

SOLITARIO EXPLORATION & ROYALTY CORP.  
Form 10-K  
March 07, 2014

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, 2013

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 MKT**

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]

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 [X]

Edgar Filing: SOLITARIO EXPLORATION & ROYALTY CORP. - Form 10-K

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, 2013 as reported on NYSE MKT was approximately \$28,572,000.

There were 39,212,689 shares of common stock, \$0.01 par value, outstanding on February 28, 2014.

#### **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, 2014, have been incorporated by reference into Part III of this Annual Report on Form 10-K



**TABLE OF CONTENTS**

	Page
<b>PART I</b>	
Item 1 Business	3
Item 1A Risk Factors	6
Item 1B Unresolved Staff Comments	12
Item 2 Properties	12
Item 3 Legal Proceedings	30
Item 4 Mine Safety Disclosures	30
<b>PART II</b>	
Item 5 Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	<b>31</b>
Item 6 Selected Financial Data	32
Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations	33
Item 7A Quantitative and Qualitative Disclosures About Market Risk	47
Item 8 Financial Statements and Supplementary Data	48
Item 9 Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	72
Item 9A Controls and Procedures	72
Item 9B Other Information	72
<b>PART III</b>	
Item 10 Directors, Executive Officers and Corporate Governance	73
Item 11 Executive Compensation	73
Item 12 Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	73
Item 13 Certain Relationships and Related Transactions, and Director Independence	73
Item 14 Principal Accounting Fees and Services	73
<b>PART IV</b>	
Item 15 Exhibits, Financial Statement Schedules	75
<b>SIGNATURES</b>	<b>76</b>

## **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 a development stage company (prior to February 22, 2012 we were an exploration stage company) with a focus on developing the Mt. Hamilton gold project, 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.

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 ("MH 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 earned an 80% interest in MH-LLC, the 100% 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 development financing capital, none of which is currently in place. The Mt. Hamilton project, located in Nevada, is discussed below under "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. During 2013 and 2012, we have recorded revenues from joint venture delay rental payments of \$200,000 for each of 2013 and 2012 related to our Bongará project in Peru and recorded \$100,000 of delay rental payment revenue for each of 2013 and 2012 related to our Mercurio project in Brazil. In June 2012 MH-LLC sold a royalty interest in our Mt. Hamilton project to Sandstorm Gold Ltd. ("Sandstorm") for \$10,000,000 of which \$6,000,000 was paid in June 2012 and \$4,000,000 was paid in January 2013. Previously, our last significant revenues were recorded in 2000 upon the sale of our Yanacocha property for \$6,000,000. Future revenues from the sale of properties, if any, will also occur on an infrequent basis. At December 31, 2013, in addition to our Mt. Hamilton Project, we had six mineral exploration properties in Peru and Mexico and our Yanacocha royalty property in Peru and our Mercurio royalty property in Brazil. We are conducting limited exploration activities in all of those countries either on our own using contract geologists, or through joint ventures operated by our partners.

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 as of December 31, 2013 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 80%-owned by Solitario. During the year ended December 31, 2013 our wholly-owned Altoro Mineração, Ltda. subsidiary in Brazil was merged into our wholly-owned Mineração Solitario Brazil, Ltd subsidiary in Brazil.

Table of Contents

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]

- Minera Chambara, S.A. [Peru]

- 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]

- Mt. Hamilton, LLC [Colorado]

General

We are currently working on development activities related to our Mt. Hamilton gold project that we intend to develop, subject to a number of factors including obtaining necessary permits and availability of required development financing capital, none of which is currently in place. We have never developed a property in our history. As of December 31, 2013, we reported proven and probable reserves at Mt. Hamilton 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." None of our other properties have reserves.

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. During 2013 we significantly reduced our exploration activities in Peru, Mexico and Brazil. We no longer have any active employees in any of those countries, and our current and near-term future exploration activities consist of care and maintenance of our existing exploration projects through the use of contract geologists and management of our joint ventures.

In analyzing our activities, a significant aspect relates to results of our development activities at Mt. Hamilton and our exploration activities and those of our joint venture partners' on a property-by-property basis. When these 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) borrowing in the form of short-term margin debt secured by our investment in Kinross; (iii) borrowing under our three-year Facility Agreement with RMB Australia Holdings Limited and RMB Resources Inc.; (iv) joint venture delay rental payments, including payments on our Bongará property and on our Mercurio project; (v) the royalty sale to Sandstorm; (vi) the sale of properties, which last occurred in 2000 with the sale of our Yanacocha property for \$6,000,000; and (vii) 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 two segments, mining development at our Mt. Hamilton project and mineral exploration. We currently conduct limited exploration activities in Peru and Mexico. See Note 12 "Segment Reporting" in Part II, Item 8, "Financial Statements and Supplementary Data" of this Form 10-K. As of February 28, 2014, we had seven full-time employees, located in the United States and no full-time employees outside of the United States. We utilize contract employees and laborers to assist us in most of the exploration on our Latin American projects.



## Table of Contents

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 development and 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 operations in compliance with applicable laws and regulations.

Changes to current state or federal laws and regulations in each jurisdiction in which we conduct our exploration and development 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 2013, we had no material environmental incidents or non-compliance with any applicable environmental regulations.

Mt. Hamilton Joint Venture

On August 26, 2010, we signed a Letter of Intent (“LOI”) with Ely Gold & 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”), 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 expired 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 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 Item 2, “Mineral Properties” below.

#### Investment in Kinross

We have a significant investment in Kinross at December 31, 2013, which consists of 600,000 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 1,342,920 shares of Kinross common stock to fund our operations. As of February 28, 2014 we own 530,000 shares of Kinross common stock that have a value of approximately \$2.8 million based upon the market price of \$5.22 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

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.

Table of Contents

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. However, during 2013 we significantly reduced our exploration activities in Peru, Mexico and Brazil. We no longer have any active employees in any of those countries, and our exploration activities consist of care and maintenance of our existing exploration projects through the use of contract geologists and management of our joint ventures. During 2012 we terminated our mineral property activity in Bolivia.

Financial Information about Geographic Areas

Included in the consolidated balance sheets at December 31, 2013 and 2012 are total assets of \$412,000 and \$1,433,000, respectively, related to Solitario's foreign operations located in Brazil, Peru, and Mexico, including our investment in Pedra Branca do Mineração, a Brazilian entity, of which we own 49% and account for under the equity method of accounting.

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.solitarioresources.com](http://www.solitarioresources.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 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 has inherent 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 will be able to obtain such financial resources. We are permitting the Mt. Hamilton Project under an Environmental Assessment (“EA”) with the United States Forest Service (the “Forest Service”). The Forest Service is currently allowing this as the appropriate regulatory process for permitting the Mt Hamilton project. However, the Forest Service could reverse its position and require the completion of an Environmental Impact Statement (“EIS”), or a court could be petitioned to force Solitario to complete an EIS, even after approval of an EA. If such an event were to occur, it would significantly lengthen the permitting process and delay the start-up of a mine. In addition, we are required to obtain several major permits administered by the Nevada Department of Environmental Protection and archaeological clearance from both the USFS and the Nevada State Historical Preservation Office. 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

Table of Contents

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. 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 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 of 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 on our Mt. Hamilton project, 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. 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. 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 2013 when we wrote down our investments in our Cerro Azul, Atico and Jaripo projects recording mineral property impairments totaling \$13,000 and during 2012 when we wrote down our investments in our Excelsior, Triunfo and Espanola projects recording mineral property impairments totaling \$31,000.

***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 February 28, 2014. We have experienced losses in the value of Kinross stock during the past two years with the value of Kinross stock dropping from approximately \$11.40 per share to a low of \$4.38 per share. Further negative fluctuation in the market value of Kinross common stock could have a material impact on the market price of our common stock and our liquidity and capital resources.

Table of Contents

***Our debt could adversely affect our financial condition; and our related debt service obligations may adversely affect our cash flow and ability to invest in and grow our businesses.***

We have, and for the foreseeable future will continue to have, a significant amount of indebtedness. As of December 31, 2013 we had \$4,302,000 in short and long term indebtedness, including \$3,500,000 in indebtedness pursuant to the Facility Agreement, before the remaining unamortized debt discount of \$356,000 arising as a result of the warrants issued to the lender in connection with the Facility Agreement, and as of February 28, 2014 we have \$4,406,000 of short and long term indebtedness before the remaining unamortized debt discount of \$248,000. We likely will seek to draw down additional amounts under the terms of the Facility Agreement during 2014. Amounts outstanding under the Facility Agreement incur interest at the 90-day LIBOR rate plus 5% with interest being payable quarterly. Accordingly, if the LIBOR rates increase the corresponding interest rate under the Facility Agreement will increase. The servicing of this debt will require the Company to devote a substantial portion of its financial resources to its repayment, and as a result such funds will not be available to use in future operations, or investing in our businesses. Further, loans extended under the Facility Agreement are secured by substantially all of the Company's assets and therefore if the Company defaults under the Facility Agreement it could result in the lender attempting to foreclose on those assets to satisfy the Company's debt obligations.

***During 2013 and 2012 we have borrowed money using our UBS short-term credit line, 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 February 28, 2014, we have outstanding borrowing of \$906,000 against our UBS short-term credit line secured by our investment in Kinross. Our UBS short-term credit line operates similar to a margin account and provides 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, the UBS may demand immediate payment or sell as much Kinross stock as necessary to repay the short-term credit line (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.

***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 MKT during 2013 was approximately 29,000 shares. 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, negative news on our projects and general economic trends.

***Our mineral exploration and 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 and development 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 18 of our 20 years of operations. We reported losses of \$2,052,000 and \$3,297,000, respectively, for the years ended December 31, 2013 and 2012. 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.



Table of Contents

***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 in conjunction with our joint venture partners, or under lease, option or purchase agreements. Our mineral properties are located in Peru, 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, 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;
- 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.

Due to ongoing uncertainty regarding Bolivian mining law and mining rights, during 2012 we decided to cease operations in Bolivia and wrote-off our two Bolivian properties, Triunfo and Espanola, recording a mineral property write-down of \$25,000. We do not anticipate returning to do exploration in Bolivia in the near future. During 2013 Mexico imposed additional production taxes on metal mines and also holding costs.

Accordingly, 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, a three year credit facility 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 permitting and development activities to place Mt. Hamilton into production and in the case of our exploration projects, the exploration activities required to determine whether mineral deposits on our projects are commercially viable. 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 development or exploration of our 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.

Table of Contents

***Our investment in MH-LLC includes the obligation to make payments to underlying leaseholders; failure to make all of the payments 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 we agreed to make certain annual payments and certain royalty buyout payments to underlying holders of leases at Mt. Hamilton as further described below in Item 2 “Mineral Properties.” Failure to make any of these payments to underlying leaseholders may result in the loss of our entire interest in MH-LLC and the Mt. Hamilton project.

***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 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, exploration and development of mining projects. Our competitors with greater financial resources than us will be better able to withstand the uncertainties and fluctuations associated with sustained downturns in the market and to acquire high quality exploration and mining properties when market conditions are favorable. In addition, we compete with other mining companies to attract and retain key executives and other employees with technical skills and experience in the mineral exploration business. 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. Additionally, we have to make annual filings to various government agencies on all of our mineral properties. If we fail to make such filings, or improperly document such filings, the validity of our title to a mineral property could be lost or challenged. 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 and we would 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 total expenditures on our Mt. Hamilton project are

Table of Contents

budgeted to be approximately \$1,729,000 during 2014, which includes property payments and payments directly and indirectly related to permitting. These payments could increase as a result of permitting delays or challenges during the year, 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 such expenditure could substantially increase our costs to achieve compliance in the future. 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 and limited corporate liability coverage; however, 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 and development activities in Peru, Brazil, Mexico and Mt. Hamilton (Nevada) 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 or joint venture. 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. 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 or commodity fluctuations. The prices of commodities as well as currency exchange rates have fluctuated widely and future significant price declines in commodities or changes in currency exchange rates 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.

Table of Contents

***Our business model relies significantly on other companies to joint venture our projects and we anticipate continuing this practice in the future. Therefore, our results are subject to the additional risks associated with the financial condition, operational expertise and corporate priorities of our joint venture partners.***

Three of our four most important projects, Bongará, Pedra Branca and Pachuca Norte, are joint-ventured with other mining companies that manage the exploration and development activities on these projects and we are the minority-interest party. Although our joint venture agreements with each of these three companies provide certain voting rights and other minority-interest safeguards, the majority partner not only manages operations, but controls most decisions, including budgets and scope and pace of exploration and development activities. Consequently, we are highly dependent on the operational expertise and financial condition of our joint venture partners, as well as their own corporate priorities. For instance, even though our joint venture property may be highly prospective for exploration success, or economically viable based on feasibility studies, our partner may decide to not fund the further exploration or development of our project based on their respective financial condition or other corporate priorities. Therefore our results are subject to the additional risks associated with the financial condition, operational expertise and corporate priorities of our joint venture partners, which could have a material adverse effect on our financial position or results of operations.

***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. In the future, if our exploration results 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.

***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



Table of Contents

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

(Map of Mt. Hamilton Property) Mt. Hamilton.jpg

The consolidated Mt. Hamilton property consists of 305 unpatented mining claims, 9 patented mining claims totaling 121 acres and 241 acres of fee land. Two hundred seventy eight 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 management oversight. 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's Mt. Hamilton property. In December 2010, we entered into the MH Agreement with DHI with respect to MH-LLC, which now holds the Mt. Hamilton project assets. Per the terms of the MH Agreement, DHI 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, Solitario subscribed for, and subsequently funded, 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, such warrants have subsequently expired.

Solitario earned an 80% interest in the project, through its ownership in MH-LLC, upon completion of the Feasibility Study in February 2012. During 2013, Solitario, Ely and DHI revised the MH Agreement and the LOI whereby Solitario made a private placement into Ely of \$1,300,000, the proceeds of which were used by Ely to completely pay off the remaining long-term debt due to Augusta Resource Corporation (“Augusta”), and as of December 31, 2013, Solitario and Ely had no remaining debt owed to Augusta. In addition Solitario, Ely and DHI revised the MH-LLC Agreement whereby Solitario delivered 327,000 shares of its common stock to Ely during 2013 to entirely satisfy its August 2014 payment requirement of \$250,000 and 50,000 shares of Solitario common stock. As of December 31, 2013, Solitario is required to make the payments listed below, pursuant to the MH Agreement and the LOI.

Year	Cash Payments to DHI	Shares of Solitario Stock Issued to DHI	Cash payments to Royalty Owner (1)
2014	\$250,000	50,000	\$300,000
2015			\$300,000
2016			\$300,000
2017			\$300,000

Royalty reduction (6.0% to 1.00 NSR) payment paid prior to commencement of commercial production \$5,000,000

(1) Annual minimum advance royalty payments are due through the end of production.

All construction and permitting costs are shared pro-rata subsequent to the completion of the Feasibility Study. However, DHI notified Solitario that it had exercised its option of having Solitario contribute DHI’s share of costs through

## Table of Contents

commercial completion as a loan, with such loan, plus interest at 8%, being repaid to Solitario from 80% of DHI's share of distributions from MH-LLC. During 2012, Solitario loaned DHI \$127,000 for its share of costs subsequent to the completion of the Feasibility Study. However, during 2012, DHI repaid Solitario \$131,000 for the remaining balance due on the loan from Solitario, including interest, and has no balance due to Solitario as all MH-LLC joint funding expenditures were funded by MH-LLC out of MH-LLC funds during 2013.

All currently stated reserves 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. In June 2012, MH-LLC sold a 2.4% NSR royalty to Sandstorm on gold and silver production for \$10 million in cash, in which \$6.0 million was received on signing and the remaining \$4.0 million was received in mid-January 2013. Assuming the 5.0% NSR Royalty is purchased, the effective NSR Royalty rate on the currently defined reserves will be 3.40%, less \$1,700,000 of advance royalties paid as of December 31, 2013.

We are the manager of MH-LLC under the terms of the MH Agreement, which provides that 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 the County maintained gravel road.

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. KGHM International Ltd. 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 ore body and Seligman gold deposit, which constitute the main area of interest, are situated at elevations of about 8,600 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 7,400 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 and Seligman deposits 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, 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

## Table of Contents

mining engineering consulting company, to complete a 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. In December 2010 Solitario and DHI formed MH-LLC, a limited liability company which now holds 100% of the Mt. Hamilton project assets, and signed the MH Agreement. 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 Work

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. Westmont Gold Inc. from 1984 to 1994 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. Rea Gold Corp. focused on placing the NE Seligman deposits into production and conducted mining activities from 1994-1997. Augusta completed a limited confirmation drilling program and pre-feasibility related studies on the property from 2003-2007. Ely conducted a limited amount of confirmatory infill drilling in 2008. Solitario and MH-LLC conducted exploration, geotechnical, hydrologic and metallurgical drilling and engineering-environmental evaluations from late-2010 through the end of 2013.

## 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-silver style of mineralization. The likely source for both the  $WO_3$ -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 and the margins of the Seligman granodiorite stock.

Mineralization at Mt. Hamilton is controlled by stratigraphy, structure and magmatic hydrothermal alteration. Gold and silver in the Centennial ore body 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 and fracturing also appears to have controlled oxidation of the gold zone. The Centennial gold ore body 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. Gold and silver mineralization in the Seligman deposit is controlled by both vertical and sub-horizontal structures, resulting in a more complex geometry than at Centennial. The Seligman deposit is approximately 1,500 feet long and 1,000 feet wide. Recent drilling suggests that these two deposits coalesce into a single mineralized body.

## 7. Drilling

The Centennial gold and silver ore bodies have been defined by numerous drilling programs since the 1980's. Recent drilling has demonstrated the two ore bodies as previously delineated are actually a single continuous mineralized zone. The existing resources of the two deposits, now collectively referred to as the Mt. Hamilton ore body are defined by an 857 drill-hole data base incorporating 318,000 feet of drilling of which approximately 255 is reverse circulation ("RC") drill holes and the remainder is core drilling. Core recoveries average in excess of 90%, 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:

## Table of Contents

Definitions and Guidelines, dated November 27, 2010 and valid for reserve estimation in accordance with SEC-Guide 7 guidance. Solitario completed three rounds of infill and extension drilling, as well as geotechnical, metallurgical and hydrologic drilling for feasibility-related issues from 2010-2013.

### 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 both the Centennial and Seligman gold deposits and of sufficient quality to incorporate into a NI 43-101 compliant resource estimate. Furthermore, SRK believes the Centennial-Seligman 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 and reserve 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

Solitario engaged SRK to complete the Feasibility Study on the Centennial gold and silver deposit located on the Mt. Hamilton property in November 2010. 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 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 was utilized based on a breakeven economic analysis. Key economic results of the Feasibility Study include:



Table of Contents

**Feasibility Study Highlights:**

- Production Rate: 8,500 tons ore per day
- Mine Life: 8.0 years
- Average Gold Recovery: 79% (70% of recoverable gold recovered 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)

\*With the subsequent sale of the 2.4% NSR royalty to Sandstorm Gold, Solitario has estimated the Operating Cash Cost and Total Cash Cost will increase by approximately \$37 per ounce of gold equivalent recovered.

From mid-2013 through February 2014, we engaged SRK to conduct a comprehensive update of the reserve/resource models, project engineering, capital and operating cost inputs and economic assumptions. Based on the results of this study, the Company believes that the original 2012 Feasibility Study remains materially valid under current economic parameters. As part of SRK's feasibility update work, a production rate of 10,000 tons per day ("tpd") was evaluated, versus the 8,500 tpd rate used in the 2012 Feasibility Study.

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. 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.

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 and commodity price assumptions.

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.

Table of Contents**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/tong/tonne	oz/tong/tonne	oz/tong/tonne	oz/tong/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. Permitting

In November 2012 MH-LLC filed the Centennial-Seligman Mining Project, White Pine County, Nevada, Mine Plan of Operations (“PoO”) with the United States Forest Service (“USFS”) – Humbolt-Toiyabe National Forest for operating a gold and silver mine at Mt. Hamilton. The PoO describes the activities and facilities that are proposed on USFS administered lands. The USFS is the primary regulatory agency responsible for managing the permitting process. The major components described in the PoO are mining activities from two open pits (the Centennial and Seligman deposits), a waste disposal area, ore stockpiles and crushing facilities, transfer of ore off-site to private property (owned by MH-LLC) for processing via underground conveyance, mine operations office and truck shop facilities, access and haul roads, power lines, water supply well and associated infrastructure including pipelines, and exploration drill roads. Total proposed surface disturbance on USFS lands is currently estimated at 406.21 acres. Based upon the development activities proposed within the PoO, a Draft Environmental Assessment Study that describes project impacts and proposed mitigation is expected to be completed in the Second Quarter of 2014 and available for public comment.

In addition to the proposed mining activities on USFS land, Solitario applied for a right of way from the Bureau of Land Management (BLM) for road access to planned infrastructure facilities constructed on private land owned by MH-LLC. The BLM granted the access road right of way in January 2014. Three significant permits have been filed

with Nevada Division of Environmental Protection. These include the Water Pollution Control Permit application for the mine, Nevada Reclamation Permit application for the private land processing facilities, and the Air Quality Permit for the overall project. Additionally, a Class III Survey Report and the Recovery (mitigation) Report for archeological and historical resources has been submitted to the USFS and the State Historical Preservation Office for review, comment and subsequent acceptance.

The Company's goal is to complete, and receive approval, for all major permits in the third quarter of 2014. However, estimating permit timelines are difficult, at best, and there can be no assurance of when, if ever, permitting activities will be completed and construction can begin.

### 13. Planned Exploration, Development and Permitting

Solitario's focus for 2014 is to complete environmental permitting for the project. The most important component of permitting will be approval of the Environmental Assessment by the USFS. Additional engineering studies will also be undertaken. No exploration activities are planned for 2014 at Mt. Hamilton. Construction of the project could begin as early as the fourth quarter of 2014, dependent upon permit approvals and securing project funding neither of which are currently in place. Solitario entered into a contract with Kappes Cassiday & Associates ("KCA") for certain engineering and design work to be performed during 2014 on the proposed adsorption, desorption and recovery ("ADR") plant at Mt. Hamilton. The KCA contract also provided an option to Solitario for a fixed price for the design construction and commissioning of the planned ADR plant.

## **Bongará Zinc Project (Peru)**

### 1. Property Description and Location

(Map of Bongará Property) Bongará.jpg

The Bongará project consists of 16 concessions comprising 12,600 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

## Table of Contents

Potential Development of Mining Properties, (the "Framework Agreement") pursuant to, and replacing, the previously signed Bongará Letter Agreement with Votorantim. 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.

Votorantim can earn up to a 70% shareholding interest in the joint operating company by funding 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 at any time by committing to place the project into production based upon a feasibility study and making certain minimum annual exploration and development expenditures. Through December 31, 2013, 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 through a loan facility from Votorantim to Solitario. Solitario will repay this 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. In June 2014 payments of approximately \$95,000 to the Peruvian government will be due in order to maintain the mineral rights of Minera Bongará. Votorantim is responsible for paying these costs as part of its work commitment. Peru also imposes a sliding scale net smelter return royalty (NSR) on all precious and base metal production 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.

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 approximately \$35,000 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 Votorantim enters into surface rights agreements with individual landowners or communities to provide access for exploration work. Generally, these are short-term agreements.

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, a heavily travelled national highway, 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 34-kilometer road to the deposit in October 2010 and has completed 26-kilometers of its length. 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 drilled 80 core holes from 1997-2000. Cominco withdrew from the joint venture in February 2001, and Solitario retained its 100% interest in the project. We maintained the claims from 2001 to 2006, until the Votorantim Letter Agreement was signed. Votorantim has conducted surface drilling on an annual basis from 2006 to present and underground tunneling and drilling from 2010 to present. All significant work on the property has been conducted by Cominco, and more recently by Votorantim, and is described below in Section 5, "Prior Exploration."

## Table of Contents

### 4. Geological Setting

The geology of the Bongará area is relatively simple consisting of a sequence of Jurassic and Triassic clastic and 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 mineral 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, underground tunneling, helicopter services and road building, all of which were performed by third-party contractors under the direction of Votorantim.

### 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-grained 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 50 meters in width (horizontal), up to 100 meters vertically, and

hundreds of meters along strike. The stratigraphically controlled mineralization is typically one to several meters in thickness, but often attains thicknesses of five 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:

<b>Breakout Zone Name</b>	<b>Drill Hole Number</b>	<b>Intercepts (meters)</b>	<b>Zinc %</b>	<b>Lead %</b>	<b>Zinc+Lead %</b>
Sam	GC-17	58.8	12.0	2.8	<b>14.8</b>
	FC-23	81.5	4.8	0.8	<b>5.6</b>
Karen	A-1	36.2	12.8	2.7	<b>15.5</b>
North Zone	V-21	92.0	5.5	1.7	<b>7.2</b>
South Zone	V-44	28.3	15.2	0.8	<b>16.0</b>
	V-169	51.6	7.1	0.7	<b>7.8</b>
San Jorge	V-297	56.6	22.69	1.15	<b>23.84</b>

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

From 1997 through 2001, Cominco drilled 80 surface core holes totaling 24,696 meters. From 2006-2013, Votorantim completed 309 surface core holes totaling 77,193 meters. From 2011-2013, Votorantim completed 95 underground core holes totaling 15,144 meters. The majority of Votorantim's surface drilling was infill drilling designed to demonstrate the continuity and geometry of mineralization, and to a lesser extent, test for extensions of known mineralization. The underground drilling was conducted from 10 drill stations at generally 40-meter centers (two drill stations at 20-meter centers) and entirely within



## Table of Contents

the San Jorge mineralized zone. Anywhere from three to fourteen holes were drilled from each of the eight drill stations. The underground drilling was tightly spaced and designed to allow for feasibility-level reserve estimation.

All drilling conducted is within a footprint measuring approximately 2.5 kilometers long in a north-south direction and a little over a kilometer in an east-west direction. The entire drill pattern is within what we have informally labeled the Florida Canyon district. Within this district, several zones of strong zinc mineralization have been defined. The two zones with the most amount of drilling are the San Jorge and the Karen-Milagros zones. Drilling indicates that, for the most part, the entire Florida Canyon district remains open to expansion.

## 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, either through its engineering staff, or contracted independent mining engineering firms has conducted prefeasibility-level studies to provide estimates of deposit size and grade, sizing of appropriate scale of operations, infrastructure design, and capital and operating cost estimates. Votorantim has engaged an independent metallurgical testing firm to evaluate metal recoveries and various processing options for mineralized material at Florida Canyon. Based upon additional test work conducted in 2013, the recommended processing method consists of a standard flotation recovery system that is capable of recovering both sulfide and oxide mineralization. Tests to date indicate zinc recoveries of 91.8% and lead recoveries of 81.9% in the San Jorge zone and zinc recoveries of 80.3% and lead recoveries of 71.7% in the Karen-Milagros zone. Recovery optimization testing will continue in 2014.

In 2013, Votorantim drilled 16 diamond core holes evaluating geotechnical and hydrological parameters of the mineralized areas for both engineering and environmental purposes. Votorantim also completed detailed geology-mineralization modeling to develop an internal resource estimate as part of their ongoing pre-feasibility efforts. Additionally, Votorantim completed scoping-level infrastructure design and costing analysis for the project. The pre-feasibility study is scheduled to be completed by the end of 2014.

#### 10. Reserves and Resources

There are no reported mineral reserves or resources.

#### 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, 2013, 590 meters of tunneling were completed.

#### 12. Planned Exploration and Development

Work in 2014 will focus on activities necessary to complete a prefeasibility study and then to transition to feasibility-level work for 2015. A total of 6,000 meters of both surface and underground drilling is scheduled this year. Another four-kilometers of road is also scheduled to be completed in 2014.

As part of the 2014 program, permitting for a new 700-meter long tunnel to provide underground access and drilling platforms in the Karen-Milagros zone of the Florida Canyon deposit is planned, as well as permitting an extension of the existing San Jorge tunnel a further 300 meters to the south to test for the continuation of high-grade mineralization. Detailed drilling from both these tunnels will provide feasibility-level reserve information. No date has been set to initiate construction of these new tunnels. Permitting and social development activities with surrounding communities will also continue throughout 2014.

Table of Contents

**Pedra Branca Platinum-Palladium Metals Project (Brazil)**

1. Property Description, Location and Physiography

The Pedra Branca platinum-palladium (“PGM”) project consisted of 57 exploration concessions totaling approximately 70,000 hectares in Ceará State, Brazil. The property is held 100% by Pedra Branca do Mineração S.A. (“PBM”), a Brazilian entity. We hold a 49% interest in PBM and Anglo Platinum Ltd. (“Anglo”) owns a 51% interest as of December 31, 2013. 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, 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.

Anglo earned a 51% interest in PBM by funding \$7.0 million as of 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, 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. In 2012 Anglo assumed management of all administrative and operational functions at PBM. Previously, Solitario was the project manager.

The mineral interests currently held by PBM are subject to the mining regulations of Brazil that provide for annual lease payments to the government and a royalty of 0.2% on the sales proceeds for precious metals, excluding gold, which is subject to a 3% royalty. PBM's land payments for 2014 are projected to be approximately \$155,000 including annual claim maintenance payments to the government and smaller surface rights payments to local landowners. Prior to mining on the claims PBM must reach an agreement with the surface rights owners of the affected land.

Access to the project is by paved road from the deep-water port city of Fortaleza 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 Capitao 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.

## 2. 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"). 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 seven 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.

## 3. Geological Setting and Mineralization

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. All of the rocks have been folded and faulted to differing degrees during dynamic metamorphism. 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 that have been variably altered to serpentine, amphibole and talc. These layers contain chromite and/or minor sulfides of iron, copper and/or nickel. In many cases the PGM mineralization is associated with the mineral chromite. In other areas the

## Table of Contents

PGM is more closely related with minor sulfide concentration. 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.

### 4. Prior Exploration and Drilling

Surface exploration conducted, initially by Rio Tinto and Glencore, and subsequently by Altoro, Rockwell, us and then PBM (Anglo-funded), has generally been focused to identify outcroppings of ultramafic rocks, detect anomalous concentrations of PGM in soils or rocks, and magnetic geophysical surveys to detect magnetic minerals often associated with PGM mineralization. Detailed geologic mapping has been conducted over much of the known ultramafic rock outcroppings to determine the source of anomalous PGM values and to plan the specific locations for drill testing.

Through the end of 2013, a total of 354 holes totaling 26,391 meters of core drilling were completed on the project. 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. Additional drill holes have been completed at Santa Amaro, at Trapia I, at Trapia West and on the Cedro I through Cedro IV prospects. Drill spacing on these latter 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. We believe that sampling and sample security procedures implemented by us or by others that generated project data, meets or exceeds industry and regulatory quality control standards.

In 2013, Anglo conducted a major helicopter-borne geophysics survey over a large area measuring 25 by 25 kilometers. The flight lines were spaced at 50 meter intervals traversing areas potentially underlain by ultramafic rocks. Ultramafic rocks are highly magnetic and detectable by geophysics. Magnetic ultramafic rocks are also the host to all PGM mineralization identified on the property.

### 5. Mineral Reserve Estimations and Mining Operations

There are no reported reserves and no current mining operations associated with this project.

## 6. Planned Exploration

Anglo will plan and manage the 2014 work program. Anglo has indicated the program will consist of drill testing a number of magnetic anomalies that were generated from the helicopter-borne geophysics program conducted in 2013. Anglo has not yet indicated how much drilling will be conducted on the project for 2014.

### **Pachuca Norte Silver-Gold Property (Mexico)**

#### 1. Property Description, Location and Physiography

As of year-end 2013, the Pachuca Norte property (formerly referred to as “Pachuca-Real”) consisted of approximately 19,048 hectares of mineral rights encompassing about 10% of the historic Pachuca Norte 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 signed in May 2006. The Agreement, as subsequently amended, requires Solitario 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 any time without any further costs. Concession fees due to the government of Mexico are expected to total approximately \$211,000 in 2014 and option payments to private individuals are expected to total approximately \$40,000 in 2014 to keep properties in good standing.

In March 2013 we signed a binding Letter of Intent (“LOI”) with Minera Hochschild Mexico S.A. de C.V.

Table of Contents

(“Hochschild”), a wholly owned subsidiary of Hochschild Mining plc. In June 2013, a definitive joint venture agreement was signed that provides for Hochschild to earn a 51% interest in the property by funding the following exploration commitments from the signing of a definitive agreement:

Due Dates	Exploration Expenditure Amount	Expenditures (US\$)
12 months	\$1,500,000	\$ 1,500,000
18 months	\$500,000	\$2,000,000
36 months	\$3,000,000	\$ 5,000,000
60 months	\$5,000,000	\$10,000,000
Total to earn 51%		\$10,000,000

Hochschild will have the option to earn an additional 19% (total interest 70%) by funding all project expenditures necessary to complete a positive feasibility study. Hochschild will manage the operations and has the right to terminate the joint venture at any time.

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.

2. 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.

Solitario conducted surface exploration work during the first half of 2006 identifying a number of silver-gold vein targets. 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. Both Newmont and Buenaventura conducted significant surface exploration work and core drilling.

### 3. Geological Setting and Mineralization

The geology of the Pachuca Norte project area is dominated by a thick sequence of Tertiary-aged volcanic and volcanic-related rock formations of dominantly andesitic composition that is cut by a series of younger quartz porphyry and dacite porphyry dikes. The andesitic volcanic rocks are the dominant host-rock to mineralization, are gently dipping on a regional scale, but locally display moderate dips of up to 40 degrees. Basement rocks within the project area consist of Cretaceous-aged sedimentary rocks. Overlying the andesitic volcanic rocks is a sequence of volcanic and volcanic-related rocks that are primarily dacitic composition. These rocks are generally post-mineralization in age.

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 and typically have a west-northwest to east-southeast trend, except in the Real del Monte area that has a north-south trend. 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.



Table of Contents

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 less than two-meters thick. Some vein systems, however, display multiple parallel vein structures with over 10 separate vein intercepts.

4. Prior Exploration and Drilling

The historic 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. 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. Buenaventura collected approximately 1,700 geochemical samples from the surface and existing underground workings.

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. Buenaventura completed a 38-hole core drilling program totaling 13,489 meters 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. We have reviewed both Newmont's and Buenaventura's sampling procedures and believe they meet or exceed industry and regulatory quality control standards. The 10 best drill hole intercepts are presented in the table below.

<b>Prospect Name</b>	<b>Drill Hole</b>	<b>From-To (m)</b>	<b>Width (m)*</b>	<b>Gold g/t</b>	<b>Silver g/t</b>
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
Sumbimblia	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.

In 2013, Hochschild collected and assayed for precious metals approximately 700 surface samples to better define drill targets. Hochschild initiated a core drilling program in November 2013.

#### 5. Mineral Reserve Estimations and Mining Operations

There are no reported reserves and no current mining operations associated with this project.

#### 6. Planned Exploration

Hochschild is planning to complete approximately 20 core holes by mid-2014 in the North District area. Most drill holes are located adjacent to previously drilled holes that displayed strong mineralization. However, several of the holes will be targeted on veins that have never been drill tested. Depending upon drilling results, Hochschild may elect to continue the drilling program into the second half of 2014.

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

In April 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

## Table of Contents

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 subject to the terms of the shareholders agreement will be held by Minera Chambara. In November 2013, Minera Chambara dropped selected concessions, resulting in Minera Chambara now holding 82 concessions totaling 71,000 hectares of valid concessions. As of December 31, 2013, Minera Chambara's only assets are the properties and Minera Chambara has no debt. Votorantim may increase its shareholding interest to 49% by completing future spending of \$6,250,000, and may further 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 2013 and planned for 2014 is social work in preparation for any future exploration programs. In June 2014 payments of approximately \$353,000 to the Peruvian government will be due by Votorantim in order to maintain the mineral rights. Votorantim is responsible for making these payments.

## **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"). 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, 2013 we retain 100%-interest in the La Promesa project which is the only remaining property which falls within the Strategic Alliance area and is subject to the provisions of the Newmont Alliance as discussed above. In 2013, we recorded a mineral property write-down of \$3,000 for the Cerro Azul property and in 2012 we recorded a mineral property write down of \$5,000 for the Excelsior property, both of which were previously subject to the Newmont Alliance.

## La Promesa

The La Promesa property, acquired in 2008, consists of three concessions totaling 2,600 hectares. Our only holding costs for the mineral rights are annual payments of three dollars or nine dollars per hectare, depending on the age of the claims, to the Peruvian government. Total holding costs in 2014 will be approximately \$17,000. 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 2014 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. 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:

<b>Chip Channel #</b>	<b>True Width</b>	<b>Silver gpt</b>	<b>% Zinc</b>	<b>% Lead</b>	<b>Indium gpt</b>
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 Contents

**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. We held 100% interest in 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 retained 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 affiliates of Newmont Peru, Ltd., ("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 price and copper price, as well as any government royalty burden imposed by Peru on the project ores. Assuming the current maximum royalty due the government 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%. No resources or reserves have been reported by Newmont, nor has any mining been conducted on the property.

**Mercurio (Surubim) 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. In November 2010 Solitario signed a definitive agreement with Regent Holdings, Ltd., which became a wholly-owned subsidiary of Brazilian Resources Inc. (both companies collectively, "BRI") in November 2013, whereby Solitario agreed to transfer its rights to the property to BRI, providing that BRI complete the following: (i) take over Solitario's underlying property obligations; (ii) pay Solitario \$900,000 over a four year period; and (iii) invest a minimum of \$900,000 in exploration expenditures over the same period. BRI made its initial payment of \$50,000 in October 2011. In December 2012, we amended the agreement with BRI whereby the property payment schedule provides that BRI paid Solitario \$100,000 on December 14, 2012, and made an additional payment of \$100,000 in December 2013, and a final payment of \$650,000 in October 2014, with the final payment pending the government issuing title to one concession at the property. Upon the completion of all payments, BRI will own Mercurio and Solitario will retain a 1.5% NSR royalty on the first 2 million ounces of gold production and a 2.0% NSR royalty on all ounces of gold produced over 2 million ounces. BRI may terminate the agreement at any time. BRI is responsible for all payments to keep the Mercurio claims in good standing

during the period of the agreement. With exception of small scale artisanal mining for gold by gravity methods that has been conducted on the property for the past 15 years, there are no mining operations on the property. On January 28, 2013, BRI issued a news release that estimated resources on the property. BRI refers to the project as the Surubim project.

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

#### **Norcan Copper Property (Mexico)**

In June 2010 we applied for mineral rights to the Norcan Copper property located north of the Cananea mine, a major copper producer, in the State of Sonora, Mexico. We received title to two concessions totaling 35,991 hectares in 2012. Geochemical and biogeochemical surveys in this area exhibit locally anomalous copper values. Most of the area is covered by recent gravel deposits, but in several areas moderately to strongly altered intrusive rocks have been mapped.

On March 2, 2012, we signed a joint venture agreement with MMG Mexico Exploration, S.A. de C.V. ("MMG"), a wholly owned subsidiary of MMG Mining Ltd. MMG conducted core drilling on the property in the first quarter of 2013 and subsequently elected to terminate their option to earn an interest in the concessions. We are currently evaluating the results of MMG's work to determine what additional work, if any, we may elect to conduct. We may also seek another joint venture partner.

#### **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 may seek a joint venture partner to more aggressively test the property.

Table of Contents

**Canta Colorado Gold Property (Peru)**

In 2012 we applied for two exploration concessions totaling 2,000 hectares. Reconnaissance surface exploration indicates this property has the potential to host an epithermal gold deposit in Tertiary volcanic rocks. No work is planned on this property for 2014

**Discontinued Projects**

During 2013 we abandoned the Cerro Azul and Atico projects in Peru and recorded a mineral property abandonment write-down of \$8,000 and we abandoned the Jaripo project in Mexico and recorded a mineral property abandonment write-down of \$5,000. During 2012 we decided to discontinue all operations in Bolivia and abandoned the Triunfo and Espanola properties and recorded a mineral property abandonment write down of \$20,000 and \$5,000, respectively. In Peru, we abandoned the Excelsior property and recoded a mineral property abandonment write down of \$6,000.

**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.



Table of Contents

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

“**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, ( $MgFeSiO_4$ ), 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, 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.

Table of Contents

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

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

“**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

30

Table of Contents**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 stock on NYSE MKT. Trading on NYSE MKT began on Friday, August 11, 2006, under the symbol XPL. Since 2008 trading volume on NYSE MKT has exceeded the trading volume on the TSX.

The following table sets forth the high and low sales prices on NYSE MKT for our common stock for the quarterly periods from January 1, 2012 to December 31, 2013.

Period	All prices are in USD\$			
	2013		2012	
	High	Low	High	Low
First quarter	\$1.77	\$1.46	\$1.85	\$1.33
Second quarter	1.60	0.88	1.42	1.02
Third quarter	1.05	0.80	1.90	1.12
Fourth quarter	0.99	0.78	1.89	1.48

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, 2012 to December 31, 2013.

Period	All prices are in CDN\$			
	2013		2012	
	High	Low	High	Low
First quarter	\$1.77	\$1.41	\$1.85	\$1.33
Second quarter	1.60	0.95	1.40	1.04
Third quarter	1.09	0.87	1.78	1.16
Fourth quarter	1.05	0.81	1.83	1.41

Shares authorized for issuance under equity compensation plans

On June 18, 2013, Solitario's shareholders approved the 2013 Solitario Exploration & Royalty Corp. Omnibus Stock and Incentive Plan (the "2013 Plan"). Under the terms of the 2013 Plan, the Board of Directors may grant awards of stock options, stock appreciation rights, restricted stock, and restricted stock units representing up to a maximum of 1,750,000 shares pursuant to the terms of the 2013 Plan to Directors, officers, consultants and employees. As of December 31, 2013, we have granted stock options for 120,000 shares that remain unexercised at \$1.14 per share and options for 1,280,000 shares that remain unexercised at \$0.94 per share.

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, 2013, we have granted options for 160,000 shares that remain unexercised at Cdn\$1.49 per share, 264,000 shares that remain unexercised at Cdn\$1.55 per share and 1,995,000 shares that remain unexercised at Cdn\$2.40.

Subsequent to December 31, 2012, on January 28, 2014, holders of option awards from the 2006 Plan voluntarily cancelled awards for 1,797,000 options with an option price of Cdn\$2.40 with an expiration date of May 5, 2015 to allow Solitario to have additional financial flexibility. No consideration was given or received by the holders of the options to cancel the awards.

Table of Contents

The following table does not reflect the cancellation of options in January 2014:

Equity Compensation Plan Information as of December 31, 2013:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights (2006 Plan -Cdn\$)  (2013 Plan – US\$)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
<b>2006 Plan</b>			
Equity compensation plans approved by security holders	2,419,000	\$2.25	62,150
Equity compensation plans not approved by security holders	-	N/A	-
Subtotal	<b>2,419,000</b>	<b>\$2.25</b>	<b>62,150</b>
2006 Plan			
<b>2013 Plan</b>			
Equity compensation plans approved by security holders	1,400,000	\$0.96	350,000
Equity compensation plans not approved by security holders	-	N/A	-
Subtotal	<b>1,400,000</b>	<b>0.96</b>	<b>350,000</b>
2013 Plan			
Total all plans	<b>3,819,000</b>		<b>412,150</b>

Holders of our common stock

As of February 28, 2014, we have approximately 2,916 holders of our common stock.

Dividend Policy

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

**Item 6. Selected Financial Data**

The following table summarizes the consolidated statements of operations and balance sheet data for our business since January 1, 2009. This data has been derived from the audited consolidated statements of operations for our business for each of the five years ended December 31, 2013 and the audited consolidated balance sheets of our business as of December 31, 2013, 2012, 2011, 2010 and 2009. 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)	2013	2012	2011	2010	2009
Total current assets	\$3,784	\$7,936	\$5,281	\$6,113	\$6,742
Total assets	\$19,500	\$23,483	\$22,054	\$29,608	\$24,641
Working capital (1)	\$2,531	\$4,245	\$345	\$134	\$4,318
Long-term debt	\$3,144	\$2,437	\$2,075	\$2,604	\$—
Shareholders' equity	\$7,963	\$9,217	\$13,873	\$13,776	\$15,114

Statement of operations data:	Year ended December 31,				
(in thousands, except per share amounts)	2013	2012	2011	2010	2009
Property and joint venture revenue	\$300	\$300	\$242	\$200	\$200
Net loss attributable to Solitario shareholders	\$(2,052)	\$(3,297)	\$(3,377)	\$(4,066)	\$(1,786)
Per share information:					
Basic and diluted					
Net loss attributable to Solitario shareholders	\$(0.06 )	\$(0.10 )	\$(0.10 )	\$(0.14 )	\$(0.06 )

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

Table of Contents

**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 a development stage company (prior to February 22, 2012 we were an exploration stage company) with a focus on developing the Mt. Hamilton gold project, 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 development financing capital, none of which is currently in place. The Mt. Hamilton project is discussed below under "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 exploration 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 ("Crown"). 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 2013 and 2012 and we recorded \$100,000 of delay rental payments each year during 2013 and 2012 related to our Mercurio project. During June 2012, we sold a royalty interest in our Mt. Hamilton project to Sandstorm Gold Ltd. ("Sandstorm") for \$10,000,000 of which \$6,000,000 was paid in June 2012 and \$4,000,000 was paid in January 2013. 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 the sale of properties, if any, would also occur on an infrequent basis. At December 31, 2013, in addition to our Mt. Hamilton project, we had six exploration properties in Peru and Mexico, and one royalty property in each of Peru and Brazil. We are conducting limited exploration activities in those countries either on our own or through joint ventures operated by our partners.

In addition to our work at Mt. Hamilton, we have expertise in identifying mineral properties with promising mineral potential, acquiring these exploration 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 exploration 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 discussed above; (iii) the Sandstorm royalty sale during 2012; (iv) the sale of our investment in Kinross common stock; (v) borrowing against our RMB Facility Agreement; (vi) short-term margin borrowing secured by our investment in Kinross common stock; and (vii) 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 ventures; however, we do not have any current plans to further joint

Table of Contents

venture Mt. Hamilton. In 2012 and 2013, we significantly reduced our level of expenditures in our foreign exploration and administrative activities to just the care and maintenance of existing 100%-owned properties. 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.)**

<b>Reserve Category</b>	<b>Tons (millions)</b>	<b>Gold Grade</b>		<b>Silver Grade*</b>		<b>Contained Gold (koz)**</b>	<b>Contained Silver (koz)**</b>
		<b>oz/tong</b>	<b>/tonne</b>	<b>oz/tong</b>	<b>/tonne</b>		
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

*Augusta long-term debt*

On November 22, 2013 we entered into a letter agreement, (the “Letter Agreement”) between us, Ely Gold and Minerals, Inc. (“Ely”) and DHI Minerals (US) Ltd. (“DHI”). Under the Letter Agreement, Solitario subscribed for \$1,300,000 of shares of common stock of Ely at a price of Cdn\$0.10 and upon approval by Ely and other regulatory approvals we received 13,571,354 shares of Ely common stock. Ely used the \$1,300,000 from the subscription to pay Augusta Resource Corporation (“Augusta”) \$1,300,000 pursuant to the terms of an agreement between Ely and Augusta dated November 20, 2013. Ely’s receipt of the \$1,300,000 and payment of those funds to Augusta fully satisfied

Solitario's prior obligations to subscribe for an aggregate of US\$1,750,000 of shares of Ely common stock (US\$750,000 on or before May 1, 2014 and US\$1,000,000 on or before May 1, 2015) and paid off Solitario's Augusta debt which was deemed fully paid upon receipt by Augusta of the \$1,300,000 from Ely. Solitario recorded a gain on early retirement of debt of \$313,000 during 2013 as a result of the payoff of the Augusta long-term debt.

#### *Investment in Mt. Hamilton*

On November 22, 2013, Solitario and DHI entered into the second amendment (the "Second Amendment") to the Limited Liability Company Operating Agreement of Mt. Hamilton LLC, as amended (the "MH Agreement"). Pursuant to the terms of the Second Amendment, the parties agreed to modify Solitario's payment obligation of US\$250,000 and 50,000 shares of Solitario common stock due to DHI on August 21, 2014 to a payment of 327,000 shares of Solitario common which was paid on December 20, 2013.

#### *Investment in Kinross*

We have a significant investment in Kinross at December 31, 2013, which consists of 600,000 shares of Kinross common stock. During 2013 and 2012, we sold 70,000 and 180,000 shares, respectively, of Kinross common stock for proceeds of \$358,000 and \$1,591,000. As of February 28, 2013, we own 530,000 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. As of December 31, 2013 we have sold two covered options covering 200,000 shares of Kinross stock whereby the holder could purchase 100,000 shares at \$7.00 per share and purchase 100,000 shares at \$8.00 per share, both of which expired unexercised in February 2014. The Kinross call option is discussed below under Note 7, "Derivative instruments" in Item 8, "Financial Statements and Supplementary Data." As of December 31, 2013, we have borrowed \$802,000 in a margin loan against our holdings of Kinross shares. The short-term margin loan is discussed below under Note 4 "Short-term debt" to the consolidated financial statements in Item 8, "Financial Statements and Supplementary Data."

## Table of Contents

### *Investment in Ely*

During 2013 we sold 6,303,563 shares of Ely common stock for proceeds of \$481,000. As part of the Letter Agreement, discussed above, we received 13,571,354 shares of Ely common stock and as of December 31, 2013 we own 15,732,274 shares of Ely common stock, representing approximately 19.5% of the outstanding shares of Ely. We have classified our holdings of Ely common stock as marketable equity shares available for sale and gains and losses on our holdings of Ely are recorded in other comprehensive income in the shareholders' equity section of our Consolidated Balance Sheet.

### *Mineral property*

Solitario began capitalizing its development costs incurred at its Mt. Hamilton project subsequent to the completion of the Feasibility Study. During 2013, Solitario capitalized \$2,784,000 of mineral property to Mt. Hamilton, including \$1,884,000 of development costs, \$174,000 of payments on mineral properties and \$726,000 of interest. In addition, Solitario capitalized \$11,000 of net bonding costs and \$300,000 of advance royalty payments to an underlying leaseholder as other assets. See Note 2, "Mineral Properties," in Item 8, "Financial Statements and Supplementary Data" below for further discussion of the Mt. Hamilton project.

### *Cancellation of options*

On January 28, 2014, holders of option awards from the 2006 Stock Option Incentive Plan (the "2006 Plan") voluntarily cancelled awards for 1,797,000 options with an option price of Cdn\$2.40 with an expiration date of May 5, 2015 to allow us to have additional financial flexibility. No consideration was given or received by the holders of the options to cancel the awards.

### *Private placement*

On February 28, 2014 we closed a private placement of 1,600,000 shares of Solitario common stock priced at \$1.05 per share for total proceeds of \$1,680,000 (the 2014 Offering). We retained a placement agent in connection with the portion of the Offering conducted in Canada and paid the placement agent a fee of \$50,000 for the sale effected to the single Canadian investor that participated in the 2014 Offering.

## **(c). Results of Operations**

Comparison of the year ended December 31, 2013 to the year ended December 31, 2012

We had a net loss of \$2,052,000 or \$0.06 per basic and diluted share for the year ended December 31, 2013 compared to a net loss of \$3,297,000 or \$0.10 per basic and diluted share for the year ended December 31, 2012. As explained in more detail below, the primary reasons for the decrease in net loss during 2013 compared to the net loss during 2012 were (i) cessation of exploration activities in February 2012 at Mt. Hamilton after the completion of the Feasibility Study, resulting in the capitalization of development expenditures, compared to exploration costs of \$301,000 on our Mt. Hamilton project during 2012; (ii) a decrease in other exploration expense to \$797,000 during 2013 compared to \$1,685,000 during 2012; (iii) recording of a gain on early termination of debt on the payoff of our Augusta debt of \$313,000 during 2013; (iv) the recording of a gain on our warrant liability of \$998,000 during 2013 from the decrease in the value of the RMB warrants compared to a loss on warrant liability of \$488,000 during 2012; (v) a decrease in our interest expense and dividend income, net, to a credit of \$57,000 compared to interest expense, net of \$318,000 during 2012 as a result of capitalizing interest expense to mineral property related to the development of Mt. Hamilton during 2013; and (vi) a decrease in our non-stock option general and administrative expense to \$1,824,000 during 2013 compared to \$1,948,000 during 2012. Partially offsetting these decreases in net loss were (i) a reduction in our gain on the sale of marketable equity securities to \$142,000 during 2013 compared to gain on sale of marketable equity securities of \$1,528,000 during 2012.; (ii) recording a reduction in the net income at our MH-LLC subsidiary attributable to non-controlling interest of \$47,000 during 2013 for the net income attributable to the noncontrolling interest, compared to reduction in the net loss, during 2012 of \$301,000 for the net loss attributable to noncontrolling interest, (iii) an increase in the net loss of our equity method investment to \$1,012,000 during 2013 compared to \$488,000 during 2012 and (iv) a decrease in income tax benefit to \$176,000 during 2013 compared to an income tax benefit of \$648,000 during 2012. Each of these items is discussed in greater detail below.

Our primary activities during 2013 and 2012 have been the (i) engineering and permitting activities to advance the Mt. Hamilton property toward future production, and to a lesser extent the monitoring of the exploration and development activities of our joint venture partners. During 2013 we continued our development efforts related to our Mt. Hamilton project

Table of Contents

capitalizing \$2,784,000 in mineral property costs including \$1,884,000 in direct development costs, property payments of \$174,000 and capitalization of interest costs of \$726,000. In addition we recorded an increase in other assets during 2013 of \$311,000 including bonding costs of \$11,000 and \$300,000 of advance royalty payment. During 2012 we capitalized \$3,454,000 of mineral property, including \$3,129,000 in direct development costs and \$325,000 of property payments. In addition we capitalized \$35,000 of bonding costs and \$300,000 of advanced royalty payment to other assets. The expenditures were greater during 2012 as we were preparing our Feasibility Study and subsequently completing permitting and engineering work related to the development of the Mt. Hamilton project and filing of our Plan of Operations with the United States Forest Service as part of the permitting process at Mt. Hamilton. We decreased our exploration expenditures at our South American and Mexico properties to \$797,000 during 2013 compared to \$1,685,000 in 2012 as a result of a shift in our focus to the Mt. Hamilton project. We did no drilling on any of our exploration projects in South America or Mexico during 2013 compared to 2012 when we completed a drilling campaign at our Jaripo project in Mexico.

Our 2014 exploration and development expenditure budget is approximately \$1,130,000, which includes approximately \$956,000 for development costs related to Mt. Hamilton. In addition we anticipate we will spend approximately \$765,000 for payments on leases to landowners, advance minimum royalty payments and payments to DHI pursuant to the MH Agreement. The primary factor in the reduction in Mt. Hamilton exploration and development expenditures in 2014 compared to 2013 relates to the planned completion of our primary permitting activities during 2014, with reductions in engineering design work and project management pending obtaining all necessary permits and obtaining financing to begin construction of the project. The future construction of Mt. Hamilton will be dependent on a number of factors including receiving permits and obtaining financing for construction, none of which is currently in place. We cannot predict with certainty that we will be successful in achieving any of these goals. During 2014 we plan to significantly curtail our early-stage planned exploration activities on our other properties and our reconnaissance exploration activities as we focus on the development of Mt. Hamilton. 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	2013	2012
Cerro Azul	\$71	\$99
Pachuca	14	32
La Promesa	8	19
Norcan	5	2
Mercurio	4	9
Canta Colorado	2	17
Jaripo	1	247
Mt. Hamilton	—	301
Espanola	—	22
Atico	—	4
Triunfo	—	1
Pedra Branca, net	—	(30 )
Reconnaissance	692	1,263

Total exploration expense \$797 \$1,986

During 2013, as a result of the payoff of the Augusta debt, discussed above under recent developments, we recorded a gain on early termination of debt for the difference between (i) \$1,613,000, the discounted fair value of the Augusta debt on the date of payoff and (ii) \$1,300,000 used by Ely to fully pay the Augusta debt.

We recorded an increase in our consolidated loss of \$47,000 during 2013 for DHI's noncontrolling interest in the net income, as a result of the gain on retirement of debt of \$313,000, at MH-LLC. We recorded a credit (reduction of expense) of \$301,000, during 2012 for DHI's noncontrolling interest in the losses of MH-LLC. The change from a loss in 2012 to income in 2013 is related to the capitalization of direct development costs of \$1,884,000 and the capitalization of \$726,000 of interest during 2013 coupled with the gain on early retirement of debt, discussed above. During 2012 we recorded management fees of \$30,000, as a credit to exploration expense prior to Anglo Platinum, Ltd., the 51% owner of our PBM subsidiary taking over as manager of PBM.

We believe a discussion of our general and administrative costs should be viewed without the non-cash stock option compensation expense which is discussed below. Excluding these costs, general and administrative costs were \$1,824,000 during 2013 compared to \$1,948,000 during 2012. We incurred salary and benefits expense of \$880,000 during 2013 compared to \$1,008,000 during 2012, which decreased as a result of the full-year capitalization to Mt. Hamilton property of

Table of Contents

certain salary costs during 2013 compared to 2012. In addition, travel and investor relation costs were reduced to \$394,000 during 2013 compared to \$463,000 during 2012. These decreases were mitigated by an increase in legal, accounting and other costs to \$284,000 during 2013 compared to \$224,000 during 2012 partially as a result of certain costs incurred with regard to our investment in Ely and our early termination of the Augusta debt during 2013. We anticipate general and administrative costs for 2014 will be slightly lower than the costs incurred during 2013 as we expect less activity with regard to Mt. Hamilton and our South American operations and we have targeted reductions in salary costs during 2014. We have forecast 2014 general and administrative costs to be approximately \$1,522,000, excluding non-cash stock option compensation expense.

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, 2013 we recorded \$420,000 of non-cash stock option expense for the amortization of grant date fair value with a credit to additional paid-in-capital compared to \$732,000 of non-cash stock option compensation expense during 2012. See Note 10, "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 2013 we recorded a gain on derivative instruments of \$90,000 compared to a loss of \$30,000 during 2012. The gain was primarily related to the sale of two Kinross calls during 2013 for \$90,000 which expired unexercised in February 2014. We recorded a loss during 2012 primarily related to the remaining value attributed to Ely warrants we received in 2010 in connection with the formation of MH-LLC, which expired during 2012. 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 anticipate selling a material number of covered Kinross call options during 2014. See Note 7, "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.

We had \$56,000 of depreciation and amortization during 2013, of which we capitalized \$30,000 to mineral property in connection with the development of Mt. Hamilton, compared to \$61,000 in 2012. The decrease is primarily as a result of certain equipment being fully amortized during 2013, which was partially offset by a small increase in furniture and fixtures at Mt. Hamilton. We amortize these assets over a three-year period. We anticipate our 2014 depreciation and amortization costs will be similar to our 2013 amount.

During 2013 we incurred \$726,000 of interest costs, including (i) \$165,000 paid in cash on the RMB Loan, (ii) \$22,000 paid on our UBS margin loans, (iii) \$195,000 for the amortization of our deferred offering costs on the RMB Loan and \$217,000 of interest costs associated with the amortization of the discount associated with the RMB warrants issued in connection with the RMB Loan and (iv) \$127,000 of interest costs during 2013 related to the accretion of interest on the Augusta debt prior to the payoff of the loan in November 2013. As discussed above, we capitalized all of our interest costs during 2013 to mineral property associated with the development of the Mt.



Hamilton project. See Note 2, "Mineral properties" and Note 5 "Long-term debt" to our consolidated financial statements in Item 8, "Financial Statements and Supplementary Data." During 2012 we recorded interest expense, net of interest and dividend income, of \$318,000 which included (i) \$70,000 of interest expense related to the amortization of deferred offering costs on the RMB Loan; (ii) \$77,000 of interest expense related to the discount recorded on the warrants issued in connection with the RMB Loan; (iii) \$30,000 interest paid in cash on the RMB Loan; \$58,000 of interest paid in cash on our outstanding margin loans and \$184,000 of interest expense related to the accretion of discount on our Augusta long-term debt. Both the deferred offering costs and the warrant discount are being amortized to interest expense on a straight-line basis over the expected life of the RMB Loan. We recorded dividend income of \$57,000 during 2013 compared to \$98,000 during 2012, primarily related to dividends on our Kinross stock. Interest income during 2013 and 2012 was not significant as our interest bearing accounts were kept to a minimum to reduce borrowing costs. We anticipate our interest cost will decrease in 2014 as a result of the payoff of the Augusta debt, mitigated by an increase in the outstanding balance on the RMB Loan anticipated during 2014 compared to 2013. We also anticipate dividend income will decrease during 2014 as we sell our Kinross common stock to fund our operations. See Note 4, "Short-term debt" and Note 5, "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 2013 we sold 70,000 shares of Kinross stock for proceeds of \$358,000 and recorded a gain on sale of Kinross of \$308,000 compared to 2012 when we sold 180,000 shares of Kinross stock for proceeds of \$1,591,000 and recorded a gain on sale of \$1,464,000. In addition during 2013 we sold 6,303,563 shares of Ely for gross proceeds of \$481,000 and recorded a loss on sale of marketable equity securities of \$166,000 compared to 2012 when we sold 570,000 shares of TNR for proceeds of \$73,000 and recorded a gain on sale of \$64,000. We anticipate we will continue to liquidate our holdings of Kinross stock to

## Table of Contents

fund our exploration activities and our 2014 budget anticipates the sale of 360,000 shares of Kinross stock for assumed proceeds of \$1,800,000 during 2014. Although we have not budgeted any sales of shares of Ely for 2014, we may also sell some shares of Ely to meet our cash and liquidity needs. See Liquidity and Capital resources below. Any proceeds we may receive from sales of marketable equity securities are significantly dependent on the quoted market price of the securities sold on the date of sale and may be at prices significantly below our projected price.

During 2013 we recorded an income tax benefit of \$176,000 compared to an income tax benefit of \$648,000 during 2012. The change in our tax benefit during 2013 is primarily related to the following factors, discussed above, which reduced our expected 2013 tax benefit compared to 2012: (a) the decrease in our taxable non-stock option general and administrative expenses; (b) the gain on warrant liability compared to the loss on warrant liability in 2012; (c) the decrease in direct development and exploration expenses at our Mt. Hamilton project, and (d) the decrease in our United States exploration costs. The following factors, discussed above, partially mitigated the decrease in our deferred tax expense in 2013 compared to 2012: (a) a reduction in the gain on sale of marketable equity securities; (b) our reduction in US taxable-deductible capitalized costs at Mt. Hamilton and (c) the decrease in interest expense incurred during 2013 compared with 2012, discussed above. See Note 6, "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, 2013. We provide a valuation allowance for our foreign net operating losses, which are primarily related to our exploration activities in Peru, Mexico 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 2013 we recorded \$13,000 of mineral property impairments related to our Cerro Azul and Atico properties in Peru and our Jaripo property in Mexico compared to \$31,000 of mineral property impairments related to our Triunfo and Espanola properties in Bolivia and our Excelsior project in Peru during 2012.

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

#### Short-term debt

As of December 31, 2013, we have borrowed \$802,000 from UBS Bank, USA ("UBS Bank") pursuant to a secured credit line agreement between us and UBS Bank including \$2,000 of accrued interest. As of February 28, 2014 we have borrowed an additional \$100,000, net of interest, on the UBS loan and have an outstanding balance of 906,000. 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 0.17% as of December 31, 2013. 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, 2013 and February 28, 2014, the equity balance in our account at UBS was approximately 69% and 67%, respectively. Solitario incurred interest costs related to the UBS credit line of \$22,000 and \$36,000, respectively, for the years ended December 31, 2013 and 2012.

We also had 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, 2013, we have repaid all short-term margin loans previously borrowed from RBC and have closed our RBC brokerage accounts and no longer have short term borrowing capacity at RBC. We had no short-term borrowing from RBC during 2013. We recorded \$22,000 of interest expense related to the RBC short-term margin loans for the year ended December 31, 2012.

We are using 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 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 2014, 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 2014 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 2014. We anticipate proceeds from the sale of shares of Kinross common stock less any repayment of outstanding short-term margin loans, and proceeds from borrowing from the RMB Loan will provide adequate funds for our operations through the end of 2014. Our use of short-term borrowing is not considered

Table of Contents

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 during 2014. Our maximum amount of short-term borrowing was \$1,710,000, including accrued interest, during the year ended December 31, 2013. Our average short-term borrowing during the year ended December 31, 2013 was \$863,000.

Long-term debt

*RMB Facility Agreement*

On August 10, 2012, we entered into a Facility Agreement with RMBAH and RMBR. Under the Facility Agreement, we may borrow up to \$5,000,000 from RMBAH (with any amounts outstanding collectively being the "RMB Loan") at any time during the 24 month period commencing on August 21, 2012, the date of initial funding (the "Availability Period"), after which time any undrawn portion of the \$5,000,000 commitment will be cancelled and will no longer be available for drawdown. We borrowed \$1,500,000 on August 21, 2012 from which we received net proceeds of \$912,000 after deducting deferred offering costs of \$588,000, which included an arrangement fee of \$250,000, legal costs of \$328,000 and other costs of \$10,000. The deferred offering costs are recorded in other long-term assets and are being amortized on a straight-line basis to interest expense over 36 months, the term of the Facility Agreement. We have recorded deferred offering costs of \$322,000 and \$518,000, respectively as of December 31, 2013 and 2012 in other assets. We borrowed an additional \$2,000,000 during 2013 and at December 31, 2013, the balance of the RMB Loan is \$3,500,000.

The RMB Loan matures on the earlier to occur of (i) 36 months from the date of initial funding or (ii) the date on which financing is made available to MH-LLC for purposes of placing the Mt. Hamilton project into commercial production. The RMB Loan amounts bear interest at the 90-day LIBOR rate plus 5%, payable in arrears on the last day of each quarterly interest period. All proceeds from the RMB Loan are deposited in a proceeds account (the "Proceeds Account") and are recorded as restricted cash until disbursed in accordance with the Facility Agreement. Pursuant to the Facility Agreement, funds may only be disbursed from the Proceeds Account for approved expenditures, including (i) exploration and development activities at the Mt. Hamilton project, ongoing earn-in payments at MH-LLC, general corporate purposes as set forth in a project and corporate budget approved by RMBAH and (iv) any other purpose approved by RMBAH. As of December 31, 2013 there was no cash balance in the Proceeds Account. The RMB Loan may be repaid at any time without penalty. Any amounts repaid may not be redrawn under the Facility Agreement. The RMB Loan is secured by a lien on our 80% interest in MH-LLC as well as a general security interest in our remaining assets.

The following table details the interest costs associated with the RMB Loan:

(in thousands)

	Year ended	
	December	
	31,	
	2013	2012
Interest expense paid in cash	\$165	\$30
Amortization of the RMB Warrants discount	217	77
Amortization of RMB deferred offering costs	195	70
Total interest related to the RMB Loan	\$577	\$177

#### *RMB Warrants*

Pursuant to the Facility Agreement, we issued 1,624,748 warrants to RMBAH as partial consideration for financing services provided in connection with the Facility Agreement. Each RMB Warrant entitles the holder to purchase one share of Solitario common stock pursuant to the terms and conditions of the RMB Warrants. The RMB Warrants expire 36 months from their date of issuance and have an exercise price of \$1.5387 per share, subject to customary anti-dilution adjustments. We recorded a discount to the RMB Loan for the fair value of the RMB Warrants of \$650,000 as of August 21, 2012, based upon a Black-Scholes model using a 36-month life, volatility of 62%, and a risk-free interest rate of 0.39%. We are amortizing this discount on a straight-line basis to interest expense over the three-year term of the RMB Loan and the remaining unamortized warrant discount was \$356,000 and \$573,000, respectively, as of December 31, 2013 and 2012.

#### *Augusta long-term debt*

In connection with the formation of MH-LLC, the Mt. Hamilton properties contributed by DHI 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 our earn-in, we agreed to 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 were non-interest bearing. Accordingly, upon formation and the contribution of the mineral properties by DHI to MH-LLC,

## Table of Contents

MH-LLC recorded the 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.

As discussed above under recent developments, on November 22, 2013, we subscribed for 13,571,354 shares of Ely common stock for \$1,300,000 and, pursuant to the Letter Agreement Ely, used the funds to fully pay off the Augusta long-term debt. We recorded a gain on early retirement of debt of \$313,000 during 2013 as a result of the payoff of the Augusta long-term debt. At December 31, 2012, we had three payments remaining on the Augusta long-term debt totaling \$2,500,000, less \$264,000 of unamortized discount for total Augusta debt of \$2,236,000, of which \$727,000 was recorded as current.

In April 2013, Ely exercised its right to reduce to \$500,000 Solitario's required subscription of \$750,000 for Ely common stock, funds from which Ely was required to pay the June 1, 2013 payment due to Augusta. Ely agreed to pay the remaining \$250,000 due to Augusta from its own funds, for a total payment of \$750,000 which was done in June 2013. As a result, we received 5,131,150 shares of Ely common stock and recorded the fair market value of the Ely stock received as marketable equity securities and an increase in additional paid-in-capital. Ely's payment of the \$250,000 portion of the Augusta debt was recorded as an increase in non-controlling interest in the equity section of Solitario's balance sheet and is shown as a noncontrolling interest contribution, net as well as a repayment of long-term debt in the statement of cash flows.

During 2013 and 2012 we recorded \$127,000 and \$184,000, respectively, for accretion of interest related to the Augusta long-term debt and paid \$2,050,000, including the contribution of \$250,000 from noncontrolling interest, discussed above and \$750,000, respectively, in cash on the long-term note. All interest accreted on the Augusta long-term debt during 2013 was capitalized to mineral property. See Note 2, "Mineral properties," to our consolidated financial statements in Item 8, "Financial Statements and Supplementary Data."

## Joint venture and delay rental payments

In the past, we have financed our activities through the sale of our properties, joint venture arrangements, and 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 2013 and 2012 related to delay rental payments on our Bongará project from Votorantim Metais Cajamarquilla, S.A., a wholly-owned subsidiary of Votorantim Metais (both companies referred to as "Votorantim"), our joint venture partner. In addition, we received \$100,000 delay rental payments, respectively, on our Mercurio project in Brazil from Brazilian Resources, Inc., our joint venture partner during 2013 and 2012. Receipts from joint venture payments previously occurred on an infrequent basis. Per our agreements with both Votorantim on our Bongará project and Brazilian Resources, Inc. on our Mercurio project, 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.

#### Sale of mineral property

During 2012, MH-LLC completed the sale of a 2.4% net smelter returns royalty (“NSR”) on the Mt. Hamilton project to Sandstorm for \$10,000,000. MH-LLC received an upfront payment of \$6,000,000 upon signing the agreement and received \$4,000,000 on January 15, 2013, which we recorded as a current asset as of December 31, 2012. See Note 2, “Mineral Properties,” in Item 8, “Financial Statements and Supplementary Data” below for further discussion of the Sandstorm royalty sale. Previously a significant sale of mineral properties occurred in 2000 when we sold our interest in our Yanacocha property in Peru for \$6,000,000 in cash. Any sales of property, whether as a royalty, gold-stream or outright sale will also occur in the future, if at all, on an infrequent basis.

#### MH Agreement

During 2013, MH-LLC distributed \$250,000 to its members in proportion to their interests. Solitario received \$200,000 from this distribution which was eliminated in consolidation. During 2012, MH-LLC distributed \$2.5 million to its members in proportion to their interests. Solitario received \$2,000,000 from this distribution which was eliminated in consolidation. In addition during 2012 Solitario received \$500,000 from DHI to repay a portion of a prior loan to Solitario, and Solitario agreed to forgive \$35,000 of accrued interest due from DHI, which represented the accrued interest on loans made to DHI in connection with the MH Agreement through June 30, 2012.

Table of Contents

Solitario and DHI entered into the Second Amendment whereby the parties agreed to modify Solitario's payment obligation of US\$250,000 and 50,000 shares of Solitario common stock due to DHI on August 21, 2014 as previously contemplated under the terms of the MH Agreement to a payment of 327,000 shares of Solitario common which was paid on December 20, 2013.

Investment in marketable equity securities

Our investments in marketable equity securities are based upon market quotes on the NYSE MKT and the TSXV. At December 31, 2013, we have classified \$1,577,000 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 shareholders' equity. During the year ended December 31, 2013, we recorded a loss in other comprehensive income on marketable equity securities of \$3,454,000, net of related deferred tax expense of \$770,000.

*Kinross common stock*

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, 2013 and 2012, we owned 600,000 and 670,000 shares of Kinross common stock, respectively. The Kinross shares are recorded at their fair market value at December 31, 2013 and 2012 of \$2,628,000 and \$6,512,000, respectively.

During 2013 we sold 70,000 shares of Kinross stock for proceeds of \$358,000 and recorded a gain on sale of Kinross of \$308,000. During 2012 we sold 180,000 shares of Kinross stock for proceeds of \$1,591,000 and recorded a gain on sale of marketable equity securities of \$1,464,000 in the consolidated statement of operations. The gain on sale was transferred; less related deferred tax expense, from previously unrealized gain on marketable equity securities in other comprehensive income. 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 varied from a high of \$9.87 per share to a low of \$4.28 per share during the year ended December 31, 2013.

*Ely common stock*

During 2013 we sold 6,303,563 shares of Ely for gross proceeds of \$481,000 and recorded a loss on sale of marketable equity securities of \$166,000 in the consolidated statement of operations. The loss on sale was transferred; less related deferred tax expense, from previously unrealized gain on marketable equity securities in other comprehensive income. As part of the Letter Agreement, discussed above, we received 13,571,354 shares of Ely



common stock. As of December 31, 2013 we own 15,732,274 shares of Ely common stock, representing approximately 19.5% of the outstanding shares of Ely that are recorded at their fair market value of \$1,324,000 at December 31, 2013. We have classified our holdings of Ely common stock as marketable equity shares available for sale and gains and losses on our holdings of Ely are recorded in other comprehensive income in the shareholders' equity section of our consolidated balance sheet.

*Other common stock*

We also own 430,000 shares of TNR Gold Corp. that are recorded at their fair market value of \$16,000 at December 31, 2013 and 250,000 shares of International Lithium Corporation that are recorded at their fair market of \$5,000 at December 31, 2013.

Working capital

We had working capital of \$2,531,000 at December 31, 2013 compared to \$4,245,000 at December 31, 2012. Our working capital at December 31, 2013 primarily consists of our cash and equivalents and our investment in 360,000 shares of Kinross common stock of \$1,577,000, which we plan to sell in the next year, less our accounts payable of \$367,000 and our short-term margin loan of \$802,000. We also intend to borrow pursuant to the RMB Facility Agreement and to repay our UBS Bank secured credit line margin loan. We will continue to monitor our exposure to Kinross as 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 2014 for assumed proceeds of \$1,800,000. 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 \$2,092,000 as of December 31, 2013 compared to \$616,000 as of December 31, 2012. As of December 31, 2013, our cash balances along with our available credit from the RMB Facility Agreement, our investment

## Table of Contents

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 2014 development and payment obligations related to MH-LLC and the Mt. Hamilton project.

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.

## Sale of our common stock

On February 28, 2014, we announced the sale of 1,600,000 shares of our common stock in a private placement at a price of \$1.05 per share for total proceeds of \$1,680,000 (the "2014 Offering"). We paid a finder's fee of \$50,000 in connection with the 2014 Offering. The 2014 Offering was unanimously approved by our Board of Directors.

On July 26, 2013, we sold 2,451,892 shares of our common stock in a private placement at a price of \$0.84 per share for total proceeds of \$2,060,000 (the "Offering"). The Offering was unanimously approved by our Board of Directors and, as part of the Offering insiders subscribed for and acquired 606,665 shares (the "Insider Shares") for a total purchase of \$510,000. The offer and sale of the Insider Shares was unanimously approved by the Audit Committee of the Board of Directors. All shares in the Offering were offered and sold on the same terms and conditions.

On June 26, 2012 we sold 180,000 shares of common stock to Christopher Herald, President and Chief Executive Officer of Solitario, and 45,000 shares of common stock to James Maronick, Chief Financial Officer of Solitario, at a price of \$1.22 per share. The purchase of the shares was unanimously approved by our Board of Directors and was also unanimously approved by our Audit Committee of the Board of Directors. The price of the shares was the last closing price of our common stock as quoted on the NYSE MKT (formerly NYSE Amex) on June 25, 2012. Solitario received total proceeds of \$274,500.

Any future sale of our common stock, if any, would be dependent on a number of factors including the market price of our stock, the availability of investors, our ability to meet necessary regulatory requirements, including possible registration of the shares to be sold with the United States Securities and Exchange Commission among other things, none of which are currently in place.

Stock-based compensation plans

On June 18, 2013 Solitario's shareholders approved the 2013 Solitario Exploration and Royalty Corp. Omnibus Stock and Incentive Plan (the "2013 Plan"). Under the terms of the 2013 Plan, the Board of Directors may grant awards for up to 1,750,000 shares to Directors, officers, employees and consultants. Such awards may take the form of stock options, stock appreciation rights, restricted stock, and restricted stock units. During the year ended December 31, 2013 we granted options for 120,000 shares at an exercise price of \$1.14 and options for 1,280,000 shares at an exercise price of \$0.94 per share. The options vest 25% on date of grant and 25% on the next three anniversary dates.

During the year ended December 31, 2013, options for 117,500 shares were exercised from the 2006 Plan for cash proceeds of \$184,000. During 2013 there were no shares exercised or granted from the 2006 Plan. During the year ended December 31, 2012, no options were exercised from the 2006 Plan and we granted 165,000 options from the 2006 Plan. Subsequent to December 31, 2013, holders of 1,797,000 options from the 2006 plan priced at Cdn\$2.40 agreed to voluntarily cancel their options. No consideration was given or received from the holders to cancel their options.

We do not expect a significant number of our vested options from the either the 2006 Plan or the 2013 Plan will be exercised in the next year. See Note 10, "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 and the 2013 Plan as of December 31, 2013.

Off-balance sheet arrangements

As of December 31, 2013 and 2012, we have no off-balance sheet arrangements.

Table of Contents

(e). Cash Flows

Net cash used in operations during the year ended December 31, 2013 decreased to \$2,237,000 compared to \$3,504,000 for 2012 primarily as a result of (i) a decrease in exploration expenses to \$797,000 in 2013 compared to \$1,986,000 in 2012, primarily related to reduced activity South America and Mexico during 2013 as well as the capitalization of \$1,884,000 in exploration and development costs at our Mt. Hamilton project, as discussed above, which is included in investing activities; and (ii) a decrease in non-stock option general and administrative costs to \$1,824,000 during 2013 compared to \$1,948,000 during 2012.

Net cash provided from investing activities decreased to \$2,517,000 during 2013 compared to \$3,870,000 during 2012 primarily related to (i) a reduction in proceeds from the Sandstorm sale, discussed above to \$4,000,000 during 2013 compared to \$6,000,000 during 2012, and (ii) a reduction in proceeds from the sale of marketable equity securities to \$839,000 during 2013, which included the sale of 6,303,563 shares of Ely for proceeds of \$481,000 discussed above, compared to \$1,664,000 during 2012. This decrease was partially offset by (i) a decrease in the capitalization of expenditures for additions to mineral properties, primarily at Mt. Hamilton, as discussed above, to \$2,173,000 during 2013 compared to \$3,457,000 in 2012 and (ii) an increase in funds from the sale of derivative instruments and the proceeds from the sale of other assets in 2013 compared to 2012.

Net cash provided from (used in) financing activities increased to \$1,196,000 provided during 2013 compared to \$(182,000) used during 2012. The primary reason for the increase in cash provided from financing activities in 2013 was primarily related to (i) the \$2,060,000 private placement completed during 2013 and (ii) the increase in the proceeds from the RMB Loan to \$2,000,000 during 2013 compared to net proceeds of \$912,000 during 2012. These increases in cash provided from financing activities during 2013 compared to the decrease in cash used in 2012 was partially offset by an increase in cash due to (i) an increase in net repayments on short-term debt of \$698,000 during 2013 compared to net short-term debt repayments of \$510,000 during 2012, and (ii) the increase in long-term debt repayment associated with the Augusta debt, discussed above, of \$2,050,000 during 2013 compared to \$750,000 during 2012.

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

Development Activities

With the completion of the Feasibility Study on February 22, 2012, we entered the development stage of the Mt. Hamilton project. The development of the Mt. Hamilton project, if it occurs, will entail a significant capital investment, 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 and there can be no assurance that the

funds to complete the development of Mt. Hamilton will not be higher than is estimated in the Feasibility Study. As a result, 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 development financing 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 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 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 historically 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 many of our interests in mining claims and leases, we have entered into agreements, which generally may be canceled at our option. We are often required to make minimum rental and option payments in order to maintain our interest in certain claims and leases. Our net 2013 mineral and surface property rental and option payments included in exploration expense, were \$44,000. In 2014 we estimate our net exploration property rentals and option payments for properties we own or operate, to be approximately \$1,040,000, which includes \$294,000 of mineral property payments at Mt. Hamilton. 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 pay on our behalf, or reimburse us approximately \$694,000 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.

Table of ContentsEnvironmental 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 initiating 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 financial position. For the years ended December 31, 2013 and 2012, we have not capitalized any costs related to environmental control facilities. We do not anticipate our non-Mt. Hamilton project exploration activities will result in any material new or additional environmental expenditures or liabilities in the near future.

Our planned Mt. Hamilton project 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 construction and the completion of mining development activities, substantial reclamation and mine closure bonds and similar financial assurances must be given to the federal and state regulatory agencies and maintained. The requirements to fund these development and operating financial assurances 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 anticipate the majority of our activities during 2014 at our Mt. Hamilton project will relate to obtaining required permits to develop the project. With the exception of any potential Mt. Hamilton project construction activities, we do not expect any material additional environmental exposures or required environmental remediation expenditures within the next year.

Contractual Obligations

The following table provides an analysis of our contractual obligations at December 31, 2013:

(in thousands)	As of December 31, 2013				
	Payments due by period				
	Total	Less than	1	1-3	4-5
	year	year	years	years	More than 5 years
Operating Lease Obligations	\$ 47	\$ 47	\$ -	\$ -	\$ -
Short-term margin loan (1)	802	802	-	-	-
Land Holding Costs (2)	52	52	-	-	-
Mt. Hamilton land holding costs (3)	1,164	294	618	168	84

Edgar Filing: SOLITARIO EXPLORATION & ROYALTY CORP. - Form 10-K

Mt. Hamilton cash earn-in payments (4)	250	250	-	-	-
Mt. Hamilton earn-in payments in stock of Solitario (4)(5)	43	43	-	-	-
Mt. Hamilton advance royalty and royalty buy-down payments (4)(6)	6,800	300	5,600	600	300
RMB Loan long-term debt (7)	3,500	-	3,500	-	-
Total	\$12,658	\$1,788	\$9,718	\$768	\$384

(1) *The short term-margin loan is due on demand and includes \$2,000 of accrued interest at December 31, 2013.*

(2) *Excluding Mt. Hamilton, discussed below, our other land holding contractual obligations, net of expected joint venture reimbursements of \$694,000. 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 2019 and include \$44,000 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 through 2019, valued at \$1,206 per ounce, the closing price of an ounce of gold at December 31, 2013, quoted on 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 \$250,000 and deliver 50,000 shares of Solitario common stock to DHI by February 21, 2014, of which \$250,000 was paid and 50,000 shares of our stock were delivered in February 2014. We have further agreed to (i) buy down the existing 6% net smelter return (“NSR”) royalty to a 1% NSR royalty by paying the underlying royalty holder \$5,000,000 on or before commercial completion of the Mt. Hamilton project, which we have estimated the payment for the purposes of this schedule to be due on or before December 31, 2016. If we fail to make any of the payments due to DHI, described above, or fail to make the annual advanced royalty payments discussed*

Table of Contents

*below or fail to pay down the existing royalty, discussed below, our interest in MH-LLC will be reduced to 49% and DHI's interest will be increased to 51%.*

*(5) The commitment value of the shares of Solitario stock to be paid to DHI, discussed above in note (4) to this table, have been valued at \$0.85 per share, the December 31, 2013 ending stock price as quoted on the NYSE-MKT.*

*(6) The minimum annual advance royalty payments of \$300,000 per year have been included in this table through December 2019. In addition the \$5,000,000 royalty buy-down discussed above is due on or before commercial completion, which is estimated to occur in November 2015 for purposes of this schedule only. The actual date of commercial completion is not currently known and is dependent upon obtaining permits, financing and other factors, none of which are currently in place and may be delayed for a number of reasons beyond our control. Please see "Risk Factors", above.*

*(7) The RMB Loan is a three year term loan and is estimated to be paid in full for the purpose of this schedule on or before August 2015.*

**(g). 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 2014. 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 to earn up to an 80% interest. In December 2010, we entered into the definitive MH Agreement with DHI, a wholly owned subsidiary of Ely, with respect to MH-LLC, the limited liability company that holds the Mt. Hamilton project assets. During 2013, Solitario, Ely and DHI revised the LOI to clarify the timing and pricing of the payments due to Ely as a result of the early termination of the Augusta debt, as further described above in recent developments. See also Note 2, "Mineral properties" in Part II, Item 8 "Financial Statements and Supplementary Data" of this Form 10-K.

We are the manager of all project activities. Our focus for 2014 is to complete environmental permitting for the project. The most important component of permitting will be approval of the Environmental Assessment by the USFS. Additional engineering studies will also be undertaken. In addition, we entered into a contract with Kappes Cassiday & Associates ("KCA") for the preparation during 2014 of an engineering report concerning the engineering and design of the proposed adsorption, desorption and recovery ("ADR") plant at Mt. Hamilton. The KCA contract also provided an option to us to contract with KCA for the fabrication and construction of the ADR plant on the Mt Hamilton mine site and the wet testing and training of Mt Hamilton personnel at a fixed price of \$9.3 million. The option is entirely at our discretion and the price will be fixed for a period of five months after the issuance of the engineering report, after which the price will be subject to escalation based upon published CPI data. No exploration activities are planned for 2014 at Mt. Hamilton. There can be no assurance as to when permitting will be completed as it is dependent on a number of factors over which we have no control. Other planned activities for 2014 include other limited engineering and project management in support of a positive permitting decision.

We have budgeted approximately \$1,895,000 for permitting activities, planned development, land and earn-in payments for 2014 at Mt. Hamilton.



**(h). Exploration Joint Ventures, Royalty and other properties**

The following discussion relates to an analysis of our anticipated property exploration plans as of December 31, 2013. Please also see Note 2 “Mineral Properties” to the consolidated financial statements 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.

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. The Bongará project hosts the Florida Canyon zinc deposit, where high-grade zinc mineralization has been encountered in drill holes over an area approximately 2.5 kilometers by 1.3 kilometers in dimension.

Votorantim is funding and managing all work conducted on the project. Work in 2014 will focus on activities necessary to complete a prefeasibility study and then to transition to feasibility-level work for 2015. A total of 6,000 meters of both surface and underground drilling is scheduled this year. Another four-kilometers of road is also scheduled to be completed in 2014. As part of the 2014 program, permitting for a new 700-meter long tunnel to provide underground access and drilling platforms in the Karen-Milagros zone of the Florida Canyon deposit is planned, as well as permitting an extension of the existing San Jorge tunnel a further 300 meters to the south to test for the continuation of high-grade mineralization. Detailed drilling from both these tunnels will provide feasibility-level reserve information. No date has been set to initiate construction of these new tunnels. Permitting and social development activities with surrounding communities will also continue throughout 2014.

## Table of Contents

### 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 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, Anglo is the manager of the project and is paid a management fee of 5% of the incurred costs at PBM.

Anglo has indicated the 2014 exploration program will consist of a drilling program to drill-test areas identified by a helicopter-borne geophysics program completed in 2013. The drilling program will focus on magnetic anomalies that may be related to areas of ultramafic rocks that are the host to all PGM mineralization identified on the property.

### Pachuca Norte

In June 2013, a definitive joint venture agreement was signed that provides for Hochschild Mining (“Hochschild”) to earn a 51% interest in the property by funding a total of \$10,000,000 in exploration commitments over the five years from the signing of the definitive agreement. Hochschild will have the option to earn an additional 19% (total interest 70%) by funding all project expenditures necessary to complete a positive feasibility study. Hochschild will manage the operations and has the right to terminate the joint venture at any time.

The project is located about 80 kilometers north of Mexico City near the city of Pachuca.

Hochschild is planning to complete approximately 20 core holes by mid-2014 in the North District area. Most drill holes are located adjacent to previously drilled holes that displayed strong mineralization. However, several of the holes will be targeted on veins that have never been drill tested. Depending upon drilling results, Hochschild may elect to continue the drilling program into the second half of 2014.

### 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 \$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.

#### Other Properties

We have significantly reduced activities in Peru and Mexico and have budgeted expenditures of \$166,000 for exploration on our other properties in Peru and Mexico that are not subject to joint venture and have terminated our Latin American employees. We will carry on limited exploration activities during 2014 by utilizing contract geologists and have placed our current properties on care and maintenance.

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

During 2013 we abandoned our Cerro Azul and Atico properties in Peru and our Jaripo property in Mexico and recorded \$13,000 of mineral property impairments. During 2012 we abandoned our Triunfo and Espanola properties in Bolivia and our Excelsior project in Peru and recorded \$31,000 of mineral property impairments.

#### **(j). Significant Accounting Policies**

See Note 1, "Business and Summary of Significant Accounting Policies," in Item 8 "Financial Statements and Supplementary Data" for a discussion of our Significant Accounting Policies.

Table of Contents

**(k). Related Party Transactions**

On July 26, 2013, we sold 2,451,892 shares of Solitario common stock in a private placement at a price of \$0.84 per share for total proceeds of \$2,060,000 (the "Offering"). The Offering was unanimously approved by our Board of Directors and, as part of the Offering insiders subscribed for and acquired 606,665 shares (the "Insider Shares") for a total purchase of \$510,000. The offer and sale of the Insider Shares was unanimously approved by the Audit Committee of the Board of Directors. All shares in the Offering were offered and sold on the same terms and conditions.

On June 26, 2012, Christopher Herald, our President and Chief Executive Officer, and James Maronick, our Chief Financial Officer, purchased shares of our common stock at a price of \$1.22 per share, with Mr. Herald purchasing 180,000 shares and Mr. Maronick purchasing 45,000 shares. The purchase of the shares was unanimously approved by our Board of Directors and was also unanimously approved by our Audit Committee of the Board of Directors. The price of the shares was the last closing price of our common stock as quoted on the NYSE MKT on June 25, 2012. We received total proceeds of \$275,000.

**(l). Recent Accounting Pronouncements**

There are no recently issued accounting standards for which the Company expects a material impact on our consolidated financial statements

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

Smaller reporting companies are not required to provide the information required by this item.

Table of Contents

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

	Page
Consolidated Financial Statements	
Report of Independent Registered Public Accounting Firm	49
Consolidated Balance Sheets as of December 31, 2013 and 2012	50
Consolidated Statements of Operations for the years ended December 31, 2013 and 2012	51
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2013 and 2012	52
Consolidated Statements of Shareholders' Equity for the years ended December 31, 2013 and 2012	53
Consolidated Statements of Cash Flows for the years ended December 31, 2013 and 2012	54
Notes to Consolidated Financial Statements	55

48

Table of Contents

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Shareholders

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, 2013 and 2012, and the related consolidated statements of operations, comprehensive loss, shareholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements 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 audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements and assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Solitario Exploration & Royalty Corp. as of December 31, 2013 and 2012, and the results of their operations and their cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

/s/EKS&H LLLP

March 7, 2014

Denver, Colorado

49

Table of Contents

## SOLITARIO EXPLORATION &amp; ROYALTY CORP.

## CONSOLIDATED BALANCE SHEETS

(in thousands of U.S. dollars, except share and per share amounts)	December 31, 2013	December 31, 2012
Assets		
Current assets:		
Cash and cash equivalents	\$2,092	\$616
Investments in marketable equity securities, at fair value	1,577	3,110
Royalty Sale Receivable	—	4,000
Prepaid expenses and other	115	210
Total current assets	3,784	7,936
Mineral properties	12,098	9,327
Investments in marketable equity securities, at fair value	2,396	3,983
Equity method investment	153	1,165
Other assets	1,069	1,072
Total assets	\$19,500	\$23,483
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	\$367	\$398
Short-term margin loan	802	1,500
Current portion long-term debt	—	727
Deferred income taxes	—	963
Other	84	103
Total current liabilities	1,253	3,691
Long-term debt, net of discount	3,144	2,437
Deferred gain on sale of mineral property	7,000	7,000
Warrant liability	140	1,138
Commitments and contingencies (Notes 2 and 9)		
Shareholders' Equity:		
Solitario shareholders' equity		
Preferred stock, \$0.01 par value, authorized 10,000,000 shares (none issued and outstanding at December 31, 2013 and 2012)	—	—
Common stock, \$0.01 par value, authorized, 100,000,000 shares (37,512,127 and 34,479,958 and , respectively, shares issued and outstanding at December 31, 2013 and 2012)	375	345



Edgar Filing: SOLITARIO EXPLORATION & ROYALTY CORP. - Form 10-K

Additional paid-in capital	51,963	47,107
Accumulated deficit	(44,730)	(42,678)
Accumulated other comprehensive income	460	3,914
Total Solitario shareholders' equity	8,068	8,688
Noncontrolling interest	(105 )	529
Total shareholders' equity	7,963	9,217
Total liabilities and shareholders' equity	\$19,500	\$23,483

See Notes to Consolidated Financial Statements.

Table of Contents

## SOLITARIO EXPLORATION &amp; ROYALTY CORP.

## CONSOLIDATED STATEMENTS OF OPERATIONS

## FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

(in thousands of U.S. Dollars, except per share amounts)	For the year ended	
	2013	2012
Property and joint venture revenue		
Joint venture property payments	\$300	\$300
Costs, expenses and other:		
Exploration expense	797	1,986
Depreciation and amortization	26	61
General and administrative	2,244	2,680
(Gain) loss on derivative instruments	(90 )	30
Property abandonment and impairment	13	31
Gain on sale of assets	(11 )	(8 )
Interest expense and dividend income (net)	(57 )	318
Total costs, expenses and other	2,922	5,098
Other Income (expense)		
Gain on early termination of debt	313	—
Gain on sale of marketable equity securities	142	1,528
Gain (loss) on warrant liability	998	(488 )
Equity in net loss of equity method investment	(1,012 )	(488 )
Total other income (expense)	441	552
Loss before income tax	(2,181 )	(4,246 )
Income tax benefit	176	648
Net loss	(2,005 )	(3,598 )
(Income) loss attributable to noncontrolling interest	(47 )	301
Net loss attributable to Solitario shareholders	\$(2,052 )	\$(3,297 )
Loss per common share attributable to Solitario shareholders:		
Basic and diluted	\$(0.06 )	\$(0.10 )
Weighted average shares outstanding:		
Basic and diluted	35,743	34,351

See Notes to Consolidated Financial Statements.

Table of Contents

SOLITARIO EXPLORATION & ROYALTY CORP.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

(in thousands of U.S. Dollars)	For the year ended December 31,	
	2013	2012
Net loss for the period, before other comprehensive loss	\$(2,005)	\$(3,598)
Other comprehensive income (loss):		
Unrealized loss on marketable equity securities, net of deferred taxes	(3,454)	(1,963)
Comprehensive loss	(5,459)	(5,561)
Income (loss) attributable to noncontrolling interests	(47 )	301
Comprehensive loss attributable to Solitario shareholders	\$(5,506)	\$(5,260)

See Notes to Consolidated Financial Statements

Table of Contents

## SOLITARIO EXPLORATION &amp; ROYALTY CORP.

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

## FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

(in thousands, of U.S. Dollars except share amounts)	Solitario Shareholders'				Accumulated Other Shareholders' Income	Total Solitario Controlling Equity	Non- Controlling Interest
	Common Stock Shares	Paid-in Amount	Additional Accumulated Capital	Comprehensive Deficit			
Balance at December 31, 2011	34,204,958	\$342	\$49,015	\$(39,381	) \$5,877	\$15,853	<b>\$(1, 640)</b>
Issuance of shares and \$300 of cash to noncontrolling shareholder for future earn-in Noncontrolling interest	50,000	1	70	—	—	71	(180 )
Contribution (net)	—	—	—	—	—	—	198
Disproportionate share entry on earn in to MH-LLC	—	—	(2,983	) —	—	(2,983	) 2,983
Reversal of contra- noncontrolling interest on earn-in	—	—	—	—	—	—	(531 )
Stock option expense	—	—	732	—	—	732	—
Issuance of shares in private placement	225,000	2	273	—	—	275	—
Net loss	—	—	—	(3,297	) —	(3,297	) (301 )
Net unrealized (loss) on marketable equity securities (net	—	—	—	—	(1,963	) (1,963	) —

Edgar Filing: SOLITARIO EXPLORATION & ROYALTY CORP. - Form 10-K

of tax of \$1,168)								
Balance at December 31, 2012	34,479,958	345	47,107	(42,678	)	3,914	8,688	529
Issuance of shares and \$500 of cash to noncontrolling shareholder for future earn-in	427,777	4	377	—	—	—	381	(881
Noncontrolling interest distribution (net)	—	—	—	—	—	—	—	(50
Credit for payment to receive Ely shares as well as Augusta debt payment			1,800				1,800	250
Issuance of shares in private placement	2,451,892	25	2,035	—	—	—	2,060	—
Exercise of stock options	117,500	1	183	—	—	—	184	—
Stock option expense	—	—	420	—	—	—	420	—
Issuance of shares for mineral property	35,000	—	41	—	—	—	41	—
Net loss	—	—	—	(2,052	)	—	(2,052	) 47
Net unrealized (loss) on marketable equity securities (net of tax of \$770)	—	—	—	—	—	(3,454	) (3,454	) —
Balance at December 31, 2013	37,512,127	\$375	\$51,963	\$(44,730	)	\$460	\$8,068	\$(105

See Notes to Consolidated Financial Statements.

Table of Contents

## SOLITARIO EXPLORATION &amp; ROYALTY CORP.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

## FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

(in thousands of U.S. Dollars)	For the year ended December 31,	
	2013	2012
Operating activities:		
Net loss	\$(2,005)	\$(3,598)
Adjustments to reconcile net loss to net cash used in operating activities:		
(Gain) loss on derivative instruments	(90 )	30
Depreciation and amortization	26	61
Gain on early termination of debt	(313 )	—
Loss on equity method investment	1,012	488
Property abandonment and impairment	13	31
Employee stock option expense	420	732
Deferred income taxes	(176 )	(648 )
(Gain) loss on warrant liability	(998 )	488
Amortization of interest on debt discounts	—	332
Gain on asset and equity security sales	(153 )	(1,536)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	78	200
Accounts payable and other current liabilities	(51 )	(84 )
Net cash used in operating activities	(2,237)	(3,504)
Investing activities:		
Additions to mineral properties	(2,173)	(3,457)
Additions to other assets	(318 )	(397 )
Sale of derivative instrument, net	90	51
Proceeds from sale of mineral property	4,000	6,000
Proceeds from sale of marketable equity securities	839	1,664
Proceeds from sale of other assets	79	9
Net cash provided by investing activities	2,517	3,870
Financing activities:		
Short-term borrowing	2,300	2,665
Repayment of short-term borrowing	(2,998)	(3,165)
Repayment of long-term debt	(2,050)	(750 )
Proceeds from issuance of debt, net	2,000	912
Proceeds from issuance of common stock , net	2,060	275
Proceeds from exercise of options	184	—
Payment to noncontrolling interest	(550 )	(300 )
Noncontrolling interest contribution, net	250	181

Edgar Filing: SOLITARIO EXPLORATION & ROYALTY CORP. - Form 10-K

Net cash provided by (used in) financing activities	1,196	(182 )
Net increase in cash and cash equivalents	1,476	184
Cash and cash equivalents, beginning of year	616	432
Cash and cash equivalents, end of year	\$2,092	\$616
Supplemental disclosure of cash flow information:		
Cash paid for interest, capitalized to mineral property	\$186	\$87
Supplemental disclosure of non-cash flow investing and financing activities:		
Capitalized non-cash interest	\$540	\$—
Capitalized depreciation	\$30	\$—
Issuance of stock for mineral property	\$41	\$—
Issuance of stock to non-controlling interest	\$381	\$—
Shares of Ely marketable equity securities received upon payment of Augusta debt	\$1,800	\$—
Royalty sale receivable	\$—	\$4,000
Transfer of contra-noncontrolling interest to noncontrolling interest upon earn-in	\$—	\$531
Disproportionate share entry from noncontrolling interest to additional paid in capital upon earn-in	\$—	\$2,983
Debt financing costs	\$—	\$588
Issuance of stock to noncontrolling interest	\$—	\$71

See Notes to Consolidated Financial Statements.

Table of Contents

1. Business and Summary of Significant Accounting Policies:

*Business and company formation*

Solitario Exploration & Royalty Corp. ("Solitario") is a development stage company at December 31, 2013 (but not a company in the "Development Stage") under Industry Guide 7, as issued by the United States Securities and Exchange Commission, with a focus on the development of the Mt. Hamilton gold project located in Nevada.

In December 2010 Solitario signed the Limited Liability Company Operating Agreement of Mt. Hamilton LLC (the "MH Agreement") with DHI Minerals (U.S.) Ltd., ("DHI") and formed Mt. Hamilton LLC ("MH-LLC"), the owner of the Mt. Hamilton project. On February 22, 2012, Solitario earned an 80% interest in MH-LLC as a result of the completion of a feasibility study on the Mt. Hamilton project (the "Feasibility Study") prepared by SRK Consulting (US), Inc. of Lakewood, Colorado ("SRK"). Solitario intends to develop the Mt. Hamilton project. However, Solitario has never developed a mineral property. In addition Solitario has 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.

Solitario has been actively involved in mineral exploration since 1993. During 2012, Solitario sold a royalty on its Mt. Hamilton Project for \$10,000,000 and recorded a deferred gain on that sale of \$7,000,000. Additionally, although, Solitario records joint venture property payments as revenue for standby delay rental payments, Solitario's previously significant revenues were in 2000 upon the sale of the Yanacocha property for \$6,000,000. Future revenues from the sale of properties, if any, would also occur on an infrequent basis in the future. At December 31, 2013, in addition to the Mt. Hamilton project, Solitario had six mineral exploration properties in Peru and Mexico and its Yanacocha and Mercurio royalty properties in Peru and Brazil, respectively. Solitario is conducting limited exploration activities in these 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*

Augusta long-term debt



On November 22, 2013 Solitario entered into a letter agreement, (the “Letter Agreement”) between Solitario, Ely and DHI, a wholly-owned subsidiary of Ely Gold & Minerals Inc. Under the Letter Agreement, Solitario subscribed for \$1,300,000 of shares of common stock of Ely at a price of Cdn\$0.10 and upon approval by Ely and regulatory approvals we received 13,571,354 shares of Ely common stock. Ely used the \$1,300,000 from the subscription to pay Augusta Resource Corporation (“Augusta”) \$1,300,000 pursuant to the terms of an agreement between Ely and Augusta Resource Corporation (“Augusta”) dated November 20, 2013. Ely’s receipt of the \$1,300,000 and payment to Augusta fully satisfied Solitario’s prior obligations to subscribe for an aggregate of US\$1,750,000 of shares of Ely common stock (US\$750,000 on or before May 1, 2014 and US\$1,000,000 on or before May 1, 2015) and satisfied Solitario’s Augusta debt which was deemed fully paid upon Augusta’s receipt of the \$1,300,000 from Ely. Solitario recorded a gain on early retirement of debt of \$313,000 during 2013 as a result of the payoff of the Augusta long-term debt.

#### Investment in Mt. Hamilton

On November 22, 2013, Solitario and DHI also entered into the second amendment (the “Second Amendment”) to the MH Agreement. Pursuant to the terms of the Second Amendment, the parties agreed to modify Solitario’s payment obligation of US\$250,000 and 50,000 shares of Solitario common stock due to DHI on August 21, 2014 previously contemplated under the terms of the MH Agreement to a payment of 327,777 shares of Solitario common stock which was paid on December 20, 2013.

#### Investment in Kinross

Solitario has a significant investment in Kinross Gold Corporation (“Kinross”), which consisted of the following at December 31, 2013 and 2012:

Table of Contents

(in thousands)	Year ended	
	December	
	31,	
	2013	2012
Shares	600	670
Fair value		
Current assets	\$ 1,577	\$ 3,110
Long term assets	\$ 1,051	\$ 3,402

The current assets represent Solitario's estimate of the portion of marketable equity securities that will be liquidated within one year. Solitario sold the following shares of Kinross during 2013 and 2012:

(in thousands)	Year ended	
	December	
	31,	
	2013	2012
Shares sold	70	180
Proceeds	\$ 358	\$ 1,591
Gain on sale	\$ 308	\$ 1,464

As of December 31, 2013 and 2012, Solitario has borrowed \$802,000 and \$1,500,000, respectively, in short-term margin loans, which are primarily secured by its investment in Kinross. The short-term margin loan is discussed below under Note 4, "Short-term debt." At December 31, 2013 Solitario had sold two covered calls covering a total of 200,000 shares of its Kinross common stock, as further described below in Note 7 "Derivative instruments," both of which expired unexercised in February 2014. As of February 28, 2014, Solitario owns 530,000 shares of Kinross common stock which have a value of approximately \$2.8 million based upon the market price of \$5.22 per Kinross share. 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 Solitario's liquidity and capital resources.

Investment in Ely

As part of the Letter Agreement, discussed above, we received 13,571,354 shares of Ely common stock. During 2013 we sold 6,303,563 shares of Ely common stock for proceeds of \$481,000, recording a loss on sale of marketable equity securities of \$166,000. As of December 31, 2013 we own 15,732,274 shares of Ely common stock, representing approximately 19.5% of the outstanding shares of Ely with a fair value of \$1,324,000. We have classified our holdings of Ely common stock as marketable equity shares available-for-sale and gains and losses on our holdings of Ely are recorded in accumulated other comprehensive income in the shareholders' equity section of our Consolidated Balance Sheet.

*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 \$300,000, in joint venture and property payments for both of the years ended December 31, 2013 and 2012. 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 without reserves are recognized as revenue. Payments received on the sale of properties with reserves are recognized as revenue to the extent the proceeds exceed the proportionate basis in the assets sold. Gain on the sale of a mineral property revenue stream is deferred to the extent there is a guarantee for the future revenue stream until such time as the potential funding obligation for the guarantee is reduced or released.

## Table of Contents

### *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 other marketable equity securities; (v) the fair value of Solitario's liability for warrants Solitario granted RMB Australia Holdings Limited ("RMBAH") upon entering into the facility agreement, discussed below.

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, 2013 and 2012 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 began capitalizing all of its expenditures on its Mt. Hamilton project, subsequent to the completion of the Feasibility Study. 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.

*Derivative instruments*

Beginning in December 2008, Solitario sold covered calls on a limited basis covering its shares of Kinross common stock. Solitario also owned certain warrants issued by Ely, which expired unexercised during 2012. As explained in more detail in Note 5, "Long-term debt," Solitario entered into a facility agreement (the "Facility Agreement") with RMBAH, and RMB Resources, Inc., a Delaware corporation ("RMBR") whereby Solitario may borrow up to \$5,000,000 from RMBAH (with any amounts outstanding collectively being the "RMB Loan"). In connection with the Facility Agreement Solitario issued 1,624,748 warrants, (the "RMB Warrants") as partial consideration for financing services provided in connection with the Facility Agreement. All of these derivative instruments are further discussed in Note 7, "Derivative instruments" below. Solitario accounts for its derivative instruments in accordance with ASC 815 "Accounting for Derivative Instruments and Hedging Activities" ("ASC 815"). Solitario has not designated its covered calls as hedging instruments and any changes in the fair market value of the covered calls and its warrants are recognized in the statement of operations in the period of the change.

*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 and the Kinross calls are carried at their estimated fair value based on quoted market prices. See Note 8, "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. Solitario records investments in marketable equity securities as available-for-sale for investments in publicly traded marketable equity securities for which it does not exercise significant control; including owning less than 20% of the outstanding securities, and where Solitario has no representation on the Board of those companies and exercises no control over the management of those companies. 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 statements of operations. The following tables summarize Solitario's marketable equity securities and accumulated other comprehensive income related to its marketable equity securities:

(in thousands)	December 31, 2013	December 31, 2012
Marketable equity securities at fair value	\$ 3,973	\$ 7,093
Cost	1,954	851
Accumulated other comprehensive income for unrealized holding gains	2,019	6,242
Deferred taxes on accumulated other comprehensive income for unrealized holding gains	(688 )	(2,328 )
Valuation allowance on deferred taxes on unrealized holding losses included in other comprehensive loss	(871 )	—
Accumulated other comprehensive income	\$ 460	\$ 3,914

The following table represents changes in marketable equity securities:

(in thousands)	Year ended December 31,	
	2013	2012
Gross cash proceeds	\$ 839	\$ 1,664
Cost	697	136
Gross gain on sale included in earnings during the period	142	1,528
Deferred taxes on gross gain on sale included in earnings	(58 )	(571 )
Reclassification adjustment to unrealized gain in other comprehensive income for net gains included in earnings	(84 )	(957 )
Gross unrealized holding loss arising during the period included in other comprehensive loss.	(4,081)	(1,603)
Deferred taxes on unrealized holdings loss included in other comprehensive loss	1,582	597
	(871 )	—

Valuation allowance on deferred taxes on unrealized holding losses included in other comprehensive loss		
Net unrealized holding gain (loss)	(3,370)	(1,006)
Other comprehensive income (loss) from marketable equity securities	\$(3,454)	\$(1,963)

*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, Peru and Mexico, a portion of the payments under the land, leasehold and exploration agreements of Solitario are 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 2013 and 2012, Solitario

## Table of Contents

recorded foreign exchange losses of \$21,000 and \$32,000, 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 \$64,000 and \$36,000, respectively, at December 31, 2013 and 2012.

### *Equity method investments*

Solitario records its share of income or loss of unconsolidated subsidiaries where it has a significant influence over the unconsolidated subsidiary, under the equity method of accounting, as an increase or decrease in its investment in the unconsolidated subsidiary. Solitario accounts for its investment in Pedra Branca do Mineracao, Ltd. ("PBM") under the equity method since July 2010, when Anglo Platinum Limited ("Anglo") earned a 51% interest in PBM. Solitario elected not to record its investment in PBM at fair value after July 2010 and during 2013 and 2012 recorded a reduction of \$1,012,000 and \$488,000, respectively, in its equity method investment for Solitario's share of the loss of PBM during 2013 and 2012. During the years ended December 31, 2013 and 2012, PBM had no revenues and reported a net operating loss of approximately \$2,065,000 and \$996,000, respectively.

### *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.

### *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 6, "Income taxes" below.



*Earnings per share*

The calculation of basic and diluted loss per share is based on the weighted average number of shares of common stock outstanding during the years ended December 31, 2013 and 2012. Potentially dilutive shares related to outstanding common stock options of 3,819,000 and 2,598,400 for the years ended December 31, 2013 and 2012, respectively, and RMB warrants of 1,624,748 for the years ended December 31, 2013 and 2012 were excluded from the calculation of diluted loss per share because the effects were anti-dilutive.

*Employee stock compensation and incentive plans*

Solitario classifies all of its stock options as equity options in accordance with the provisions of ASC 718 “Compensation – Stock Compensation”. See Note 10, “Employee stock compensation plans” below.

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 based upon the grant date fair value of the awards and as the stock options vest by multiplying the estimated grant date 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. Solitario may also grant Restricted Stock Units and Restricted stock in connection with its 2013 Plan.

Table of Contents*Segment reporting*

With the completion of the Feasibility Study on February 22, 2012, Solitario now operates in two segments, (i) mineral exploration and (ii) mining development and operations. Solitario is capitalizing Mt. Hamilton development and operations costs subsequent to February 22, 2012. Solitario's Mt. Hamilton project is located in Nevada and all of Solitario's remaining operations are located in Peru, Brazil and Mexico as further described in Note 2 to these consolidated financial statements. Included in the consolidated balance sheet at December 31, 2013 and 2012 are total assets of \$412,000 and \$1,433,000, respectively, related to Solitario's foreign operations located in Brazil, Peru and Mexico. Solitario is not aware of any foreign exchange restrictions on its subsidiaries located in foreign countries.

*Recent accounting pronouncements*

There are no recently issued accounting standards for which Solitario expects a material impact on its consolidated financial statements

2. Mineral properties:

The following table details Solitario's investment in Mineral Property:

(in thousands)	December 31,	
	2013	2012
Development (United States)		
Mt. Hamilton	\$12,059	\$9,275
Exploration		
Pachuca (Mexico)	20	20
La Promesa (Peru)	5	5
Norcan (Mexico)	6	6
Aconchi (Mexico)	5	5
Canta Colorado (Mexico)	3	3
Atico (Peru)	-	5
Cerro Azul (Peru)	-	3
Jaripo (Mexico)	-	5
Total exploration	39	52
Total mineral property	\$12,098	\$9,327

*Mt. Hamilton*

MH-LLC joint venture of the Mt. Hamilton project

In December 2010 Solitario signed the MH Agreement with DHI and formed MH-LLC, the owner of the Mt. Hamilton project. Pursuant to the MH Agreement, the fair value of the DHI contribution 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 below in Note 5, "Long-term debt."

As of December 31, 2013, pursuant to the MH Agreement, Solitario had one remaining cash payment to DHI of \$250,000 and one remaining stock payment to DHI of 50,000 shares of Solitario common stock, both of which were paid in February 2014. In addition, Solitario has annual advance royalty payments due to the underlying leaseholder of \$300,000 per year and a \$5,000,000 royalty reduction payment due the underlying leaseholder prior to commercial production at Mt. Hamilton. Failure to make these payments to the underlying leaseholder will result in a reduction in Solitario's interest in MH-LLC from 80% to 49% with a corresponding increase in the DHI's interest in MH-LLC.

The MH Agreement provides that all costs for development at Mt. Hamilton after completion of the Feasibility Study will be shared by Solitario and DHI pro-rata. Upon completion of the Feasibility Study, DHI notified Solitario that it had exercised its option of having Solitario contribute DHI's share of costs through commercial completion as a loan, with such loan, plus interest at 8%, being repaid to Solitario from 80% of DHI's share of distributions from MH-LLC. During 2012, Solitario loaned DHI \$127,000 for its share of costs subsequent to the completion of the Feasibility Study. However, subsequently, DHI repaid Solitario \$131,000 for the remaining balance due on the loan from Solitario, including interest, and has no balance due to Solitario as of December 31, 2013 or 2012.

Table of Contents

During 2013, MH-LLC distributed \$250,000 to its members, Solitario and DHI, in proportion to their interests. Solitario received \$200,000 from this distribution which was eliminated in consolidation. During 2012, MH-LLC distributed \$2.5 million to its members in proportion to their interests. Solitario received \$2 million from this distribution which was eliminated in consolidation. In addition, during 2012 Solitario received \$500,000 from DHI to repay a portion of a prior loan to Solitario, and Solitario agreed to forgive \$35,000 of accrued interest due from DHI, which represented the accrued interest on loans made to DHI in connection with the MH Agreement through June 30, 2012. Including accrued interest of \$17,000 prior to the repayment of the DHI loan, Solitario recorded a net decrease to interest income of \$18,000 for the interest earned and forgiven during 2012.

Sandstorm royalty sale

In June 2012, MH-LLC completed the sale of a 2.4% net smelter royalty on its Mt. Hamilton project to Sandstorm for \$10 million. MH-LLC received an upfront payment of \$6 million upon signing the agreement and received \$4 million on January 15, 2013, which Solitario recorded as a current asset as of December 31, 2012. The Sandstorm royalty agreement provides that in the event Sandstorm does not receive \$10 million in royalty proceeds by December 31, 2022, MH-LLC will make up any shortfall. As a result of this guarantee, Solitario believes it is appropriate to defer the gain on sale, until such time as the potential funding obligation under the guarantee is reduced or eliminated. Solitario reduced mineral property \$3,000,000 and recorded a deferred gain as a long-term liability on the sale of the Sandstorm royalty of \$7,000,000 during 2012.

As part of the agreement, MH-LLC will have the option, for a period of 30 months from the date of the agreement to repurchase the NSR for \$12 million, provided that MH-LLC enters into a gold stream agreement with Sandstorm that has an upfront deposit of greater than \$30 million. In addition, MH-LLC has provided Sandstorm with a right of first refusal on any future royalty or gold stream financing for the Mt. Hamilton project. Pursuant to the agreement, Solitario is jointly and severally liable for all obligations of MH-LLC to Sandstorm.

Capitalized costs

Solitario began capitalizing its development costs incurred at its Mt. Hamilton project subsequent to the completion of the Feasibility Study, as detailed in the following table:

(in thousands)	Year ended	
	December 31,	
	2013	2012
Development expenditures	\$1,854	\$3,107
Capitalized interest	726	—
Property payments	174	325
Capitalized depreciation	30	22
Total capitalized costs	\$2,784	\$3,454

Included in the property payments during 2013 are the issuance of 35,000 shares with a fair value of \$41,000 issued to underlying leaseholders which were recorded as an increase to additional paid-in-capital. Solitario also capitalized \$300,000 during each year of advance royalty payments to the underlying leaseholder of as long-term other assets. See Note 3, "Other assets," below.

*Exploration property*

Solitario's exploration mineral properties at December 31, 2013 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, 2013, none of Solitario's exploration properties have production (are operating) or contain proven or probable reserves. Solitario's exploration 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.

Table of Contents

In addition to its capitalized exploration properties, Solitario has an interest in its Bongará and Mercurio exploration concessions, which are currently subject to joint venture agreements where joint venture partners made payments to Solitario. Solitario records joint venture property payment revenue received in excess of capitalized costs and recorded \$200,000 of joint venture property revenue on its Bongará project during 2013 and 2012 and recorded \$100,000 of joint venture property revenue on its Mercurio project in Brazil during 2013 and 2012. . At December 31, 2013 and 2012, neither of these properties have any remaining capitalized costs.

Solitario also sold its mineral interests in its Yanacocha and Mercurio exploration projects and retained a royalty interest in each. Solitario has no capitalized costs related to these royalty interests.

*Discontinued projects*

During 2013, Solitario recorded \$13,000 of mineral property write-downs related to its Cerro Azul and Atico properties in Peru and its Jaripo property in Mexico. During 2012, Solitario recorded \$31,000 of mineral property mineral property write-downs related to its Excelsior, Triunfo and Espanola projects.

*Exploration Expense*

The following items comprised exploration expense:

	For the year ended December 31,	
(in thousands)	2013	2012
Geologic and field expenses	\$311	\$1,307
Administrative	486	378
Mt. Hamilton exploration	—	301
Total exploration expense	\$797	\$1,986

3. Other assets:

The following items comprised other assets:

(in thousands)	December 31,
----------------	--------------

	2013	2012
Deferred offering costs RMB Loan	\$322	\$518
Accumulated Mt. Hamilton advance royalty payments <sup>(1)</sup>	600	300
Furniture and Fixtures, net of accumulated depreciation	95	143
Exploration bonds and other assets	52	111
Total other assets	\$1,069	\$1,072

<sup>(1)</sup> Total advanced royalty payments at Mt. Hamilton are \$1,700,000. The capitalized advanced royalty payments here exclude advanced royalty payments of \$1,100,000 incurred by Ely, prior to the formation of MH-LLC and payments by MH-LLC expensed prior to completion of the Feasibility Study.

In connection with the RMB Loan, Solitario recorded deferred offering costs that are being amortized on a straight-line basis to interest cost over 36 months, the term of the Facility Agreement. See Note 5, "Long-term debt," below.

#### 4. Short-term debt:

Solitario maintained a secured credit line agreement with UBS Bank, USA ("UBS") during 2013 and 2012. At December 31, 2013, the credit line is secured by all of Solitario's assets held in its UBS brokerage account, consisting primarily of 600,000 Kinross shares. The UBS credit line may be terminated by UBS at any time by UBS or Solitario and any amounts outstanding must be repaid upon termination. The UBS 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 is 0.17% as of December 31, 2013. The average interest rate was approximately 2.45% and 2.49%, respectively, for 2013 and 2012. UBS may change the base rate at any time. The UBS credit line provides that Solitario may borrow up to \$2 million, subject to the value of the assets held in its brokerage account at UBS, and that Solitario maintain a minimum equity value percentage in its UBS brokerage account above 40%.

Table of Contents

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 credit line and any other balances owed to UBS. UBS 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 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, 2013, the equity value in Solitario's UBS brokerage account was 69%.

Solitario also maintained a short-term margin account with RBC Capital Markets, LLC ("RBC") during 2012, which was closed during 2013 and Solitario no longer has any short-term borrowing capacity with RBC. Solitario borrowed against its short-term margin account during 2012, which was repaid during 2012. During 2012, the loans carried interest at a margin loan rate of 4.25% per annum. At December 31, 2013, Solitario has no outstanding short-term debt owed to RBC.

The following tables summarize Solitario's short-term debt:

(in thousands)	December 31,	
	2013	2012
UBS short-term credit line		
Beginning balance	\$ 1,500	\$ 2,000
Borrowing	2,300	1,200
Repayments	(2,998)	(1,700)
Ending balance	802	1,500
RBC short term margin loan		
Beginning balance	—	—
Borrowing	—	1,465
Repayments	—	(1,465)
Ending balance	—	—
Total short-term margin loans	\$ 802	\$ 1,500

(in thousands)	Year	
	ended	
	December	
	2013	2012
Interest UBS short-term credit line	\$ 22	\$ 36
Interest RBC short-term margin loan	—	22
Total interest short term margin loans	\$ 22	\$ 58

During 2013 Solitario capitalized all of its interest to mineral property. See Note 2, "Mineral properties," above.

5. Long-term debt:



*Augusta long-term debt*

In connection with the formation of MH-LLC, the Mt. Hamilton properties contributed by DHI 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 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 at the time of the formation of MH-LLC. The payments due to Augusta were non-interest bearing. Accordingly, upon formation and the contribution of the mineral properties by DHI to MH-LLC, MH-LLC recorded the 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.

As discussed above under recent developments, on November 22, 2013, Solitario subscribed for 13,571,354 shares of Ely common stock for \$1,300,000 and, pursuant to the Letter Agreement, Ely used the funds from the sale of their shares to fully pay off the Augusta long-term debt. Solitario recorded a gain on early retirement of debt of \$313,000 during 2013 as a result of the payoff of the Augusta long-term debt.

In April 2013, Ely exercised its right to reduce to \$500,000 Solitario's required subscription of \$750,000 for Ely common stock, funds from which Ely was required to pay the June 1, 2013 payment due to Augusta. Ely agreed to pay the

Table of Contents

remaining \$250,000 due to Augusta from its own funds, for a total payment of \$750,000 which was done in June 2013. As a result, Solitario received 5,131,150 shares of Ely common stock and recorded the fair value of the Ely stock received as marketable equity securities and an increase in additional paid-in-capital. Ely's payment of the \$250,000 portion of the Augusta debt was recorded as an increase in non-controlling interest in the equity section of Solitario's balance sheet.

During 2013 and 2012 Solitario recorded \$127,000 and \$184,000, respectively, for accretion of interest related to the Augusta long-term debt and paid \$1,800,000 and \$750,000, respectively, in cash on the long-term note. All interest accreted on the Augusta long-term debt during 2013 was capitalized to mineral property. See Note 2, "Mineral properties," above.

*RMB Facility Agreement*

On August 10, 2012, Solitario entered into a the Facility Agreement with RMBAH, and RMBR whereby Solitario may borrow up to \$5,000,000 from RMBAH (with any amounts outstanding collectively being the "RMB Loan") at any time during the 24 month period commencing on August 21, 2012, (the "Availability Period"), after which time any undrawn portion of the \$5,000,000 commitment will be cancelled and will no longer be available for drawdown. Solitario recorded \$588,000 of deferred offering costs related to the Facility Agreement in long-term assets, which are being amortized over the 36 month life of the Facility Agreement on a straight-line basis. See Note 3, "Other Assets," above. In connection with the Facility Agreement, Solitario recorded a warrant discount related to the 1,624,748 warrants issued to RMBAH at the time Solitario entered into the Facility Agreement (the "RMB Warrants") and recorded a debt discount of \$650,000 for the fair value of the RMB warrants. The debt discount is being amortized to interest cost over 36 months, the term of the Facility Agreement. See Note 7, "Derivative instruments," below. The RMB Loan amounts bear interest at the 90-day LIBOR rate plus 5%, payable in arrears on the last day of each quarterly interest period. The RMB Loan interest rate was 5.25% at December 31, 2013. The RMB Loan may be repaid at any time without penalty. Any amounts repaid may not be redrawn under the Facility Agreement. The RMB Loan is secured by a lien on Solitario's 80% interest in MH-LLC as well as a general security interest in Solitario's remaining assets.

The following table summarizes the RMB Loan:

(in thousands)	RMB Loan borrowing	RMB Warrant discount	RMB Long-term Debt
Beginning balance December 31, 2011	\$ —	\$ —	\$ —
Initial borrowing, August 21, 2012	1,500	(650 )	850
Amortization of discount to interest cost	—	77	77
Ending balance December 31, 2012	\$ 1,500	\$ (573 )	927
Borrowing	2,000	—	2,000
Amortization of discount to interest cost	—	217	217
Ending balance December 31, 2013	\$ 3,500	\$ (356 )	\$ 3,144

Solitario recorded the following interest cost related to the RMB Loan:

(in thousands)	Year ended	
	December 31,	
	2013	2012
Interest paid in cash	\$165	\$30
Amortization of the RMB Warrants discount	217	77
Amortization of RMB deferred financing costs	196	70
Total interest expense related to the RMB Loan	\$578	\$177

Solitario capitalized all of its interest incurred during 2013 to mineral property. See Note 2, “Mineral properties,” above.

Table of Contents6. Income taxes:

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

(in thousands)	2013	2012
Current:		
United States	\$5	\$—
Foreign	12	18
Deferred:		
United States	(614)	(853)
Foreign	—	—
Operating loss and credit carryovers:		
United States	421	187
Foreign	—	—
Income tax benefit	\$(176)	\$(648)

Consolidated loss before income taxes includes losses from foreign operations of \$1,564,000 and \$1,944,000 in 2013 and 2012, respectively.

See Note 1, “Business and Summary of Significant Accounting Policies” for a detail of the deferred taxes associated with the sale of marketable equity securities and the deferred taxes associated with unrealized gains and losses associated with other comprehensive income related to marketable equity securities.

The net deferred tax assets/liabilities in the December 31, 2013 and 2012 consolidated balance sheets include the following components:

(in thousands)	2013	2012
Deferred tax assets:		
Loss carryovers	\$9,852	\$10,118
Deferred Gain	2,335	1,253
Stock option compensation expense	932	900
Royalty	1,363	1,492
Earnings in Unconsolidated Subsidiary	798	496
Severance	23	30
Unrealized loss on derivative securities	—	79
Other	107	106
Valuation allowance	(12,545)	(11,441)
Total deferred tax assets	2,865	3,033

Deferred tax liabilities:

Unrealized gain on derivative securities	160	—
MH-LLC investment	1,168	819
Exploration costs	845	845
Unrealized gains on marketable equity securities	688	2,328
Other	4	4
Total deferred tax liabilities	2,865	3,996
Net deferred tax liabilities	\$—	\$963

At December 31, 2012, Solitario has classified its deferred tax liability as current, primarily related to the current portion of its investment in Kinross common stock.

Table of Contents

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

(in thousands)	2013	2012
Expected income tax benefit	\$(741)	\$(1,444)
Non-deductible foreign expenses	—	1
Non-deductible foreign stock compensation expense	18	20
Foreign tax rate differences	31	72
State income tax	303	(82 )
Change in valuation allowance	233	629
MH-LLC Investment	(16 )	102
Permanent differences and other	(4 )	54
Income tax benefit	\$(176)	\$(648 )

During 2013 the valuation allowance was decreased primarily as a result of reduction in the value of its holdings of Kinross with a corresponding decrease in the built-in gains and during 2012 the valuation allowance was increased primarily as a result of increases in Solitario foreign net operating loss carry-forwards, for which it was more likely than not that the deferred tax benefit would not be realized.

At December 31, 2013, Solitario has unused US federal Net Operating Loss ("NOL") carryovers of \$1,250,000 and unused US State NOL carryovers of \$3,543,000 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 two to five years depending on the foreign jurisdiction.

Solitario and its subsidiaries are subject to the following material taxing jurisdictions: United States Federal, States of Colorado and Nevada, Mexico, Peru and Brazil. The tax years that remain open to examination by the United States Internal Revenue Service are years 2010 through 2013. The tax years that remain open to examination by the State of Colorado are years 2009 through 2013. The tax years that remain open to examination by Mexico are years 2010 through 2013. 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, 2013, or December 31, 2012 or for the years then ended.

## 7. Derivative instruments:

### *RMB warrants*

Pursuant to the Facility Agreement, the Company issued 1,624,748 warrants to RMBAH as partial consideration for financing services provided in connection with the Facility Agreement. Each RMB Warrant entitles the holder to purchase one share of Solitario common stock at an exercise price of \$1.5387 for a term of 36 months, subject to standard anti-dilution adjustments. Solitario recorded a discount to the RMB Loan for the fair value of the RMB Warrants. Solitario is amortizing this discount on a straight-line basis to interest cost over the three-year term of the RMB Loan and as of December 31, 2013 the remaining unamortized warrant discount was \$356,000.

Solitario has recorded a liability for the fair value of the RMB Warrants based upon a Black-Scholes model and adjusts the fair value of the warrants at each balance sheet date, with changes in value recorded in other income (loss) in the statement of operations. The following tables summarize the RMB Warrants:

	Warrant Liability (in thousands)	Black Scholes model			
		Life (months)	Stock price Per share	Volatility (%)	Risk- Free interest rate
Initial RMB warrant liability balance	\$ 650	36	\$1.19	62	0.39
Loss (gain) on warrant liability	488				
Ending balance December 31, 2012	\$1,138	32	1.68	62	0.35
Loss (gain) on warrant liability	(998)				
Ending balance December 31, 2013	\$ 140	20	0.85	55	0.38

Table of Contents*Covered call options*

From time to time Solitario has sold covered call options against its holdings of Kinross. 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. Solitario has not designated its covered calls as hedging instruments as described in ASC 815, "Derivatives and Hedging," and any changes in the fair value of its covered calls are recognized in the statement of operations in the period of the change. During 2013 and 2012, Solitario recorded the following liabilities and gain or loss on derivative instruments related to Kinross covered call options:

(in thousands)	KGC	KGC	KGC
	February 2013	February 2014	February 2014
	\$11 call	\$7 call	\$8 call
Shares of Kinross	100	100	50
Balance December 31, 2011	\$ —	\$ —	\$ —
Sale of call	51	—	—
(Gain) on derivative instrument	(48 )	—	—
Ending liability balance December 31, 2012	\$ 3	\$ —	\$ —
Sale of call	—	55	35
(Gain) on derivative instrument	(3 )	(53 )	(34 )
Ending liability balance December 31, 2013	\$ —	\$ 2	\$ 1

*Other warrants*

During 2010, in connection with the acquisition of Mt. Hamilton and the formation of MH-LLC, Solitario acquired warrants to purchase shares of Ely stock for Cdn\$0.25 per share, with warrants for 833,333 shares that expired on August 30, 2012 and warrants for 833,333 that expired on October 19, 2012. In May 2011 Solitario acquired warrants to purchase shares of International Lithium Corp., which were written off during 2012 and expired during 2013. Solitario has recorded gains and losses on these warrants in its gain (loss) on derivative instruments in the statement of operations as detailed below.

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, 2013 and 2012:

(in thousands)	Derivatives	December 31,	December 31,
	Balance Sheet Location	2013	2012



Derivatives not designated as hedging instruments under  
ASC 815

RMB warrants	Long-term liabilities	\$140	\$ 1,138
Kinross calls	Other current liabilities	\$ 3	-

The following amounts are included in loss on derivative instruments in the consolidated statement of operations for the years ended December 31, 2013 and 2012:

(in thousands)	Year ended December 31, 2013	2012
Gain (loss) on derivatives not designated as hedging instruments under ASC 815		
Kinross Calls	\$ 90	\$ 48
Ely warrants	—	(74 )
ILC warrants	—	(4 )
Total gain (loss)	\$ 90	\$ (30 )

8. Fair value of financial instruments:

For certain of Solitario's financial instruments, including cash and cash equivalents, the Sandstorm royalty sale receivable, 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 Ely equity investments are carried at their estimated fair value primarily based on publicly available quoted market prices.

Table of Contents

Solitario applies 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 the years ended December 31, 2013 and 2012, 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, 2013:

(in thousands)	Level 1	Level 2	Level 3	Total
Assets				
Marketable equity securities	\$3,973	\$—	\$—	\$3,973
Liabilities				
RMB warrants	—	140	—	140
Kinross calls	3			3

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, 2012:

(in thousands)	Level 1	Level 2	Level 3	Total
Assets				
Marketable equity securities	\$7,093	\$—	\$—	\$7,093
Liabilities				
RMB warrants	—	1,138	—	1,138

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

Marketable equity securities: At December 31, 2013 and 2012, the fair value of Solitario's investment in Kinross, TNR and Ely marketable equity securities is based upon quoted market prices.

Kinross calls: The fair value of the Kinross calls, which are traded on a public market, is based upon quoted market prices.

RMB warrants: The RMB warrants issued by Solitario are not traded on any public exchange. Solitario determines the fair value of the RMB warrants using a Black-Scholes pricing model, using inputs, including share price, volatility of Solitario common stock and discount rates that include an assessment of performance risk, that are readily available from public markets therefore they are classified as Level 2 inputs as of December 31, 2013 and 2012.

During the year ended December 31, 2013, Solitario did not change any of the valuation techniques used to measure its financial assets and liabilities at fair value.

Table of Contents

9. 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, "Mineral properties," above. Solitario estimates its 2014 property rentals and option payments, excluding certain earn-in payments discussed below, for properties we own or operate to be approximately \$1,040,000, which includes \$294,000 of mineral property payments at Mt. Hamilton, assuming that our joint ventures continue in their current status and that we do not appreciably change our property positions on existing properties; approximately \$694,000 of these annual payments are paid or 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. The total rent expense for these offices during 2013 and 2012 was approximately \$72,000 and \$61,000, 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 2015 of \$47,000.

As a result of completion of the Mt. Hamilton feasibility study, Solitario is committed to make certain earn-in payments, as contemplated in the MH Agreement: (1) annual cash payments of \$300,000 for an advance minimum royalty due to an underlying royalty holder; (2) payment to DHI of \$250,000 in cash and delivery of 50,000 shares of Solitario common stock by February 21, 2014; and (3) buy down a portion of an existing 6% net smelter royalty to a 1% net smelter royalty by paying \$5,000,000 to an underlying royalty holder on or before commercial completion of the Mt. Hamilton project.

10. 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 classifies its stock options under the 2006 Plan as equity options in accordance with the provisions of ASC 718 "Compensation – Stock Compensation."

b.) 2006 Plan stock option compensation

Solitario's outstanding options from the 2006 Plan 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. The following table shows the grant date fair value of Solitario's options grants from the 2006 Plan as of the date of grant.

Grant date fair value

Grant Date	12/17/12	5/5/10	5/19/09
Option – grant date price (Cdn\$)	\$1.49	\$2.40	\$1.55
Options granted	165,000	2,065,000	519,000
Expected life yrs.	5.0	5.0	5.0
Expected volatility	68 %	56 %	56 %
Risk free interest rate	0.7 %	2.2 %	1.9 %
Weighted average fair value	\$0.84	\$1.19	\$0.65
Grant date fair value	\$139,000	\$2,449,000	\$339,000

Solitario recorded \$189,000 and \$732,000, respectively, of stock option expense from the 2006 Plan during 2013 and 2012 included in general and administrative expense, for the amortization of grant date fair value with a credit to additional paid-in capital.

Table of Contents

## c.) 2006 Plan Stock option activity

During the year ended December 31, 2013, options for 117,500 shares were exercised for cash proceeds of \$184,000. During 2012 there were no shares exercised from the 2006 Plan. The following table summarizes the activity for stock options outstanding under the 2006 Plan as of December 31, 2013 and 2012:

	2013			2012		
	Options	Weighted Average Exercise Price (Cdn\$)	Aggregate Intrinsic value(1)	Options	Weighted Average Exercise Price (Cdn)\$	Aggregate intrinsic Value(1)
2006 Plan						
Outstanding, beginning of year	2,598,400	\$ 2.22		2,433,400	\$ 2.27	
Granted	—	—		165,000	\$ 1.49	
Exercised	(117,500 )	1.55		—	—	
Cancelled	—	—		—	—	
Forfeited	(61,900 )	2.40		—	—	
Outstanding, end of year	2,419,000	\$ 2.25	\$ —	2,598,400	\$ 2.22	\$ 1,650
Exercisable, end of year	2,336,500	\$ 2.27	\$ —	1,958,400	\$ 2.22	\$ 413

(1)The intrinsic value at December 31, 2013 and 2012 based upon the quoted market price of Cdn\$0.87 and Cdn\$1.50, respectively, per share for our common stock on the TSX and an exchange ratio of 0.93485 and 1.0031, respectively, United States dollars per Canadian dollar.

## a.) The 2013 Plan

On June 18, 2013 Solitario's shareholders approved the 2013 Solitario Exploration and Royalty Corp. Omnibus Stock and Incentive Plan (the "2013 Plan"). Under the terms of the 2013 Plan, the Board of Directors may grant awards for up to 1,750,000 shares to Directors, officers, employees and consultants. Such awards may take the form of stock options, stock appreciation rights, restricted stock, and restricted stock units. The terms and conditions of the awards are pursuant to the 2013 Plan and are granted by the Board of Directors or a committee appointed by the Board of Directors. Solitario classifies its awards from the 2013 Plan as equity awards under the provisions of ASC 718 "Compensation – Stock Compensation."

## b.) Stock option compensation

Solitario's made two grants of options during 2013 from the 2013 Plan which 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. The following table shows the grant date fair value of Solitario's options grants from the 2013 Plan as of the date of grant.

Grant date fair value

Grant Date	6/18/13	10/21/13
Option – grant date price	\$1.14	\$0.94
Options outstanding	120,000	1,280,000
Expected life yrs.	5.0	5.0
Expected volatility	68 %	67 %
Risk free interest rate	1.24 %	1.39 %
Weighted average fair value	\$0.65	\$0.53
Grant date fair value	\$78,000	\$674,000

Solitario recorded \$231,000 of stock option expense from the 2013 Plan during 2013 included in general and administrative expense, for the amortization of grant date fair value with a credit to additional paid-in capital.

Table of Contents

## c.) Stock option activity

The following table summarizes the activity for stock options outstanding under the 2013 Plan as of December 31, 2013:

	2013	Weighted Average Exercise Price	Aggregate Intrinsic value(1)
	Options		
2013 Plan			
Outstanding, beginning of year	—	—	
Granted	1,400,000	0.96	
Exercised	—	—	
Cancelled	—	—	
Forfeited	—	—	
Outstanding, end of year	1,400,000	\$ 0.96	\$ —
Exercisable, end of year	350,000	\$ 0.96	\$ —

(1)The intrinsic value at December 31, 2013 based upon the quoted market price of \$0.85, per share for our common stock on the NYSE-MKT.

11. Related party transactions:

On July 26, 2013, Solitario closed a private placement of 2,451,892 shares of its common stock at a price of \$0.84 per share for total proceeds of \$2,060,000 (the "Offering"). The Offering was unanimously approved by our Board of Directors and, as part of the Offering; insiders subscribed for and acquired 606,665 shares (the "Insider Shares") for a total purchase of \$510,000. The offer and sale of the Insider Shares was unanimously approved by the Audit Committee of the Board of Directors. All shares in the Offering were offered and sold on the same terms and conditions.

On June 26, 2012, Christopher Herald, President and Chief Executive Officer of Solitario, and James Maronick, Chief Financial Officer of Solitario, purchased shares of the Company's common stock at a price of \$1.22 per share, with Mr. Herald purchasing 180,000 shares and Mr. Maronick purchasing 45,000 shares. The purchase of the shares was unanimously approved by Solitario's Board of Directors and was also unanimously approved by Solitario's Audit Committee of the Board of Directors. The price of the shares was the last closing price of Solitario's common stock as quoted on the NYSE MKT (formerly NYSE Amex) on June 25, 2012. Solitario received total proceeds of \$275,000.



12. Segment reporting

With the completion of the Feasibility Study on February 22, 2012, Solitario now operates in two segments, (i) mineral exploration and (ii) mining development and operations. Solitario is capitalizing Mt. Hamilton development and operations costs subsequent to February 22, 2012, as detailed above in Note 2, "Mineral properties."

The following summarizes Solitario segment information for the year ended December 31, 2013:

(in thousands)	Year ended December 31, 2013			
	Mt Hamilton	Exploration	Corporate and Other	Consolidated
Exploration expense	\$—	\$797	\$—	\$797
Interest expense	—	—	—	—
Other (income) loss (1)	(287	) 784	887	1,384
Pre-tax income (loss)	\$287	\$(1,581	) \$(887	) \$(2,181
Total assets (2)(3)	\$14,283	\$784	\$4,433	\$19,500
Capital Expenditures (4)	\$3,094	\$5	\$4	\$3,103

(1) Mt. Hamilton other includes gain on early retirement of debt of \$313. Corporate and other includes gain on sale of marketable equity securities of \$142.

(2) Exploration total assets include equity method investment of \$153.

(3) Corporate and other total assets include investment in marketable equity securities of \$3,973.

(4) Capital expenditures at Mt. Hamilton include capitalized interest of \$726 and capitalized other assets of \$311.

Table of Contents

The following summarizes Solitario segment information for the year ended December 31, 2012:

(in thousands)	Year ended December 31, 2012			
	Mt Hamilton	Exploration	Corporate and Other	Consolidated
Exploration expense	\$301	\$1,685	\$—	\$1,986
Interest expense	184	—	234	418
Other (1)	58	798	986	1,842
Pre-tax (loss)	\$(543	) \$(2,483	) \$(1,220	) \$(4,246
Total assets (2)(3)	\$14,236	\$1,467	\$7,780	\$23,483
Capital Expenditures	\$3,789	\$3	\$62	\$3,854

(1) Corporate and other includes gain on sale of marketable equity securities of \$1,528.

(2) Exploration total assets include equity method investment of \$1,165.

(3) Corporate and other total assets include investment in marketable equity securities of \$7,093.

### 13. Subsequent events

On January 28, 2014, holders of option awards from the 2006 Plan voluntarily cancelled awards for 1,797,000 options with an option price of Cdn\$2.40 with an expiration date of May 5, 2015 to allow Solitario to have additional financial flexibility. No consideration was given or received by the holders of the options to cancel the awards.

On February 28, 2014 Solitario closed a private placement of 1,600,000 shares of Solitario common stock priced at \$1.05 per share for total proceeds of \$1,680,000 (the "2014 Offering"). Solitario retained a placement agent in connection with the portion of the Offering conducted in Canada and paid the placement agent a fee of \$50,000 for the sale effected to the single Canadian investor that participated in the 2014 Offering.

Table of Contents

**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, 2013, 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. There were no changes over financial reporting pursuant to Item 308(c) of Regulation SK during the three months ended December 31, 2013.

This annual report does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. As a smaller reporting company, Solitario's management's report was not subject to attestation by our independent registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit us to provide only management's report in this annual report.

**Item 9B. Other Information**

None

Table of Contents

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, 2013 pursuant to Section 14(a) of the Exchange Act (the "2014 Proxy").

Item 11. Executive Compensation

The information required under Item 11 is incorporated herein by reference to the information set forth in the 2014 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 2014 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 2014 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 2014 Proxy.



Table of Contents

**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, 2013, and 2012  
Consolidated Statements of Operations for the years ended December 31, 2013 and 2012  
Consolidated Statements of Comprehensive Loss for the years ended December 31, 2013 and 2012  
Consolidated Statements of Shareholder's Equity for the years ended December 31, 2013 and 2012  
Consolidated Statements of Cash Flows for the years ended December 31, 2013 and 2012  
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.



Table of Contents

**SIGNATURES**

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 7, 2014

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.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/</u> Christopher E. Herald, Chief Executive Officer	Principal Executive Officer and Director	<u>March 7, 2014</u>
<u>/s/</u> James R. Maronick, Chief Financial Officer	Principal Financial and Accounting Officer	<u>March 7, 2014</u>
<u>/s/</u> Mark E. Jones, III	     A majority of	
<u>/s/</u> Brian Labadie	the Board of   Directors	<u>March 7, 2014</u>
<u>/s/</u> Leonard Harris	   	
<u>/s/</u>		



John Hainey

|  
|  
|  
|  
|

By: /s/

James R. Maronick,  
Attorney-in-fact

Table of Contents

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 99.1 to Solitario's Form 8-K filed on March 22, 2013)
- 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)
- 4.2 Form of Warrant Certificate of Solitario Exploration & Royalty Corp. (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on August 16, 2012)
- 10.1 Letter Agreement dated April 22, 2013 between Solitario, Ely, and DHI (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on April 25, 2013)
- 10.2 Subscription Agreement dated April 22, 2013 between Solitario and Ely subscribing for 5,131,150 shares of Ely common stock. (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on April 25, 2013)
- 10.3 Third Amendment to mining lease dated May 23, 2013 between CMC, MH-LLC and Solitario. (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on May 24, 2013)
- 10.4 Third Amendment to mining lease dated May 23, 2013 between Carrington, MH-LLC and Solitario. (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on May 24, 2013)
- 10.5 Letter agreement between the Company and DHI-US with respect to the Lease Amendments dated May 23, 2013. (incorporated by reference to Exhibit 99.3 to Solitario's Form 8-K filed on May 24, 2013)
- 10.6 2013 Solitario Exploration & Royalty Corp. Ominbus Stock and Incentive Plan. (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on June 20, 2013)
- 10.7 Subscription Agreement dated July 15, 2013 between Solitario and Mr. Christopher Herald. (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on July 19, 2013)
- 10.8 Subscription Agreement dated July 15, 2013 between Solitario and Mr. Walt Hunt. (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on July 19, 2013)
- 10.9 Subscription Agreement dated July 15, 2013 between Solitario and Mr. James Maronick. (incorporated by reference to Exhibit 99.3 to Solitario's Form 8-K filed on July 19, 2013)
- 10.10 Subscription Agreement dated July 15, 2013 between Solitario and Mr. Brian Labadie. (incorporated by reference to Exhibit 99.4 to Solitario's Form 8-K filed on July 19, 2013)
- 10.11

Edgar Filing: SOLITARIO EXPLORATION & ROYALTY CORP. - Form 10-K

Subscription Agreement dated July 15, 2013 between Solitario and Mr. Leonard Harris. (incorporated by reference to Exhibit 99.5 to Solitario's Form 8-K filed on July 19, 2013)

10.12 Letter Agreement dated November 22, 2013 between Solitario, Ely, and DHI (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on November 27, 2013)

10.13 Subscription Agreement dated November 22, 2013 between Solitario and Ely subscribing for 13,571,354 shares of Ely common stock DHI (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on November 27, 2013)

Table of Contents

- 10.14 Second Amendment to the Limited Liability Company Operating Agreement of Mt. Hamilton LLC dated November 22, 2013 (incorporated by reference to Exhibit 99.3 to Solitario's Form 8-K filed on November 27, 2013)
- 10.15 Facility Agreement dated August 10, 2012 between Solitario, RMBAH and RMBR. (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on August 16, 2012)
- 10.16 Security Agreement dated August 10, 2012 between Solitario, RMBAH and RMBR. (incorporated by reference to Exhibit 99.3 to Solitario's Form 8-K filed on August 16, 2012)
- 10.17 Pledge Agreement dated August 10, 2012 between Solitario, RMBAH and RMBR. (incorporated by reference to Exhibit 99.4 to Solitario's Form 8-K filed on August 16, 2012)
- 10.18 Side Agreement dated August 10, 2012 between Solitario, RMBAH, RMBR, DHI and Ely. (incorporated by reference to Exhibit 99.5 to Solitario's Form 8-K filed on August 16, 2012)
- 10.19 Net smelter royalty agreement for purchase of a 2.4% NSR Royalty by Sandstorm for \$10 million by and among MH-LLC, Solitario and Sandstorm dated June 11, 2012. (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on June 13, 2012)
- 10.20 Subscription agreement between Solitario and Mr. Christopher E. Herald. (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on July 2, 2012)
- 10.21 Subscription agreement between Solitario and Mr. James R. Maronick. (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on July 2, 2012)
- 10.22 Amendment of the Mt. Hamilton LLC Operating Agreement dated June 28, 2012 between Solitario and DHI Minerals (US), Ltd. (incorporated by reference to Exhibit 99.3 to Solitario's Form 8-K filed on July 2, 2012)
- 10.23 Letter Agreement dated June 28, 2012 between Solitario and DHI Minerals (US), Ltd. (incorporated by reference to Exhibit 99.4 to Solitario's Form 8-K filed on July 2, 2012)
- 10.24 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)
- 10.25 Letter agreement between Solitario Exploration & Royalty Corp. and DHI 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)
- 10.26 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)
- 10.27 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)

- Limited Liability Company Contribution Agreement among Solitario Exploration & Royalty Corp., DHI  
10.28 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)
- Solitario Resources Corporation 2006 Stock Option Incentive Plan (As Amended), an amendment of the  
10.29 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)

Table of Contents

- 10.30 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)
- 10.31 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)
- 10.32 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)
- 10.33 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)
- 10.34 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)
- 10.35 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)
- 10.36 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)
- 10.37 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)
- 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 EKS&H LLLP
- 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

Table of Contents

101 \* The following financial statements, formatted in XBRL: (i) Consolidated Balance Sheets as of December 31, 2013 and 2012; (ii) Consolidated Statements of Operations for the years ended December 31, 2013 and 2012; (iii) Consolidated Statements of Comprehensive Loss for the years ended December 31, 2013 and 2012; (iv) Consolidated Statements of Shareholders' Equity for the years ended December 31, 2013 and 2012; (v) Consolidated Statements of Cash Flows for the years ended December 31, 2013 and 2012; and (vi) Notes to the Consolidated Financial Statements.

\* Filed herewith