired in 2008 and 2009. Drilling was conducted in mid-2009 and based on the drilling results we elected to abandon the project on June 30, 2010. The La Noria property was staked in the second quarter of 2008. Surface work conducted throughout 2009 and drilling conducted in the first quarter of 2010 did not support continued work on the project. The Palmira property was optioned in November 2009. Surface sampling, geological mapping, IP-geophysics and drilling were conducted in the first quarter of 2010. Based on the results of drilling, we elected to abandon the project on June 30, 2010.

**GLOSSARY OF MINING TERMS**

“**Amphibolite**” means a metamorphic rock composed chiefly of amphibole and plagioclase and having little or no quartz.

“**Assay**” means to test minerals by chemical or other methods for the purpose of determining the amount of valuable metals contained.

“**Bankable feasibility study**” means a comprehensive study of a mineral deposit in which all geological, engineering, legal, operating, economic, social, environmental and other relevant factors are considered in sufficient detail that it could reasonably serve as the basis for a final decision by a financial institution to finance the development of the deposit for mineral production.

“**Breccia**” means rock consisting of fragments, more or less angular, in a matrix of finer-grained material or of cementing material.

“**Claim or Concession**” means a mining interest giving its holder the right to prospect, explore for and exploit minerals within a defined area.

“**Clastic**” means pertaining to rock or rocks composed of fragments or particles of older rocks or previously existing solid matter; fragmental.

“**Chromite**” means a cubic mineral, ferrous chromate, usually with much of the ferrous iron and aluminum replaced by magnesium, and some of the chromium by ferric iron: the principal ore of chromium.

“**Cut-off grade**” means the grade below which mineralized material will be considered waste.

“**Dacite or Dacitic**” means a fine-grained volcanic rock of intermediate composition between mafic and felsic.

“**Deposit**” means an informal term for an accumulation of mineral ores.

“**Development**” means work carried out for the purpose of opening up a mineral deposit and making the actual ore extraction possible.

“**Dolomite**” means calcium magnesium carbonate,  $\text{CaMg}(\text{CO}_3)_2$ , occurring in crystals and in masses.

“**Dore**” means a mixture of gold and silver cast in bars or bullion, prior to final refining.

“**Dunite**” means a coarse-grained igneous rock composed almost entirely of olivine.

“**Facies**” means the appearance and characteristics of a sedimentary deposit, especially as they reflect the conditions and environment of deposition and serve to distinguish the deposit from contiguous deposits.

“**Fault**” means a fracture in rock along which there has been displacement of the two sides parallel to the fracture.

“**Felsic**” means rocks consisting chiefly of feldspars, quartz and other light colored materials.

“**Granodiorite**” means a coarse-grained acid igneous rock which is intermediate in composition between granite and diorite.

“**gpt**” means grams per tonne.

“**Heap leach**” means a gold extraction method that percolates a cyanide solution through ore heaped on an impervious pad or base.

“**Hornfels**” means a fine-grained metamorphic rock, the result of recrystallization of siliceous or argillaceous sediments by contact metamorphism.

“**Host rock**” means the rock surrounding an ore deposit.

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“**Karst**” means a landscape that is characterized by the features of solution weathering and erosion in the subsurface. These features include caves, sinkholes, disappearing streams, subsurface drainage and deeply incised narrow canyons.

“**Mafic**” means silicate minerals or rocks that are rich in magnesium and iron. Most mafic minerals are dark in color with a high density.

“**Magnetometric**” means the results from an analysis utilizing a magnetometer, an instrument for measuring the intensity of a magnetic field, in this case, the earth's magnetic field.

“**Manto deposits**” means replacement orebodies that are stratabound, irregular to rod shaped ore occurrences usually horizontal or near horizontal in attitude.

“**Metasomatic**” means rocks that form from a series of metamorphic processes whereby chemical changes occur as a result of the introduction of material, often in hot aqueous solutions, from external sources.

“**Mineralization**” means the concentration of metals within a body of rock.

“**NSR**” means net smelter return royalty.

“**Olivine**” means a group of magnesium iron silicates,  $(MgFe)SiO_4$ , occurring in olive-green to gray-green masses as an important constituent of basic igneous rocks.

“**opt**” or “**oz/ton**” means ounces per ton.

“**Ore**” means material containing minerals that can be economically extracted.

“**Ounce**” means a troy ounce.

“**Oxide**” means mineralized rock in which some of the original minerals have been oxidized (*i.e.*, combined with oxygen). Oxidation tends to make the ore more porous and permits a more complete permeation of cyanide solutions so that minute particles of gold in the interior of the minerals will be more readily dissolved.

“**Patented mining claim**” means a mining claim for which the federal government of the United States has passed its title to the claimant, making it private land. A person may mine and remove minerals from a mining claim without a mineral patent. However, a mineral patent gives the owner exclusive title to the locatable minerals. It also gives the owner title to the surface and other resources.

“**Peridotite**” means a dense, dark-colored, coarse-grained igneous rock consisting mostly of the minerals olivine and pyroxene. Peridotite is ultramafic in composition and contains less than 45% silica and is high in magnesium and iron.

“**Porphyry**” means an igneous, usually hard, rock with large crystals embedded in a finer groundmass of minerals.

“**Phyllites**” means a slate-type rock, the cleavage planes of which have a luster imparted by minute scales of mica.

“**Reserves**” or “**ore reserves**” means that part of a mineral deposit, which could be economically and legally extracted or produced at the time of the reserve determination.

“**Sampling**” means selecting a fractional, but representative, part of a mineral deposit for analysis.

“**Sediment**” means solid material settled from suspension in a liquid.

“**Shales**” means a fine-grained sedimentary rock consisting of compacted and hardened clay, silt, or mud that often forms in many distinct layers and splits easily into thin sheets or slabs.

“**Sphalerite**” means a very common mineral, zinc sulfide, usually containing some iron and a little cadmium, occurring in yellow, brown, or black crystals or cleavable masses with resinous luster and it is the principal ore of zinc.

“**Skarn**” means a coarse-grained metamorphic rock formed by the contact metamorphism of carbonate rock often containing garnet, pyroxene epidote and wollastonite.

“**Stockwork**” means a rock mass interpenetrated by multiple, tightly packed small veins of mineralization.

“**Stope**” means an excavation in the form of steps made by the mining of ore from steeply inclined or vertical veins.

“**Stratigraphy**” means the arrangement of rock strata, especially as to the geographic, chronologic order of sequence (age), classification, characteristics and formation.

“**Strike**” when used as a noun, means the direction, course or bearing of a vein or rock formation measured on a level surface and, when used as a verb, means to take such direction, course or bearing.

“**Stripping ratio**” means the ratio of waste to ore in an open pit mine.

“**Sulfide**” means a compound of sulfur and some other element.

“**Tailings**” means material rejected from a mill after most of the valuable minerals have been extracted.

“**Ton**” means a short ton (2,000 pounds).



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“**Tonne**” means a metric ton that contains 2,204.6 pounds or 1,000 kilograms.

“**Vein**” means a fissure, fault or crack in a rock filled by minerals that have traveled upwards from some deep source.

“**Volcaniclastic**” means clastic (made up of fragments of preexisting rocks) rock chiefly composed of volcanic material derived by ejection of volcanic material from a volcanic vent.

**Item 3. Legal Proceedings**

None

**Item 4. Mine Safety Disclosures**

Not applicable

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**PART II**

**Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

Our common stock traded predominantly on the TSX under the symbol SLR prior to August 2, 2006 when Solitario received approval to list its common shares on NYSE Amex Equities (formerly known as the American Stock Exchange). Trading on NYSE Amex Equities began on Friday, August 11, 2006, under the symbol XPL. Since 2008 trading volume on NYSE Amex Equities has exceeded the trading volume on the TSX.

The following table sets forth the high and low sales prices on NYSE Amex Equities for our common stock for the quarterly periods from January 1, 2010 to December 31, 2011.

All prices are in USD\$				
Period	2011		2010	
	High	Low	High	Low
First quarter	\$4.33	\$3.32	\$2.49	\$2.02
Second quarter	3.57	2.55	2.60	1.96
Third quarter	3.10	1.62	2.34	1.79
Fourth quarter	1.77	1.31	4.06	2.12

The following table sets forth the high and low sales prices on the TSX for our common stock for the quarterly periods from January 1, 2010 to December 31, 2011.

All prices are in CDN\$				
Period	2011		2010	
	High	Low	High	Low
First quarter	\$4.20	\$3.30	\$2.62	\$2.07
Second quarter	3.44	2.46	2.72	2.06
Third quarter	2.98	1.63	2.41	1.80
Fourth quarter	1.79	1.35	3.80	2.15

Shares authorized for issuance under equity compensation plans

On June 27, 2006, Solitario's shareholders approved the 2006 Stock Option Incentive Plan (the "2006 Plan"). Under the terms of the 2006 Plan, the Board of Directors may grant up to 2,800,000 options to Directors, officers and employees with exercise prices equal to the market price of Solitario's common stock at the time of grant. However, under the terms of the 2006 Plan, the total number of outstanding options from all plans may not exceed 2,800,000. As of December 31, 2011, we have granted options for 376,500 shares that remain unexercised at Cdn\$1.55 per share and 2,056,900 shares that remain unexercised at Cdn\$2.40.

Equity Compensation Plan Information as of December 31, 2011:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights Cdn\$ (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
2006 Plan			
Equity compensation plans approved by security holders	2,433,400	\$2.27	165,250
Equity compensation plans not approved by security holders	-	N/A	-
Total	2,433,400	\$2.27	165,250

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Holder of our common shares

As of March 8, 2012, we have approximately 3,319 holders of our common shares.

Dividend Policy

We have not paid a dividend in our history and do not anticipate paying a dividend in the foreseeable future.

Use of Proceeds

On April 13, 2011, we sold 3,400,000 shares of our common stock in an underwritten public offering, and on May 9, 2011, we sold an additional 510,000 shares at \$2.50 per share, upon the exercise of the underwriter's option to cover over-allotments. The total number of shares sold in the public offering and the over-allotment were 3,910,000 shares (the "Offering") for an aggregate offering price of \$9,775,000 (the "Offering"). In addition to a commission of 6% totaling \$587,000, we incurred indirect costs related to legal, accounting and other costs related to the Offering of \$251,000, all of which have been charged to additional paid-in-capital, in arriving at the net proceeds from the offering of \$8,937,000. None of these costs were paid to officers, directors or their associates, to persons holding 10 percent or more of any class of our equity securities or to our affiliates. Roth Capital Partners was the sole underwriter of the Offering. The Offering was made pursuant to a shelf registration statement on Form S-3 previously filed with the SEC on March 18, 2011, which was declared effective on March 29, 2011 (File Number 333-172929). A prospectus supplement relating to the Offering has been filed with the SEC and is available on the SEC's website located at [www.sec.gov](http://www.sec.gov).

The proceeds, from the date of the Offering (including the proceeds from the over-allotment) through December 31, 2011 were used for the following:

Repayment of short-term borrowing	\$1,915,000
Purchase of Royalty Buy-down	1,520,000
Exploration and property additions at Mt. Hamilton	3,322,000
Other exploration and general working capital *	2,180,000
Total use of proceeds	<u>\$8,937,000</u>

\* Based upon an estimate of use of proceeds between cash available from the Offering and cash available from cash on hand prior to the Offering, cash from sales of Kinross and cash proceeds from option exercises during the period.

None of the proceeds of the Offering were used for direct or indirect payments to officers, directors or their associates, or persons owning 10 percent or more of any class of our equity securities or to our affiliates. The Royalty Buy-down had not been entered into at the time of the prospectus supplement, discussed above, and therefore was not specifically identified in the use of proceeds at that time, but was generally included under the caption “general corporate purposes, including possible acquisition and exploration of new mining properties.”

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The following table summarizes the consolidated statements of operations and balance sheet data for our business since January 1, 2007. This data has been derived from the audited consolidated statements of operations for our business for each of the five years ended December 31, 2011 and the audited consolidated balance sheets of our business as of December 31, 2011, 2010, 2009, 2008 and 2007. You should read this information in conjunction with Item 7 – "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Solitario's historical consolidated financial statements and notes included in Item 8 – "Financial Statements and Supplementary Data." The information set forth below is not necessarily indicative of future results.

Balance sheet data: As of December 31,  
(in thousands)

	2011	2010	2009	2008	2007
Total current assets	\$ 5,281	\$ 6,113	\$ 6,742	\$ 4,997	\$ 7,972
Total assets	\$22,054	\$29,608	\$24,641	\$26,463	\$30,430
Working capital (1)	\$ 345	\$ 134	\$ 4,318	\$ 3,415	\$ 6,245
Shareholders' equity	\$13,873	\$13,776	\$15,114	\$18,051	\$18,267

Statement of operations data: Year ended December 31,  
(in thousands, except per share amounts)

	2011	2010	2009	2008	2007
Property and joint venture revenue	\$ 242	\$ 200	\$ 200	\$ 200	\$ 100
Net loss	<u>\$(3,377)</u>	<u>\$(4,066)</u>	<u>\$(1,786)</u>	<u>\$(617)</u>	<u>\$(5,440)</u>
Per share information:					
Basic and diluted					
Net loss	<u>\$(0.10)</u>	<u>\$(0.14)</u>	<u>\$(0.06)</u>	<u>\$(0.02)</u>	<u>\$(0.18)</u>

(1) Working capital consists of current assets less current liabilities.

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**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

The following discussion should be read in conjunction with the information contained in the consolidated financial statements and notes thereto included in Item 8 "Financial Statements and Supplementary Data." Our financial condition and results of operations are not necessarily indicative of what may be expected in future years.

**(a). Business Overview and Summary**

We are, as of February 22, 2012, a development stage company (prior to February 22, 2012 we were an exploration stage company) with a focus on the acquisition of precious and base metal properties with exploration potential and the development or purchase of royalty interests. We announced on February 22, 2012 the completion of a feasibility study on our Mt. Hamilton project (the "Feasibility Study"), prepared by SRK Consulting (US), Inc. of Lakewood, Colorado ("SRK"). As a result of the completion of the Feasibility Study, we have earned an 80% interest in the Mt. Hamilton project and intend to develop the Mt. Hamilton project, subject to a number of factors including obtaining necessary permits and availability of required capital, none of which is currently in place. The Mt. Hamilton project is discussed below under "Ely Gold Investment and the Mt. Hamilton Joint Venture." In addition, we acquire and hold a portfolio of exploration properties for future sale, joint venture or to create a royalty prior to the establishment of proven and probable reserves. Although our mineral properties may be developed in the future by us or through a joint venture, and we currently intend to develop the Mt. Hamilton project, we have never developed a mineral property. We may also evaluate mineral properties to potentially buy a royalty.

Solitario was incorporated in the state of Colorado on November 15, 1984 as a wholly owned subsidiary of Crown Resources Corporation. We have been actively involved in this business since 1993. We recorded revenues from joint venture delay rental payments related to our Bongará project of \$200,000, each year, during 2011, 2010 and 2009 and we recorded \$42,000 in delay rental joint venture property payments during 2011 related to a \$50,000 payment received on our Mercurio project, less capitalized costs of \$8,000. Previously, our last significant revenues were recorded in 2000 upon the sale of our Yanacocha property for \$6,000,000. We expect that future revenues from joint venture payments or the sale of properties, if any, would also occur on an infrequent basis. At December 31, 2011, we had 12 exploration properties in Peru, Bolivia, Mexico and Brazil, and two royalty properties in Peru and one royalty property in Brazil. We are conducting exploration activities in all of those countries. As discussed below under "Recent Developments," in August 2010 we signed a Letter of Intent ("LOI") with Ely Gold & Minerals, Inc. ("Ely"), and in December 2010 we signed the Limited Liability Company Operating Agreement for Mt. Hamilton, LLC (the "MH Agreement") to earn up to an 80% interest in the Mt. Hamilton project located in Nevada.

In addition to our work at Mt. Hamilton, we have expertise in identifying mineral properties with promising mineral potential, acquiring these mineral properties and exploring them to enable us to sell, joint venture or create a royalty on these properties prior to the establishment of proven and probable reserves. For these early-stage projects, one of our primary goals is to discover economic deposits on our mineral properties and advance these deposits, either on our own or through joint ventures, up to the development stage (development activities include, among other things, the

completion of a feasibility study for the identification of proven and probable reserves, as well as permitting and preparing a deposit for mining). At that point, or sometime prior to that point, we would attempt to either sell our mineral properties, pursue their development either on our own or through a joint venture with a partner that has expertise in mining operations or create a royalty with a third party that continues to advance the property.

In analyzing our activities, the most significant aspect relates to results of our exploration and potential development activities and those of our joint venture partners on a property-by-property basis. When our exploration or development activities, including drilling, sampling and geologic testing, indicate a project may not be economic or contain sufficient geologic or economic potential we may impair or completely write-off the property. Another significant factor in the success or failure of our activities is the price of commodities. For example, when the price of gold is up, the value of gold-bearing mineral properties increases; however, it also becomes more difficult and expensive to locate and acquire new gold-bearing mineral properties with potential to have economic deposits. We anticipate the success of our development activities on our Mt. Hamilton property will become increasingly important in the future.

The potential sale, joint venture or development of our mineral properties will occur, if at all, on an infrequent basis. Accordingly, while we conduct development activities at the Mt. Hamilton project, we need to maintain and replenish our capital resources. We have met our need for capital in the past through (i) the sale of properties, which last occurred in 2000 with the sale of our Yanacocha property for \$6,000,000; (ii) joint venture payments, including delay rental payments of \$200,000, each year, respectively, received during 2010 and 2009 on our Bongará property; (iii) sale of our investment in Kinross; (iv) short-term margin borrowing secured by our investment in Kinross; and (v) issuance of common stock, including exercise of options. We have reduced our exposure to the costs of our exploration activities in the past through the use of joint



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ventures; however we do not have any current plans to joint venture Mt. Hamilton. Although we anticipate these practices will continue for the foreseeable future, we can provide no assurance that these sources of capital will be available in sufficient amounts to meet our needs, if at all.

## (b). Recent Developments

*Feasibility Study*

On February 22, 2012, we announced the completion of the Feasibility Study, and as a result we earned an 80% interest in MH-LLC, and became a development-stage company (but not a company in the “Development Stage”) and we reported the following mineral reserves at our Mt. Hamilton project:

**Mineral Reserves Statement, Centennial Gold-Silver Deposit,****White Pine County, Nevada****SRK Consulting (Inc.)**

Reserve Category	Tons (millions)	Gold Grade		Silver Grade*		Contained Gold (koz)**	Contained Silver (koz)**
		oz/ton	g/tonne	oz/ton	g/tonne		
Proven	0.923	0.032	1.10	0.155	5.31	29.3	142.7
Probable	21.604	0.021	0.72	0.134	4.59	457.8	2,884.3
Proven + Probable	22.527	0.022	0.75	0.136	4.66	487.1	3,028.2

\*Reported silver grade is cyanide soluble. \*\*Some numbers may not add due to rounding.

*Equity financing*

On April 13, 2011, we sold 3,400,000 shares of our common stock in the Offering at a price to the public of \$2.50 per share and on May 9, 2011, we sold an additional 510,000 shares at \$2.50 per share, upon the exercise of the underwriter’s option to cover over-allotments. The net proceeds from the Offering were \$8,937,000 after the underwriter’s commission of six percent totaling \$587,000 and offering costs of \$251,000. The Offering was made pursuant to a shelf registration statement on Form S-3 previously filed with the SEC on March 18, 2011, which was declared effective on March 29, 2011. A prospectus supplement relating to the Offering has been filed with the SEC

and is available on the SEC's website located at [www.sec.gov](http://www.sec.gov).

*Ely Gold investment and the Mt. Hamilton Joint Venture*

On August 26, 2010, we signed a letter of intent (the "LOI") with Ely to make certain equity investments into Ely and to joint venture Ely's Mt. Hamilton gold project, which was wholly-owned by DHI-Minerals (US) Ltd. ("DHI-US"). DHI-US is an indirect wholly-owned subsidiary of Ely. The LOI and the joint venture terms and equity investments, described below were subject to the approval (the "Approval") by Ely shareholders and regulatory approval from the TSX Venture Exchange ("TSXV"), which was received on October 18, 2010. Pursuant to the LOI, on August 26, 2010 and October 19, 2010, we made private placements of Cdn\$250,000 each in Ely. We received a total of 3,333,333 shares of Ely common stock and warrants to purchase a total of 1,666,667 shares of Ely stock (the "Ely Warrants") for an exercise price of Cdn\$0.25 per share, which expire two years from the date of purchase. The placements were part of the LOI to joint venture Ely's Mt. Hamilton gold project. On November 12, 2010 we made an initial contribution of \$300,000 for a 10% interest in MH-LLC which was formed in December 2010. The terms of the joint venture are set forth in the Limited Liability Company Operating Agreement of Mt. Hamilton LLC ("MH-LLC") between us and DHI-US (the "MH Agreement"). Pursuant to the terms of the MH Agreement, we determined that upon formation, MH-LLC was a variable interest entity (a "VIE") and we controlled MH-LLC and were the primary beneficiary of MH-LLC in accordance with ASC 810. As a result of our controlling interest in MH-LLC, we consolidated MH-LLC and its debt with an initial fair value of \$3,066,000 related to MH-LLC. As a result of the completion of the Feasibility Study, we have earned an 80% interest in the Mt. Hamilton project and intend to develop the Mt. Hamilton project, subject to a number of factors including obtaining necessary permits and availability of required capital, none of which is currently in place. See a more complete discussion of Ely and MH-LLC in Note 12 to the consolidated financial statements, "Ely Gold investment and the Mt. Hamilton Joint Venture" in Item 8 "Financial Statements and Supplementary Data." During the year ended December 31, 2011, we made cash payments of \$200,000 and issued 50,000 shares of common stock, valued at \$140,000, to DHI-US as part of our earn-in to MH-LLC. These payments were recorded as contra-noncontrolling interest account in the equity section of the consolidated balance sheet.

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*Royalty buy-down*

On May 17, 2011, we entered into an agreement, along with our subsidiary MH-LLC, with an underlying royalty holder on our Mt. Hamilton property whereby we delivered, for the benefit of MH-LLC, 344,116 shares of our common stock, with a fair market value of \$1,000,000 based upon a 20-day weighted average quoted stock price, and \$1,520,000 of cash, to reduce the future net smelter royalty (the "Royalty Buy-down") from a maximum royalty of 8% to a maximum royalty of 6%. MH-LLC retains its existing right to further reduce the net smelter royalty at Mt. Hamilton by an additional 5%, to an ultimate royalty of 1%, as further discussed in Note 12 to the consolidated financial statements, "Ely Gold investment and the Mt. Hamilton Joint Venture" in Item 8 "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K for the year ended December 31, 2011. As part of the Royalty Buy-down transaction, we agreed to loan \$504,000 to DHI-US, the non-controlling member of MH-LLC, for its mutually agreed 20% of the total purchase price contributed by us to MH-LLC to fund the Royalty Buy-down. This loan is unsecured; bears interest at 6% per annum and the loan and any accrued interest thereon will only be repaid from 80% of DHI-US share of distributions from MH-LLC, if any. We have recorded the loan of \$504,000 as an offset to DHI-US's non-controlling interest in MH-LLC, as the loan represents a claim on DHI-US's share of the future distributions from MH-LLC. During the year ended December 31, 2011, we accrued \$19,000, of interest on the \$504,000 loan as an offset to DHI-US's minority interest in the equity section of our consolidated balance sheet.

*Investment in Kinross*

We have a significant investment in Kinross at December 31, 2011, which consists of 850,000 shares of Kinross common stock. During 2011, 2010 and 2009, we sold 130,000, 70,000 and 100,000 shares, respectively, of Kinross common stock for proceeds of \$2,035,000, \$1,301,000 and \$1,852,000. As of March 8, 2012, we own 820,000 shares of Kinross common stock. Our investment in Kinross common stock represents a significant concentration of risk and any significant fluctuation in the market value of Kinross common shares could have a material impact on our liquidity and capital resources. In October 2007, we entered into a collar that limited the proceeds on 900,000 shares of Solitario's investment in Kinross common shares. On April 12, 2011, the final tranche of the Kinross Collar due on that date expired, and 100,000 shares under the Kinross Collar were released. The Kinross Collar has expired as of that date and no shares are subject to the Kinross Collar. No shares were delivered to UBS under the Kinross Collar and no cash was paid or received upon termination of the Kinross Collar. On April 13, 2010, a tranche of the Kinross Collar due on that date expired, and 400,000 shares under the Kinross Collar were released. During 2011, 2010 and 2009, Solitario has from time to time sold covered calls against its holdings of Kinross. As of December 31, 2011 Solitario has no covered calls outstanding against its holdings of Kinross shares. The Kinross Collar and Kinross Calls are discussed below under Note 6 to the consolidated financial statements, "Derivative instruments." As of December 31, 2011, Solitario has borrowed \$2,000,000 in a margin loan against its holdings of Kinross shares. The short-term margin loan is discussed below under Note 3 to the consolidated financial statements, "Short-term debt."

*Mineral property*

During the year ended December 31, 2011, we capitalized a total of \$235,000, related to the acquisition of certain leases located near the Mt. Hamilton project, owned by MH-LLC and we capitalized \$2,520,000 for the Royalty Buy-down discussed above. We also capitalized \$10,000 of mineral properties in Mexico during the year ended December 31, 2011. All exploration costs on our properties, including any additional costs incurred for subsequent lease payments or exploration activities related to our projects, are expensed as incurred.

*Stock option liability – Change in accounting principle*

On January 1, 2011, we changed our accounting for stock options to equity accounting from liability accounting in accordance with ASU 2010-13. In accordance with ASU 2010-13, this change in accounting principle has been made on a prospective basis as of January 1, 2011 with a reduction to stock option liability of \$2,775,000, an increase to additional paid-in-capital of \$1,240,000 and a reduction in accumulated deficit of \$992,000, net of deferred taxes of \$543,000. The newly adopted accounting principle is preferable because it improves consistency in financial reporting by eliminating diversity in accounting practice. See Note 9, “Employee stock compensation plans” to our consolidated financial statements in Item 8, “Financial Statements and Supplementary Data.”

**(c). Results of Operations**

Comparison of the year ended December 31, 2011 to the year ended December 31, 2010

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We had a net loss of \$3,377,000 or \$0.10 per basic and diluted share for the year ended December 31, 2011 compared to a net loss of \$4,066,000 or \$0.14 per basic and diluted share for the year ended December 31, 2010. As explained in more detail below, the primary reasons for the increase in net loss during 2011 compared to the net loss during 2010 were (i) \$3,700,000 of exploration costs on our Mt. Hamilton project compared to \$1,214,000 during 2010; (ii) an increase in our non-stock option general and administrative expense to \$2,160,000 during 2011 compared to \$1,767,000 during 2010; (iii) a loss on derivative instruments and an increase in our interest expense, net during 2011 compared to gains for both items during 2010; (iv) no gain on sale on deconsolidation of PBM during 2011 compared to a gain on deconsolidation of \$724,000 during 2010; (v) an increase in the equity in our loss of PBM to \$623,000 during 2011 compared to a loss of \$220,000 during 2010; and (vi) a reduction in our income tax benefit during 2011 to \$635,000 compared to a net income tax benefit of \$1,159,000 during 2010. Partially offsetting these increases in costs were (i) a reduction in non-Mt. Hamilton exploration expenses to \$2,246,000 during 2011 compared to \$2,819,000 during 2010; (ii) an increase in the gain on sale of marketable equity securities to \$1,937,000 during 2011 compared to \$995,000 during 2010; and (iii) an increase in the share of the loss on our Mt. Hamilton project attributable to the noncontrolling shareholder to \$3,591,000 during 2011 compared to \$1,274,000 during 2010. Each of these items is discussed in greater detail below.

Our primary activities during 2011, 2010 and 2009 have been the (i) exploration activities to advance the Mt. Hamilton property toward the completion of a feasibility study, (ii) exploration on our mineral properties to delineate deposits to enable us to sell or joint venture the mineral property and (iii) reconnaissance exploration to locate and acquire mineral properties. During 2011 we increased our exploration efforts related to our Mt. Hamilton project and spent \$3,700,000 including a \$300,000 advance royalty payment and \$3,400,000 in direct exploration expenditures related to Mt. Hamilton. We acquired the Mt. Hamilton project during 2010, and in 2010 we spent \$1,214,000 including a \$300,000 advance royalty payment and \$914,000 in direct exploration expenditures related to Mt. Hamilton. We recorded a credit of \$3,591,000 and \$1,110,000, respectively, during 2011 and 2010 for DHI-US's noncontrolling interest in the expenditures of MH-LLC, related to these exploration expenditures. We decreased our exploration expenditures at our South American and Mexico properties to \$2,246,000 and \$2,819,000, respectively, in 2011 and 2010, from \$3,579,000 in 2009 partially due to the deconsolidation of PBM, as a result of which we did not include any exploration expenditures for PBM after July 21, 2010 and partially as a result of a shift in our focus to the Mt. Hamilton project. During 2011 we completed a drilling program at our Cerro Azul project in Peru. During 2011 we capitalized \$2,755,000 related to our Mt. Hamilton properties, and we capitalized \$10,000 related to our Jaripo and Aconchi properties in Mexico. Included in these capitalized costs was the issuance of 344,116 shares of our common stock valued at \$1,000,000. During 2010 we capitalized \$5,000 related to the addition of our Atico project in Peru and \$6,000 related to our Norcan project in Mexico.

Our 2012 exploration expenditure budget is approximately \$3,442,000 which includes approximately \$1,325,000 for development costs related to Mt. Hamilton. In addition we anticipate we will spend approximately \$1,675,000 for payments on leases to landowners, advance minimum royalty payments and payments to DHI-US pursuant to the MH Agreement. The primary factor in the reduction in Mt. Hamilton exploration and development expense from 2011 to 2012 relates to the completion of our Feasibility Study and related activities, including drilling and engineering design work, which occurred during 2011, and which will not be a significant part of our planned activities during 2012. Our planned activities during 2012 relate to our intention to move the Mt. Hamilton project through development activities including permitting, obtaining financing for the capital required to build the project and other engineering and project management. The future construction of Mt. Hamilton will be dependent on a number of factors including receiving permits and obtaining financing for the capital and construction. We cannot predict with certainty that we will be successful in achieving any of these goals. In addition we plan to continue to perform our early-stage planned

exploration activities on our other properties and to continue reconnaissance exploration activities to acquire new properties. These exploration activities may also be modified, as necessary for changes, in joint venture funding, commodity prices and access to capital.

Exploration expense (in thousands) by property consisted of the following:

Property Name	2011	2010
Mt. Hamilton	\$3,700	\$1,214
Cerro Azul	715	185
Jaripo	26	-
Espanola	24	21
La Promesa	17	40
Mercurio	15	36
Cajatambo	7	361
Chonta	4	3
Newmont Alliance	4	1
Excelsior	3	40

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Norcan	3	6
Bongará	3	6
Pachuca	2	91
Triunfo	1	6
Pedra Branca, net	(50)	402
Palmira	-	146
La Noria	-	139
Paria Cruz	-	26
Atico	-	20
El Sello	-	19
Reconnaissance	<u>1,472</u>	<u>1,271</u>
Total exploration expense	<u>\$5,946</u>	<u>\$4,033</u>

We recorded a credit (reduction of expense) of \$3,591,000 and \$1,110,000, respectively, during 2011 and 2010 for DHI-US's noncontrolling interest in the losses of MH-LLC. In addition, we recorded a credit of \$164,000 during 2010 for Anglo's noncontrolling interest in the losses of the consolidated subsidiary, PBM, prior to its deconsolidation on July 21, 2010. During 2011 we recorded management fees of \$50,000 to PBM as a credit to exploration expense. During 2010 we recorded management fees of \$47,000 to PBM, which were eliminated in consolidation, net of \$11,000 of noncontrolling interest.

We believe a discussion of our general and administrative costs should be viewed without the non-cash stock option compensation expense or benefit which is discussed below. Excluding these costs, general and administrative costs were \$2,160,000 during 2011 compared to \$1,767,000 in 2010. We incurred salary and benefits expense of \$1,300,000 during 2011 compared to \$985,000 in 2010, which increased due to a bonus paid during 2011 of \$245,000, and an increase in salaries during 2011 compared to 2010. We also recorded an increase in our legal and accounting costs to \$305,000 during 2011 from \$279,000 in 2010, due to the legal and accounting work associated with setting up the administration of MH-LLC and land matters at Mt. Hamilton and the Royalty Buy-down. In addition, other general and administrative costs including rent, travel, and insurance decreased to \$238,000 during 2011 compared to \$248,000 in 2010, primarily related to reduced exploration activity in South America and Mexico, continuing efforts to reduce overhead although overhead costs related to Mt. Hamilton increased. These decreases were mitigated by an increase in our shareholder relations costs to \$318,000 during 2011 compared to \$254,000 during 2010. We anticipate general and administrative costs will decrease in the future as a result of not spending for costs related to setting up the administration of MH-LLC and related land matters at the Mt. Hamilton project compared to what we incurred in 2011, as well as a reduction in shareholder relations costs compared to what we incurred during 2011. We have forecast 2012 general and administrative costs to be approximately \$1,695,000, excluding non-cash stock option compensation expense or benefit.

We account for our employee stock options under the provisions of ASC 718. Beginning in January 1, 2011, we recognize stock option compensation expense on the date of grant for 25% of the grant date fair value, and subsequently, based upon a straight line amortization of the grant date fair value of each of its outstanding options. During the year ended December 31, 2011 we recorded \$697,000 of non-cash stock option expense for the amortization of grant date fair value with a credit to additional paid-in-capital compared to \$2,513,000 of non-cash stock option compensation expense during 2010. Prior to January 1, 2011, Solitario recorded a stock option liability for the vested fair value of each option grant on the measurement date by multiplying the estimated fair value

determined using the Black-Scholes model by the percentage vested on the measurement date See Note 9, "Employee stock compensation plans" to our consolidated financial statements in Item 8, "Financial Statements and Supplementary Data" for an analysis of the changes in the fair value of our outstanding stock options and the components that are used to determine the fair value.

During 2011 we recorded a loss on derivative instruments of \$137,000 compared to a gain on derivative instruments of \$152,000 during 2010. The decrease in the gain to a loss was primarily related to an unrealized loss on our investment in Ely warrants of \$180,000 during 2011 compared to a gain of \$117,000 during 2010. The change in value in the Ely warrants is determined using a Black-Scholes option pricing model and is highly dependent on the change in the price of Ely's common stock which declined from Cdn\$0.30 per share at December 31, 2010 to Cdn\$0.18 per share at December 31, 2011. This loss was partially mitigated by a gain on a Kinross call we sold (and repurchased) during 2011 of \$42,000. We have sold covered calls on a limited portion of our Kinross common stock that we intend to sell within one year, to enhance our return on Kinross common stock in exchange for some potential upside in those covered Kinross shares. We do not have any Kinross call options outstanding at December 31, 2011 and do not anticipate selling a material number of covered Kinross call options during 2012. See Note 6, "Derivative instruments" to our consolidated financial statements in Item 8, "Financial Statements and Supplementary Data" for an analysis of the changes in our derivative instruments, and the components that are used to determine the fair value of our derivative instruments.



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We had \$46,000 of depreciation and amortization expense during 2011 compared to \$67,000 in 2010 primarily as a result of an increase in the amount of fully depreciated furniture and fixtures during 2011 compared to 2010. We amortize these assets over a three-year period. We anticipate our 2012 depreciation and amortization costs will be similar to our 2011 amount.

During 2011 we recorded interest expense, net of interest and dividend income, of \$163,000 compared to interest and dividend income, net, of \$63,000 during the same period in 2010. The increase in interest expense is primarily related to \$217,000 of interest expense on our long-term debt during 2011 compared to \$19,000 of interest expense on long-term debt during 2010. In addition we recorded \$71,000 of interest expense related to our short-term margin loans during 2011 compared to \$23,000. The increase is related to the time our margin loans were outstanding during 2011 compared to 2010. During 2011 we recorded dividend income of \$98,000 compared to \$103,000 during 2010 from dividends on our Kinross stock. Remaining interest income recorded during 2011 and 2010 consisted of payments on cash and cash equivalent deposit accounts. We anticipate our interest expense will increase as we continue to utilize short-term margin loans to fund a portion of our activities to supplement the sales of our Kinross common stock. However we anticipate this increase will be partially offset by an expected reduction in the interest expense related to our long-term debt as we pay down our Augusta debt. We also anticipate dividend income will continue to decrease during 2012 as we sell a portion of our Kinross common stock to fund our operations. See Note 3, "Short-term debt" and Note 4, "Long-term debt" to our consolidated financial statements in Item 8, "Financial Statements and Supplementary Data" for additional discussion of our interest expense related to our short and long-term debt.

During 2011 we sold 130,000 shares of Kinross stock for proceeds of \$2,035,000 and recorded a gain on sale of \$1,937,000 compared to 2010, when we sold 70,000 shares of Kinross stock for proceeds of \$1,301,000 and recorded a gain on sale of \$995,000. We anticipate we will continue to liquidate our holdings of Kinross stock to fund our exploration activities and our 2012 budget anticipates the sale of 360,000 shares of Kinross stock for assumed proceeds of \$5,040,000 during 2012. These proceeds are significantly dependent on the quoted market price of Kinross stock on the date of sale and may be at prices significantly below our projected price.

During 2011 we recorded an income tax benefit of \$635,000 compared to an income tax benefit of \$1,159,000 during 2010. The reduction in our tax benefit during 2011 primarily related to the increase in our United States taxable gain on the sale of Kinross stock to \$1,937,000 in 2011 compared to a gain on sale of \$995,000 during 2010. In addition, we recorded a decrease in our stock option expense to \$697,000 during 2011 compared to a stock option expense during 2010 of \$2,513,000. Partially offsetting the increased gain on sale of marketable equity securities was an increase in our general and administrative expenses, discussed above, during 2011 compared to 2010 and by the fact that we recorded a gain on deconsolidation of our PBM subsidiary of \$724,000 during 2010 and had no similar item during 2011. Although our United States exploration expense at our Mt. Hamilton project was significantly higher during 2011 compared to 2010, as discussed above, because we record minority interest credit for DHI-US's share of those expenditures, the tax effect of the expenditures in determining our tax expense reflected in our consolidated statement of operations is also reduced. See Note 5, "Income taxes" to our consolidated financial statements in Item 8, "Financial Statements and Supplementary Data" for additional discussion of our income tax expense and deferred income tax liability at December 31, 2011. We provide a valuation allowance for our foreign net operating losses, which are primarily related to our exploration activities in Peru, Mexico, Bolivia and Brazil. We anticipate we will

continue to provide a valuation allowance for these net operating losses until we are in a net tax liability position with regards to those countries where we operate or until it is more likely than not that we will be able to realize those net operating losses in the future.

We regularly perform evaluations of our mineral property assets to assess the recoverability of our investments in these assets. All long-lived assets are reviewed for impairment whenever events or circumstances change which indicate the carrying amount of an asset may not be recoverable utilizing guidelines based upon future net cash flows from the asset as well as our estimates of the geologic potential of early stage mineral property and its related value for future sale, joint venture or development by us or others. During 2011 we recorded \$10,000 of mineral property impairments related to our Paria Cruz project in Peru, discussed below, compared to 2010 when we recorded \$55,000 of mineral property impairments related to our Santiago, La Noria and Palmira projects .

Comparison of the year ended December 31, 2010 to the year ended December 31, 2009

We had a net loss of \$4,066,000 or \$0.14 per basic and diluted share for the year ended December 31, 2010 compared to a net loss of \$1,786,000 or \$0.06 per basic and diluted share for the year ended December 31, 2009. As explained in more detail below, the primary reasons for the increase in net loss during 2010 compared to the net loss during 2009 were (i) \$1,214,000 of exploration costs on our Mt. Hamilton project; (ii) a reduction in the gain on sale of Kinross common stock to \$995,000 during 2010, compared to a gain of \$1,409,000 during 2009; (iii) an increase in our stock option expense to \$2,513,000 during 2010

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compared to a stock option benefit of \$269,000 during 2009; (iv) a reduction in our gain on derivative instruments to \$152,000 during 2010 compared to a gain on derivative instruments of \$694,000 during 2009. Partially offsetting these items were (i) a gain on deconsolidation of PBM of \$724,000 during 2010; (ii) a reduction in non-Mt. Hamilton exploration expense during 2010 to \$2,819,000 compared to exploration expense of \$3,579,000 during 2009 and (iii) an income tax benefit of \$1,159,000 during 2010 compared to an income tax expense of \$996,000 during 2009. Each of these items is discussed in greater detail below.

During 2010 we increased our exploration efforts related to our newly acquired Mt. Hamilton project and spent \$1,214,000, including a \$300,000 advance royalty payment and \$914,000 in direct exploration expenditures related to Mt. Hamilton. We recorded a credit of \$1,110,000 for DHI-US's noncontrolling interest in the expenditures of MH-LLC, primarily related to these exploration expenditures. We decreased our exploration expenditures at our South American properties to \$2,819,000, partially due to the deconsolidation of PBM, as a result of which we did not include any exploration expenditures for PBM after July 21, 2010 and partially as a result of a shift in our focus to the Mt. Hamilton project. During 2010 we capitalized \$5,000 related to the addition of our Atico project in Peru and \$6,000 related to our Norcan project in Mexico. During 2009 we capitalized \$5,000 related to the addition of our Palmira Project.

Exploration expense (in thousands) by property consisted of the following:

Property Name	2010	2009
Mt. Hamilton	\$1,214	\$-
Pedra Branca	402	1,196
Cajatambo	361	413
Cerro Azul	185	65
Palmira	146	32
La Noria	139	71
Pachuca	91	111
La Promesa	40	74
Excelsior	40	3
Mercurio	36	65
Paria Cruz	26	7
Espanola	21	10
Atico	20	-
El Sello	19	-
Norcan	6	-
Bongará	6	35
Triunfo	6	5
Chonta	3	524
Newmont Alliance	1	120
La Purica	-	32
Santiago	-	3
Reconnaissance	<u>1,271</u>	<u>813</u>
Total exploration expense	<u>\$4,033</u>	<u>\$3,579</u>

During 2010 we recorded a credit (reduction of expense) of \$1,110,000 for DHI-US's noncontrolling interest in the losses of MH-LLC. In addition, we recorded a credit of \$164,000 and \$419,000, respectively, during 2010 and 2009, for Anglo's noncontrolling interest in the losses of the consolidated subsidiary, PBM, during the year. On July 21, 2010, Anglo made a payment of \$746,000 to PBM required to fund the third work program at the Pedra Branca project, which is held by PBM. Upon making this payment, Anglo earned an additional 21% interest in PBM and now holds a 51% interest in PBM. Accordingly, we have deconsolidated our interest in Pedra Branca and have recorded its 49% interest in the fair value of PBM on the date of deconsolidation as an equity investment. During 2010 we recorded management fees of \$47,000 to PBM of which \$36,000, net of \$11,000 of noncontrolling interest, was eliminated for those fees charged prior to deconsolidation of PBM on July 21, 2010. During 2009 we recorded management fees of \$65,000, to PBM, which were eliminated in consolidation, net of \$19,000 of noncontrolling interest.

Excluding non-cash stock option compensation costs, discussed below, general and administrative costs were \$1,767,000 during 2010 compared to \$2,348,000 in 2009. We incurred salary and benefits expense of \$985,000 during 2010 compared to \$1,187,000 in 2009, which decreased due to a lower number of employees in our South American operations and reduced bonuses in 2010 compared to 2009. We also recorded a reduction in our legal and accounting costs to \$279,000 during 2010 from \$637,000 in 2009, due to the legal and accounting work associated with our attempted acquisition of Metallic

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Ventures Gold Inc. (“Metallic Ventures”) during 2009. In addition, other general and administrative costs including rent, travel, and insurance decreased to \$247,000 during 2010 compared to \$332,000 in 2009, primarily related to a reduction in exploration activity and continuing efforts to reduce overhead. These decreases were mitigated by a loss on currency exchange rates during 2010 of \$1,000, compared to a gain of \$35,000 in 2009 and an increase in our shareholder relations costs to \$254,000 during 2010 compared to \$223,000 during 2009.

We accounted for our employee stock options under the provisions of ASC 718, Compensation – Stock Compensation, and during 2010 and 2009, we classified our stock options as liabilities as they are priced in Canadian dollars and our functional currency is United States dollars. We recorded the fair value of the vested portion of our outstanding options as a liability and record changes in the fair value as stock option compensation expense or benefit in the statement of operations in the period of the change. Upon exercise, the fair value of the options on the date of exercise, which is equal to the intrinsic value, is credited to additional paid-in capital. We estimate the fair values of the options granted using a Black-Scholes option pricing model. During the year ended December 31, 2010, we recognized \$2,513,000 of non-cash stock-based compensation expense as part of general and administrative expense for the increase in the fair value of our stock option liability during 2010 compared to non-cash stock option compensation benefit of \$269,000 during 2009. Our stock option compensation expense changes as a result of an increase in the market price of our common stock and additional options outstanding at the end of 2010 compared to 2009. The price of our stock as quoted on the TSX increased to Cdn\$3.69 at December 31, 2010 from Cdn\$2.40 at December 31, 2009. Generally as the price of our common stock increases our stock option liability and our stock option compensation expense increases and the converse is true as well. See Employee stock compensation plans in Note 1 to the consolidated financial statements contained in Item 8, “Financial Statements and Supplementary Data” for an analysis of the changes in the fair value of our outstanding stock options and the components that are used to determine the fair value.

During 2010 we recorded a gain on derivative instruments of \$152,000 compared to a gain on derivative instruments of \$694,000 during 2009. The decrease in the gain was primarily related to a reduction from unrealized gain of \$522,000 during 2009 to an unrealized loss on our Kinross Collar of \$7,000 during 2010. In addition during 2009, we recorded net realized gains of \$138,000 on call options on our Kinross stock compared to a realized gain of \$42,000 on Kinross call options during 2010. Mitigating this decline in gain on derivative instruments was a gain of \$117,000 on our Ely warrants, discussed below, during 2010 and there were no similar items in 2009. We have not designated the Kinross Collar or the Kinross call options as hedging instruments as described in ASC 815 and any changes in the fair market value of the Kinross Collar and the Kinross call options are recognized in the statement of operations in the period of the change. We have sold covered calls on a limited portion of our Kinross common stock that we intend to sell within one year, to enhance our return on Kinross common stock in exchange for some potential upside in those covered Kinross shares.

We had \$67,000 of depreciation and amortization expense during 2010 compared to \$91,000 in 2009 primarily as a result of an increase in the amount of fully depreciated furniture and fixtures during 2010 compared to 2009. We amortize these assets over a three-year period.

During 2010 we recorded interest and dividend income, net, of \$63,000 compared to \$106,000 during the same period in 2009. During 2010 we recorded dividend income of \$103,000 compared to \$104,000 during 2009 from dividends on our Kinross stock. The primary reason for the decrease in interest and dividend income, net, resulted from interest expense of \$24,000 and \$19,000, respectively, from our short and long term borrowing during 2010. The interest income recorded during 2010 and 2009 consisted of payments on cash and cash equivalent deposit accounts.

During 2010 we sold 70,000 shares of Kinross stock for proceeds of \$1,301,000 and recorded a gain on sale of \$995,000 compared to 2009, when we sold 100,000 shares of Kinross stock for proceeds of \$1,852,000 and recorded a gain on sale of \$1,409,000. We anticipate we will continue to liquidate our holdings of Kinross stock to fund our exploration activities, and our 2011 budget anticipates the sale of 275,000 shares of Kinross stock for assumed proceeds of \$5,214,000 during 2011.

During 2010 we recorded an income tax benefit of \$1,159,000 compared to income tax expense of \$996,000 during 2009. Our tax benefit during 2010 primarily related to the increase in United States exploration expense at our Mt. Hamilton project and our stock option expense of \$2,513,000 compared to a stock option benefit during 2009 of \$269,000. In addition we recorded one-time break fee income of \$2,200,000 related to our attempt to acquire Metallic Ventures during 2009, which increased our taxable income in 2009. Furthermore our gain on the sale of Kinross stock decreased to \$995,000 in 2010 compared to a gain on sale of \$1,409,000 during 2009. These were partially offset by the gain on deconsolidation of our PBM subsidiary of \$724,000 recorded during 2010.

During 2010 we recorded \$55,000 of mineral property impairments related to our Santiago, La Noria and Palmira projects compared to 2009 when we recorded \$51,000 of mineral property impairments related to our Purica and Chonta properties.

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**(d). Liquidity and Capital Resources**

Short-term debt

We have borrowed \$2,000,000 from UBS Bank, USA ("UBS Bank") pursuant to a secured credit line agreement between us and UBS Bank and have accrued \$1,000 of unpaid interest on this debt in accounts payable. The UBS Bank credit line carries an interest rate which floats, based upon a base rate of 2.25% plus the one-month London Interbank Offered Rate ("LIBOR"), which was 0.25% as of December 31, 2011. We are required to maintain minimum equity value percentages of 40% at UBS. The equity value percentage may be modified by UBS at any time. If the equity value in our account at UBS falls below the minimum, UBS may call the loan, or may sell enough Kinross shares held in our brokerage account or liquidate any other assets to restore the minimum equity value. At December 31, 2011 and March 8, 2012, the equity balance in our account at UBS was 67% and 65%, respectively. Solitario recorded interest expense related to the UBS credit line of \$50,000 and \$18,000, respectively, for the year ended December 31, 2011 and 2010.

We also have access to short-term margin loan borrowing capacity from RBC Capital Markets, LLC ("RBC") using our investment in Kinross stock held at RBC as collateral for the short-term margin loans. As of December 31, 2011, we have repaid all short-term margin loans previously borrowed from RBC. Subsequent to December 31, 2011, we have borrowed \$500,000 against our short-term margin account. We estimate we have access to additional borrowing of approximately \$1.2 million on our RBC margin loan borrowing capacity as of March 8, 2012, based upon the market value of our Kinross shares held at RBC. The previously outstanding loans carried, and the currently outstanding loan carries, interest at a margin loan rate of 4.25% per annum. The margin loan rate can be modified by RBC at any time. The margin loans are callable by RBC at any time. Per the terms of the margin loans, we are required to maintain a minimum equity value in the account of 35%, based upon the value of our Kinross shares and any other assets held at RBC, less any short-term margin loan balance and any other balances owed to RBC. The equity value percentage may be modified by RBC at any time. If the equity value in our account at RBC falls below the minimum, RBC may call the loan, or may sell enough Kinross shares held in our brokerage account or liquidate any other assets to restore the minimum equity value. At March 8, 2012, the equity balance in our account at RBC was 81%. We recorded \$21,000 and \$5,000, respectively, of interest expense related to the RBC short-term margin loans for the year ended December 31, 2011 and 2010.

We are using this short-term debt as an alternative source of capital to selling our Kinross stock. We intend to continue to borrow money for the next year or longer using our Kinross common stock as collateral to defer potential current United States income taxes if we were to sell our Kinross common stock in excess of our anticipated United States tax deductible expenses for the entire year of 2012, which consist primarily of United States general and administrative costs and a portion of our costs to develop the Mt. Hamilton project in Nevada. We anticipate the proceeds from the sale of Kinross common stock sold during 2012 will not exceed our anticipated United States tax deductible expenses, and accordingly, we do not anticipate having any currently payable United States income taxes for 2012. We anticipate proceeds from the sale of shares of Kinross common stock and proceeds from any loans against our investment in Kinross stock will provide adequate funds for our operations through the end of 2012. Our use of short-term borrowing is not considered critical to our liquidity, capital resources or credit risk strategies. We consider the use of short-term borrowing as a component of our overall strategy to potentially maximize our after-tax

returns on the sale of our investment in Kinross stock. We currently intend to repay the short-term debt with proceeds from the sale of Kinross stock in the future. Our maximum amount of short-term borrowing was \$3,875,000, including accrued interest, during the year ended December 31, 2011. Our average short-term borrowing during the year ended December 31, 2011 was \$2,466,000. Subsequent to December 31, 2011, we borrowed an additional \$500,000 and as of March 8, 2012, we have a total of \$2,500,000 outstanding under short-term margin loans.

#### Long-term debt

In connection with the formation of MH-LLC, the Mt. Hamilton properties contributed by DHI-US to MH-LLC are subject to a security interest granted to Augusta to secure a debt obligation related to Ely's acquisition of the Mt. Hamilton project. Pursuant to the MH Agreement, as part of our earn-in, we agreed to make payments totaling \$3,750,000, of which \$1,250,000 is to be paid in cash to DHI-US and of which \$2,500,000 is to be made as private placement investments in Ely common stock, detailed below, all to provide Ely with the funds necessary for Ely to make the loan payments due to Augusta, which loan payment obligations are secured by the mining claims currently owned by MH-LLC. During 2011 we made a \$500,000 payment on the Augusta debt, and the total remaining payments as of December 31, 2011 are \$3,250,000. Failure to make any of the payments to DHI-US or investments in Ely necessary to provide Ely with the funds necessary for Ely to make the required payments due to Augusta may result in the loss of all of our interest in the Mt. Hamilton project. The payments due to Augusta are non-interest bearing. Accordingly, upon the contribution of the mineral properties by DHI-US to MH-LLC, MH-LLC recorded \$3,066,000 for the discounted fair value of the payments due to Augusta, discounted at 7.5%, which was



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based on our estimated cost of similar credit as of the formation of MH-LLC. As a result of earning an 80% interest in MH-LLC on the completion of the Feasibility Study, pursuant to the terms of the MH Agreement, we no longer have the right to opt-out of the payments due to Augusta.

Schedule of debt payments due to Augusta as of December 31, 2011:

Date	Amount
June 1, 2012	\$750,000
June 1, 2013	750,000
June 1, 2014	750,000
June 1, 2015	1,000,000
Discount	<u>(448,000)</u>
Net due	2,802,000
Less current portion	<u>727,000</u>
Net long-term debt	<u>\$2,075,000</u>

During the year ended December 31, 2011, Solitario made a \$500,000 payment of principal on the long-term debt to DHI-US, which in turn was paid to Augusta. During 2011 and 2010, Solitario recorded \$217,000 and \$19,000, respectively, for accretion of interest expense related to MH-LLC long-term debt due to Augusta.

Joint venture and delay rental payments

In the past, we have financed our activities through the sale of our properties, joint venture arrangements, the sale of our securities and from the sale of our marketable equity security investment in Kinross. We received \$200,000, each year respectively, from joint venture payments during 2011, 2010 and 2009 related to delay rental payments on our Bongará project, discussed above, and during 2011 we received a \$50,000 delay rental joint venture payment on our Mercurio project in Peru, which was partially offset by \$8,000, the entire capitalized value of Mercurio at the time of the payment. Receipts from joint venture payments previously occurred during the years from 1996 through 2000 and the sale of properties last occurred in 2000 upon the sale of our Yanacocha property for \$6,000,000. Per our agreements with both Votorantim on Bongará and Regent on Mercurio, the joint venture partners may terminate the agreements at any time, and will not be required to make further delay rental payments if they terminate the agreements. Our agreement with Votorantim on our Bongará project calls for annual delay rental payments of \$200,000 until Votorantim provides notice that it has made certain minimum expenditures or makes a decision to place the project in production or decides to drop the project. We expect future revenues from joint venture payments and from the sale of properties, if any, would occur on an infrequent basis.

Investment in marketable equity securities

Our marketable equity securities are classified as available-for-sale and are carried at fair value, which is based upon market quotes of the underlying securities. At December 31, 2011 and 2010, we owned 850,000 and 980,000 shares of Kinross common stock, respectively. The Kinross shares are recorded at their fair market value of \$9,690,000 and \$18,581,000 at December 31, 2011 and December 31, 2010, respectively. In addition we own other marketable equity securities with a fair value of \$671,000 and \$1,190,000 as of December 31, 2011 and December 31, 2010, respectively. Our investments in marketable equity securities are based upon market quotes on the NYSE and the TSXV. At December 31, 2011, we have classified \$4,361,000 of our marketable equity securities as a short-term asset. Changes in the fair value of marketable equity securities are recorded as gains and losses in other comprehensive income in stockholders' equity. During the year ended December 31, 2011, we recorded a loss in other comprehensive income on marketable equity securities of \$9,425,000, less related deferred tax expense of \$3,516,000.

During the year ended December 31, 2011 we sold 130,000 shares of Kinross stock for proceeds of \$2,035,000 resulting in a gain of \$1,937,000 which was transferred, less related deferred tax expense of \$722,000, from previously unrealized gain on marketable equity securities in other comprehensive income. We also own (i) 1,000,000 shares of TNR Gold Corp. that are recorded at their fair market value of \$54,000 at December 31, 2011; (ii) 250,000 shares of International Lithium Corporation that are recorded at their fair market of \$28,000 at December 31, 2011 and (iii) 3,333,333 shares of Ely that are recorded at their fair market value of \$588,000, all of which are classified as marketable equity securities available for sale.

Any change in the market value of the shares of Kinross common stock could have a material impact on our liquidity and capital resources. The price of shares of Kinross common stock has varied from a high of \$18.60 per share to a low of \$11.14 per share during the year ended December 31, 2011.

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Kinross Collar and Kinross Calls

*Kinross Collar*

On October 12, 2007, we entered into a Zero-Premium Equity Collar (the "Kinross Collar") pursuant to a Master Agreement for Equity Collars and a Pledge and Security Agreement with UBS whereby we pledged 900,000 shares of Kinross common shares to be sold (or delivered back to us with any differences settled in cash). On April 12, 2011, the final tranche of 100,000 shares under the Kinross Collar were released upon the expiration of that tranche of the Kinross Collar. As of December 31, 2011, no shares are subject to the Kinross Collar.

*Kinross Calls*

Beginning in December 2008, we sold covered calls covering our shares of Kinross common stock. We sold three covered calls covering 130,000 shares of Kinross common stock during 2009, of which 50,000 of these call options expired unexercised in April 2009, 40,000 were repurchased in July 2009 and 40,000 were repurchased in November 2009. In November 2009, we sold an option for 40,000 shares which expired in May 2010. In September 2011, we sold options covering 65,000 shares for proceeds of \$57,000, which were repurchased in October 2011 for \$15,000 and we recorded a gain of \$42,000 in loss (gain) on derivative instruments. As of December 31, 2011, we have no outstanding covered calls covering our investment in Kinross common stock.

The business purpose of the Kinross Collar was to provide downside price protection for our investment in Kinross. In consideration for obtaining this price protection, we had given up the upside appreciation above the upper threshold price of the Kinross Collar. Our risk management policy related to our investment in the Kinross Collar was to reduce the potential price risk on assets which represented a significant proportion of total assets, where economically feasible. The business purpose of the Kinross calls was to lock in a specific price on a portion of the Kinross shares we intended to sell within the next year. We will continue to look toward other Kinross risk management options to meet our risk management policy. These alternatives include the use of short-term margin loans, discussed above, listed options, use of covered calls and sale of the investment. The use of these Kinross risk management strategies reduces the potential of paying significant taxes on a near term sale of the entire investment in Kinross shares based upon both (i) the projected future needs for the use of funds from any sales of the investment in Kinross shares and (ii) the potential generation of future United States net operating losses which could be used to offset any taxable gains on future sale of the investment in Kinross shares. We have not designated the Kinross Collar or Kinross calls as hedging instruments as described in ASC 815 and any changes in the fair market value of the Kinross Collar or the Kinross calls are recognized in the statement of operations in the period of the change.

Income taxes

As a result of the United States federal and state net operating loss generated during 2011, which we may carry back to 2010, we have recorded a receivable for an income tax refund of approximately \$275,000, which was received in February 2012. See Note 5, "Income taxes" to the consolidated financial statements contained in Item 8, "Financial Statements and Supplementary Data" for more information.

#### Working capital

We had working capital of \$345,000 at December 31, 2011 compared to working capital of \$134,000 as of December 31, 2010. Our working capital at December 31, 2011 consists of our cash and equivalents and marketable equity securities, primarily consisting of the current portion of our investment in 850,000 shares of Kinross common stock of \$4,361,000, less our short-term margin loans of \$2,000,000 and current deferred income taxes of \$1,627,000 related to our planned sales of Kinross common stock during the next year. We intend to liquidate a limited portion of our Kinross shares over the next year, in order to continue to defer current United States income taxes on the sale of shares of Kinross common stock. We also intend to continue to borrow on margin at RBC and on our UBS Bank secured credit line. We will continue to monitor our exposure to a single asset, taking into consideration our cash and liquidity requirements, tax implications, the market price of gold and the market price of Kinross stock. We have budgeted the anticipated sale of 360,000 shares of Kinross stock during 2012 for assumed proceeds of \$5,040,000. Any funds received from the sale of our Kinross shares or borrowing against the value of our Kinross shares would be used primarily to fund exploration and development on our existing properties, for the acquisition and exploration of new properties and general working capital.

Cash and cash equivalents were \$432,000 as of December 31, 2011 compared to \$478,000 at December 31, 2010. As of December 31, 2011, our cash balances along with our investment in marketable equity securities and our UBS Bank credit line are considered adequate to fund our expected expenditures over the next year, including our planned 2012 development and payment obligations related to MH-LLC and the Mt. Hamilton project.

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The nature of the mining exploration business requires significant sources of capital to fund exploration, development and operation of mining projects. We will need additional resources to fund our long-term payment obligations associated with MH-LLC, develop the Mt. Hamilton project on our own and explore any mineral deposits we have. We anticipate that we would finance these activities through the use of joint venture arrangements, the issuance of debt or equity, the sale of interests in our properties or the sale of our shares of Kinross common stock. There can be no assurance that a combination of such sources of funds will be available in the quantity or on terms acceptable to us, if at all.

## Stock-based compensation plans

During the year ended December 31, 2011, 150,600 options were exercised for proceeds of \$247,000 and no options were granted from the 2006 Plan. During the year ended December 31, 2010, no options were exercised from the 2006 Plan and we granted 2,065,000 options from the 2006 Plan. None of our outstanding options from the 2006 Plan expire during 2012. We do not expect a significant number of our vested options from the 2006 Plan will be exercised in the next year. See Note 9, "Employee stock compensation plans" to the consolidated financial statements contained in Item 8, "Financial Statements and Supplementary Data" for a summary of the activity for stock options outstanding under the 2006 Plan as of December 31, 2011.

## Off-balance sheet arrangements

As of December 31, 2011 and 2010, we have no off-balance sheet arrangements.

## (e). Cash Flows

Net cash used in operations during the year ended December 31, 2011 increased to \$7,931,000 compared to \$5,440,000 for 2010 primarily as a result of (i) an increase in exploration expenses to \$5,946,000 in 2011 compared to \$4,033,000 in 2010, primarily related to an increase in exploration expenditures at our Mt. Hamilton project to \$3,700,000 during 2011 compared to exploration expenditures of \$1,214,000 at Mt. Hamilton during 2010; (ii); an increase in non-stock option general and administrative costs to \$2,160,000 during 2011 compared to non-stock option general and administrative costs of \$1,767,000 and (iii) the net payment of \$119,000 of accounts payable during 2011 compared to the net increase of \$414,000 of accounts payable during 2010. These increased uses of cash were mitigated by an increase in joint venture property payments to \$242,000 during 2011 compared to \$200,000 during 2010. The remaining uses of cash for operations were comparable in 2011 and 2010.

Net cash provided from (used in) investing activities increased to \$193,000 cash provided during 2011 compared to (\$324,000) cash used during the year ended December 31, 2010 primarily related to (i) an increase in the proceeds from the sale of Kinross common stock to \$2,035,000 during 2011 compared with \$1,301,000 proceeds from the sale of Kinross stock in 2010. During 2011 we sold 130,000 shares of Kinross at an average price of \$15.65 compared to the sale of 70,000 shares of Kinross during 2010 at an average price of \$18.59; (ii) no effect on cash during 2011 from the deconsolidation of PBM compared to a decrease in cash of \$1,083,000 from the deconsolidation of PBM during 2010; and (iii) the purchase during 2010 of the Ely units for \$493,000 consisting of 3,333,333 shares of Ely common stock and warrants for 1,666,667 shares of Ely common stock. These increases in cash provided by investing activities between 2011 and 2010 were partially offset by the use of cash for additions to mineral property of \$1,765,000 during 2011 compared to additions to mineral property of \$11,000 during 2010. The remaining uses of cash from investing activities were comparable in 2011 and 2010.

Net cash provided from financing activities increased to \$7,692,000 during the year ended December 31, 2011 compared to \$4,296,000 during 2010. The primary reason for the increase in cash provided from financing activities in 2011 was related to the equity offering, discussed above under recent developments which provided \$8,937,000 in cash during 2011 and no similar financing was completed during 2010. The increase in cash provided by this financing was partially offset by reductions in cash provided during 2011 for short-term borrowing and from contributions from noncontrolling interests compared to 2010.

#### **(f). Development Activities, Exploration Activities, Environmental Compliance and Contractual Obligations**

##### Development Activities

With the completion of the Feasibility Study on February 22, 2012, we are now entering the development stage of the Mt. Hamilton project. The development of the Mt. Hamilton project, if it occurs, will entail a significant capital investment,

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which is estimated in the Feasibility Study to be \$71.9 million. We currently do not have the funds for the estimated \$71.9 million capital investment to develop the Mt. Hamilton project. The funding for the full development will require significant additional capital which we anticipate may come from the liquidation of our investment in Kinross, additional issuance of our common stock, equipment leasing, debt and commodity stream financing, none of which is currently in place to adequately fund the required capital investment. We cannot provide any assurance that such capital will be available in sufficient amounts, if at all. If we develop the Mt. Hamilton deposit, we will be responsible for reclamation of the Mt. Hamilton project at the completion of mining. In addition we are required to make certain annual claim payments on our mineral property at Mt. Hamilton and to make payments to DHI-US, Ely and to certain other underlying leaseholders at Mt. Hamilton to maintain our ownership of MH-LLC and the Mt. Hamilton project. These obligations are detailed below under “Contractual Obligations.” If we fail to make any of these payments we may lose some or all of our interest in MH-LLC and/or the Mt. Hamilton project.

## Exploration Activities

A significant part of our business involves the review of potential property acquisitions and continuing review and analysis of properties in which we have an interest, to determine the exploration and development potential of the properties. In analyzing expected levels of expenditures for work commitments and property payments, our obligations to make such payments fluctuate greatly depending on whether, among other things, we make a decision to sell a property interest, convey a property interest to a joint venture, or allow our interest in a property to lapse by not making the work commitment or payment required. In acquiring our interests in mining claims and leases, we have entered into agreements, which generally may be canceled at our option. We are required to make minimum rental and option payments in order to maintain our interest in certain claims and leases. Our net 2011 mineral and surface property rental and option payments included in exploration expense, not including \$300,000 of advance royalty payments related to Mt. Hamilton, were \$287,000. In 2012 we estimate our net exploration property rentals and option payments for properties we own or operate, excluding Mt. Hamilton, to be approximately \$860,000, assuming that our joint ventures continue in their current status and that we do not appreciably change our property positions on existing properties, we estimate that our joint venture partners will reimburse approximately \$665,000 of these annual payments. These obligations are detailed below under “Contractual Obligations.” In addition, we may be required to make further payments in the future if we elect to exercise our options under those agreements or if we enter into new agreements.

## Environmental Compliance

We are subject to various federal, state and local environmental laws and regulations in the countries where we operate. We are required to obtain permits in advance of completing certain of our exploration activities, to monitor and report on certain activities to appropriate authorities, and to perform remediation of environmental disturbance as a result of certain of our activities. Historically, the nature of our activities of review, acquisition and exploration of properties prior to the establishment of reserves, which may include mapping, sampling, geochemistry and geophysical studies, as well as some limited exploration drilling, has not resulted in significant environmental impacts in the past. We have historically carried on our required environmental remediation expenditures and activities, if any, concurrently with our exploration activities and expenditures. The expenditures to comply with our environmental

obligations are included in our exploration expenditures in the statement of operations and have not been material to our capital or exploration expenditures, and have not had a material effect on our competitive position. For the years ended December 31, 2011 and 2010, we have not capitalized any costs related to environmental control facilities. We do not anticipate our other, non-Mt. Hamilton project, exploration activities will result in any material new or additional environmental expenditures or liabilities in the near future.

Our planned development activities will increase our environmental expenditures in the event we complete the development of the Mt. Hamilton project, which entails among other things, building a mine, building and operating an open pit, an ore processing plant and leach pads and other similar activities. Prior to mining development activities, substantial reclamation and mine closure bonds to the federal and state regulatory agencies must be put in place and are dependent on, among other things, receiving required permits and obtaining necessary financing. None of which are in place currently; please see "Risk Factors" in Item 1A of Part I, above. We do not expect any of these additional environmental expenditures within the next year.

#### Contractual Obligations

The following table provides an analysis of our contractual obligations at December 31, 2011:



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(in thousands)	As of December 31, 2011				
	Payments due by period				
-	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating Lease Obligations	\$65	\$65	\$-	\$-	\$-
Short-term margin loan (1)	2,001	2,001	-	-	-
Land holding costs (2)	205	205	-	-	-
Mt. Hamilton land holding costs (3)	2,146	657	609	636	244
Mt. Hamilton cash earn-in payments (4)	1,300	300	1,000	-	-
Mt. Hamilton earn-in payments in stock of Solitario (4)(5)	358	72	286	-	-
Mt. Hamilton advance royalty and royalty buy-down payments (4)(6)	6,800	300	5,600	600	300
Long-term debt (4)(7)	3,250	750	1,500	1,000	-
Total	\$16,125	\$4,350	\$8,995	\$2,236	\$544

(1) The short-term margin loans are due on demand and include \$1,000 of accrued interest at December 31, 2011.

(2). Excluding Mt. Hamilton, discussed below, our other land holding contractual obligations, net of expected joint venture reimbursements of \$655,000. Our non-Mt. Hamilton land holding agreements are generally cancelable at our option and this amount includes all required net land payments for the next 12 months to maintain our existing mineral properties.

(3) Mt. Hamilton land holding costs have been shown through 2017 and included \$32,000 of annual unpatented mining claim fees, minimum cash stand-by royalty and land payments and required minimum royalty payments of 33 ounces of gold per year in 2016 and 2017, valued at \$1,566 per ounce, the closing price of an ounce of gold at December 31, 2011, quoted on [kitco.com](http://www.kitco.com).

(4) Pursuant to the MH Agreement, we have agreed to make the following payments as part of our earn-in upon completion of the Feasibility Study: We have agreed to (i) make payments totaling \$750,000 to DHI-US, to enable Ely to make payments in satisfaction of the Augusta long-term debt and make payments totaling \$300,000 and deliver 50,000 shares of Solitario common stock to DHI-US by August 23, 2012 (the "Phase I earn-in"), of which \$150,000 was paid and 25,000 shares of our stock was delivered in February 2012. We have further agreed to (i) invest \$300,000 into MH-LLC for an advance royalty payment to the underlying royalty holder, and (ii) make payments totaling \$500,000 to DHI-US and deliver 100,000 shares of Solitario common stock to DHI-US by August 23, 2013 (the Phase II earn-in"). Finally, we have agreed to (i) invest \$600,000 into MH-LLC for an advance royalty payment to the underlying royalty holder; (ii) make payments totaling \$500,000 to DHI-US and deliver 100,000 shares of Solitario common stock to DHI-US by August 23, 2014; and (iii) buy down the existing 8% net smelter return ("NSR") royalty to a 3% NSR royalty by paying the underlying royalty holder \$5,000,000 by November 19, 2014 (the "Phase III earn-in"). If we fail to make any of the payments prior to the completion of Phase I earn-in we will forfeit our entire interest in MH-LLC. If we fail to make any of the payments after the completion of Phase I earn-in, our interest in MH-LLC will be reduced to 49% and DHI-US's interest will be increased to 51%.

(5) The commitment value of the shares of Solitario stock to be paid to DHI-US, discussed above in note (4) to this table, have been valued at \$1.43 per share, the December 31, 2011 ending stock price as quoted on the NYSE Amex.

(6) *The minimum annual advance royalty payments of \$300,000 per year have been included in this table through December 2017, in addition to a \$3,500,000 royalty buy-down discussed above due in November 2013 and a \$1,500,000 royalty buy-down payment due in November 2014.*

(7) *Includes unamortized discount as of December 31, 2011; see “Long-term debt” above. Of these payments, \$1,250,000 will be made in cash to DHI-US, discussed above in note 4 to this table, and \$2,500,000 of these payments will be made to Ely, in the form of private placements for Ely common stock, of \$750,000 in June 2013, \$750,000 in June 2014, and \$1,000,000 in June 2015, as further discussed below in Note 12 to the consolidated financial statements, “Ely Gold investment and the Mt. Hamilton Joint Venture” in Item 8 “Financial Statements and Supplementary Data.”*

**(g). Joint Ventures, Royalty and the Strategic Alliance properties**

The following discussion relates to an analysis of our exploration and potential development plans for our major properties as of December 31, 2011. Please also see Note 2 to the consolidated financial statements, “Mineral Properties” in Item 8, “Financial Statements and Supplementary Data,” and our discussion of our properties under Item 2, “Properties” of this Annual Report on Form 10-K for a more complete discussion of all of our mineral properties.

Mt Hamilton joint venture

The Mt. Hamilton gold property, located in east-central Nevada, is currently the most important project in the Company and is our primary focus for 2012. With the completion of the Feasibility Study in February 2012, we have now earned an 80% interest in the property. It is our only property with proven and probable reserves. Our initial participation in the Mt. Hamilton property began in August 2010, when we signed a Letter of Intent with Ely Gold to earn up to an 80% interest. In December 2010, we entered into the definitive MH Agreement with DHI-US, a wholly owned subsidiary of Ely Gold, with respect to MH-LLC, a limited liability company, that now holds the Mt. Hamilton project assets.

We are the manager of all project activities. The most important objectives for the remainder of 2012 are the filing of a Plan of Operations with the US Department of Agriculture - Forest Service and advancing the environmental studies necessary to move the project into construction and production. As part of the permitting process, we will undertake public scoping meetings to define potential concerns and develop mitigation plans to address issues identified by all stakeholders,

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which includes the public, county, state, and federal regulatory agencies, and Native American input. Prior to the scoping process and consultancy with the regulatory agencies, it is not possible to predict the timetable to complete permitting.

In addition to the permitting activities, we are also planning a drilling program to convert mineralization to proven and probable reserves. This drilling will occur mainly along the eastern and southern margins of the currently defined Centennial ore body, but some drilling in the previously mined Seligman area may also be undertaken.

We have budgeted approximately \$3,000,000 for permitting activities, planned development, land and earn-in payments for 2012 at Mt. Hamilton.

## Bongará

The Bongará project is an advanced-stage high-grade zinc project in Peru. Based on extensive exploration and development work conducted to date, we believe the property has excellent potential to be developed into a mine over the next several years. In August 2006 we signed a Letter Agreement with Votorantim Metais (“Votorantim”), granting Votorantim the right to earn up to a 70% interest in the project by meeting certain spending and development milestones. Votorantim is funding and managing all work conducted on the project. The Bongará project hosts the Florida Canyon zinc deposit, where high-grade zinc mineralization has been encountered in drill holes over an area approximately 2.0 kilometers by 2.0 kilometers in dimension.

For 2012, permitting has been initiated to construct a new tunnel to provide underground access and drilling platforms in the Karen-Milagros zone of the Florida Canyon deposit. Tunneling is scheduled to begin in late 2012 or early 2013. Ongoing work in 2012 includes additional metallurgical testing, and other pre-feasibility activities in preparation for completion of a full feasibility report in 2013. Additionally, 20,000 meters of drilling to further define mineralization is planned in 2012 from both the surface at San Jorge and Karen-Milagros and the existing underground workings at San Jorge. Votorantim will also continue road construction to the project area with the objective of completing access to the Florida Canyon area late in the year. To date, access to the deposit has occurred via helicopter and foot trails. Permitting and social development activities with surrounding communities will also continue throughout 2012.

## Pedra Branca

The Pedra Branca project is an advanced-stage project in which we are exploring for platinum and palladium (“PGM”) in Brazil. Several well mineralized bodies containing strong values of PGM’s have been delineated by drilling. We believe there is good potential to discover additional PGM-bearing deposits. The property is 100% owned by

PBM. Our joint venture partner, Anglo Platinum (“Anglo”), currently owns 51% of PBM and is funding, through PBM, all work conducted on the project. We hold a 49% interest in PBM. We deconsolidated PBM during 2010 and will record our share of any exploration expense as our equity interest in the gains and losses of PBM against its investment in PBM. As part of the Shareholders Agreement, PBM has paid us a 5% management fee for operating the project based upon total expenditures, pursuant to a Services Agreement. Anglo has indicated they will be taking over the management of the project during the second quarter of 2012, and we will no longer be receiving the 5% management fee.

The work program for 2012 consists of helicopter-borne geophysics on closely spaced flight lines traversing areas potentially underlain by ultramafic rocks. Ultramafic rocks are highly magnetic and detectable by geophysics. Ultramafic rocks are also the host to all PGM mineralization identified on the property to date. Anglo has indicated additional work will be conducted on re-logging selected drill core to better interpret the geology and geometry of the mineralization. If the geophysical program is successful in identifying new ultramafic bodies, Anglo has indicated PBM may drill test these areas in 2013.

#### Pachuca Real

The Pachuca project located in central Mexico is an early-stage exploration project in which we are exploring for silver and gold. We believe the project has excellent potential to host multiple high-grade silver-gold veins over a fairly large area. In April 2010, Solitario signed a definitive venture agreement with Compania De Minas Buenaventura S.A.A. (“Buenaventura”), allowing Buenaventura to earn up to a 70% interest in the property by meeting certain expenditure and development milestones. In 2011, Buenaventura completed a 38-hole core drilling program totaling 13,489 meters. In December 2011, Buenaventura elected to terminate its option to earn an interest in the property, and consequently, Solitario retains a 100% interest.

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Our initial plans for 2012 are to evaluate the extensive work program that Buenaventura completed and we will probably seek a new joint venture partner later in the year. Absent securing a venture partner in 2012, we are considering conducting a follow-up drilling program in 2013 offsetting some of the well mineralized Buenaventura drill holes.

## Newmont Alliance

In January 2005 we signed a Strategic Alliance Agreement (the "Alliance Agreement") with Newmont Overseas Exploration Limited ("Newmont"), to explore for gold in South America (the "Strategic Alliance"). We currently have the La Promesa, Excelsior and Cerro Azul properties that fall within the currently defined Strategic Alliance areas and are subject to the provisions of the Newmont Alliance. All three properties are considered early-stage exploration properties.

In 2011 we drilled 11 core holes at Cerro Azul and intersected mineralization in seven of the holes. We believe there is potential on all three of the Strategic Alliance properties, but as we are currently focused on higher priority projects, we plan to conduct very limited activities on these in 2012.

## Yanacocha Royalty Property

The 61,000-hectare Yanacocha royalty property is located in northern Peru immediately north of Newmont Mining-Buenaventura's Minera Yanacocha Mine, the largest gold mine in South America. We acquired the property in 1993 and sold it to Newmont in 2000 for \$6.0 million and we retained a net smelter return ("NSR") royalty on the property. We amended the NSR royalty schedule in January 2005 at which time Newmont committed to a long-term US\$4.0 million work program on our royalty property. We consider the property to be an early-stage exploration property, but believe it has good potential to host gold mineralization. Newmont continues to conduct annual exploration work on the property, and we see this work continuing for the foreseeable future.

## **(h). Wholly-owned Exploration Properties**

### Jaripo

In December 2011 we optioned the 775-hectare Jaripo silver-zinc-lead-gold project in Sonora, Mexico, from a private Mexican individual. We can acquire a 100% interest in the property without any retained royalty due the underlying

owner, by making scheduled option payments of \$225,000 over the next three years, and a final payment of \$1.75 million in December 2015.

The property is characterized by a vein system that has been traced over a length of 1,500 meters. Another company drilled 12 core holes totaling 1,503 meters in 2010. All the drill holes, except one, intersected mineralization. Since optioning the property, we have conducted detailed surface sampling and mapping. We believe the property has the potential to host significant silver-zinc-lead-gold mineralization in veins, is underexplored and will be relatively inexpensive to drill test. We are planning a 10-hole drilling program in 2012.

#### Other Properties

For Peru and Mexico, we have budgeted approximately \$2,117,000 in 2012 for exploration on our wholly-owned projects, our Newmont Strategic Alliance projects, discussed above, and reconnaissance exploration activities for 2012. This amount includes approximately \$266,000 for drilling related expenditures for the Jaripo property in 2012. These activities include mapping, sampling, geophysical and geochemical analysis in addition to our drilling activities. Our significant wholly-owned projects include Atico in Peru, Jaripo, Aconchi and Norcan in Mexico, and Triunfo and Espanola in Bolivia.

#### **(i). Discontinued Projects**

During 2011 we abandoned the Paria Cruz project and recorded a mineral property write-down of \$10,000. During 2010 we abandoned the Santiago, Cajatambo, La Noria and Palmira properties and recorded a mineral property write down of \$16,000, \$28,000, \$6,000 and \$5,000, respectively. We performed drilling, stream sediment sampling, rock chip channel sampling and reconnaissance geological mapping. Based upon this work, the decision was made to abandon these projects.

#### **(j). Critical Accounting Estimates**

#### Mineral Properties, net

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We classify our interest in mineral properties as Mineral Properties, net (tangible assets) pursuant to ASC 930. On February 22, 2012, we announced the completion of the Feasibility Study, and as a result we earned an 80% interest in MH-LLC, and we reported the mineral reserves as of February 22, 2012 at our Mt. Hamilton project, discussed above. The majority of our mineral properties represents mineral use rights for parcels of land we do not own. Except for Mt. Hamilton, all of our mineral properties are located in Latin America, and relate to exploration stage properties. The value of these assets is primarily driven by the nature and amount of economic minerals believed to be contained, or potentially contained, in such properties.

## Impairment

We regularly perform evaluations of our investment in mineral properties to assess the recoverability and/or the residual value of our investments in these assets. All long-lived assets are reviewed for impairment whenever events or circumstances change, such as negative drilling results or termination of a joint venture, which indicates the carrying amount of an asset may not be recoverable, utilizing established guidelines based upon discounted future net cash flows from the asset or upon the determination that certain exploration properties do not have sufficient potential for economic mineralization as a result of our analysis of exploration or development activities including surveys, sampling and drilling.

## Fair Value

ASC 820 establishes a framework for measuring fair value and requires enhanced disclosures about fair value measurements. ASC 820 clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. ASC 820 also requires disclosure about how fair value is determined for assets and liabilities and establishes a hierarchy for which these assets and liabilities must be grouped, based on significant levels of inputs as follows:

**Level 1:** Quoted prices in active markets for identical assets or liabilities;

**Level 2:** Quoted prices in active markets for similar assets and liabilities and inputs that are observable for the asset or liability; or

**Level 3:** Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The determination of where assets and liabilities fall within this hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

Marketable equity securities

Our investments in marketable equity securities are classified as available-for-sale and are carried at fair value, which is based upon quoted prices of the securities owned. The cost of marketable equity securities sold is determined by the specific identification method. Changes in market value are recorded in accumulated other comprehensive income within stockholders' equity, unless a decline in market value is considered other than temporary, in which case the decline is recognized as a loss in the consolidated statement of operations.

Ely units and warrants

In connection with the LOI, we purchased 3,333,333 Ely units in two equal tranches consisting each of 1,666,666 shares of Ely common stock and warrants to purchase 833,333 shares of Ely common stock received on August 30, 2010 (the "First Tranche"). The second tranche was received on October 19, 2010 (the "Second Tranche"). The Ely common stock and any underlying shares to be received upon exercise of the warrants were subject to a four-month hold period from the date the units were purchased.

We allocated the purchase price of the units for both tranches between the shares of Ely common stock and the warrants based upon the relative fair values of the warrants and shares in the units on the dates of purchase. The fair value of the shares of Ely common stock was based upon the quoted market value of Ely shares as quoted on the TSXV. The fair value of the Ely warrants was based upon a Black-Scholes option pricing model. We did not discount these fair values for the four-month hold period because of our classification of these assets as long-term based upon our intent to hold the shares and any shares from the potential exercise of the warrants for a period of more than one year and because the relatively short hold period was not considered to create a material discount to our value as of the date of purchase of the units. We recorded a day-one unrealized gain on the Ely marketable equity securities, net of deferred taxes, to other comprehensive income, based upon the quoted fair market value of the Ely shares on the date of purchase. We classify our



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shares of Ely common stock as marketable equity securities available for sale and any unrealized gains or losses are recognized in unrealized gain or loss on marketable equity securities in other comprehensive income.

Pursuant to ASC 815 the warrants received in both tranches do not qualify as a derivative instrument until 31 days prior to the end of the hold period. Accordingly we recorded a day-one unrealized gain to other comprehensive income on the Ely warrants as of the date of purchase for both tranches. However, on November 30, 2010, the date the hold period for the potential shares from warrants from the First Tranche was less than 31 days, we changed the classification of the warrants received on August 30, 2010 to derivative instrument and concurrently transferred the unrealized gain on the warrants as of that date of \$62,000, net of deferred taxes of \$37,000, to unrealized gain on derivative instrument in the statement of operations to reflect the change in the classification of the warrants received in the First Tranche as deferred instruments on that date. Solitario recorded an additional gain on derivative instruments of \$17,000, for a total gain on derivative instruments in the statement of operations since the date of acquisition of \$117,000. The fair value of the warrants was calculated based upon a Black-Scholes option pricing model at each period end date.

Because the warrants received in the Second Tranche did not qualify as derivative instruments as of December 31, 2010 we recorded all changes in value of the warrants during 2010 in unrealized gain in other comprehensive income in the equity section of the consolidated balance sheet. We transferred the balance of unrealized gain in other comprehensive income to gain on derivative instrument in the statement of operations, when the warrants were reclassified as derivative instruments in accordance with ASC 815 in January 2011.

## Derivative instruments

We account for our derivative instruments in accordance with ASC 815, "Accounting for Derivative Instruments and Hedging Activities." Pursuant to ASC 815, we have not designated the Kinross Collar or the Kinross call options as hedging instruments and any changes in the fair market value of the Kinross Collar or the Kinross call options are recognized in the statement of operations in the period of the change. See results of operations above for the loss (gain) on derivative instrument related to the Kinross Collar and the Kinross call options during 2011 and 2010.

## Revenue Recognition

We record delay rental payments as revenue in the period received. We received \$200,000 in delay rental payments during the years ended December 31, 2011 and 2010. Any payments received for the sale of property interests are recorded as a reduction of the related property's capitalized cost. Proceeds which exceed the capitalized cost of the property are recognized as revenue. During 2011 we recorded \$42,000 in joint venture and property payments related to a \$50,000 payment on our Mercurio project, less \$8,000 for the entire capitalized cost at Mercurio at the time of the payment.

### Deferred Noncontrolling Shareholder Payments

We record any proceeds from parties earning an interest in subsidiaries as deferred noncontrolling shareholder payments until the party earns an interest in the subsidiary. Upon earning an initial or subsequent interest in the subsidiary by the other party, we record noncontrolling interest equal to the earned percentage interest in the net book value of the subsidiary and any difference between the proceeds recorded in deferred noncontrolling interest is recorded as additional paid-in-capital. In the event the parties do not earn either an initial interest or a subsequent interest in the subsidiary, we record any payments included in deferred noncontrolling shareholder payments to the statement of operations.

### Long-term debt

We record the long-term debt due to Augusta at the discounted fair value as of the date of the formation of MH-LLC in accordance with ASC 470. Upon the contribution of the mineral properties by DHI-US to MH-LLC, MH-LLC recorded \$3,066,000 for the discounted fair value of the payments due to Augusta, discounted at 7.5%, which was based on our estimated cost of similar credit as of the formation of MH-LLC.

### Stock-based compensation

Solitario classifies its options as equity options, in accordance with ASU 2010-13 and no longer records a liability for the fair value of its outstanding options beginning January 1, 2011. In accordance with ASU 2010-13, this change has been made on a prospective basis as of January 1, 2011 with a reduction to stock option liability of \$2,775,000, an increase to additional paid-in-capital of \$1,240,000 and a reduction in accumulated deficit of \$992,000, net of deferred taxes of \$543,000 as a cumulative effect of a change in accounting principle. The adoption of ASU 2010-13 had the effect of increasing the 2011 net

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loss and basic and diluted earnings per share by \$524,000 and \$0.02 per share, respectively, by no longer accounting for its options as liabilities. See Note 9, to the consolidated financial statements, "Employee stock compensation plans" below.

## Income taxes

We account for income taxes in accordance with ASC 740, "Accounting for Income Taxes." Under ASC 740, income taxes are provided for the tax effects of transactions reported in the financial statements and consist of taxes currently due plus deferred taxes related to certain income and expenses recognized in different periods for financial and income tax reporting purposes. Deferred tax assets and liabilities represent the future tax return consequences of those differences, which will either be taxable or deductible when the assets and liabilities are recovered or settled. Deferred taxes also are recognized for operating losses and tax credits that are available to offset future taxable income and income taxes, respectively. A valuation allowance is provided if it is more likely than not that some or all of the deferred tax assets will not be realized. Currently we believe our deferred tax assets, exclusive of our foreign net operating losses and our Yanacocha royalty asset, are recoverable. Recovery of these assets is dependent upon our expected gains on the Kinross securities we own. If these values are not realized, we may record additional valuation allowances in the future.

## Accounting for Uncertainty in Income Taxes

ASC 740 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. ASC 740 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition. ASC 740 provides that a company's tax position will be considered settled if the taxing authority has completed its examination, the company does not plan to appeal, and it is remote that the taxing authority would reexamine the tax position in the future. The adoption of ASC 740-10 had no effect on our financial position or results of operations.

## **(k). Related Party Transactions**

### TNR Gold Corp.

As of December 31, 2011, we own 1,000,000 shares of TNR that are classified as marketable equity securities available-for-sale and are recorded at their fair market value of \$54,000 at December 31, 2011. Christopher E. Herald, our CEO, was a member of the Board of Directors of TNR until June 3, 2009.

**(I). Recent Accounting Pronouncements**

In April 2010 the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2010-13, “Effect of Denominating the Exercise Price of a Share-Based Payment Award in the Currency of the Market in Which the Underlying Equity Security Trades” (“ASU 2010-13”). ASU 2010-13 addresses the classification of a share-based payment award with an exercise price denominated in the currency of a market in which the underlying equity security trades. FASB Accounting Standards Codification (“ASC”) Topic 718 was amended to clarify that a share-based payment award with an exercise price denominated in the currency of a market in which a substantial portion of the entity’s equity securities trade shall not be considered to contain a market, performance or service condition. Therefore, such an award is not to be classified as a liability if it otherwise qualifies for equity classification. The amendments in ASU 2010-13 are effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2010, with early application permitted. Solitario changed its accounting for options upon the adoption of ASU 2010-13 from liability accounting to equity accounting in the first quarter of 2011. In accordance with ASU 2010-13, this change has been made on a prospective basis as of January 1, 2011 with a reduction to stock option liability of \$2,775,000, an increase to additional paid-in-capital of \$1,240,000 and a reduction in accumulated deficit of \$992,000, net of deferred taxes of \$543,000. See “Employee stock compensation plans” below as discussed in Note 1 to the Financial Statements.

In January 2010 ASC guidance for fair value measurements and disclosure was updated to require additional disclosures related to transfers in and out of level 1 and 2 fair value measurements and enhanced detail in the level 3 reconciliation. The guidance was amended to clarify the level of disaggregation required for assets and liabilities and the disclosures required for inputs and valuation techniques used to measure the fair value of assets and liabilities that fall in either level 2 or level 3. The updated guidance was effective for our fiscal year beginning January 1, 2010, with the exception of the level 3 disaggregation, which is effective for our fiscal year beginning January 1, 2011. The adoption had no impact on our consolidated financial position, results of operations or cash flows. See the discussion of our assets and liabilities measured at fair value above under “Fair Value.”

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**Item 7A. Quantitative and Qualitative Disclosures about Market Risk**

(a) Equity Price Risks

(1) Our investment in Kinross is subject to equity market risk.

As of December 31, 2011 a hypothetical increase of 10 percent in the price of Kinross common stock would increase the value of our holdings of Kinross by \$977,000 and increase other comprehensive income and total stockholders' equity by the same amount, net of deferred taxes of \$364,000. Additionally our working capital would also be increased by \$436,000 from a hypothetical increase of 10 percent in the price of Kinross common stock, net of deferred taxes of \$162,000. This increase is based upon all of our 850,000 Kinross common shares as of December 31, 2011.

A hypothetical decrease of 10 percent in the price of Kinross common stock would have the opposite effect of the increase discussed above.

(2) Our investment in Ely common stock is subject to equity market risk.

As of December 31, 2011 a hypothetical increase of 10 percent in the price of Ely common stock would increase the value of our holdings of Ely by \$59,000 and increase other comprehensive income and total stockholders' equity by the same amount, net of deferred taxes of \$22,000. As we have not classified any of our investment in Ely common stock as a current asset, our working capital would not change from a hypothetical increase of 10 percent in the price of Ely common stock.

(3) Our investment in the Ely warrants derivative instruments at December 31, 2011 is not materially subject to equity market risk for changes in the price of Ely common stock. See "Derivative instruments" above.

(b.) Interest Rate Risks

We have no material interest rate risks at December 31, 2011.

(1) Long-term debt.

Our required payments on our long-term debt Augusta note are fixed as the Augusta debt is non-interest bearing, and we recorded discounted fair value of the payments due to Augusta, discounted at 7.5%, which was our estimated cost of similar credit as of the formation of MH-LLC. Accordingly, any increase or decrease in market interest rates will have no effect on our accretion of interest expense or the cash payments to be made on the Augusta note.

(2) Short-term debt.

An increase or decrease of 10% in the interest rate charged on our short-term margin loans, that currently have a floating rate of 2.5% per annum, would not have a material impact on our interest expense.

(c.) Exchange Rate Risks

The portion of our cash that is denominated in foreign currency is subject to exchange rate risk.

Solitario's cash accounts in foreign subsidiaries not denominated in United States dollars represent the only significant foreign currency denominated assets. Foreign currency denominated cash accounts totaled \$325,000 and \$32,000, respectively, at December 31, 2011 and 2010. We have estimated that as of December 31, 2011 an increase in the value of the Brazilian Real to the United States Dollar of 10% would decrease our cash on hand by \$28,000, and increase our net loss in the statement of operations by \$28,000, net of deferred taxes of \$10,000. A decrease in the value of the Brazilian Real to the United States Dollar of 10% would increase the value of our cash and reduce our net loss in the statement of operations by the opposite amount. We have no other material exchange rate risks as of December 31, 2011, as our other foreign denominated cash accounts are not significant to our total assets, liabilities or operating results.

Our other operating assets and liabilities are generally dominated in United States Dollars and do not have material exchange rate risks.

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**Item 8. Financial Statements and Supplementary Data**

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of

Solitario Exploration & Royalty Corp.

Wheat Ridge, Colorado

We have audited the accompanying consolidated balance sheets of Solitario Exploration & Royalty Corp. (the "Company") as of December 31, 2011 and 2010, and the related consolidated statements of operations, changes in shareholders' equity and comprehensive loss and cash flows for each of the years in the three-year period ended December 31, 2011. We also have audited the Company's internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting included in Item 9A. Our responsibility is to express an opinion on these consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.



Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Solitario Exploration & Royalty Corp. as of December 31, 2011 and 2010, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2011 in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, Solitario Exploration & Royalty Corp. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for share-based payment awards as of January 1, 2011 due to the adoption of new FASB guidance.

Ehrhardt Keefe Steiner & Hottman PC

March 12, 2012

Denver, Colorado

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## SOLITARIO EXPLORATION &amp; ROYALTY CORP.

## CONSOLIDATED BALANCE SHEETS

(in thousands of U.S. dollars, except share and per share amounts)	December 31, 2011	December 31, 2010
Assets		
Current assets:		
Cash and cash equivalents	\$432	\$478
Investments in marketable equity securities, at fair value	4,361	5,214
Prepaid expenses and other	<u>488</u>	<u>421</u>
Total current assets	5,281	6,113
Mineral properties	8,901	6,153
Investments in marketable equity securities, at fair value	6,000	14,557
Equity method investment	1,653	2,276
Other assets	<u>219</u>	<u>509</u>
Total assets	<u>\$22,054</u>	<u>\$29,608</u>
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	\$482	\$630
Short-term margin loan	2,000	2,823
Current portion long-term debt	727	481
Deferred income taxes	1,627	1,945
Other	<u>100</u>	<u>100</u>
Total current liabilities	4,936	5,979
Long-term debt, net of discount	2,075	2,604
Deferred income taxes	1,170	4,474
Stock option liability	-	2,775
Commitments and contingencies (Notes 2 and 8)		
Shareholders' Equity:		
Solitario shareholders' equity		
Preferred stock, \$0.01 par value, authorized 10,000,000 shares (none issued and outstanding at December 31, 2011 and 2010)	-	-
Common stock, \$0.01 par value, authorized, 100,000,000 shares (34,204,958 and 29,750,242, respectively, shares issued and outstanding at December 31, 2011 and 2010)	342	297
Additional paid-in capital	49,015	36,799
Accumulated deficit	(39,381)	(36,996)
Accumulated other comprehensive income	<u>5,877</u>	<u>11,786</u>
Total Solitario shareholders' equity	15,853	11,886
Noncontrolling interest	(1,640)	1,890
Contra-noncontrolling interest	<u>(340)</u>	<u>-</u>
Total shareholders' equity	<u>13,873</u>	<u>13,776</u>
Total liabilities and shareholders' equity	<u>\$22,054</u>	<u>\$29,608</u>

See Notes to Consolidated Financial Statements.

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## SOLITARIO EXPLORATION &amp; ROYALTY CORP.

## CONSOLIDATED STATEMENTS OF OPERATIONS

## FOR THE YEARS ENDED DECEMBER 31, 2011, 2010 AND 2009

(in thousands of U.S. Dollars, except per share amounts)	For the year ended		
	December 31,		
	2011	2010	2009
Property and joint venture revenue			
Joint venture property payments	\$242	\$200	\$200
Costs, expenses and other:			
Exploration expense	5,946	4,033	3,579
Depreciation and amortization	46	67	91
General and administrative	2,857	4,280	2,079
Loss (gain) on derivative instruments	137	(152)	(694)
Property abandonment and impairment	10	55	51
(Gain) loss on sale of assets	-	(22)	18
Interest and dividend income (net)	<u>163</u>	<u>(63)</u>	<u>(106)</u>
Total costs, expenses and other	<u>9,159</u>	<u>8,198</u>	<u>5,018</u>
Other Income			
Gain on sale of marketable equity securities	1,937	995	1,409
Equity in net loss of equity method investment	(623)	(220)	-
Gain on deconsolidation of PBM subsidiary	-	724	-
Break fee on attempted acquisition	<u>-</u>	<u>-</u>	<u>2,200</u>
Total other income	<u>1,314</u>	<u>1,499</u>	<u>3,609</u>
Loss before income tax	(7,603)	(6,499)	(1,209)
Income tax benefit (expense)	<u>635</u>	<u>1,159</u>	(996)
Net loss	(6,968)	(5,340)	(2,205)
Less net loss attributable to noncontrolling interest	<u>3,591</u>	<u>1,274</u>	<u>419</u>
Net loss attributable to Solitario shareholders	<u>\$(3,377)</u>	<u>\$(4,066)</u>	<u>\$(1,786)</u>
Loss per common share attributable to Solitario shareholders:			
Basic and diluted	<u>\$(0.10)</u>	<u>\$(0.14)</u>	<u>\$(0.06)</u>
Weighted average shares outstanding:			
Basic and diluted	32,807	29,750	<u>29,750</u>

See Notes to Consolidated Financial Statements.

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## SOLITARIO EXPLORATION &amp; ROYALTY CORP.

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY AND COMPREHENSIVE LOSS

FOR THE YEARS ENDED DECEMBER 31, 2011, 2010 AND 2009

(in thousands, except share amounts)	Solitario Shareholders'				Accumulated Total			Contra		Total
	Common Stock Shares	Paid-in Amount	Additional Accumulated Capital	Comprehensive Deficit	Other Shareholders' Income	Solitario Controlling Equity	Non- Controlling Interest	Non- Shareholders' Interest	Equity	
Balance at December 31, 2008	29,750,242	\$297	\$35,611	\$(31,144)	\$12,454	\$17,218	\$833	\$-	\$18,051	
Comprehensive income:										
Net loss	-	-	-	(1,786)	-	(1,786)	(419)	-	(2,205)	
Net unrealized (loss) on marketable equity securities (net of tax of \$435)	-	-	-	-	(732)	(732)	-	-	(732)	
Comprehensive loss	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	(2,518)	(419)	-	<u>(2,937)</u>	
Balance at December 31, 2009	29,750,242	297	35,611	(32,930)	11,722	14,700	414	-	15,114	
Noncontrolling interest equity contribution	-	-	1,188	-	-	1,188	1,594	-	2,782	
Deconsolidation of PBM subsidiary	-	-	-	-	-	-	(1,844)	-	(1,844)	
Noncontrolling interest equity contribution	-	-	-	-	-	-	3,000	-	3,000	
Comprehensive income:										
Net loss	-	-	-	(4,066)	-	(4,066)	(1,274)	-	(5,340)	
Net unrealized gain on marketable	-	-	-	-	<u>64</u>	<u>64</u>	-	-	<u>64</u>	

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equity securities (net of tax of \$163)									
Comprehensive loss	-	-	-	-	-	(4,002)	(1,274)	-	(5,276)
Balance at December 31, 2010	29,750,242	297	36,799	(36,996)	11,786	11,886	1,890	-	13,776
Cumulative effect of change in accounting principle, net of deferred tax of \$543	-	-	1,240	992	-	2,232	-	-	2,232
Issuance of shares for cash in public offering, net of issuance costs of \$838	3,910,000	39	8,898	-	-	8,937	-	-	8,937
Issuance of shares for royalty buy-down	344,116	3	997	-	-	1,000	-	-	1,000
Issuance of shares and \$200 of cash to noncontrolling shareholder for future earn-in	50,000	1	139	-	-	140	-	(340)	(200)
Noncontrolling interest contribution	-	-	-	-	-	-	584	-	584
Loan to noncontrolling interest	-	-	-	-	-	-	(504)	-	(504)
Stock option expense	-	-	697	-	-	697	-	-	697
Issuance of shares on exercise of stock options	150,600	2	245	-	-	247	-	-	247
Accrued interest on advance to noncontrolling interest	-	-	-	-	-	-	(19)	-	(19)

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Comprehensive income:									
Net loss	-	-	-	(3,377)	-	(3,377)	(3,591)	-	(6,968)
Net unrealized (loss) on marketable equity securities (net of tax of \$3,516)	-	-	-	-	(5,909)	(5,909)	-	-	(5,909)
Comprehensive loss	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	(9,286)	(3,591)	-	<u>(12,877)</u>
Balance at December 31, 2011	34,204,958	<u>\$342</u>	<u>\$49,015</u>	<u>\$(39,381)</u>	<u>\$5,877</u>	<u>\$15,853</u>	<u>\$(1,640)</u>	<u>\$(340)</u>	<u>\$13,873</u>

See Notes to Consolidated Financial Statements.

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## SOLITARIO EXPLORATION &amp; ROYALTY CORP.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2011, 2010 AND 2009

(in thousands of U.S. Dollars)	For the year ended December 31,		
	2011	2010	2009
Operating activities:			
Net loss	\$(6,968)	\$(5,340)	\$(2,205)
Adjustments to reconcile net loss to net cash used in operating activities:			
Loss (gain) on derivative instruments	137	(152)	(694)
Depreciation and amortization	46	67	91
Loss on equity method investment	623	220	-
Property abandonment and impairment	10	55	51
Employee stock option expense (benefit)	697	2,513	(269)
Deferred income taxes	(635)	(867)	611
Amortization of interest on debt discount	217	19	-
Gain on asset and equity security sales	(1,937)	(1,017)	(1,391)
Gain on deconsolidation of PBM subsidiary	-	(724)	-
Changes in operating assets and liabilities:			
Prepaid expenses and other current assets	(2)	49	96
Accounts payable and other current liabilities	(119)	414	112
Current income taxes payable	-	(677)	385
Net cash used in operating activities	<u>(7,931)</u>	<u>(5,440)</u>	<u>(3,213)</u>
Investing activities:			
Additions to mineral properties	(1,765)	(11)	(5)
Additions to other assets	(119)	(60)	(15)
Purchase of marketable equity securities	-	(358)	-
Sale (purchase) of derivative instrument, net	42	(135)	99
Proceeds from sale of marketable equity securities	2,035	1,301	1,852
Decrease in cash from deconsolidation of PBM subsidiary	-	(1,083)	-
Proceeds from sale of other assets	<u>-</u>	<u>22</u>	<u>-</u>
Net cash provided by investing activities	<u>193</u>	<u>(324)</u>	<u>1,931</u>
Financing activities:			
Short-term margin loan (repayment) borrowing, net	(872)	2,800	-
Repayment of long-term debt	(500)	-	-
Proceeds from common stock offering, net	8,937	-	-
Proceeds from exercise of options	247	-	-
Payment to noncontrolling interest	(200)	-	-
Noncontrolling interest contribution	<u>80</u>	<u>1,496</u>	<u>1,286</u>
Net cash provided by financing activities	<u>7,692</u>	<u>4,296</u>	<u>1,286</u>



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Net increase (decrease) in cash and cash equivalents	(46)	(1,468)	4
Cash and cash equivalents, beginning of year	<u>478</u>	<u>1,946</u>	<u>1,942</u>
Cash and cash equivalents, end of year	<u>\$ 432</u>	<u>\$ 478</u>	<u>\$1,946</u>
Supplemental disclosure of cash flow information:			
Cash paid for interest	\$71	\$31	\$23
Cash paid for income taxes	\$-	\$319	\$-
Supplemental disclosure of non-cash flow investing and financing activities:			
Acquisition of mineral properties for stock	\$1,000	\$-	\$-
Loan to noncontrolling interest	\$504	\$-	\$-
Issuance of stock to noncontrolling interest	\$140	\$-	\$-
Reclassification of stock option liability to additional paid-in capital, \$1,240 and to retained earnings,\$992, net of deferred taxes of \$543upon change in accounting principle	\$2,775	\$-	\$-
Assumption of Mt. Hamilton long-term debt on acquisition of Mt. Hamilton mineral property	\$-	\$3,066	\$-
Noncontrolling shareholder contribution of Mt. Hamilton property	\$-	\$3,000	\$-
Reclassification of deferred noncontrolling shareholder payments to additional paid-in capital	\$-	\$1,188	\$-
Reclassification of deferred noncontrolling shareholder payments to noncontrolling interest	\$-	\$1,594	\$-

See Notes to Consolidated Financial Statements.

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1. Business and Summary of Significant Accounting Policies:

*Business and company formation*

Solitario Exploration & Royalty Corp. (“Solitario”) is an exploration stage company at December 31, 2011 with a focus on the acquisition of precious and base metal properties with exploration potential and the development or purchase of royalty interests. Solitario acquires and holds a portfolio of exploration properties for future sale or joint venture or to create a royalty prior to the establishment of proven and probable reserves. In August 2010 Solitario signed a Letter of Intent related to the Mt. Hamilton project and in December 2010 Solitario signed a Limited Liability Company Operating Agreement to form Mt. Hamilton LLC (“MH-LLC”) whereby Solitario could earn-in up to an 80% interest in MH-LLC and have the right to develop the Mt. Hamilton project located in Nevada, discussed below under “Recent developments.” Solitario intends to develop the Mt. Hamilton project. However, Solitario has never developed a mineral property. Solitario is exploring on other mineral properties that may be developed in the future by Solitario or through a joint venture. Solitario may also evaluate mineral properties to potentially buy a royalty.

Solitario has been actively involved in mineral exploration since 1993. Solitario's last significant revenues were recorded in 2000 upon the sale of the Yanacocha property for \$6,000,000. Future revenues from joint venture payments or the sale of properties, if any, would also occur on an infrequent basis. At December 31, 2011, Solitario had 12 mineral exploration properties in the United States, Peru, Bolivia, Mexico and Brazil and its Yanacocha and La Tola royalty properties in Peru. Solitario is conducting exploration activities in all of those countries.

Solitario was incorporated in the state of Colorado on November 15, 1984 as a wholly-owned subsidiary of Crown Resources Corporation (“Crown”). In July 1994, Solitario became a publicly traded company on the Toronto Stock Exchange (the “TSX”) through its Initial Public Offering.

*Recent developments*

Mt. Hamilton feasibility study

Solitario announced on February 22, 2012 the completion of a feasibility study on its Mt. Hamilton project (the “Feasibility Study”), prepared by SRK Consulting (US), Inc. of Lakewood, Colorado (“SRK”). As a result of the completion of the Feasibility Study, Solitario earned an 80% interest in MH-LLC, became a development-stage company (but not a company in the “Development Stage”) and reported mineral reserves at its Mt. Hamilton project. See Note 15, “Subsequent event, Mt. Hamilton feasibility study,” below.

Equity financing

On April 13, 2011, Solitario sold 3,400,000 shares of its common stock in an underwritten public offering (the "Offering") at a price to the public of \$2.50 per share and on May 9, 2011 Solitario sold an additional 510,000 shares at \$2.50 per share, upon the exercise of the underwriter's option to cover over-allotments. The net proceeds were \$8,937,000 after the underwriter's commission of six percent totaling \$587,000 and offering costs of \$251,000. The Offering was made pursuant to a shelf registration statement on Form S-3 previously filed with the SEC on March 18, 2011, which was declared effective on March 29, 2011. A prospectus supplement relating to the Offering has been filed with the SEC and is available on the SEC's website located at [www.sec.gov](http://www.sec.gov).

Stock option liability – Change in accounting principle

On January 1, 2011, Solitario changed its accounting for stock options to equity accounting from liability accounting upon the adoption of Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") No. 2010-13, "Effect of Denominating the Exercise Price of a Share-Based Payment Award in the Currency of the Market in Which the Underlying Equity Security Trades." The newly adopted accounting principle is preferable because it improves consistency in financial reporting by eliminating diversity in accounting practice. See Note 9, "Employee stock compensation plans."

Royalty buy-down

On May 17, 2011, we entered into an agreement, along with our subsidiary MH-LLC, with an underlying royalty holder on our Mt. Hamilton property whereby we delivered, for the benefit of MH-LLC, 344,116 shares of our common stock, with a fair market value of \$1,000,000 based upon a 20-day weighted average quoted stock price, and \$1,520,000 of cash, to

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reduce the future net smelter royalty (the "Royalty Buy-down") from a maximum royalty of 8% to a maximum royalty of 6%. MH-LLC retains its existing right to further reduce the net smelter royalty at Mt. Hamilton by an additional 5% to an ultimate royalty of 1%. As part of the Royalty Buy-down transaction, we agreed to loan \$504,000 to DHI Minerals (US) Ltd. ("DHI-US"), the noncontrolling member of MH-LLC, for its mutually agreed 20% of the total purchase price contributed by us to MH-LLC to fund the Royalty Buy-down. This loan is unsecured bearing interest at 6% per annum, and the loan and any accrued interest thereon will only be repaid from 80% of DHI-US share of distributions from MH-LLC, if any. We have recorded the loan of \$504,000 as an offset to DHI-US's noncontrolling interest in MH-LLC, as the loan represents a claim on DHI-US's share of the future distributions from MH-LLC. During 2011 we accrued \$19,000 of interest on the \$504,000 loan recorded as an offset to DHI-US's noncontrolling interest in the equity section of our consolidated balance sheet.

## *Investment in Kinross*

Solitario has a significant investment in Kinross at December 31, 2011, which consists of 850,000 shares of Kinross common stock. During 2011, 2010 and 2009, Solitario sold 130,000, 70,000 and 100,000 shares, respectively of Kinross common stock for proceeds of \$2,035,000, \$1,301,000 and \$1,852,000 respectively. As of March 8, 2012, Solitario owns 820,000 shares of Kinross common stock. Solitario's investment in Kinross common stock represents a significant concentration of assets, with the inherent risk that entails. Any significant fluctuation in the market value of Kinross common shares could have a material impact on our liquidity and capital resources. In October 2007 Solitario entered into a collar that limited the proceeds on 900,000 shares of Solitario's investment in Kinross common shares. On April 12, 2011, the final tranche of the Kinross Collar due on that date expired, and 100,000 shares under the Kinross Collar were released. During 2011, 2010 and 2009, Solitario has from time to time sold covered calls against its holdings of Kinross. As of December 31, 2011, Solitario has no covered calls outstanding against its holdings of Kinross shares. The Kinross Collar and Kinross Calls are discussed below under "Derivative instruments." As of December 31, 2011, Solitario has borrowed \$2,000,000 in a margin loan against its holdings of Kinross shares. The short-term margin loan is discussed below under Note 3, "Short-term debt."

## *Financial reporting*

The consolidated financial statements include the accounts of Solitario and its wholly-owned subsidiaries, controlled non-wholly-owned subsidiaries and its equity investment in Pedra Branca Mineracao, Ltd "(PBM)", which owns the Pedra Branca project in Brazil. All significant intercompany accounts and transactions have been eliminated in consolidation. The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America ("generally accepted accounting principles"), and are expressed in US dollars.

## *Revenue recognition*

Solitario records delay rental payments as revenue in the period received. Solitario recorded \$242,000 in joint venture and property payments for the year ended December 31, 2011 and recorded \$200,000 in joint venture and property payments during the years ended December 31, 2010 and 2009. Any payments received for the sale of property interests are recorded as a reduction of the related property's capitalized cost. Proceeds which exceed the capitalized cost of the property are recognized as revenue.

*Deferred noncontrolling shareholder payments*

Solitario records any proceeds from parties earning an interest in subsidiaries as deferred noncontrolling shareholder payments until the party earns an interest in the subsidiary. Upon earning an initial or subsequent interest in the subsidiary, Solitario records noncontrolling interest equal to the earned percentage interest in the net book value of the subsidiary and any difference between the proceeds and the noncontrolling interest as additional paid-in capital. In the event the parties do not earn either an initial interest or a subsequent interest in the subsidiary, Solitario records any payments remaining in deferred noncontrolling shareholder payments to the statement of operations.

On July 21, 2010, Anglo Platinum Limited ("Anglo") made a payment of \$746,000 to PBM required to fund the 2010 work program at the Pedra Branca project, which is held by PBM. Upon making this payment, Anglo earned an additional 21% interest in PBM and now holds a 51% interest in PBM. As a result of Anglo earning a 51% interest in PBM by meeting the requirements of the Shareholders Agreement, Solitario reclassified the balance of \$2,782,000 in deferred noncontrolling shareholder payments as \$1,594,000 to Anglo's interest in PBM and \$1,188,000 to additional paid-in capital, for Solitario's

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share of the deferred noncontrolling shareholder payments. Accordingly, as it no longer controls PBM, Solitario deconsolidated PBM, in accordance with the FASB Accounting Standards Codification (“ASC”) No. 810, “Consolidations,” during year ended December 31, 2010; see Note 11 “Deconsolidation of PBM.” This reduced the balance in the deferred noncontrolling shareholder account to zero as of July 21, 2010. During the year ended December 31, 2010, Solitario received deferred noncontrolling shareholder payments of \$1,496,000. During the year ended December 31, 2011, Solitario received no deferred noncontrolling shareholder payments from joint venture partners to earn an interest in any of Solitario’s subsidiaries.

### *Use of estimates*

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Some of the more significant estimates included in the preparation of Solitario's financial statements pertain to: (i) the recoverability of mineral properties and their future exploration potential; (ii) the estimate of the fair value of Solitario's stock option grants to employees; (iii) the ability of Solitario to realize its deferred tax assets; (iv) the current portion of Solitario's investment in Kinross stock and in Ely shares included in marketable equity securities; (v) the fair value of Solitario’s investment in the Ely Warrants; (vi) the discounted value of the long-term debt recorded upon the formation of MH-LLC; (vii) the fair value of PBM upon deconsolidation; and (viii) the fair value of the Mt. Hamilton property recorded upon the formation of MH-LLC.

In performing its activities, Solitario has incurred certain costs for mineral properties. The recovery of these costs is ultimately dependent upon the sale of mineral property interests or the development of economically recoverable ore reserves and the ability of Solitario to obtain the necessary permits and financing to successfully place the properties into production, and upon future profitable operations, none of which is assured.

### *Cash equivalents*

Cash equivalents include investments in highly liquid money-market securities with original maturities of three months or less when purchased. As of December 31, 2011 and 2010, Solitario had concentrations of cash and cash equivalents in excess of federally insured amounts and cash in foreign banks, which are not covered under the federal deposit insurance rules for the United States.

### *Mineral properties*

Solitario expenses all exploration costs incurred on its mineral properties prior to the establishment of proven and probable reserves. Initial acquisition costs of its mineral properties are capitalized. Solitario regularly performs evaluations of its investment in mineral properties to assess the recoverability and/or the residual value of its investments in these assets. All long-lived assets are reviewed for impairment whenever events or circumstances change which indicate the carrying amount of an asset may not be recoverable, utilizing established guidelines based upon undiscounted future net cash flows from the asset or upon the determination that certain exploration properties do not have sufficient potential for economic mineralization. During the year ended December 31, 2011, 2010 and 2009, Solitario recorded an impairment of \$10,000, \$55,000 and \$51,000, respectively, on its mineral properties.

Solitario's net capitalized mineral properties of \$8,901,000 and \$6,153,000 at December 31, 2011 and 2010, respectively, related to land, leasehold and acquisition costs. As of December 31, 2011, Solitario has not identified any proven and probable reserves related to its mineral properties. However on February 22, 2012, Solitario announced the completion of the Feasibility Study with regard to its Mt. Hamilton project. See Note 15, "Subsequent event, Mt. Hamilton feasibility study."

#### *Derivative instruments*

Solitario accounts for its derivative instruments in accordance with ASC 815 "Accounting for Derivative Instruments and Hedging Activities," ("ASC 815"). On October 12, 2007 Solitario entered into a Zero-Premium Equity Collar (the "Kinross Collar") pursuant to a Master Agreement for Equity Collars and a Pledge and Security Agreement with UBS AG, London, England, an Affiliate of UBS Securities LLC (collectively "UBS") whereby Solitario pledged 900,000 shares of Kinross common stock to be sold (or delivered back to us with any differences settled in cash) upon exercise of the put or call options under

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the Kinross Collar. On April 12, 2011, the final tranche of the Kinross Collar due on that date expired unexercised, and 100,000 shares under the Kinross Collar were released. As of December 31, 2011, none of Solitario's Kinross shares are subject to the Kinross Collar.

Beginning in December 2008, Solitario sold covered calls covering its shares of Kinross common stock. Solitario sold three covered calls covering 130,000 shares of Kinross common stock during 2009, of which 50,000 of these call options expired unexercised in April 2009, 40,000 were repurchased in July 2009 and 40,000 were repurchased in November 2009. In November 2009, Solitario sold an option for 40,000 shares which expired in May 2010. In September 2011 Solitario sold options covering 65,000 shares for proceeds of \$57,000, which were repurchased in October 2011 for \$15,000 and Solitario recorded a gain of \$42,000 in (gain) loss on derivative earnings.

Solitario has not designated its Kinross Collar or its covered calls as hedging instruments as described in ASC 815 and any changes in the fair market value of the Kinross Collar or the Kinross covered calls are recognized in the statement of operations in the period of the change. See Note 6, "Derivative instruments" below.

On August 26, 2010, Solitario signed a letter of intent with Ely Gold and Minerals, Inc. ("Ely") to make certain equity investments into Ely and to joint venture Ely's Mt. Hamilton project, which was wholly owned by DHI-US. Solitario made private placement investments into Ely of \$250,000 each on August 26, 2010 and October 19, 2010. Solitario received a total of 3,333,333 shares of Ely common stock in the private placements and warrants for the purchase of 1,666,667 shares of Ely common stock at Cdn\$0.25 per share, which expire on August 26, 2012 and warrants for the purchase of 1,666,667 shares of Ely common stock at Cdn\$0.25 per share, which expire on October 19, 2012. On August 30, 2010, Solitario allocated its investment between the Ely common stock received of \$178,000 and the Ely Warrants received of \$65,000 based upon the fair values of each. During 2010 Solitario recorded a gain on derivative instruments of \$117,000 on the warrants received on August 26, 2010. In accordance with ASC 815, at December 31, 2010 Solitario did not classify the warrants acquired on October 19, 2010 as derivative instruments until January 18, 2011, or 31 days prior to the underlying shares being readily convertible to cash. Prior to that time, any gains and losses on those warrants were recorded in other comprehensive income. On January 18, 2011, Solitario transferred an unrecognized gain on derivative instrument of \$114,000 for the warrants acquired on October 19, 2010 to gain on derivative instrument. In addition, as of December 31, 2011 Solitario has recorded \$74,000 for the fair value of the 3,333,333 warrants received from Ely as a current asset. Solitario recorded an unrealized loss on derivative instrument in the statement of operations of \$179,000 related to the two Ely warrants for the year ended December 31, 2011.

*Variable interest entity*

On November 12, 2010, we made an initial contribution of \$300,000 for a 10% membership interest in, upon the formation, of MH-LLC which was formed in December 2010 to joint venture the Mt. Hamilton project. The terms of the joint venture are set forth in the Limited Liability Company Operating Agreement of MH-LLC between Solitario and DHI-US (the "MH Agreement"). MH-LLC owns 100% of the Mt. Hamilton Gold project. Pursuant to the MH Agreement, we may earn up to an 80% interest in MH-LLC, and indirectly, the Mt. Hamilton project, by completing



various staged commitments. See a more complete discussion of Ely and MH-LLC below in Note 12, “Ely Gold investment and the Mt. Hamilton Joint Venture.” Pursuant to the terms of the MH Agreement, Solitario has determined that MH-LLC is a VIE in accordance with ASC 810. Solitario has also determined that it is the primary beneficiary of MH-LLC. Accordingly, Solitario consolidates MH-LLC in its consolidated financial statements in accordance with ASC 810. Solitario has determined no separate presentation of assets or liabilities is necessary per ASC 810, as MH-LLC does not have any assets that can only be used to settle specific obligations or any liabilities for which creditors do not have recourse to Solitario.

*Fair value*

FASB ASC 820, “Fair Value Measurements and Disclosures” (“ASC 820”) establishes a framework for measuring fair value and requires enhanced disclosures about fair value measurements. ASC 820 clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. For certain of Solitario's financial instruments, including cash and cash equivalents, short-term margin loans and accounts payable, the carrying amounts approximate fair value due to their short-term maturities. Solitario's marketable equity securities, the Kinross Collar and the Kinross calls are carried at their estimated fair value based on quoted market prices. See Note 7, “Fair value of financial instruments” below.

Table of Contents*Marketable equity securities*

Solitario's investments in marketable equity securities are classified as available-for-sale and are carried at fair value, which is based upon quoted prices of the securities owned. The cost of marketable equity securities sold is determined by the specific identification method. Changes in market value are recorded in accumulated other comprehensive income within shareholders' equity, unless a decline in market value is considered other than temporary, in which case the decline is recognized as a loss in the consolidated statement of operations. Solitario had marketable equity securities with fair values of \$10,361,000 and \$19,771,000, respectively, and cost of \$988,000 and \$1,087,000, respectively, at December 31, 2011 and 2010. Solitario has accumulated other comprehensive income for unrealized holding gains of \$9,373,000 and \$18,684,000, respectively, net of deferred taxes of \$3,496,000 and \$6,969,000, respectively, at December 31, 2011 and 2010 related to our marketable equity securities. Solitario acquired 3,333,333 shares of Ely common stock during the year ended December 31, 2010 at a cost of \$358,000, discussed in Note 12, "Ely Gold investment and the Mt. Hamilton joint venture" below. Solitario sold 130,000 shares of its Kinross common stock during the year ended December 31, 2011 for gross proceeds of \$2,035,000. Solitario sold 70,000 shares of its Kinross common stock during the year ended December 31, 2010 for gross proceeds of \$1,301,000. Solitario has classified \$4,361,000 and \$5,214,000, respectively, of marketable equity securities as current, as of December 31, 2011 and 2010, which represents Solitario's estimate of what portion of marketable equity securities will be liquidated within one year.

The following table represents changes in marketable equity securities (000's).

	2011	2010	2009
Gross cash proceeds	\$2,035	\$1,301	\$1,852
Cost	<u>98</u>	<u>306</u>	<u>443</u>
Gross gain on sale included in earnings during the period	1,937	995	1,409
Unrealized holding (loss) gain arising during the period included in other comprehensive (loss) income, net of tax of \$2,793, \$534 and \$90	(4,695)	689	152
Reclassification adjustment for net gains included in earnings during the period, net of tax of \$723, \$371 and \$526	(1,214)	(624)	(884)

*Foreign exchange*

The United States dollar is the functional currency for all of Solitario's foreign subsidiaries. Although Solitario's South American exploration activities have been conducted primarily in Brazil, Bolivia, Peru and Mexico, a significant portion of the payments under the land, leasehold and exploration agreements of Solitario are denominated in United States dollars. Solitario expects that a significant portion of its required and discretionary expenditures in the foreseeable future will also be denominated in United States dollars. Foreign currency gains and losses are included in the results of operations in the period in which they occur. During 2011, 2010 and 2009, Solitario recorded foreign exchange gain (loss) of \$(43,000), \$(29,000) and \$35,000, respectively. Solitario's cash accounts in foreign subsidiaries not denominated in United States dollars represent the only significant foreign currency denominated

assets. Foreign currency denominated cash accounts totaled \$325,000 and \$32,000, respectively, at December 31, 2011 and 2010.

*Income taxes*

Solitario accounts for income taxes in accordance with ASC 740, "Accounting for Income Taxes." Under ASC 740, income taxes are provided for the tax effects of transactions reported in the financial statements and consist of taxes currently due plus deferred taxes related to certain income and expenses recognized in different periods for financial and income tax reporting purposes. Deferred tax assets and liabilities represent the future tax return consequences of those differences, which will either be taxable or deductible when the assets and liabilities are recovered or settled. Deferred taxes are also recognized for operating losses and tax credits that are available to offset future taxable income and income taxes, respectively. A valuation allowance is provided if it is more likely than not that some portion or all of the deferred tax assets will not be realized.

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*Accounting for uncertainty in income taxes*

ASC 740 clarifies the accounting for uncertainty in income taxes recognized in a company's financial statements. ASC 740 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. ASC 740 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition. ASC 740 provides that a company's tax position will be considered settled if the taxing authority has completed its examination, the company does not plan to appeal, and it is remote that the taxing authority would reexamine the tax position in the future. These provisions of ASC 740 had no effect on Solitario's financial position or results of operations. See Note 5, "Income taxes" below.

*Earnings per share*

The calculation of basic and diluted loss per share is based on the weighted average number of common shares outstanding during the years ended December 31, 2011 and 2010. Potentially dilutive shares related to outstanding common stock options of 2,433,000 and 2,584,000 for the years ended December 31, 2011 and 2010, respectively, were excluded from the calculation of diluted loss per share because the effects were anti-dilutive.

*Employee stock compensation plans*

In April 2010 the FASB issued ASU No. 2010-13, which addresses the classification of a share-based payment award with an exercise price denominated in the currency of a market in which the underlying equity security trades. ASC 718 was amended to clarify that a share-based payment award with an exercise price denominated in the currency of a market in which a substantial portion of the entity's equity securities trade shall not be considered to contain a market, performance or service condition. Therefore, such an award is not to be classified as a liability if it otherwise qualifies for equity classification. The amendments in ASU 2010-13 are effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2010, with early application permitted. Solitario classifies its options as equity options, in accordance with ASU 2010-13 and no longer records a liability for the fair value of its outstanding options beginning January 1, 2011. In accordance with ASU 2010-13, this change has been made on a prospective basis as of January 1, 2011 with a reduction to stock option liability of \$2,775,000, an increase to additional paid-in capital of \$1,240,000 and a reduction in accumulated deficit of \$992,000, net of deferred taxes of \$543,000 as a cumulative effect of a change in accounting principle. The adoption of ASU 2010-13 had the effect of increasing the 2011 net loss and basic and diluted earnings per share by \$524,000 and \$0.02 per share, respectively, by no longer accounting for its options as liabilities. See Note 9, "Employee stock compensation plans" below.

Prior to the adoption of ASU 2010-13, Solitario classified its stock options as liabilities as they are priced in Canadian dollars and Solitario's functional currency is United States dollars. Solitario recorded a liability for the fair value of the

vested portion of outstanding options based upon a Black-Scholes option pricing model. This model requires the input of subjective assumptions, including a risk free interest rate, the contractual term, the exchange rate between the United States dollar and the Canadian dollar, a zero dividend yield, and an expected volatility based upon the historical volatility of Solitario's common stock on the TSX over the period corresponding to the expected life of the options. These estimates involve inherent uncertainties and the application of management judgment. As a result, if other assumptions had been used, Solitario's recorded liability and stock-based compensation expense could have been materially different from that reported.

Solitario's outstanding options on the date of grant have a five-year term, and vest 25% on date of grant and 25% on each anniversary date. Solitario recognizes stock option compensation expense (benefit) for the change in fair value of vested options. Solitario records stock option liability for the vested fair value of each option grant on the measurement date by multiplying the estimated fair value determined using the Black-Scholes model by a vesting percentage, with 25% recognized immediately, and the remaining 75% recognized over three years on a straight line basis.

#### *Segment reporting*

Solitario operates in one business segment, minerals exploration. At December 31, 2011, Solitario's Mt. Hamilton project is located in Nevada and all of Solitario's remaining operations are located in Peru, Bolivia, Brazil and Mexico as further described in Note 2 to these consolidated financial statements. At December 31, 2011 and 2010, Solitario has recorded \$8,821,000 and \$6,066,000, respectively, of mineral property related to its Mt. Hamilton project in Nevada.

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Included in the consolidated balance sheet at December 31, 2011 and 2010 are total assets of \$598,000 and \$515,000, respectively, related to Solitario's foreign operations, located in Bolivia, Brazil, Peru and Mexico. Solitario is not aware of any foreign exchange restrictions on its subsidiaries located in foreign countries.

### *Recent accounting pronouncements*

In May 2011 the FASB issued ASU 2011-04, "Amendments to Achieve Common Fair Value Measurement and Disclosure Standards in US GAAP and IFRSs," which changes the wording used to describe the requirements in United States Generally Accepted Accounting Principles ("GAAP") for measuring fair value and for disclosing information about fair value measurements in order to improve consistency in the application and description of fair value between GAAP and International Financial Reporting Standards ("IFRS"). ASU 2011-04 clarifies how the concepts of highest and best use and valuation premise in a fair value measurement are relevant only when measuring the fair value of nonfinancial assets and are not relevant when measuring the fair value of financial assets or liabilities. In addition, the guidance expanded the disclosures for the unobservable inputs for Level 3 fair value measurements, requiring quantitative information to be disclosed related to (1) the valuation processes used, (2) the sensitivity of the fair value measurement to changes in unobservable inputs and the interrelationships between those unobservable inputs, and (3) use of a nonfinancial asset in a way that differs from the asset's highest and best use. The revised guidance is effective for interim and annual periods beginning after December 15, 2011 and early application by public entities is prohibited. Solitario does not expect the adoption of this guidance to have an impact on its consolidated financial position and results of operations.

In June 2011 the FASB issued ASU 2011-05, "Presentation of Comprehensive Income," which allows an entity the option to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. In both instances, an entity is required to present each component of net income along with total net income, each component of other comprehensive income along with a total for other comprehensive income, and a total amount for comprehensive income. ASU 2011-05 eliminates the option to present the components of other comprehensive income as part of the statement of changes in stockholders' equity. The amendments in ASU 2011-05 do not change the items that must be reported in other comprehensive income or when an item of other comprehensive income must be reclassified to net income. However, in December 2011 the FASB issued ASU 2011-12, which deferred the guidance on whether to require entities to present reclassification adjustments out of accumulated other comprehensive income by component in both the statement where net income is presented and the statement where other comprehensive income is presented for both interim and annual financial statements. ASU 2011-12 reinstated the requirements for the presentation of reclassifications that were in place prior to the issuance of ASU 2011-05 and did not change the effective date for ASU 2011-05. For public entities, the amendments in ASU 2011-05 and ASU 2011-12 are effective for fiscal years, and interim periods within those years, beginning after December 15, 2011, and should be applied retrospectively. The adoption of this guidance concerns disclosure only and will not have an impact on Solitario's consolidated financial position or results of operations.

## 2. Mineral properties:

Solitario's mineral properties at December 31, 2011 consist of use rights related to exploration stage properties, and the value of such assets is primarily driven by the nature and amount of economic mineral ore believed to be contained, or potentially contained, in such properties. The amounts capitalized as mineral properties include concession and lease or option acquisition costs. Capitalized costs related to a mineral property represent its fair value at the time it was acquired. At December 31, 2011, Solitario has no production (operating) or development stage mineral properties that contain proven or probable reserves, nor any interests in properties that contain proven or probable reserves. Subsequent to December 31, 2011, Solitario did establish that it had proven and probable reserves on its Mt. Hamilton property in Nevada. See Note 15, "Subsequent event, Mt. Hamilton feasibility study." Solitario's exploration stage mineral properties represent interests in properties that Solitario believes have exploration and development potential. Solitario's mineral use rights generally are enforceable regardless of whether proven and probable reserves have been established.

*United States*

As discussed in Note 1 above, on August 26, 2010, Solitario signed the LOI with Ely to make certain equity investments into Ely and to joint venture Ely's Mt. Hamilton gold project. MH-LLC recorded the Mt. Hamilton mineral properties at their fair value of \$6,066,000 on formation of MH-LLC. The Mt. Hamilton claims are subject to a security interest granted to Augusta Resources Corporation ("Augusta"), from whom Ely had previously acquired its interest in the Mt.

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Hamilton project that DHI-US contributed to MH-LLC. Upon formation, MH-LLC recorded a liability of \$3,066,000, discounted at 7.5%, which is Solitario's deemed market interest rate, for the secured liability to Augusta. MH-LLC recorded \$3,000,000 for the fair value of the net contribution of the Mt. Hamilton properties by DHI-US as of the formation of MH-LLC. Pursuant to the MH Agreement, Solitario has control of MH-LLC and is consolidating the activities of MH-LLC in accordance with ASC 810. Accordingly, Solitario recorded an addition to mineral properties of \$6,066,000 during 2010. During 2011 Solitario capitalized \$2,520,000 related to the Royalty Buy-down on its Mt. Hamilton project, discussed above. MH-LLC also acquired certain additional leases and property at its Mt. Hamilton project and capitalized an additional \$235,000 to mineral properties related to these initial land acquisition costs during 2011.

Pursuant to the MH Agreement, Solitario was required to fund all exploration expenditures to complete a feasibility study. MH-LLC incurred \$3,700,000 and \$1,214,000, respectively, of exploration expenditures at Mt. Hamilton, which are included in exploration expense for 2011 and 2010. In addition, MH-LLC recorded \$217,000 and \$19,000, respectively, of interest expense related to the long-term debt due to Augusta during the year ended December 31, 2011 and 2010. Solitario recorded \$3,591,000 and \$1,110,000, respectively, as a reduction in the noncontrolling interest related to Ely's 90% interest in the losses of MH-LLC for 2011 and 2010.

*Peru*

Solitario holds exploration concessions or has filed applications for concessions covering approximately 8,500 hectares in Peru excluding properties held under joint ventures and operated by other parties. Applications to acquire mineral concessions in Peru are subject to formalized administrative review and approval. According to Peruvian law, concessions may be held indefinitely, subject only to payment of annual fees to the government. Each year a payment of \$3.00 per hectare (approximately 2.477 acres per hectare) must be made by the last day of June to keep the claims in good standing. For concessions that are more than six years old, there is a \$6.00 surcharge per hectare (\$9.00 total), if less than \$100 per hectare is invested in exploration and development of the claim. Approximately 2,200 hectares of Solitario's concessions are subject to the \$6.00 per hectare surcharge. Peru also imposes a sliding scale net smelter return royalty (NSR) on all precious and base metal production. This NSR assesses a tax of 1% on all gross proceeds from production up to \$60,000,000, a 2% NSR on proceeds between \$60,000,000 and \$120,000,000 and a 3% NSR on proceeds in excess of \$120,000,000.

(a) Bongará

Solitario acquired the initial Bongará exploration concessions in 1993. Bongará mineral concessions now total 16 concessions covering approximately 13,000 hectares in northern Peru. On August 15, 2006, Solitario signed a Letter Agreement with Votorantim Metais Cajamarquilla, S.A., a wholly-owned subsidiary of Votorantim Metais (both companies referred to as "Votorantim"), on Solitario's 100%-owned Bongará zinc project. On March 24, 2007, Solitario signed a definitive agreement, the Framework Agreement for the Exploration and Potential Development of Mining Properties (the "Framework Agreement") pursuant to, and replacing, the previously signed Bongará Letter



Agreement with Votorantim. Solitario's property interests are held through the ownership of shares in Minera Bongará, a joint operating company that holds a 100% interest in the mineral rights and other project assets. At December 31, 2011, Solitario owns 100% of the shares in this company (Minera Bongará S.A.).

Votorantim can earn up to a 70% shareholder interest in the joint operating company by funding an initial \$1.0 million exploration program (completed), by completing future annual exploration and development expenditures until a production decision is made or the agreement is terminated. The option to earn the 70% interest can be exercised by Votorantim any time after the first year commitment by committing to place the project into production based upon a feasibility study. The agreement calls for Votorantim to have minimum annual exploration and development expenditures of \$1.5 million in each of years two and three, which commitments have been met as of December 31, 2009, and \$2.5 million in all subsequent years, which was met in 2010 and 2011, until a minimum of \$18.0 million has been expended by Votorantim. Votorantim will act as project operator. Votorantim, in its sole discretion, may elect to terminate the option to earn the 70% interest at any time after the first year commitment. In addition Votorantim is required to make annual delay rental payments of \$100,000 by August 15, 2007 and by making further delay rental payments to Solitario of \$200,000 on all subsequent anniversaries (completed through 2011) until a production decision is made. Once Votorantim has fully funded its \$18.0 million work commitment and committed to place the project into production based upon a feasibility study, it has further agreed to finance Solitario's 30% participating interest through production. Solitario will repay the loan facility through 50% of Solitario's cash flow distributions from the joint operating company. Votorantim is responsible for all joint venture costs as part of the Framework

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Agreement. Votorantim has conducted annual drilling programs at Bongará for the years 2006-2011, underground tunneling and drilling in 2010-2011, and road building to the project in 2010-2011.

(b) Yanacocha Royalty Property

On January 18, 2005, we signed a letter of intent (the "Letter of Intent") with Newmont Peru, Ltd. ("Newmont Peru"), to amend our net smelter return ("NSR") royalty on a 61,000-hectare property located immediately north of the Newmont Mining-Buenaventura's Minera Yanacocha Mine, the largest gold mine in South America. In addition to amending the NSR royalty schedule, Newmont Peru agreed to a long-term US\$4.0 million work commitment on our royalty property and provides us access to Newmont Peru's future exploration results on an annual basis. In January 2005 the Yanacocha royalty amendment and work commitment Letter of Intent was subsequently replaced by a definitive agreement with the same terms. Newmont continues to conduct annual exploration work on our royalty property, and we see this work continuing for the foreseeable future.

*Brazil*

(a) Pedra Branca

On April 24, 2007, Solitario signed a definitive agreement, the Shareholders Agreement with Anglo Platinum Limited ("Anglo"), relating to the Pedra Branca Project in Brazil (the "Shareholders Agreement") for the exploration and development of the Pedra Branca Project. The Shareholders Agreement provides for Solitario and Anglo property interests to be held through the ownership of shares of Pedra Branca Mineracao, Ltd. ("PBM"). Pursuant to the Shareholders Agreement, Anglo earned a 51% interest in PBM on July 21, 2010. Anglo can earn an additional 9% interest in PBM (for a total of 60%) by completing either (i) a bankable feasibility study or (ii) spending an additional \$10.0 million on exploration or development. Anglo can also earn an additional 5% interest in PBM (for a total of 65%) by arranging for 100% financing to put the project into commercial production.

Upon Anglo earning a 51% interest, Solitario made the determination that Anglo had gained control of PBM per the terms of the PBM Shareholders Agreement between Solitario and Anglo. This necessitated the deconsolidation of our interest in PBM and the recording of a gain or loss on deconsolidation in accordance with ASC 810-10-40-5. See Note 11, "Deconsolidation of PBM," below. As part of the Shareholders Agreement with Anglo, we entered into a Services Agreement with Anglo whereby we receive a 5% management fee for managing the project based upon total expenditures. During 2011, Solitario charged PBM management fees of \$62,000, as a credit to exploration expense. During 2010 Solitario charged PBM management fees of \$47,000, of which \$36,000 was received prior to July 21, 2010 and was eliminated in consolidation, net of \$12,000 of noncontrolling interest. In August 2011 Anglo funded \$1,500,000 to PBM for the remainder of the 2011 and the 2012 exploration programs.

(b) Mercurio

On March 9, 2010, Solitario signed a letter agreement with Regent Holdings, Ltd., a wholly-owned subsidiary of Brazilian Gold Corporation (“Regent”), related to Solitario’s Mercurio property located in Brazil. In November 2010 Solitario signed a definitive agreement with Regent, whereby Regent agreed to pay to Solitario \$1,000,000 over the next four years, in annual payments in the amounts of \$50,000, \$100,000, \$200,000 and \$650,000, beginning in October 2011, when Regent paid Solitario the first annual payment of \$50,000. Solitario recorded \$42,000 of joint venture and property payments after reduction of the capitalized cost at the Mercurio project of \$8,000. As of December 31, 2011, Solitario has no remaining capitalized cost related to the Mercurio project and any further delay rental payments will be recorded as revenue. Regent is also required to make a minimum exploration expenditure totaling \$900,000 over the same four-year period. Upon receipt of the final payments, Solitario will retain a net smelter royalty of 1.5% on all ounces of gold produced at Mercurio up to two million ounces and Solitario will retain a net smelter royalty of 2.0% on all ounces of gold produced at Mercurio over two million ounces. Regent may terminate the agreement at any time and is not obligated to make any further payments.

*Mexico*

(a) Pachuca Real

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The Pachuca Real silver-gold property in central Mexico was acquired by staking in late 2005 and early 2006. Part of the property, the approximately 6,200 hectare El Cura claim, is held under an option agreement with a private Mexican party. The option agreement was completed in October 2005 and provides for payments of \$500,000 over four years, of which Solitario made payments totaling \$90,000 as of December 31, 2009. The option agreement was amended in May 2009 and again in October 2011. Under the revised terms, Solitario is required to pay \$15,000 every six months, starting in May 2009, to the underlying owner to keep the option in good standing. By October 2014 Solitario must either exercise the option to acquire 100% interest in the concession by paying the underlying owner \$500,000, or the option will terminate. Claims fees to be paid to the government of Mexico totaling approximately \$82,000 were paid in 2011. Solitario may terminate its option at anytime without any further costs.

On April 28, 2010, Solitario signed a definitive venture agreement with Compania De Minas Buenaventura S.A.A. ("Buenaventura") on the Pachuca Real silver-gold project. During 2011 Buenaventura completed a 38-hole drilling program totaling 13,489 meters on the project. Buenaventura terminated the agreement in December 2011.

*Discontinued projects*

During 2011 we recorded \$10,000 of mineral property write-downs related to our Paria Cruz property in Peru. During 2010 we recorded mineral property write downs of \$55,000 related to our Santiago and Cajatambo projects in Peru and our La Noria and Palmira projects in Mexico. During 2009 we recorded mineral property write-downs of \$51,000 related to our Chonta project in Peru and our Purica project in Mexico.

*Exploration Expense*

The following items comprised exploration expense:

(in thousands)	2011	2010	2009
Geologic and field expenses	\$1,922	\$2,420	\$2,339
Administrative	324	399	1,240
Mt. Hamilton exploration	<u>3,700</u>	<u>1,214</u>	=
Total exploration expense	<u>\$5,946</u>	<u>\$4,033</u>	<u>\$3,579</u>

3. Short-term debt:

During the year ended December 31, 2011, Solitario borrowed from RBC Capital Markets, LLC ("RBC"), using Solitario's investment in Kinross held at RBC as collateral for short-term margin loans. On April 16, 2011, Solitario repaid \$1,915,000, the entire balance of its short-term margin loan with RBC, including \$10,000 of accrued interest,

with proceeds from the Offering. At December 31, 2011, Solitario has no remaining short-term margin loan with RBC. During the year ended December 31, 2011, the loans carried interest at a margin loan rate of 4.25% per annum, which floats based upon the London Interbank Offered Rate. Solitario borrowed \$900,000, net, from RBC during 2010, in short-term margin loans, using Solitario's investment in Kinross held at RBC as collateral for the short-term margin loans. Solitario maintains its ability to borrow from RBC. The margin loan rate can be modified by RBC at any time. Interest expense related to the RBC short-term margin loans was \$21,000 and \$5,000, respectively for the year ended December 31, 2011 and 2010.

As of December 31, 2011, Solitario has borrowed \$2,000,000 from UBS Bank, USA ("UBS Bank") pursuant to a credit line agreement between Solitario and UBS Bank secured by 540,000 of Solitario's Kinross shares held in Solitario's UBS brokerage account. As of December 31, 2011, Solitario recorded accrued unpaid interest of \$1,000 on the secured line of credit, included in accounts payable. The UBS Bank credit line carries an interest rate which floats, based upon a base rate of 2.25% plus the one-month London Interbank Offered Rate ("LIBOR"), which was 0.25% as of December 31, 2011. The average base rate was approximately 0.25% for the year ended December 31, 2011. UBS Bank may change the base rate at any time. The UBS Bank credit line provides that Solitario may borrow up to \$2 million and that Solitario maintain a minimum equity value percentage in its UBS brokerage account above 40%, based upon the value of its Kinross shares and any other assets held in Solitario's UBS brokerage account, less the value of its UBS Bank credit line and any other balances owed to UBS Bank. UBS Bank may modify the minimum equity value percentage of the loan at any time. In addition, if the equity value in Solitario's UBS brokerage account falls below the minimum equity value, UBS Bank may sell enough Kinross shares held in Solitario's UBS brokerage account or liquidate any other assets to restore the minimum equity value. At December 31, 2011,

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the equity value in Solitario's UBS brokerage account was 67%. Solitario recorded interest expense related to the UBS credit line of \$50,000 and \$18,000, respectively, for the year ended December 31, 2011 and 2010.

4. Long-term debt:

In connection with the formation of MH-LLC, the Mt. Hamilton properties contributed by DHI-US to MH-LLC were subject to a security interest granted to Augusta related to Ely's acquisition of the Mt. Hamilton properties. Pursuant to the MH Agreement, as part of its earn-in, Solitario agreed to make payments to provide Ely with the funds necessary for Ely to make the loan payments due to Augusta. As of December 31, 2011, these payments total \$3,250,000. Solitario will pay DHI-US \$750,000 in cash in June 2012, and will make private placement investments totaling \$2,500,000 in Ely common stock, all to provide Ely with the funds necessary for Ely to make the loan payments due to Augusta. The payments due to Augusta are non-interest bearing. Accordingly, upon formation and the contribution of the mineral properties by DHI-US to MH-LLC, MH-LLC recorded discounted fair value of the payments due to Augusta, discounted at 7.5%, which was Solitario's estimated cost of similar credit as of the formation of MH-LLC. The following is the schedule of debt payments due to Augusta as of December 31, 2011 and 2010:

Payment date	December 31, December 31,	
	<u>2011</u>	<u>2010</u>
June 1, 2011	\$-	\$500,000
June 1, 2012	750,000	750,000
June 1, 2013	750,000	750,000
June 1, 2014	750,000	750,000
June 1, 2015	1,000,000	1,000,000
Unamortized discount	<u>(448,000)</u>	<u>(665,000)</u>
Total	2,802,000	3,085,000
Current portion	<u>727,000</u>	<u>481,000</u>
Long-term debt	<u>\$2,075,000</u>	<u>\$2,604,000</u>

During 2011 Solitario recorded \$217,000 for accretion of interest expense related to the Augusta note and paid \$500,000 on the long-term note. During 2010 Solitario recorded \$19,000 for accretion of interest expense related to the Augusta note which increased the outstanding long-term debt balance to \$3,085,000 at December 31, 2010 from the balance of \$3,066,000 upon formation of MH-LLC.

5. Income taxes:

Solitario's income tax expense (benefit) consists of the following as allocated between foreign and United States components:

(in thousands)	2011	2010	2009
Current:			
United States	\$-	\$(342)	\$ 385
Foreign	14	50	-
Deferred:			
United States	\$(458)	\$(773)	\$162
Foreign	-	-	-
Operating loss and credit carryovers:			
United States	(191)	(94)	449
Foreign	<u>-</u>	<u>-</u>	<u>-</u>
Income tax expense (benefit)	<u>\$(635)</u>	<u>\$(1,159)</u>	<u>\$996</u>

Consolidated income (loss) before income taxes includes losses from foreign operations of \$2,657,000 and \$2,721,000 in 2011 and 2010, respectively.

During 2011 and 2010, Solitario recognized other comprehensive income related to unrealized (losses) gains on marketable equity securities of (\$7,488,000) and \$1,223,000, respectively. Other comprehensive (loss) income has been charged

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(\$2,793,000) and \$534,000, respectively, for the income tax (benefit) expense associated with these gains. During 2011 and 2010, Solitario transferred unrealized gain of \$1,937,000 and \$995,000, respectively from other comprehensive income upon the sale of 130,000 and 70,000 shares, respectively, of Kinross common stock, less income tax of \$723,000 and \$371,000, respectively, associated with these unrealized gains.

The net deferred tax assets/liabilities in the December 31, 2011 and 2010 consolidated balance sheets include the following components:

(in thousands)	2011	2010
Deferred tax assets:		
Loss carryovers	\$9,887	\$9,387
Stock option compensation expense	648	976
Royalty	1,492	1,492
Severance	30	30
Other	381	74
Valuation allowance	(9,699)	(9,971)
Total deferred tax assets	<u>2,739</u>	<u>1,988</u>
Deferred tax liabilities:		
Unrealized gain on derivative securities	107	241
MH-LLC investment	1,083	305
Exploration costs	845	845
Unrealized gains on marketable equity securities	3,496	7,012
Other	<u>5</u>	<u>4</u>
Total deferred tax liabilities	<u>5,536</u>	<u>8,407</u>
Net deferred tax liabilities	<u>\$2,797</u>	<u>\$6,419</u>

At December 31, 2011 and 2010, Solitario has classified \$1,627,000 and \$1,945,000, respectively, of its deferred tax liability as current, primarily related to the current portion of its investment in Kinross common stock.

A reconciliation of expected federal income taxes on income (loss) from operations at statutory rates, with the expense (benefit) for income taxes is as follows:

(in thousands)	2011	2010	2009
Expected income tax expense (benefit)	\$(2,585)	\$(2,210)	\$(411)
Non-deductible foreign expenses	1	1	13
Non-deductible foreign stock compensation expense	16	54	(9)
Foreign tax rate differences	90	98	107
State income tax	(56)	(94)	88



Change in valuation allowance	621	798	1,205
MH-LLC investment	1,221	377	-
Permanent differences and other	<u>57</u>	<u>(183)</u>	3
Income tax expense (benefit)	<u>\$(635)</u>	<u>\$(1,159)</u>	<u>\$ 996</u>

During 2011 and 2010 the valuation allowance was increased primarily as a result of increases in Solitario foreign net operating loss carryforwards, for which it was more likely than not that the deferred tax benefit would not be realized.

At December 31, 2011, Solitario has unused US federal Net Operating Loss ("NOL") carryovers of \$3,022,000 and unused US State NOL carryovers of \$3,929,000 both of which begin expiring in 2030. Solitario has foreign loss carryforwards for which Solitario has provided a full valuation allowance and which expire over various periods from five years to no expiration depending on the foreign jurisdiction.

Solitario adopted the provisions of ASC 740, which prescribe a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. ASC 740 requires that Solitario recognize in its consolidated financial statements, only those tax positions that are

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“more-likely-than-not” of being sustained as of the adoption date, based on the technical merits of the position. As a result of the implementation of ASC 740, Solitario performed a comprehensive review of its material tax positions in accordance with recognition and measurement standards established by ASC 740. The provisions of ASC 740 had no effect on Solitario’s financial position, cash flows or results of operations at December 31, 2011 or December 31, 2010, or for the years then ended as Solitario had no unrecognized tax benefits.

Solitario and its subsidiaries are subject to the following material taxing jurisdictions: United States Federal, State of Colorado, Mexico, Peru and Brazil. The tax years that remain open to examination by the United States Internal Revenue Service are years 2008 through 2011. The tax years that remain open to examination by the State of Colorado are years 2007 through 2011. The tax years that remain open to examination by Mexico are years 2008 through 2011. All tax years remain open to examination in Peru and Brazil. Solitario’s policy is to recognize interest and penalties related to uncertain tax benefits in income tax expense. Solitario has no accrued interest or penalties related to uncertain tax positions as of December 31, 2010, December 31, 2011 or for the years then ended.

6. Derivative instruments:

*Ely warrants*

In connection with the equity investment in Ely on August 30, 2010 (the “First Ely Investment”), Solitario acquired warrants to purchase 833,333 shares of Ely common stock at Cdn\$0.25 per share for a period of two years. The warrants had a four-month hold period from August 30, 2010 whereby any shares received upon exercise of the warrants could not be sold until after December 30, 2010. Solitario recognized a \$147,000 loss on derivative instrument during 2011 and recognized a \$117,000 gain on derivative instrument during 2010 for the change in the value of the warrants received in the First Ely Investment. Solitario has recorded \$36,000 and \$182,000, respectively, as of December 31, 2011 and 2010 for the fair value of the warrants received from the First Ely Investment, based upon a Black-Scholes option pricing model. These warrants are classified as other current assets as of December 31, 2011 and as a long-term other asset as of December 31, 2010 in the consolidated balance sheet.

On October 19, 2010, Solitario made an additional equity investment into Ely, (the “Second Ely Investment”) and received warrants to purchase an additional 833,333 shares of Ely common stock at Cdn\$0.25 per share for a period of two years. However because the underlying shares’ four-month hold period did not expire until February 2011, as of December 31, 2010 the warrants were not classified as derivative instruments. In accordance with ASC 815, at December 31, 2010 Solitario did not classify the warrants acquired on October 19, 2010 as derivative instruments until January 18, 2011, or 31 days prior to the underlying shares being readily convertible to cash. Prior to that time, any gains and losses on those warrants were recorded in other comprehensive income. At December 31, 2010, Solitario recorded \$184,000 for the fair value of the warrants received in the Second Ely Investment in other current assets and recorded \$114,000 unrealized gain in other comprehensive income. On January 18, 2011, Solitario transferred an unrecognized gain on derivative instrument of \$114,000 for the warrants acquired on October 19, 2010 to gain on derivative instrument. Solitario recorded \$38,000 for the fair value of the 833,333 warrants received from the Second Ely Investment based upon a Black-Scholes option pricing model as other current assets as of December 31, 2011. Solitario recorded a \$146,000 unrealized loss on derivative instrument in the statement of operations for the

net loss related to the 833,333 warrants received from the Second Ely Investment for the year ended December 31, 2011.

*Kinross Collar*

On October 12, 2007 Solitario entered into a Zero-Premium Equity Collar (the "Kinross Collar") pursuant to a Master Agreement for Equity Collars and a Pledge and Security Agreement with UBS AG, London, England, an Affiliate of UBS Securities LLC (collectively "UBS"). Under the terms of the Kinross Collar, Solitario pledged 900,000 shares of Kinross common shares to be sold (or delivered back to Solitario with any differences settled in cash). On April 12, 2011, the remaining 100,000 shares under the Kinross Collar were released upon the expiration of the tranche of the Kinross Collar on that date. No shares were delivered to UBS under the Kinross Collar and no cash was paid or received upon termination of the final tranche of the Kinross Collar.

Solitario had not designated the Kinross Collar as a hedging instrument as described in ASC 815, "Derivatives and Hedging," and any changes in the fair market value of the Kinross Collar are recognized in the statement of operations in the period of the change. As of December 31, 2011 and December 31, 2010, Solitario recorded no value and \$2,000, respectively, for the fair market value of the Kinross Collar in other current assets. Solitario recorded an unrealized loss of \$2,000 during the

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year ended December 31, 2011. Solitario recorded an unrealized loss of \$7,000 and gain of \$522,000, respectively, for the year ending December 31, 2010 and 2009 in gain on derivative instrument for the change in the fair market value of the Kinross Collar.

*International Lithium Corp.*

In May 2011 TNR Gold Corp. (“TNR”) completed a spin-out of a new entity, International Lithium Corp. (“ILC”). Solitario owned 1,000,000 shares of TNR at the time of the spin-out and received 250,000 shares of ILC and warrants to acquire 250,000 shares of ILC (the “ILC Warrants”) at a price of Cdn\$0.375 per share for a period of two years. During the year ended December 31, 2011, Solitario recorded unrealized gain on derivative instruments of \$2,000 on its ILC warrants.

*Covered call options*

The business purpose of selling covered calls is to provide additional income on a limited portion of shares of Kinross that Solitario may sell in the near term, which is generally defined as less than one year. In exchange for receiving the additional income from the sale of the covered call option, Solitario has given up the potential upside on the shares covered by the call option sold in excess of the strike price. Solitario has not designated its covered calls as hedging instruments as described in ASC 815 and any changes in the fair market value of its covered calls are recognized in the statement of operations in the period of the change.

Beginning in December 2008, Solitario sold covered calls covering its shares of Kinross common stock. In September 2011 Solitario sold options covering 65,000 shares for proceeds of \$57,000, which were repurchased in October 2011 for \$15,000 and Solitario recorded a gain of \$42,000 in gain/loss on derivative earnings. Solitario sold three covered calls covering 130,000 shares of Kinross common stock during 2009, of which 50,000 of these call options expired unexercised in April 2009, 40,000 were repurchased in July 2009 and 40,000 were repurchased in November 2009. In November 2009 Solitario sold an option for 40,000 shares which expired unexercised in May 2010 and Solitario recorded a gain of \$42,000 in derivative instruments during 2010 for this call.

Solitario does not use its Kinross Collar or covered call derivative instruments as trading instruments; any cash received or paid related to its derivative instruments is shown as investing activities in the consolidated statement of cash flows.

The following table provides the location and amount of the fair values of Solitario's derivative instruments presented in the consolidated balance sheet as of December 31, 2011 and December 31, 2010:

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(in thousands)	Balance Sheet Location	Derivatives	
		December 31, 2011	December 31, 2010
Derivatives not designated as hedging instruments under			
ASC 815			
Ely Investment warrants	Current other assets	\$ 74	\$ -
Ely Investment warrants	Long-term other assets	-	182
Kinross Collar	Current other assets	-	2
ILC warrants	Current other assets	4	-

The following amounts are included in loss (gain) on derivative instruments in the consolidated statement of operations for the years ended December 31, 2011, 2010 and 2009:

(in thousands)	Year ended December 31,					
	2011 (1)		2010 (1)		2009(1)	
(Loss) gain on derivatives not designated as hedging instruments under ASC 815	Realized	Unrealized	Realized	Unrealized	Realized	Unrealized
Ely warrants	\$ -	\$(179)	\$ -	\$117	\$ -	\$ -
ILC warrants	-	2	-	-	-	-

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Kinross Collar	(2)	-	-	(7)	-	522
Kinross Calls	42	-	42	-	138	34
Total (gain) loss	\$40	\$(177)	\$42	\$110	\$138	\$556

(1) Gains and losses on derivative instruments are realized upon expiration or repurchase. Cash received or paid for the derivative instrument may occur in a different period.

The Kinross common stock held as collateral for the margin loans at UBS Bank and RBC are held in Solitario's brokerage accounts at UBS and RBC, respectively. See Note 3, "Short-term debt" above.

7. Fair value of financial instruments:

For certain of Solitario's financial instruments, including cash and cash equivalents, payables and short-term debt, the carrying amounts approximate fair value due to their short maturities. Solitario's marketable equity securities, including its investment in Kinross common stock, TNR Gold and the First and Second Ely Equity Investments are carried at their estimated fair value primarily based on publicly available quoted market prices. The Kinross Collar and the Ely Warrants are carried at their estimated fair value based on a Black-Scholes option pricing model.

Effective January 1, 2008, Solitario adopted ASC 820, "Fair Value Measurements." ASC 820 establishes a framework for measuring fair value and requires enhanced disclosures about fair value measurements. ASC 820 clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. ASC 820 also requires disclosure about how fair value is determined for assets and liabilities and establishes a hierarchy for which these assets and liabilities must be grouped, based on significant levels of inputs as follows:

**Level 1:** Quoted prices in active markets for identical assets or liabilities;

**Level 2:** Quoted prices in active markets for similar assets and liabilities and inputs that are observable for the asset or liability; or

**Level 3:** Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The determination of where assets and liabilities fall within this hierarchy is based upon the lowest level of input that is significant to the fair value measurement. During 2011 Solitario reclassified the shares underlying the Second Ely Equity Investment from Level 2 to Level 1 upon the expiration of statutory holding requirements. During the year ended December 31, 2011 and 2010, there were no other reclassifications in financial assets or liabilities between Level 1, 2 or 3 categories.

The following is a listing of Solitario's financial assets and liabilities required to be measured at fair value on a recurring basis and where they are classified within the hierarchy as of December 31, 2011:

(in thousands)	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Assets				
Marketable equity securities	\$10,361	\$-	\$-	\$10,361
Other current assets - Ely warrants	-	74	-	74
Other current assets - ILC warrants	-	4	-	4

The following is a listing of Solitario's financial assets and liabilities required to be measured at fair value on a recurring basis and where they are classified within the hierarchy as of December 31, 2010:

(in thousands)	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Assets				
Marketable equity securities	\$18,771	\$-	\$-	\$18,771
Marketable equity securities – Ely common stock	500	500		1,000
Kinross Collar derivative instrument	-	2	-	2
Other assets - Ely warrants		366		366

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*Items measured at fair value on a recurring basis:*

Marketable equity securities: At December 31, 2011 and 2010 the fair value of Solitario's investment in Kinross, TNR and Ely marketable equity securities is based upon quoted market prices. At December 31, 2010, the Ely shares issued on October 19, 2010 are classified as Level 2, because they were still subject to a hold period, which expired in January 2011.

Ely and ILC warrants: The Ely warrants are not traded on any public exchange. Solitario determines the fair value of the Ely warrants using a Black-Scholes pricing model, using inputs, including share price, volatility of Ely common stock and discount rates that include an assessment of performance risk, that are readily available from public markets and for the hold period discussed above, therefore they are classified as Level 2 inputs as of December 31, 2011 and 2010. The ILC warrants are not traded on a public exchange. Solitario estimates the value of the ILC warrants using a Black-Scholes model and inputs that were readily available from public markets, and has classified these as a Level 2 input as of December 31, 2011.

Kinross Collar: The Kinross Collar between Solitario and UBS was a contractual hedge that was not traded on any public exchange. Solitario determined the fair value of the Kinross Collar using a Black-Scholes model using inputs, including the price of a share of Kinross common stock and the volatility of the Kinross common stock price that are readily available from public markets, and discount rates that include an assessment of performance risk; therefore, they were classified as Level 2 inputs. See Note 6, "Derivative instruments" above.

*Items measured at fair value on a nonrecurring basis:*

Mt. Hamilton long-term debt: In 2010 the long-term debt associated with the Mt. Hamilton claims was discounted using Solitario's estimate of a market interest rate to obtain similar financing. Solitario did not have access to a readily traded market for similar credit risks and estimated the interest rate based upon what similar interest rates were on publicly held debt instruments issued by mining companies traded on public markets, what Solitario was borrowing money on its short-term margin accounts, and a discussion with an investment banking firm regarding what Solitario may be able to borrow to fund the Mt. Hamilton project. Solitario discounted the \$3,750,000 required payments at an interest rate of 7.5%. Accordingly these inputs are classified as Level 3 inputs.

Mt. Hamilton property valuation: In 2010 Solitario determined the fair value of the mineral claims making up the Mt. Hamilton project upon its investment in MH-LLC based upon: (i) Solitario's evaluation of similar non-producing mining properties, without proven and probable reserves based upon Solitario's experience in these types of transactions; (ii) an analysis of the fair values of the liabilities assumed and the equity interests received upon the formation of MH-LLC; (iii) a review of the funds previously expended and capitalized by Ely in their historical financial statements; and (iv) a review of the stated estimated value of the Mt. Hamilton property transferred to MH-LLC in the transaction documents between DHI-US and Solitario upon the formation of MH-LLC. Accordingly, these inputs are classified as Level 3 inputs.

Deconsolidation of PBM: In 2010 upon Anglo earning a 51% interest in PBM, discussed below in Note 11, "Deconsolidation of PBM," Solitario deconsolidated PBM in accordance with ASC 810-10-40 whereby Solitario



performed a valuation using Level 3 inputs of its 49% interest in the assets of PBM on the date of deconsolidation. The fair value analysis examined four valuation techniques and used assumptions of management on future results and included: (i) the present value of future cash flows; (ii) a market valuation analysis of publicly traded entities with exploration exposure to platinum group metals, similar to PBM; (iii) an analysis of the market value based upon sales and joint ventures of similar exploration properties and projects; and (iv) the recent investment by Anglo to earn an additional 21% interest in PBM.

During the year ended December 31, 2011, Solitario did not change any of the valuation techniques used to measure its financial assets and liabilities at fair value.

8. Commitments and contingencies:

In acquiring its interests in mineral claims and leases, Solitario has entered into lease agreements, which may be canceled at its option without penalty. Solitario is required to make minimum rental and option payments in order to maintain its interests in certain claims and leases. See Note 2, above. Solitario estimates its 2012 property rentals and option payments, excluding Augusta long term-debt, discussed above and certain earn-in payments to DHI-US discussed below in Note 12,

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“Ely Gold investment and the Mt. Hamilton joint venture,” for properties we own or operate to be approximately \$860,000, assuming that our joint ventures continue in their current status and that we do not appreciably change our property positions on existing properties; approximately \$655,000 of these annual payments are reimbursable to us by our joint venture partners. In addition, we may be required to make further payments in the future if we elect to exercise our options under those agreements or if we enter into new agreements.

Solitario has entered into certain month-to-month office leases for its field offices in Nevada, Peru and Mexico as well as Brazil, prior to the deconsolidation of PBM. The total rent expense for these offices during 2011, 2010 and 2009 was approximately \$55,000, \$89,000 and \$60,000, respectively. In addition, Solitario leases office space under a non-cancelable operating lease for the Wheat Ridge, Colorado office which provides for total minimum rent payments through October of 2012 of \$30,000.

As a result of completion of the Mt. Hamilton feasibility study, Solitario is committed to make certain earn-in payments to DHI-US, excluding payments for the Augusta debt, discussed above in Note 4, “Long-term debt,” as contemplated in the MH Agreement: (1) payment of \$300,000 in cash for an advance minimum royalty due to an underlying royalty holder, payment of \$300,000 in cash and delivery of 50,000 shares of Solitario common stock by August 23, 2012; (2) payment of \$300,000 in cash for an advance minimum annual royalty due to an underlying royalty holder; payment of \$500,000 in cash and delivery of 100,000 shares of Solitario common stock by August 23, 2013; (3) payment of \$300,000 in cash for an advance minimum annual royalty due to an underlying royalty holder; payment of \$500,000 in cash; delivery of 100,000 shares of Solitario common stock and buy down of the existing 6% net smelter royalty to a 1% net smelter royalty by paying \$5,000,000 to an underlying royalty holder by November 19, 2014. See Note 12, “Ely Gold investment and the Mt. Hamilton joint venture” below.

9. Employee stock compensation plans:

a.) The 2006 Plan

On June 27, 2006, Solitario's shareholders approved the 2006 Stock Option Incentive Plan (the "2006 Plan"). Under the terms of the 2006 Plan, the Board of Directors may grant up to 2,800,000 options to Directors, officers and employees with exercise prices equal to the market price of Solitario's common stock at the date of grant.

Solitario accounts for its stock options under the provisions of ASC 718 “Compensation – Stock Compensation.” Pursuant to ASC 718, as of January 1, 2011, Solitario classifies its stock options as equity options in accordance with ASU 2010-13. Previously, Solitario had classified its stock options as liabilities as they are priced in Canadian dollars and Solitario’s functional currency is United States dollars and Solitario’s common stock trades on both the NYSE Amex Equities (“NYSE-Amex”) and the Toronto Stock Exchange (“TSX”). Prior to January 1, 2011, Solitario recorded a liability for the fair value of the vested portion of outstanding options based upon a Black-Scholes option pricing

model.

During the year ended December 31, 2011, options for 150,600 shares were exercised at prices between Cdn\$1.55 and Cdn\$2.40 per share for cash proceeds of \$247,000. There were no options exercised during 2010 or 2009. There were no options forfeited during 2011 or 2010.

During 2009, Solitario attempted to acquire Metallic Ventures, Inc. (“Metallic Ventures”). On October 13, 2009, concurrent with the signing of an amendment to an agreement with Metallic Ventures, Inc., certain holders of 1,935,000 options agreed to voluntarily cancel the options listed below. None of the cancelled options had any intrinsic value on the date of cancellation. The cancellations of the options were effected to allow Solitario to have enough authorized and unissued shares of its common stock to increase the share consideration offered to Metallic Ventures pursuant to the Amendment. No consideration was paid or received for the cancellation of the options. The following table details the options cancelled on October 13, 2009:

Option Price	Cdn\$ 2.77	Cdn\$4.38	Cdn\$4.53	Cdn\$5.12
Option expiration date	06/27/2011	02/08/2012	09/07/2012	06/14/2012
Cancelled options	1,388,000	5,000	442,000	100,000

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## b.) Stock option compensation

Solitario's outstanding options on the date of grant have a five-year term, and vest 25% on date of grant and 25% on each of the next three anniversary dates. Solitario recognizes stock option compensation expense on the date of grant for 25% of the grant date fair value, and subsequently, based upon a straight line amortization of the unvested grant date fair value of each of its outstanding options. Solitario granted 2,065,000 options on May 5, 2010, with a grant date fair value of \$2,449,000, based upon a Black-Scholes option pricing model resulting in a weighted average fair value of \$1.19 per share. Solitario granted 519,000 options on May 19, 2009, with a grant date fair value of \$339,000, based upon a Black-Scholes pricing model resulting in a weighted average grant date fair value of \$0.65 per share. Solitario recorded \$697,000 of stock option expense during 2011 for the amortization of grant date fair value with a credit to additional paid-in capital.

Prior to January 1, 2011, Solitario recorded a stock option liability for the vested fair value of each option grant on the measurement date by multiplying the estimated fair value determined using the Black-Scholes model by the percent vested of the option on the measurement date. Solitario recognized \$2,513,000 in stock option compensation expense during 2010 and Solitario recognized a \$269,000 stock option compensation benefit during 2009 for the change in the estimated fair value of outstanding options. At December 31, 2010, the fair value of outstanding options granted under the 2006 Plan was determined utilizing the following assumptions and a Canadian dollar to United States dollar exchange rate of 0.99994.

Fair Value at December 31, 2010

Grant Date	5/5/10	5/19/09
Plan	2006 Plan	2006 Plan
Option price (Cdn\$)	\$2.40	\$1.55
Options outstanding	2,065,000	519,000
Expected life	4.4 yrs	3.4 yrs
Expected volatility	62%	66%
Risk free interest rate	1.6%	1.1%
Weighted average fair value	\$2.24	\$2.54
Portion of vesting at measurement date	41.6%	64.6%
Fair value of outstanding vested options	\$1,924,000	\$851,000

## c.) Stock option compensation

The following table summarizes the activity for stock options outstanding under the 2006 Plan as of December 31, 2011, with exercise prices equal to the stock price, as defined, on the date of grant and no restrictions on exercisability after vesting:

	Shares issuable on outstanding Options	Weighted average exercise Price (Cdn\$)	Weighted average remaining contractual term in years	Aggregate intrinsic value(1)
2006 Plan				
Outstanding, beginning of year	2,584,000	\$2.23		
Granted	-			
Exercised	(150,600)	\$1.60		
Forfeited	=			
Outstanding at December 31, 2011	2,433,400	\$2.27	3.2	\$-
Exercisable at December 31, 2011	1,271,150	\$2.24	3.1	\$-

(1) The intrinsic value at December 31, 2011 based upon the quoted market price of Cdn\$1.36 per share for our common stock on the TSX and an exchange ratio of 0.9804 Canadian dollars per United States dollar.

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The activity in the 2006 Plan for the years ended December 31, 2011, 2010 and 2009 is as follows:

	2011		2010		2009	
	Options	Weighted Average Exercise Price(Cdn\$)	Options	Weighted Average Exercise Price(Cdn\$)	Options	Weighted Average Exercise Price(Cdn\$)
2006 Plan						
Outstanding, beginning of year	2,584,000	\$2.23	519,000	\$1.55	2,135,000	\$3.28
Granted	-		2,065,000	\$2.40	519,000	\$1.55
Exercised	(150,600)	\$1.60	-		-	
Cancelled	-		-		(1,935,000)	\$3.30
Forfeited	-		-		(200,000)	\$3.12
Outstanding, end of year	2,433,400	\$2.27	2,584,000	\$2.23	519,000	\$1.55
Exercisable, end of year	1,271,150	\$2.24	775,750	\$2.12	129,750	\$1.55

## d.) Stock option compensation – Change in Accounting Principle

On January 1, 2011, Solitario changed its accounting for stock options to equity accounting from liability accounting in accordance with ASU 2010-13. In accordance with ASU 2010-13, this change in accounting principle has been made on a prospective basis as of January 1, 2011 with a reduction to stock option liability of \$2,775,000, an increase to additional paid-in capital of \$1,240,000 and a reduction in accumulated deficit of \$992,000, net of deferred taxes of \$543,000. The newly adopted accounting principle is preferable because it improves consistency in financial reporting by eliminating diversity in accounting practice.

Solitario has estimated that if it had not adopted the change in accounting principle it would have recorded a reduction in stock option compensation expense of \$835,000 and would have reduced net loss by \$524,000 or \$0.02 per share for the year ended December 31, 2011.

10. Stockholders' equity and noncontrolling interest:

During the year ended December 31, 2011, Solitario's only noncontrolling interest related to MH-LLC, for which there were no changes in Solitario's ownership percentage and current activity is presented on the accompanying consolidated statement of equity.

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The following provides a reconciliation of the beginning and ending balances noncontrolling interest in PBM and MH-LLC for the year ended December 31, 2010.

(in thousands)	December 31, 2010			
	Shareholder's <u>Equity</u>	Anglo Noncontrolling <u>Interest</u>	Ely Noncontrolling <u>Interest</u>	Total Noncontrolling <u>Interest</u>
Beginning balance	\$14,700	\$414	\$-	\$414
Transfer of deferred noncontrolling interest	1,188	1,594	-	1,594
Noncontrolling interest equity contribution	-	-	3,000	3,000
Deconsolidation of PBM subsidiary	-	(1,844)	-	(1,844)
Comprehensive income:				
Net income (loss)	(4,066)	(164)	(1,110)	(1,274)
Net unrealized gain on marketable equity securities (net of tax of \$163)	<u>64</u>	<u>-</u>	<u>-</u>	<u>-</u>
Comprehensive income (loss)	(4,002)	(164)	<u>(1,110)</u>	<u>(1,274)</u>
Ending balance	\$ <u>11,886</u>	\$ <u>-</u>	\$ <u>1,890</u>	\$ <u>1,890</u>

During the year ended December 31, 2009, Solitario's only noncontrolling interest related to its Pedra Branca project, for which there were no changes in Solitario's ownership percentage.

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11. Deconsolidation of PBM:

On July 21, 2010, Anglo made a payment of \$746,000 to PBM required to fund the 2010 work program at the Pedra Branca project, which is held by PBM. Upon making this payment, Anglo earned an additional 21% interest in PBM and now holds a 51% interest in PBM. As part of earning its interest, Solitario transferred \$1,594,000 of previously recorded deferred non-controlling shareholder payments to Anglo's minority interest and \$1,188,000 to additional paid-in capital for Solitario's disproportionate share of the deferred noncontrolling shareholder payments as of that date.

Solitario reviewed the elements of control over PBM in accordance with ASC 810. Solitario made the determination that as a less than 50% owning noncontrolling shareholder, Solitario did not have aspects of control to overcome the assumption of control by Anglo, the controlling shareholder. Accordingly, it was determined that Anglo had gained control of PBM per the terms of the PBM shareholders agreement between Solitario and Anglo. This necessitated the deconsolidation of our interest in PBM and the recording of a gain on deconsolidation in accordance with ASC 810.

Solitario determined the fair value of PBM on the date of deconsolidation based upon a weighted average of four valuation analyses and used assumptions of management on future results that included: (i) the present value of future cash flows, (ii) a market valuation analysis of publicly traded entities with exploration exposure to platinum group metals, similar to PBM, (iii) an analysis by management of the market value based upon sales and joint ventures of similar exploration properties and projects to Pedra Branca, and (iv) the recent investment by Anglo to earn an additional 21% interest in PBM. Solitario determined the deconsolidation date fair value of its 49% interest in PBM to be \$2,496,000. Solitario recorded a non-cash gain on deconsolidation of PBM of \$724,000 for the year ended December 31, 2010 in other income in the consolidated statement of operations. Solitario recorded the cash decrease of \$1,083,000 from deconsolidation of PBM in its investment activities in the consolidated statement of cash flows for the year ended December 31, 2010.

As of July 21, 2010, Solitario records its equity interest in the gains and losses of PBM against its investment in PBM and has elected not to record its equity method investment in PBM at fair value after July 21, 2010. Solitario recorded a reduction of \$623,000 and \$220,000, respectively, in its equity method investment in PBM for the year ended December 31, 2011 and 2010 for its equity share in the loss of PBM since July 21, 2010. Solitario has determined that its investment and activities of PBM as of and for the years ended December 31, 2011 do not qualify for separate reporting of financial information of a significant equity method subsidiary.

12. Ely Gold investment and the Mt. Hamilton joint venture:

On August 26, 2010, Solitario signed a letter of intent (the "LOI") with Ely to make certain equity investments into Ely and to joint venture Ely's Mt. Hamilton gold project through the formation of MH-LLC. The formation of MH-LLC



and certain equity investments, described below, were subject to the approval (the "Approval") of the LOI by Ely shareholders and regulatory approval from the TSX Venture Exchange ("TSXV"), which was received on October 18, 2010. The terms of the joint venture are set forth in the Limited Liability Company Operating Agreement of Mt. Hamilton LLC ("MH-LLC") between us and DHI-US (the "MH Agreement").

a.) Ely Gold investment

*First Tranche equity investment in Ely*

As part of the LOI, Solitario agreed to make up to five sequential equity investments in Ely. On August 30, 2010, Solitario acquired 1,666,666 units of Ely at a price of Cdn\$0.15 per unit for consideration of Cdn\$250,000 or \$243,000 (the "First Tranche"). Each unit consisted of one share of Ely common stock and one-half warrant entitling the holder of a full warrant to purchase an additional share of Ely for Cdn\$0.25, with such warrant expiring two years from the subscription date. Any shares received from the units including any shares from the exercise of the warrants were subject to a hold period which expired on December 30, 2010. The warrants further provide that if the price of a share of Ely common stock trades above Cdn\$0.35 on the TSXV for twenty consecutive trading days Ely may give notice to Solitario that the warrants will expire in ten days from the date of the notice, to effectively force Solitario to exercise the warrants. Ely's common stock has not traded above Cdn\$0.35 for twenty consecutive days since Solitario acquired the Ely warrants and at December 31, 2011, Ely common stock was quoted on the TSXV at Cdn\$0.18 per share. Solitario allocated \$178,000 of the purchase price of the units of \$243,000 to the shares of Ely common stock and allocated \$65,000 of the purchase price to the warrants based upon the relative fair values of the warrants and shares in the units on August 30, 2010. The fair value of the shares of Ely common stock on August 30, 2010 was \$317,000 based upon the quoted market value of Ely shares as quoted on the TSXV. The fair value of the Ely warrants was \$117,000 on August 30, 2010 based upon a Black-Scholes option pricing model. Solitario did not discount these fair

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values for the four-month hold period because the relatively short hold period did not create a material discount to Solitario's value as of the date of purchase of the units.

*Ely shares from the First Tranche*

Solitario recorded a day-one unrealized gain on the Ely shares of common stock of \$87,000, net of deferred taxes of \$52,000, to other comprehensive income, based upon the quoted fair market value of the Ely shares on August 30, 2010, the date of purchase. During the year ended December 31, 2010, Solitario recognized an additional unrealized gain on marketable equity securities of \$115,000, net of deferred taxes of \$68,000, to a total of \$202,000, net of deferred taxes of \$120,000, in other comprehensive income related to the 1,666,666 shares of Ely acquired on August 30, 2010. During the year ended December 31, 2011, Solitario recognized an unrealized loss on marketable equity securities of \$129,000, net of deferred taxes of \$77,000. Solitario has recorded marketable equity securities of \$294,000 and \$500,000, respectively, as of December 31, 2011 and 2010 for the fair market value of the Ely shares acquired on August 30, 2010.

*Ely warrants from the First Tranche*

Solitario classified the warrants received on August 30, 2010 as derivative instrument and has recorded a loss on derivative instruments in the statement of operations of \$147,000 for the year ended December 31, 2011 compared to a gain of \$117,000 on derivative instrument for the year ended December 31, 2010 for the fair value of the Ely warrants received on August 30, 2010. The fair value of the warrants was calculated based upon a Black-Scholes option pricing model at each period end date. See Note 6, "Derivative instruments" above.

*Second Tranche equity investment in Ely*

On October 19, 2010, Solitario acquired an additional 1,666,666 units of Ely at a price of Cdn\$0.15 per unit for consideration of Cdn\$250,000 or \$250,000 (the "Second Tranche"). The warrants included in the units expire on October 18, 2012 and otherwise the units for the First and Second Tranches have the same terms and conditions. Solitario allocated \$180,000 of the purchase price of the Second Tranche units of \$250,000 to the shares of Ely common stock and allocated \$70,000 of the purchase price to the warrants based upon the relative fair values of the warrants and shares in the units on October 19, 2010. The fair value of the Second Tranche shares of Ely common stock on October 19, 2010 was \$508,000 based upon the quoted market value of Ely shares as quoted on the TSXV. The fair value of the Second Tranche Ely warrants was \$197,000 on October 19, 2010 based upon a Black-Scholes option pricing model.

*Ely shares from the Second Tranche*

Solitario recorded a day-one unrealized gain on the Ely shares of common stock of \$206,000, net of deferred taxes of \$122,000, to other comprehensive income, based upon the quoted fair market value of the Ely shares on October 19, 2010, the date of purchase. During the year ended December 31, 2010, Solitario recognized an additional unrealized loss on marketable equity securities of \$5,000, net of deferred taxes of \$3,000, to a total of \$201,000, net of deferred

taxes of \$119,000, in other comprehensive income related to the 1,666,666 shares of Ely acquired on October 19, 2010. During the year ended December 31, 2011, Solitario recognized an unrealized loss on marketable equity securities of \$129,000, net of deferred taxes of \$77,000. Solitario has recorded marketable equity securities of \$294,000 and \$500,000, respectively, as of December 31, 2011 and 2010 for the fair market value of the Ely shares acquired on October 19, 2010.

*Ely warrants from the Second Tranche*

Because the warrants did not qualify as derivative instruments as of December 31, 2010 because the hold period had more than 31 days remaining at December 31, 2010, Solitario recorded a total of \$72,000, net of deferred taxes of \$43,000 to other comprehensive income for the increase in the fair market value over the allocated cost of the Ely warrants received in the Second Tranche. During 2011 Solitario transferred \$114,000 of unrealized gain in other comprehensive income to gain on derivative instruments in the statement of operations, when the warrants were reclassified as derivative instruments in accordance with ASC 815 in January 2011. Solitario recorded a net loss of \$32,000 on derivative instruments during 2011, including the transfer of \$114,000 of unrealized gain, discussed above, for the change in the fair value of the warrants received on October 19, 2010. The fair value of the warrants was calculated based upon a Black-Scholes option pricing model at each period end date. See Note 6, "Derivative Instruments" above.

*Additional tranches of Ely common stock for payment of MH-LLC long-term debt*

The MH Agreement provides that Solitario subscribe for three additional tranches of shares of Ely: (i) \$750,000 in shares of Ely common stock at a price equal to the 20-day weighted moving average price on the TSXV (the "WMAP") on or before June 1, 2013 (the "Third Tranche"), the entire amount of which Ely is required to utilize to make the \$750,000 payment

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due to Augusta for the long-term debt in Note 4 above; (ii) \$750,000 in shares of Ely common stock at a price equal to the WMAP on or before June 1, 2014; (the “Fourth Tranche”), the entire amount of which Ely is required to utilize to make the \$750,000 payment due to Augusta for the long-term debt in Note 4 above, and (iii) \$1,000,000 in shares of Ely common stock at the WMAP on or before June 1, 2015 (the “Fifth Tranche”) the entire amount of which Ely is required to utilize to make the \$1,000,000 payment due to Augusta for the long-term debt in Note 4 above. Although the MH Agreement provides that Solitario would have no obligation to subscribe for any of the shares if Solitario chooses to cease earning an additional interest in MH-LLC, discussed below, prior to the subscription for the shares, as a result of the completion of the Feasibility Study, Solitario intends to develop the Mt. Hamilton project and would lose its entire interest in MH-LLC or be subject to dilution to a 49% interest in MH-LLC if it does not complete all of the payments to DHI-US and the subscription of Ely required in the MH Agreement.

b.) Investment in Mt. Hamilton LLC

*Formation of MH-LLC joint venture of the Mt. Hamilton project*

On November 12, 2010 Solitario made an initial contribution of \$300,000 for a 10% interest in, upon the formation of, MH-LLC which was formed in December 2010. Pursuant to the MH Agreement, the fair value of the DHI-US contributions was valued at \$3,000,000 for its 90% interest and MH-LLC assumed \$3,066,000 for the fair value of the Augusta debt, discussed above in Note 4, “Long-term debt.” Upon formation of MH-LLC whereby Solitario had the right to earn up to an 80% interest in MH-LLC by completing various staged commitments, Solitario determined its interest in MH-LLC was a controlling interest. As a result of its controlling interest in MH-LLC, Solitario has consolidated MH-LLC. See Note 15, “Subsequent event, Mt. Hamilton feasibility study,” below.

Pursuant to the MH Agreement, Solitario is required to fund all exploration expenditures to complete a feasibility study. MH-LLC incurred \$3,700,000 and \$1,214,000, respectively, of exploration expenditures at Mt. Hamilton, which are included in exploration expense for 2011 and 2010. In addition, MH-LLC recorded \$217,000 and \$19,000, respectively, of interest expense related to the long-term debt due to Augusta during the year ended December 31, 2011 and 2010. Solitario recorded a \$3,591,000 and \$1,110,000, respectively, for reduction in the noncontrolling interest related to Ely’s 90% interest in the losses of MH-LLC for 2011 and 2010.

MH-LLC owns certain mineral claims, which are subject to a security interest held by Augusta. MH-LLC has recorded a note payable for this security interest of \$2,802,000 and \$3,085,000, respectively, as of December 31, 2011 and 2010; see Note 4, “Long-term debt” above.

c.) Earn-in payments due to DHI-US

Pursuant to the MH Agreement, as of December 31, 2011, and prior to the completion of the Feasibility Study, the MH Agreement provided that Solitario could earn up to an 80% interest in MH-LLC by completing the following staged commitments: (1) In order to earn an additional 41% interest in MH-LLC, to a total of 51%, Solitario must (i) make the Augusta note payment of \$750,000 due on June 1, 2012; and (ii) make cash payments totaling \$300,000 to DHI-US, and deliver 50,000 shares of Solitario common stock to DHI-US by August 23, 2012 (the "Phase I earn-in"). (2) In order to earn an additional 19% interest in MH-LLC, to a total of 70%, Solitario is required to (i) invest \$300,000 into MH-LLC for an advance royalty payment to the underlying royalty holder; and (ii) make cash payments totaling \$500,000 to DHI-US and deliver 150,000 shares of Solitario common stock to DHI-US by August 23, 2013 (the "Phase II earn-in"). (3) In order to earn an additional 10% interest in MH-LLC, to a total of 80%, Solitario is required to (i) invest \$300,000 into MH-LLC for an advance royalty payment to the underlying royalty holder; (ii) make payments totaling \$500,000 to DHI-US and deliver 100,000 shares of Solitario common stock to DHI-US by August 23, 2014; (iii) buy down the existing 6% net smelter return ("NSR") royalty to a 3.5% NSR royalty by paying the underlying royalty holder \$3,500,000 by November 19, 2013; and (iv) buy down the existing 3.5% net smelter return ("NSR") royalty to a 1% NSR royalty by paying the underlying royalty holder \$1,500,000 by November 19, 2014 (the "Phase III earn-in"). The MH Agreement further provides that if Solitario did not make all of the Phase I payments, its entire interest in MH-LLC would be forfeited. After the completion of the Phase I earn-in, Solitario may elect to cease earning an additional interest in MH-LLC at any time prior to the Phase II earn-in or the Phase III earn-in, in which case Solitario's interest in MH-LLC will be reduced to 49% and DHI-US's interest will be increased to 51% and Solitario would cease to exercise control of MH-LLC if Phase II or Phase III is not achieved.

Pursuant to the MH Agreement, Solitario upon completion of the Feasibility Study, discussed below in Note 15,

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“Subsequent event, Mt. Hamilton feasibility study,” has earned an 80% interest in MH-LLC. However, the MH Agreement provides that if Solitario completes a bankable feasibility study and earns an 80% interest in MH-LLC, as of that date, Solitario will no longer be able to opt-out of any future required payments, and will be obligated to make any unpaid payments of cash and stock to DHI-US, any unpaid payments to the underlying royalty holder and any uncompleted investment Tranches due to Ely by the due dates described above. The MH Agreement requires Solitario to fund all expenditures until completion of the Feasibility Study. Pursuant to the MH Agreement, upon completion of the Feasibility Study, all costs will be shared by Solitario and DHI-US pro-rata. However DHI-US has the option of having Solitario contribute its share of costs through commercial completion as a loan, with such loan, plus interest, being repaid to Solitario from 80% of DHI-US’s share of net proceeds from MH-LLC.

d.) Other land payments due by MH-LLC

During 2011, MH-LLC entered into leases to acquire additional mineral properties at Mt. Hamilton for which MH-LLC will be required to make certain additional payments on these properties totaling \$210,000 in 2012, \$235,000 in 2013 and \$310,000 in 2014. These lease payments are at the option of MH-LLC and may be cancelled if MH-LLC chooses not to proceed with the development of the Mt. Hamilton project. In addition, MH-LLC exercised its option for the acquisition of a mineral lease property acquired in the formation of MH-LLC for a payment of \$115,000 in January 2012.

13. Related party transactions:*TNR Gold Corp.*

Solitario owns 1,000,000 shares of TNR that are classified as marketable equity securities available-for-sale and are recorded at their fair market value of \$54,000 and \$190,000, respectively, at December 31, 2011 and 2010. Christopher E. Herald, our CEO, was a member of the Board of Directors of TNR until June 3, 2009.

14. Selected Quarterly Financial Data (Unaudited):

(in thousands)	2011			
	March 31,	June 30,	Sept. 30,	Dec. 31,
	(1)(3)	(1)(3)	(1)(2)(3)	(1)(3)
Revenue	\$-	\$-	\$200	\$42
Net income (loss)	\$(161)	\$(849)	\$(906)	\$(1,461)

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Earnings (loss) per share:				
Basic and diluted	\$(0.01)	\$(0.03)	\$(0.03)	\$(0.04)
Weighted shares outstanding:				
Basic and diluted	29,769	33,027	34,163	34,205

(in thousands)	2010			
	March 31,	June 30,	Sept. 30,	Dec. 31,
	(6)(7)(8)	(6)(7)(8)	(4)(5)(6)(7)(8)	(6)(7)(8)
Revenue	\$-	\$-	\$200	\$-
Net income (loss)	\$(905)	\$(1,292)	\$7	\$(1,876)
Earnings (loss) per share:				
Basic and diluted	\$(0.03)	\$(0.04)	\$0.00	\$(0.10)
Weighted shares outstanding:				
Basic and diluted	29,750	29,750	29,750	29,750

*Fluctuations for 2011*

(1) During 2011 Solitario sold 105,000 shares of Kinross common stock in the first quarter for proceeds of \$1,648,000 and a gain of \$1,568,000; sold 20,000 shares of Kinross stock in the second quarter for proceeds of \$316,000 and a gain of \$302,000 and sold 5,000 shares of Kinross in the fourth quarter for proceeds of \$71,000 and a gain of \$67,000. Solitario did not sell any Kinross shares in the second quarter of 2011, which contributed to the larger loss in the second third and fourth quarters and the smaller loss in the first quarter.

(2) In the third quarter Solitario received a payment of \$200,000 in joint venture revenue on its Bongará project in Peru, which reduced the loss in the third quarter.

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(3) Exploration expense was \$841,000, \$921,000, \$1,724,000 and \$2,460,000, respectively, in the first, second, third and fourth quarters of 2011, which contributed to the fluctuation in the losses in the respective quarters.

*Fluctuations for 2010*

(4) During the third quarter of 2010, Solitario recorded a gain on the deconsolidation of its PBM subsidiary of \$724,000, which contributed to the net income for the third quarter of 2010.

(5) In the third quarter Solitario received a payment of \$200,000 in joint venture revenue on its Bongará project in Peru, which contributed to the net income for the third quarter of 2010.

(6) Exploration expense was \$775,000, \$953,000, \$584,000 and \$1,721,000, respectively, in the first, second, third and fourth quarters of 2010, which contributed to the fluctuation in the net losses and net income in the respective quarters.

(7) During 2010 Solitario sold 40,000 shares of Kinross common stock in the second quarter for proceeds of \$730,000 and a gain of \$553,000 and sold 30,000 shares of Kinross common stock in the fourth quarter for proceeds of \$571,000 and a gain of \$442,000. Solitario did not sell any Kinross shares in the first and second quarters.

(8) Solitario recognized stock option compensation expense of \$9,000, \$645,000, \$851,000 and \$1,008,000, respectively, in the first, second, third and fourth quarters of 2010, which contributed to the increasing losses from the first, second and fourth quarters and mitigated the gains from deconsolidation joint venture payments and reduced exploration expenditures in the third quarter, discussed above.

15. Subsequent event, Mt. Hamilton feasibility study:

On February 22, 2012, Solitario announced the completion of the Feasibility Study on its Mt. Hamilton project prepared by SRK. As a result of the completion of the Feasibility Study, Solitario has earned an 80% interest in MH-LLC, owner of the Mt. Hamilton project, and we intend to develop the Mt. Hamilton project, subject to a number of factors including obtaining necessary permits and availability of required capital, none of which is currently in place. As a result of the completion of the Feasibility Study and our intention to develop the Mt. Hamilton project, Solitario became a development stage company (but not a company in the "Development Stage"). The Feasibility Study reported the following proven and probable reserves at Solitario's Mt. Hamilton project:

**Mineral Reserves Statement, Centennial Gold-Silver Deposit,**

**White Pine County, Nevada**

**SRK Consulting (Inc.)**

Reserve Category	Gold Grade	Silver Grade*
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	Tons (millions)	oz/ton	g/tonne	oz/ton	g/tonne	Contained Gold (koz)**	Contained Silver (koz)**
Proven	0.923	0.032	1.10	0.155	5.31	29.3	142.7
Probable	21.604	0.021	0.72	0.134	4.59	457.8	2,884.3
Proven + Probable	22.527	0.022	0.75	0.136	4.66	487.1	3,028.2

\*Reported silver grade is cyanide soluble. \*\*Some numbers may not add due to rounding.

The MH Agreement provides that if Solitario completes a bankable feasibility study and earns an 80% interest in MH-LLC, as of that date, Solitario will no longer be able to opt-out of any future required payments, and will be obligated to make any unpaid payments of cash and stock to DHI-US, any unpaid payments to the underlying royalty holder and, pursuant to the LOI Solitario will be obligated to make any uncompleted investment Tranches due to Ely by the due dates described above. Upon completion of the Feasibility Study, the MH Agreement provides that all costs for development at Mt. Hamilton will be shared by Solitario and DHI-US pro-rata. However DHI-US has the option of having Solitario contribute its share of costs through commercial completion as a loan, with such loan, plus interest, being repaid to Solitario from 80% of DHI-US's share of net proceeds from MH-LLC.

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**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

None

**Item 9A. Controls and Procedures**

The management of Solitario is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")). During the fiscal period covered by this report, Solitario's management, with the participation of the Chief Executive Officer and Chief Financial Officer, carried out an evaluation of the effectiveness of Solitario's internal control over financial reporting and the design and operation of Solitario's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act). This evaluation of the effectiveness of our internal control over financial reporting was based on the framework and criteria established in *Internal Control – Integrated Framework*, issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on such evaluation, Solitario's Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2011, Solitario's internal control over financial reporting is effective and that its disclosure controls and procedures are effective to ensure that information required to be disclosed by Solitario in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the required time periods and are designed to ensure that information required to be disclosed in its reports is accumulated and communicated to Solitario's management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's assessment of the effectiveness of our internal control over financial reporting as of December 31, 2011 has been audited by Ehrhardt Keefe Steiner & Hottman PC, an independent registered public accounting firm, as stated in their report which is included in Item 8 of this Form 10-K.

**Item 9B. Other Information**

None

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PART III

**Item 10. Directors, Executive Officers and Corporate Governance**

The information required under Item 10 is incorporated herein by reference to the information set forth in our definitive proxy statement in connection with the annual meeting of shareholders to be filed with the Securities and Exchange Commission within 120 days after the end of our fiscal year ended December 31, 2011 pursuant to Section 14(a) of the Exchange Act (the "2012 Proxy").

Item 11. Executive Compensation

The information required under Item 11 is incorporated herein by reference to the information set forth in the 2012 Proxy.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information with respect to Item 12 is incorporated herein by reference to the information set forth in the 2012 Proxy.

**Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information with respect to Item 13 is incorporated herein by reference to the information set forth in the 2012 Proxy.

Item 14. Principal Accounting Fees and Services

The information required under Item 14 is incorporated herein by reference to the information set forth in the 2012 Proxy.

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**PART IV**

**Item 15. Exhibits, Financial Statement Schedules**

The following documents are filed as a part of this Annual Report on Form 10-K:

1. Financial Statements

The following financial statements contained in Part II, Item 8 are filed as part of this Annual Report on Form 10-K:

Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2011, and December 31, 2010

Consolidated Statements of Operations for the years ended December 31, 2011 and December 31, 2010

Consolidated Statements of Stockholders' Equity and Comprehensive Loss for the years ended December 31, 2011  
and

December 31, 2010

Consolidated Statements of Cash Flows for the years ended December 31, 2011 and December 31, 2010

Notes to Consolidated Financial Statements

2. Financial Statement Schedules

Financial statement schedules are omitted because they are not required or are not applicable, or the required information is provided in the consolidated financial statements or notes thereto described in Item 15(1) above.

3. Exhibits

The Exhibits listed in the Index to Exhibits, which appears immediately following the signature page and is incorporated herein by reference, are filed as part of this Annual Report on Form 10-K.

**SIGNATURES**

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Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SOLITARIO EXPLORATION  
& ROYALTY CORP.

By: /s/ James R. Maronick  
Chief Financial Officer

Date: March 12, 2012

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	- Title	Date
/s/	- -	-
Christopher E. Herald, Chief Executive Officer	- Principal Executive Officer and Director	March 12, 2012
/s/	- -	-
James R. Maronick, Chief Financial Officer	- Principal Financial and Accounting Officer	March 12, 2012
/s/	-	-
Mark E. Jones, III	-	-
-		
/s/	A majority of the Board of Directors	March 12, 2012
Brian Labadie		
-	-	-
/s/	-	-
Leonard Harris	-	-
-	-	-
/s/	-	-
John Hainey	-	-
-	-	-
By: /s/	- -	-
James R. Maronick, Attorney-in-fact	- -	-

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INDEX TO EXHIBITS

Description

- 3.1 Amended and Restated Articles of Incorporation of Solitario Exploration & Royalty Corp., as Amended (incorporated by reference to Exhibit 3.1 to Solitario's Form 10-Q filed on August 10, 2010)
- 3.2 Amended and Restated By-laws of Solitario Exploration & Royalty Corp. (incorporated by reference to Exhibit 3.2 to Solitario's Form 10-Q filed on August 7, 2008)
- 4.1 Form of Common Stock Certificate of Solitario Exploration & Royalty Corp. (incorporated by reference to Exhibit 4.1 to Solitario's Form 10-Q filed on August 7, 2008)
- 10.1 Purchase Agreement for a royalty buy-down by and among MH-LLC, Solitario Exploration & Royalty Corp. and Centennial, dated May 17, 2011 (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on May 18, 2011)
- 10.2 Letter agreement between Solitario Exploration & Royalty Corp. and DHI-US with respect to the funding of the Purchase Price and related amendments to the MH-LLC Operating Agreement dated May 17, 2011 (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on May 18, 2011)
- 10.3 Letter of intent between Solitario Exploration & Royalty Corp. and Ely Gold & Minerals Inc. regarding private placement and the Mt. Hamilton joint venture (incorporated by reference to Exhibit 99.1 to Solitario's 8-K filed on September 1, 2010)
- 10.4 Limited Liability Company Operating Agreement of Mt. Hamilton LLC between Solitario Exploration & Royalty Corp. and DHI Minerals (U.S.) Ltd. dated December 22, 2010 (incorporated by reference to Exhibit 99.2 to Solitario's 8-K filed on December 28, 2010)
- 10.5 Limited Liability Company Contribution Agreement among Solitario Exploration & Royalty Corp., DHI Minerals (U.S.) Ltd. and Mt. Hamilton LLC dated December 22, 2010 (incorporated by reference to Exhibit 99.3 to Solitario's 8-K filed on December 28, 2010)
- 10.6 Solitario Resources Corporation 2006 Stock Option Incentive Plan (As Amended), an amendment of the Solitario Resources Corporation 2006 Stock Option Incentive Plan (incorporated by reference to Exhibit A to Solitario's Proxy Statement Pursuant to Section 14(a) filed on April 30, 2007)
- 10.7 Alliance Agreement, dated January 18, 2005, between Solitario Resources Corporation and Newmont Overseas Exploration Limited (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on January 20, 2005)
- 10.8 Stock Purchase Agreement, dated January 18, 2005, between Solitario Resources Corporation and Newmont Mining Corporation of Canada Limited (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on January 20, 2005)
- 10.9

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Amended and Restated Royalty Grant, dated January 18, 2005, between Solitario Resources Corporation and Minera Los Tapados S.A. (incorporated by reference to Exhibit 99.3 to Solitario's Form 8-K filed on January 20, 2005)

10.10 Change in Control Severance Benefits Agreement between Solitario Resources Corporation and Christopher E. Herald, dated as of March 14, 2007 (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on March 14, 2007)

10.11 Change in Control Severance Benefits Agreement between Solitario Resources Corporation and James R. Maronick, dated as of March 14, 2007 (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on March 14, 2007)

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- Change in Control Severance Benefits Agreement between Solitario Resources Corporation and Walter W. Hunt, dated as of March 14, 2007 (incorporated by reference to Exhibit 99.3 to Solitario's Form 8-K filed on March 14, 2007)
- 10.12
- Framework Agreement for the Exploration and Development of Potential Mining Properties, related to Solitario's 100% owned Bongará project in Peru between Minera Bongará S.A., Minera Solitario Peru S.A.C, Solitario Resources Corporation, and Votorantim Metais – Cajamarquilla S.A dated March 24, 2007 (incorporated by reference to Exhibit 10.2 to Solitario's Form 8-K filed on October 4, 2007)
- 10.13
- Shareholders Agreement relating to the Pedra Branca Project in Brazil, between Anglo Platinum Brasil, S.A. and Altoro Mineracao, LTDA and Pedra Branca do Brasil Mineração S.A. and Rustenburg Platinum Mines Limited and Solitario Resources Corporation dated April 24, 2007 (incorporated by reference to Exhibit 10.1 to Solitario's Form 8-K filed on October 4, 2007)
- 10.14
- Master Agreement for Equity Collars between Solitario Resources Corporation and UBS AG, London, England, an affiliate of UBS Securities, LLC, Stamford, CT, dated October 5, 2007, providing the terms and conditions for entering a Zero-Premium Equity Collar on 900,000 shares of Kinross common stock pledged by Solitario (incorporated by reference to Exhibit 10.1 to Solitario's Form 10-Q filed on November 8, 2007)
- 10.15
- Pledge and Security Agreement between Solitario Resources Corporation and UBS AG, London, England, an affiliate of UBS Securities, LLC, Stamford, CT, dated October 5, 2007 providing the terms and conditions to allow for the pledge by Solitario of 900,000 shares of Kinross common stock pursuant to a Master Agreement for Equity Collars dated of the same day (incorporated by reference to Exhibit 10.2 to Solitario's Form 10-Q filed on November 8, 2007)
- 10.16
- Single Pay Collar Confirmations between Solitario Resources Corporation and UBS AG, London, England, an affiliate of UBS Securities, LLC, Stamford, CT dated October 12, 2007 for the pledge of 900,000 shares of Kinross common stock pursuant to the Master Agreement for Equity Collars and the Pledge and Security Agreement, filed above in item 10.1 and 10.2 respectively, setting the trade and termination date, upper and lower threshold prices, number of shares and other terms and conditions of three equity collars entered into on the same date (incorporated by reference to Exhibit 10.3 to Solitario's Form 10-Q filed on November 8, 2007)
- 10.17
- 14.1 Code of Ethics for the Chief Executive Officer and Senior Financial Officer (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on July 18, 2006)
- 21.1\* Subsidiaries of Solitario Exploration & Royalty Corp.
- 23.1\* Consent of Ehrhardt Keefe Steiner & Hottman PC
- 23.2\* Consent of SRK Consulting (U.S.) Inc.
- 24.1\* Power of Attorney
- 31.1\* Certification of Chief Executive Officer pursuant to SEC Rule 13a-14(a)/15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 31.2\* Certification of Chief Financial Officer pursuant to SEC Rule 13a-14(a)/15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

32.1\* Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

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The following financial statements, formatted in XBRL: (i) Consolidated Balance Sheets as of December 31, 2011 and 2010; (ii) Consolidated Statements of Operations for the years ended December 31, 2011, 2010 and 2009; (iii) Consolidated Statements of Shareholders' Equity and Comprehensive Loss for the years ended December 31, 2011, 2010 and 2009; (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2011, 2010 and 2009; and (v) Notes to the Consolidated Financial Statements, tagged as blocks of text. In 101\* accordance with Rule 406T of Regulation S-T, the information in these exhibits is furnished and deemed not filed or a part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, and otherwise is not subject to liability under these sections and shall not be incorporated by reference into any registration statement or other document filed under the Securities Act of 1933, as amended, except as expressly set forth by the specific reference in such filing

\* Filed herewith

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Exhibit 21.1

**SOLITARIO EXPLORATION & ROYALTY CORP.**

**Schedule of Subsidiaries**

**March 12, 2012**

Solitario Exploration & Royalty Corp. [Colorado]

Subsidiaries-[jurisdiction] - percentage owned

- Altoro Gold Corp. [British Columbia, Canada] - 100%

- Altoro Gold (BVI) Corp. [British Virgin Islands] - 100%

- Minera Altoro (BVI) Ltd. [British Virgin Islands]- 100%

- Minera Andes (BVI) Corp. [British Virgin Islands] -100%

- Compañía Minera Andes del Sur S.A. [Bolivia] - 100%

- Minera Altoro Brazil (BVI) Corp. [British Virgin Islands] - 100%

- Altoro Mineração, Ltda. [Brazil] - 100%

- Minera Chambara, S.A [Peru] - 85% owned

- Minera Solitario Peru, S.A. [Peru] - 100%

- Minera Bongará, S.A. [Peru] - 100%

- Minera Soloco, S.A. [Peru] - 100%

- Mineração Solitario Brazil, Ltd [Brazil] - 100%

- Minera Solitario Mexico, S.A. [Mexico] - 100%

- Mt. Hamilton, LLC [Colorado] - 80%

Exhibit 24.1

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints James R. Maronick, his true and lawful attorney-in-fact and agent, with full power of substitution and reconstitution, for him and in his name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K for the fiscal year ended December 31, 2011, of Solitario Exploration & Royalty Corp. and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

NAME	DATE
/s/ Mark E. Jones, III	March 12, 2012
/s/ Brian Labadie	March 12, 2012
/s/ Christopher E. Herald	March 12, 2012
/s/ Leonard Harris	March 12, 2012
/s/ John Hainey	March 12, 2012