

# **RED EAGLE MINING CORPORATION**

Suite 920 – 1030 West Georgia Street  
Vancouver, British Columbia, V6E 2Y3

## **ANNUAL INFORMATION FORM**

FOR THE YEAR ENDED December 31, 2013

Dated: April 22, 2014

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## **GLOSSARY OF GENERAL TERMS**

In this Annual Information Form, unless there is something in the subject matter or context inconsistent therewith, the following capitalized words and terms have the following meanings:

<b>Affiliate</b>	A company is an "Affiliate" of another company if: <ul style="list-style-type: none"><li>(a) one of them is the subsidiary of the other; or</li><li>(b) each of them is controlled by the same Person;</li></ul>
<b>Associate</b>	means, when used to indicate a relationship with a Person, <ul style="list-style-type: none"><li>(a) a partner, other than a limited partner, of that Person;</li><li>(b) a trust or estate in which that Person has a substantial beneficial interest or for which that Person serves as trustee or in a similar capacity;</li><li>(c) an issuer in respect of which that Person beneficially owns or controls, directly or indirectly, voting securities carrying more than 10% of the voting rights attached to all outstanding voting securities of the issuer, or</li><li>(d) a relative, including the spouse, of that Person or a relative of that Person's spouse, if the relative has the same home as that Person;</li></ul>
<b>Common Shares:</b>	means the common shares of the Corporation;
<b>company:</b>	unless specifically indicated otherwise, means a corporation, incorporated association or organization, body corporate, partnership, trust, association or other entity other than an individual;
<b>Control Person:</b>	means any person or company that holds or is one of a combination of persons or companies that holds a sufficient number of any of the securities of an issuer so as to affect materially the control of that issuer, or that holds more than 20% of the outstanding voting securities of an issuer except where there is evidence showing that the holder of those securities does not materially affect the control of the issuer;
<b>Corporation:</b>	means Red Eagle Mining Corporation, a company incorporated under the laws of British Columbia;
<b>Exchange:</b>	means TSX Venture Exchange Inc.;
<b>Insider:</b>	if used in relation to an issuer, means: <ul style="list-style-type: none"><li>(a) a director or senior officer of the issuer;</li></ul>

- (b) a director or senior officer of another issuer that is an insider or subsidiary of the issuer;
- (c) a Person that beneficially owns or controls, directly or indirectly, voting shares carrying more than 10% of the voting rights attached to all outstanding voting shares of the issuer; or
- (d) the issuer itself if it holds any of its own securities;

**NI 43-101 or National Instrument 43-101:** means National Instrument 43-101 "Standards of Disclosure for Mineral Projects" adopted by the Canadian Securities Administrators;

**Non-Arm's Length Party:** means a): in relation to a company: (i) a promoter, officer, director, other Insider or Control Person of that company and any Associates or Affiliates of any of such Persons; (ii) another entity or an Affiliate of that entity, if that entity or its Affiliate have the same promoter, officer, director, Insider or Control Person; and (b) in relation to an individual, any Associate of the individual or any company of which the individual is a promoter, officer, director, Insider or Control Person;

**Person:** means a company or individual;

**Santa Rosa Gold Project:** means concession contracts B7560005, B7171005, H5791005, H5790005, LDM08061, LKA08004, JC3-08091, JC3-08092X, KIG-11151, JIT-08461, JI8-08071, KGM-14153X, KGM-14151, KGM-14242XKGM-14241, LIN-11551, ICQ-0800643X and OG2-081816, some of which are the subject of the Santa Rosa Purchase Agreement and Bullet Purchase Agreement;

**Shareholder:** means a holder of Common Shares of the Corporation;

## **PRELIMINARY NOTES**

### *Financial Statements and MD&A*

The Corporation's audited financial statements and management's discussion and analysis ("MD&A") have been filed with Canadian securities regulatory authorities and are available electronically under the Corporation's profile at [www.sedar.com](http://www.sedar.com). The Corporation's financial statements are prepared in accordance with and all financial information in this Annual Information Form is prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS"). The Corporation's fiscal year end is December 31.

### *Effective Date of Information*

All information in this Annual Information Form is as of December 31, 2013 unless otherwise indicated.

### *Forward-Looking Statements*

This Annual Information Form contains or incorporates by reference "forward-looking information" which means disclosure regarding possible events, conditions, acquisitions, or results of operations that is based on assumptions about future conditions and courses of action and may include future oriented financial information with respect to prospective results of operations, financial position or cash flows that is presented either as a forecast or a projection, and may include, but is not limited to, statements with respect to the future financial and operating performance of the Corporation, its current and proposed subsidiaries and its current and proposed mineral projects, the future price of gold, the estimation of mineral reserves and resources, the realization of mineral reserve estimates, the timing and amount of estimated future production, costs of production, working capital requirements, capital and exploration expenditures, costs and timing of mine development, processing facility construction and the development of new deposits, costs and timing of future exploration, requirements for additional capital, government regulation of mining operations, environmental risks, reclamation expenses, title disputes or claims, limitations of insurance coverage and the timing and possible outcome of pending litigation and regulatory matters. Often, but not always, forward-looking statements can be identified by the use of words such as "plans", "proposes", "expects", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "believes" or variations (including negative variations) of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Corporation and/or its current and proposed subsidiaries to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others, general business, economic, competitive, political and social uncertainties; the actual results of current exploration activities; actual results of reclamation activities; the outcome of negotiations, conclusions of economic evaluations and studies; changes in project parameters and returns as plans continue to be refined; future prices of uranium; possible variations of ore grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accidents, labour disputes and other risks of the mining industry; political instability; insurrection or war; political uncertainty; arbitrary changes in law; delays in obtaining governmental approvals or financing or in the completion of development or construction activities. As a result, actual actions, events or results may differ materially from those described in forward-looking statements and there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. Forward-looking statements contained herein are made as of the date of the Annual Information Form and the Corporation disclaims any obligation to update any forward-looking statements, whether as a result of new information, future



events or results or otherwise. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements due to the inherent uncertainty therein.

### *Currency*

All dollar amounts in this Annual Information Form are expressed in Canadian dollars, unless otherwise indicated.

### *Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Resources*

This Annual Information Form (including the documents incorporated by reference therein) uses the terms "measured", "indicated" and "inferred" mineral resources. United States investors are advised that while such terms are recognized and required under Canadian securities legislation, the United States Securities and Exchange Commission does not recognize them. "Inferred mineral resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility.

It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. United States investors are cautioned not to assume that all or any part of measured or indicated resources will ever be converted into mineral reserves. United States investors are also cautioned not to assume that all or part of an inferred mineral reserve exists or is economically or technically mineable.

## **ARTICLE 1 CORPORATE STRUCTURE**

### **1.1 NAME, ADDRESSES AND INCORPORATION**

The full corporate name of the Corporation is "Red Eagle Mining Corporation". The head office of the Corporation is located at Suite 920 – 1030 West Georgia Street, Vancouver, British Columbia, V6E 2Y3 and the records office of the Corporation is located at Suite 1600 – 609 Granville Street, Vancouver, British Columbia, V7Y 1C3.

The Corporation was initially incorporated pursuant to the *Business Corporations Act* (British Columbia) on January 4, 2010. On December 12, 2013 the Corporation amended its Articles to include advance notice provisions relating to the nomination of persons for election to the Board of Directors made by the shareholders of the Corporation. The Corporation is a reporting issuer in British Columbia, Alberta and Ontario.

### **1.2 INTERCORPORATE RELATIONSHIPS**

The Corporation currently has two subsidiaries, Red Eagle Mining de Colombia Limited, (a wholly owned British Columbia subsidiary) and Rovira Mining Limited ("Rovira") (a 70% owned British Columbia subsidiary).

## **ARTICLE 2 GENERAL DEVELOPMENT OF THE BUSINESS OF THE CORPORATION**

### **2.1 THREE YEAR HISTORY AND SIGNIFICANT ACQUISITIONS**

The Corporation is a growth-oriented, Canadian-based gold company, focused on exploring and developing gold properties in Colombia. The Corporation currently has interests in two exploration and development projects, the Pavo Real Project and the Santa Rosa Project. The properties of the Corporation are in the exploration stage. The Corporation completed its initial public offering on June 24, 2011 and the Corporation's shares were listed on the TSX Venture Exchange under symbol "RD" on June 28, 2011. Since its initial public offering, the Corporation has focused on development of the Santa Rosa Gold Project. On October 30, 2013 the Corporation completed and filed on SEDAR a Preliminary Economic Assessment for the San Ramon Gold Deposit. (See "Technical Report and Preliminary Economic Assessment, San Ramon Deposit, Santa Rosa Project, Colombia").

On April 15, 2011 the Corporation acquired 100% of the Santa Rosa Gold Project in Antioquia, Colombia, for US\$9,600,000 of which US\$8,900,000 has been paid to date. On August 6, 2013 the Corporation signed an agreement (the August 6, 2013 Amendment) with the vendors deferring the remaining US\$700,000 until November 2014. The Corporation also agreed to acquire certain adjacent concession contracts for US\$780,000, of which US\$40,000 has been paid and US\$740,000 is due upon title transfer. As at December 31, 2013 the outstanding balance relating to these purchases was US\$1,440,000.

On October 22, 2012, concurrent with a private placement financing, the Corporation completed the sale of a 2% royalty over the Santa Rosa property to Liberty Metals and Mining Holdings LLC for gross proceeds of \$8,333,333. The Corporation had the option to sell an additional 1% royalty for \$4,166,667 at any time until December 31, 2013 and on December 20, 2013, the Corporation exercised this option. These transactions were recorded as a credit to the mineral property reducing the value of the property to

nil and the excess was taken as a gain in the statement of income in 2013. The Corporation has the option to repurchase a 1% royalty for \$8,333,333 at any time during the first two years of gold production.

On October 24, 2012 the Corporation executed an agreement with Bullet Holdings Corp. to acquire additional mineral concession contracts totaling 35,910 hectares adjacent to the Corporation's Santa Rosa project. The consideration for the transaction was the issuance of 905,000 common shares, reimbursement of current year concession fees and the granting of a 1.5% royalty over the properties acquired. The Corporation has decided to drop one concession contract and two applications, reducing this recently acquired area from 35,910 hectares to 30,097 hectares. These additional mineral concession contracts are not subject to the Liberty royalty.

On July 2, 2013 the Corporation successfully applied for an additional 1,809 hectares adjacent to the northwest of the existing holdings along the mineralised trend of the Santa Rosa property.

### **ARTICLE 3 BUSINESS OF THE CORPORATION**

#### **3.1 GENERAL**

##### **Business**

The Corporation is in the business of the acquisition and exploration of properties in the gold industry. The Corporation currently has interests in those mineral properties referred to in "General Development of the Business of the Corporation – Three Year History and Significant Acquisitions" above and in "Mineral Projects" below. Its current focus is on the Santa Rosa Property more particularly described under "Mineral Projects" below.

##### **Stage of Development**

The Corporation is in the exploration stage and does not produce, develop or sell any products at this time. The progress on, and results of, work programs on the Corporation's material mineral properties is set out below in the "Mineral Projects" section of this Annual Information Form.

##### **Specialized Skill and Knowledge**

All aspects of the Corporation's business require specialized skills and knowledge. Such skills and knowledge include the areas of geology, drilling, logistical planning and implementation of exploration programs, mining, metallurgy and accounting. While recent increased activity in the resource mining industry has made it more difficult to locate competent employees and consultants in such fields, the Corporation has found that it can locate and retain such consultants and believes it will continue to be able to do so.

##### **Competitive Conditions**

Competition in the mineral exploration industry is intense. The Corporation competes with other mining companies, many of which have greater financial resources and technical facilities for the acquisition and development of, and production from, mineral concessions, claims, leases and other interests, as well as for the recruitment and retention of qualified employees and consultants.

## **Components**

All of the raw materials the Corporation requires to carry on its business are readily available through normal supply or business contracting channels in Colombia. The Corporation has secured personnel to conduct its contemplated programs.

## **Cycles**

The mining business is subject to mineral price cycles. The marketability of minerals and mineral concentrates is also affected by worldwide economic cycles.

## **Economic Dependence**

The Corporation's business is not substantially dependent on any contract such as a contract to sell the major part of its products or services or to purchase the major part of its requirements for goods, services or raw materials, or on any franchise or licence or other agreement to use a patent, formula, trade secret, process or trade name upon which its business depends.

## **Changes to Contracts**

It is not expected that the Corporation's business will be affected in the current financial year by the renegotiation or termination of contracts or sub-contracts.

## **Environmental Protection**

Environmental requirements are being adhered to and monitored on an ongoing basis. It is not expected that the financial and operational effects of environmental protection requirements will have a significant impact on capital expenditures, profit or loss or the competitive position of the Corporation in the near future.

## **Employees**

As at December 31, 2013, the Corporation had 35 full-time employees and no part-time employees. The Corporation also relies upon consultants to carry on many of its activities.

## **Reorganizations**

There were no material reorganizations of the Corporation for the year ended December 31, 2013. On November 1, 2013 the Corporation entered into an agreement with Miranda Gold Corp. pursuant to which the Corporation agreed to transfer all of the shares of Miranda Gold Colombia IV Ltd. held by it (a 70% interest) back to Miranda Gold Corp. The transfer was effected on December 31, 2013.

## **Social or Environmental Policies**

The Corporation has not implemented any social or environmental policies that are fundamental to its operations.

## **3.2 RISK FACTORS**

The Corporation has identified below certain significant risks relating to the Corporation, but it has not identified all of the risks associated with the Corporation. If any of these risks materialize into actual events or circumstances or other possible additional risks and uncertainties of which the Corporation is

currently unaware actually occur, the Corporation's assets, liabilities, financial condition, results of operations (including future results of operations), business and business prospects, are likely to be material and adversely affected. Readers should carefully consider the following risks described below.

### **Exploration, Development and Operations**

Exploration and development of mineral deposits involves a high degree of risk which even a combination of careful evaluation, experience and knowledge may not eliminate. Few properties which are explored are ultimately developed into producing properties. Any potential determination as to whether a mineral deposit will be commercially viable can be affected by such factors as: deposit size, grade, unusual or unexpected geological formations and metallurgy; proximity to infrastructure; metal prices which are highly cyclical; environmental factors; unforeseen technical difficulties; work interruptions; and government regulations, including regulations relating to permitting, prices, taxes, royalties, land tenure, land use, importing and exporting of minerals and environmental protection. The exact effect of these factors cannot be accurately predicted.

The long term profitability of the Corporation's operations will be in part directly related to the cost and success of its exploration programs, which may be affected by a number of factors. Substantial expenditures are required to establish reserves through drilling, to develop processes to extract the resources and, in the case of new properties, to develop the extraction and processing facilities and infrastructure at any site chosen for extraction. Although substantial benefits may be derived from the discovery of a major deposit, no assurance can be given that any such deposit will be commercially viable or that the funds required for development can be obtained on a timely basis.

Mining operations generally involve a high degree of risk. The Corporation's operations will be subject to all the hazards and risks normally encountered in the exploration, development and production of gold and copper, including unusual and unexpected geologic formations, seismic activity, rock bursts, cave-ins, flooding and other conditions involved in the drilling and removal of material, any of which could result in damage to, or destruction of, the mine and other producing facilities, damage to life or property, environmental damage and possible legal liability. Although appropriate precautions to mitigate these risks are taken, operations are subject to hazards such as equipment failure or failure of structures which may result in environmental pollution and consequent liability. Even though the Corporation intends to obtain liability insurance in an amount which it considers adequate, the nature of these risks is such that liabilities might exceed policy limits, the liabilities and hazards might not be insurable, or the Corporation might not elect to insure itself against such liabilities due to high premium costs or other reasons, in which event the Corporation could incur significant costs that could have a material adverse effect upon its financial condition.

### **Risks with Title to Mineral Properties**

The Corporation's interest in the Santa Rosa Gold Project is subject to the Santa Rosa Purchase Agreement pursuant to which the Corporation must make one final cash payment of US\$700,000 on or before November 30, 2014 in order to retain its interest in the property. If the Corporation fails to make this payment, it may lose its interest in the property. Any failure by the Corporation to retain title to properties which comprise its projects could have a material adverse effect on the Corporation and the value of the Common Shares.

The Corporation does not maintain insurance against title. Title on mineral properties and mining rights involves certain inherent risks due to the difficulties of determining the validity of certain claims as well as the potential for problems arising from the frequently ambiguous conveyance history of many mining properties. The Corporation has diligently investigated and continues to diligently investigate and

validate title to its mineral claims; however, this should not be construed as a guarantee of title. The Corporation is continuously in the process of establishing the certainty of the title of mineral concessions which it holds either directly or through its equity interest in its subsidiaries or will be seeking to consolidate those titles through a government-sanctioned process. The Corporation cannot give any assurance that title to properties it acquired individually or through historical share acquisitions will not be challenged or impugned and cannot guarantee that the Corporation will have or acquire valid title to these mining properties.

### **The Corporation Has No Mineral Properties in Production or Under Development**

The Corporation does not currently have mineral properties under development. The future development of properties found to be economically feasible, and the development of which is approved by the Board, will require the construction and operation of mines, processing plants and related infrastructure. As a result, the Corporation is and will continue to be subject to all of the risks associated with establishing new mining operations, including:

- the timing and cost, which can be considerable, of the construction of mining and processing facilities;
- the availability and cost of skilled labour and mining equipment;
- the need to obtain necessary environmental and other governmental approvals and permits and the
- timing of the receipt of those approvals and permits;
- the availability of funds to finance construction and development activities;
- potential opposition from non-governmental organizations, environmental groups or locals;
- groups which may delay or prevent development activities; and
- potential increases in construction and operating costs due to changes in the cost of fuel, power, materials and supplies.

The costs, timing and complexities of developing the Corporation's projects may be greater than anticipated because the majority of such property interests are not located in developed areas, and, as a result, the Corporation's property interests may not be served by appropriate road access, water and power supply and other support infrastructure. Cost estimates may increase as more detailed engineering work is completed on a project. It is common in new mining operations to experience unexpected costs, problems and delays during construction, development and mine start-up. In addition, delays in the early stages of mineral production often occur. Accordingly, the Corporation cannot provide assurance that its activities will result in profitable mining operations at its mineral properties.

### **Metal Price Volatility**

The Corporation's business is strongly affected by the world market price of gold. If the world market price of gold were to drop and the prices realized by the Corporation on gold sales were to decrease significantly and remain at such a level for any substantial period, the Corporation's profitability and cash flow would be negatively affected.

Gold prices can be subject to volatile price movements, which can be material and can occur over short periods of time and are affected by numerous factors, all of which are beyond the Corporation's control. Industry factors that may affect the price of gold include: industrial and jewellery demand; the level of demand for gold as an investment; central bank lending, sales and purchases of gold; speculative trading; and costs of and levels of global gold production by producers of gold. Gold prices may also be affected by macroeconomic factors, including: expectations of the future rate of inflation; the strength of, and confidence in, the U.S. dollar, the currency in which the price of gold is generally quoted, and other currencies; interest rates; and global or regional, political or economic uncertainties.

Depending on the market price of gold, the Corporation may determine that it is not economically feasible to continue some or all of its operations or the development of some or all of the its projects, as applicable, which could have an adverse impact on the Corporation's financial performance and results of operations. In such a circumstance, the Corporation may also curtail or suspend some or all of its exploration activities.

### **History of Losses and No Immediate Foreseeable Earnings**

The Corporation has a history of losses and there can be no assurance that it will ever be profitable. The Corporation expects to continue to incur losses unless and until such time as it develops its properties and commences mining operations on its properties. The development of the properties will require the commitment of substantial financial resources. The amount and timing of expenditures will depend on a number of factors, some of which are beyond the Corporation's control, including the progress of ongoing exploration, studies and development, the results of consultant analysis and recommendations, the rate at which operating losses are incurred and the execution of any joint venture agreements with any strategic partners, if any. There can be no assurance that the Corporation will ever achieve profitability.

### **Mining Risks and Insurance Risks**

The mining industry is subject to significant risks and hazards, including environmental hazards, industrial accidents, unusual or unexpected geological conditions, labour force disruptions, civil strife, unavailability of materials and equipment, weather conditions, pit wall failures, rock bursts, cave-ins, flooding, seismic activity, water conditions and gold bullion losses, most of which are beyond the Corporation's control. These risks and hazards could result in: (i) damage to, or destruction of, mineral properties or producing facilities; personal injury or death; environmental damage; (ii) delays in mining; and (iii) monetary losses and possible legal liability. As a result, production may fall below historic or estimated levels and the Corporation may incur significant costs or experience significant delays that could have a material adverse effect on the Corporation's financial performance, liquidity and results of operation.

The Corporation does not maintain insurance to cover these risks and hazards. The lack of, or insufficiency of, insurance coverage could adversely affect the Corporation's cash flow and overall profitability.

### **Permitting Approvals**

The operations of the Corporation and the exploration agreements into which it has entered require approvals, licenses and permits from various regulatory authorities, governmental and otherwise (including project specific governmental decrees) that are by no means guaranteed. The Corporation believes that it holds or will obtain all necessary approvals, licenses and permits under applicable laws and regulations in respect of its main projects and, to the extent that they have already been granted, believes it is presently complying in all material respects with the terms of such approvals, licenses and

permits. However, such approvals, licenses and permits are subject to change in various circumstances and further project-specific governmental decrees and/or legislative enactments may be required. There can be no guarantee that the Corporation will be able to obtain or maintain all necessary approvals, licenses and permits that may be required and/or that all project-specific governmental decrees and/or required legislative enactments will be forthcoming to explore and develop the properties on which it has exploration rights, commence construction or operation of mining facilities or to maintain continued operations that economically justify the costs involved.

### **Changes in Legislation**

The mining industry in Colombia is subject to extensive controls and regulations imposed by various levels of government. All current legislation is a matter of public record and the Corporation will be unable to predict what additional legislation or amendments may be enacted. Amendments to current laws, regulations and permits governing operations and activities of mining companies, including environmental laws and regulations which are evolving in Colombia, or more stringent implementation thereof, could have a material adverse impact on the Corporation and cause increases in expenditures and costs, affect the Corporation's ability to expand or transfer existing operations or require the Corporation to abandon or delay the development of new properties.

### **Economic and Political Factors in Colombia**

Although Colombia has a long-standing tradition respecting the rule of law, which has been bolstered in recent years by the present and former government's policies and programs, no assurances can be given that the Corporation's plans and operations will not be adversely affected by future developments in Colombia. The Corporation's property interests and proposed exploration activities in Colombia are subject to political, economic and other uncertainties, including the risk of expropriation, nationalization, renegotiation or nullification of existing contracts, mining licenses and permits or other agreements, changes in laws or taxation policies, currency exchange restrictions, and changing political conditions and international monetary fluctuations. Future government actions concerning the economy, taxation, or the operation and regulation of nationally important facilities such as mines, could have a significant effect on the Corporation. Colombia is home to South America's largest and longest running insurgency. While the situation has improved dramatically in recent years, there can be no guarantee that the situation will not again deteriorate. Any increase in kidnapping, gang warfare, homicide and/or terrorist activity in Colombia generally may disrupt supply chains and discourage qualified individuals from being involved with the Corporation's operations.

Additionally, the perception that matters have not improved in Colombia may hinder the Corporation's ability to access capital in a timely or cost effective manner. Any changes in regulations or shifts in political attitudes are beyond the Corporation's control and may adversely affect the Corporation's business.

Exploration may be affected in varying degrees by government regulations with respect to restrictions on future exploitation and production, price controls, export controls, foreign exchange controls, income and/or mining taxes, expropriation of property, environmental legislation and mine and/or site safety.

### **Competition**

The mineral exploration and mining business is competitive in all of its phases. The Corporation competes with numerous other parties with greater financial, technical and other resources than the Corporation, in the search for and acquisition of exploration and development rights on attractive mineral properties. The Corporation's ability to acquire exploration and development rights on properties in the



future will depend not only on its ability to develop the properties on which it currently has exploration and development rights, but also on its ability to select and acquire exploration and development rights on suitable properties for exploration and development. There is no assurance that the Corporation will continue to be able to compete successfully in acquiring exploration and development rights on such properties.

### **Changes to Environmental Laws**

The Corporation's operations are subject to the extensive environmental risks inherent in the gold mining industry. The current or future operations of the Corporation, including development activities, commencement of production on its properties, potential mining and processing operations and exploration activities require permits from various governmental authorities and such operations are and will be governed by laws and regulations governing prospecting, development, mining, production, exports, taxes, labor standards, occupational health, waste disposal, toxic substances, land use, environmental protection, mine safety and other matters.

Companies engaged in the development and operation of mines and related facilities generally experience increased costs, and delays in production and other schedules as a result of the need to comply with applicable laws, regulations and permits. Existing and possible future environmental legislation, regulations and actions could cause significant additional expense, capital expenditures, restrictions and delays in the activities of the Corporation. Although the Corporation believes that it is in substantial compliance in all material respects with applicable material environmental laws and regulations, there are certain risks inherent in its activities such as accidental spills, leakages or other unforeseen circumstances, which could subject the Corporation to extensive liability. In addition, the Corporation cannot assure that the illegal miners operating on its properties are in compliance with applicable environmental laws and regulations.

Failure to comply with applicable laws, regulations, and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations. Amendments to current laws, regulations and permits governing operations and activities of mining companies, or more stringent implementation thereof, could have a material adverse impact on the Corporation and cause increases in capital expenditures or production costs or reduction in levels of production at producing properties or require abandonment or delays in development of new mining properties.

### **Shortage of Experienced Personnel and Equipment**

The ability to identify, negotiate and consummate transactions that will benefit the Corporation is dependent upon the efforts of the Corporation's management team. The loss of the services of any member of management could have a material adverse effect on the Corporation. The Corporation's future drilling activities may require significant investment in additional personnel and capital equipment. Given the current level of demand for equipment and experienced personnel within the mining industry, there can be no assurance that the Corporation will be able to acquire the necessary resources to successfully implement its business plan.

Furthermore, certain of the directors and officers of the Corporation are directors and officers of other reporting issuers and, as such, will devote only a portion of their time to the affairs of the Corporation.

### **Conflicts of Interest**

Certain of the Corporation's directors and officers serve as directors or officers of other companies or have significant shareholdings in other resource companies and, to the extent that such other companies participate in ventures in which the Corporation may participate, the directors of the Corporation will have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In the event that such a conflict of interest arises, a director or officer who has such a conflict will disclose that conflict and will abstain from voting for or against the approval of such participation or such terms. In determining whether or not the Corporation will participate in a particular program and the interest therein to be acquired by it, the directors will consider, among other things, the degree of risk to which the Corporation may be exposed and its financial position at that time.

### **Possible Volatility of Stock Price**

The market price of the Common Shares can be subject to wide fluctuations in response to factors such as actual or anticipated variations in the Corporation's results of operations, changes in financial estimates by securities analysts, general market conditions, the issuance of Common Shares in connection with acquisitions made by the Corporation or otherwise, and other factors. Market fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations may adversely affect the market price of the Common Shares.

### **Repatriation of Earnings Risk**

There are currently no restrictions on the repatriation from Colombia of earnings to foreign entities. However, there can be no assurance that restrictions on repatriations of earnings from Colombia will not be imposed in the future. Exchange control regulations require that any proceeds in foreign currency originated on exports of goods from Colombia (including minerals) be repatriated to Colombia. However, purchase of foreign currency is allowed through any Colombian authorized financial entities for the purpose of payments to foreign suppliers, repayment of foreign debt, payments of dividends to foreign stockholders and other foreign expenses.

### **Financing Risks**

Additional funding may be required to complete the proposed or future exploration and other programs on the properties. There is no assurance that any such funds will be available. Failure to obtain additional financing, if required, on a timely basis, could cause the Corporation to reduce or delay its proposed operations.

The majority of sources of funds currently available to the Corporation for its acquisition and development projects are in large portion derived from the issuance of equity. While the Corporation has been successful in the past in obtaining equity financing to undertake its currently planned exploration and development programs, there is no assurance that it will be able to obtain adequate financing in the future or that such financing will be on terms advantageous to the Corporation.

### **Enforcement of Civil Liabilities**

Substantially all of the Corporation's assets are located outside of Canada and certain of the directors and officers of the Corporation are resident outside of Canada. As a result, it may be difficult or impossible to enforce judgments granted by a court in Canada against the assets of the Corporation or any of the Corporation's directors and officers residing outside of Canada.

## **Dividends**

Any payments of dividends on the Common Shares will be dependent upon the financial requirements of the Corporation to finance future growth, the financial condition of the Corporation and other factors which the Board may consider appropriate in the circumstance. It is unlikely that the Corporation will pay dividends in the immediate or foreseeable future.

## **Infrastructure**

Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants, which effect capital and operating costs. Unusual or infrequent weather phenomena, terrorism, sabotage, community, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Corporation's operations, financial condition and results of operations.

## **Option Agreements and Other Risk Sharing Ventures**

The Corporation is party to the Pavo Real Shareholder Agreement and may enter into other ventures in the future. Any failure of a venture partner to meet its obligations to the Corporation or third parties, or any disputes with respect to the parties' respective rights and obligations could have a material adverse effect on such ventures. In addition, the Corporation may be unable to exert influence over strategic decisions made in respect of properties that are the subject of such joint ventures and could suffer dilution of its interest in the properties if it is not able to meet its funding obligations under the terms of the venture.

## **Currency Risk**

The Corporation maintains its accounts in Canadian dollars and the market for gold is principally denominated in U.S. dollars. The Corporation's operations in Colombia make it subject to foreign currency fluctuations and such fluctuations may materially affect the Corporation's financial position and results. Colombia has a free and unrestricted supply and demand market. The Corporation is exposed to foreign exchange risk from the exchange rate of Colombian pesos relative to the Canadian and U.S. dollars. Foreign exchange risk is mainly derived from assets and liabilities stated in Colombian pesos. The Corporation limits its foreign exchange risk by the acquisition of short-term financial instruments and, when possible, minimizes its Colombian peso monetary asset positions.

## **Price Volatility of Publicly Traded Securities**

In recent years, the securities markets in the United States and Canada have experienced a high level of price and volume volatility, and the market prices of securities of many companies have experienced wide fluctuations in price which have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. There can be no assurance that continual fluctuations in price will not occur. The market for the Common Shares will be subject to market trends generally, notwithstanding any potential business of the Corporation. The value of the Shares will be affected by such volatility.

## **Conflicts of Interest**

Some of the directors and officers are engaged and will continue to be engaged in the search for additional business opportunities on behalf of other corporations, and situations may arise where these

directors and officers will be in direct competition with the Corporation. Conflicts, if any, will be dealt with in accordance with the relevant provisions of the *Business Corporations Act* (British Columbia).

### **Stress in the Global Economy**

Reduction in credit, combined with reduced economic activity and the fluctuations in the United States dollar, may adversely affect businesses and industries that purchase commodities, affecting commodity prices in more significant and unpredictable ways than the normal risks associated with commodity prices. The availability of services such as drilling contractors and geological service companies and/or the terms on which these services are provided may be adversely affected by the economic impact on the service providers. The adverse effects on the capital markets generally make the raising of capital by equity or debt financing much more difficult and the Corporation is dependent upon the capital markets to raise financing. Any of these events, or any other events caused by turmoil in world financial markets, may have a material adverse effect on the Corporation's business, operating results, and financial condition.

### **3.3 MINERAL PROJECTS**

The information below is based on the technical report titled "Amended Technical Report and Preliminary Economic Assessment, San Ramon Deposit, Santa Rosa Project, Colombia" dated October 10, 2013, amended March 31, 2014 and prepared for the Corporation by Mine Developments Associates Inc. ("MDA") (the "**Santa Rosa Report**"). Reference should be made to the full text of the Santa Rosa Report which is available for review on [www.SEDAR.com](http://www.SEDAR.com).

### **PROPERTY DESCRIPTION AND LOCATION**

The authors of the Santa Rosa Report are not experts in land, legal, environmental, and permitting matters. This section is based on information provided to the authors of the Santa Rosa Report by the Corporation. The authors of the Santa Rosa Report present this information to fulfill reporting requirements of NI 43-101 and express no opinion regarding the legal or environmental status of the Santa Rosa project.

#### **Location**

The Santa Rosa Gold Project is located approximately 5km southeast of the town of Santa Rosa de Osos, in the municipality of the same name, in the Department of Antioquia, 70km north of the department capital Medellín in northern Colombia (Figure 4.1 of the Santa Rosa Report). The center of the resource is located at approximately latitude 6° 36' 57 N and longitude 75° 22' 20 W. The San Ramon deposit lies in the southeastern part of concession B7560005, held by The Corporation and described in more detail in Section 4.3 of the Santa Rosa Report.

### **Colombian Mining Law Regarding Concession Contracts**

All mineral resources belong to the state and can be explored and exploited by means of concession contracts granted by the state. Under Colombian mining law, a concession contract consists of exploration, construction, and exploitation terms. Once the contract is registered, the exploration term is three years, renewable for an additional eight years in increments of two years. The concession contract is then convertible to the construction term, which is two years, renewable for an additional year. Finally the concession contract is convertible to an exploitation term.

The total period for the concession contract (exploration and exploitation) is 30 years renewable for a further 20 years.

Producing mines are subject to a federal royalty of 4% of the gross value of gold and silver production at 80% of the current London gold price so the royalty becomes in effect 3.2% (under a modification of mining law 685 of 2001).

Legal surveys are conducted by the Mining Authority prior to granting the concession contract. This defines the co-ordinates of the tenement.

### **Land Area**

The Santa Rosa Gold Project comprises a total area of approximately 31,901 hectares and consists of: 1) six concession contracts, 2) 12 concession-contract applications for which the technical study has been approved and free areas have been declared, and 3) one application recently filed (Table 4.1 and Figure 4.2 of the Santa Rosa Report). One concession contract and two concession-contract applications, which were part of the property as of the effective date of MDA's previous Technical Report (Lindholm and Schlitt, 2013b), were subsequently dropped on September 27, 2013. The Corporation holds a 100% interest in the property, subject to completion of property payments described in Sections 4.4.1, 4.4.2, and 4.4.4 of the Santa Rosa Report and to royalty obligations described in Section 4.4.5 of the Santa Rosa Report. Figure 4.3 of the Santa Rosa Report is an enlargement showing just the concessions in the immediate vicinity of the San Ramon deposit, located in the southeastern part of concession B7560005, which is the focus of the Santa Rosa Report.

The annual holding costs for the concessions are approximately \$12 per hectare.

The Corporation does not currently control any surface rights on the San Ramon deposit, which are held by a single land owner. The Corporation pays a monthly fee for surface access to the surface-land-rights owner during occupation while conducting exploration activities. A preliminary footprint for potential mining operations has been determined, and there have been initial discussions with the surface-rights owner to extend the lease for the life of a potential mine.

### **Royalties**

There is a government-imposed 4% royalty on gold and silver that is effectively 3.2% as described in Section 4.2 of the Santa Rosa Report.

Liberty Metals & Mining Holdings LLC ("**LMM**"), a subsidiary of Liberty Mutual Insurance, holds a 3% net smelter returns royalty on the original six concessions of the Santa Rosa project (the Corporation's press releases, October 16, 2012, October 23, 2012 and December 20, 2013); those concessions are four concession contracts numbered B7560005, B7171005, H5791005, and H5790005 registered in the name of the Corporation, and two concession contract applications numbered LDM-08061 and LKA-08004 for which free areas have been declared that are awaiting transfer of title. The Corporation may buy back 1% of the royalty for \$8,333,333 for a period of two years from the date of the first gold production. This royalty applies to the concession in which the resource is located.

Bullet Holding Corp. holds a 1.5% net smelter returns royalty on those concession contracts and applications that the Corporation acquired from them in 2012 and still holds. This royalty does not apply to the concession in which the resource is located.

## **Environmental Liabilities**

The following information has been provided by the Corporation through their independent environmental consultant, Francisco Raúl Mejía Correa.

The Santa Rosa Gold Project now has a limited number of artisanal mining groups, with two or three small groups still working saprolite-hosted veins in small adits in the far northwest of concession H5790005 (approximately 10km from the San Ramon project area). All of the sluices and old adits have been reported to CORANTIOQUIA, the local environmental agency. To the extent known, there are no environmental liabilities associated with this operation or any other activity in the project area.

The Colombian Mining Authority has recently passed legislation whereby all tenement holders must pay annual fees to cover the cost of the Authority's inspectorate visits to project sites to assess environmental and health and safety aspects of activities on tenements. The Corporation is fully paid up in this respect.

## **Environmental Permitting**

The following information has been provided by the Corporation through their independent environmental consultant, Francisco Raúl Mejía Correa.

An application titled "Guia Minero Ambiental" must be submitted, explaining the Corporation's work ethics and environmental compliance during its exploration activities. This document does not require any approval. Exploration activities that involve disturbing the soil (roads, drill pads, camps, etc.) require an environmental management plan that is included in the Guia Minero Ambiental. In addition, application must be made for water use and management and liquid effluent permits, and these applications require approval by the environmental authority, named "CORANTIOQUIA." The Corporation has submitted a Guia Minero Ambiental on June 14, 2011 for all concessions within the first exploration-block area (the concessions and applications acquired in 2010), and it has also submitted applications on February 17, 2011 for all concessions within the first exploration-block area for water use and management and liquid effluent permits.

To date, no application has been submitted to CORANTIOQUIA concerning the regional exploration area for water use or liquid effluent permits because the prospecting phase does not require any environmental permission.

The processes required for environmental-mining activities as planned for the San Ramon gold project are shown in Table 4.3 of the Santa Rosa Report.

From the date of the Santa Rosa Report, the remaining processes referred to in Table 4.3 of the Santa Rosa Report were completed in early 2014. After the environmental license is issued and appropriate insurance against environmental impact has been obtained, the concession is automatically authorized to start the construction phase and then is converted to an exploitation concession; project construction can begin without any additional permitting requirements.

The baseline study work was awarded to the two Colombian universities which had the most extensive relevant experience – the Universidad de Antioquia ("**UdeA**") and the Fundación Universitaria Católica del Norte ("**FUCN**") located at Santa Rosa municipality. The baseline study was completed in May, 2013 and the Environmental Impact Assessment ("**EIA**") was completed in February 2014.

The Universidad de Antioquia-UdeA is a public university located in Medellín with expertise in environmental studies and the social sciences. The Universidad de Antioquia was awarded the air quality, noise, hydrology, hydrogeology, and water quality modules.

Fundación Universitaria Católica del Norte-FUCN is located 15km from the project area and has a strong network and knowledge of the community, farmers, and industry throughout the region. The university also has a very close relationship with the Mayorality, City Council, and the Community Action Board, which are directly involved in the land use plan of the Santa Rosa region. Fundación Universitaria Católica del Norte-FUCN was awarded the fauna and flora, geotechnical, soil, landscape, community, public health, and leadership modules.

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

### **Access to Property**

The Santa Rosa gold project is accessible from the city of Medellín, which has an international airport, via paved Highway 25 north-northeast through Copacabana and Don Matías for approximately 65km to a turn-off located 12km south of Santa Rosa de Osos. From the turn-off to the east, it is approximately 8km to the Corporation's camp on an unpaved road (Figure 5.1 of the Santa Rosa Report). Access within the property is by gravel roads and footpaths.

### **Climate**

The climate is mildly tropical with daytime temperatures around 24°C. Yearly rainfall averages about 200 centimeters and falls mostly during rainy seasons from March to May and September to December. There are no significant climatic restrictions on working. Exploration and mining can be conducted year round.

### **Physiography**

Topographically, the Santa Rosa de Osos district consists of an irregular, dissected peneplain with gentle-to steep-sided valleys and hills. Elevations range between about 2300m and 2500m. The region is largely occupied by grass pasture and arable land with limited and often isolated areas of lush, low-growth Andean forest, mostly located along drainages. Agriculture within the project area comprises cattle farming in about 50% of the project area and tamarillo ("tree tomato") cultivation in approximately 10% of the area, mostly in the southeast. There is also minor commercial forestry (pine). Tropically weathered latosol profiles are ubiquitous and average 5m to 10m thick in undisturbed areas.

Because the topographic relief in the project area is moderate and the entire project is covered by vegetation, surface exposures are limited to road cuts, cuts for drill-pad locations, and sluice areas, or *baticiones*, denuded by historic hydraulic mining.

The San Ramon deposit is located at an elevation of 2,453m above sea level.

### **Local Resources and Infrastructure**

The project area is located about 5km southeast of the town of Santa Rosa de Osos (population around 40,000 in the town and the same in the surrounding municipality), which is the nearest town for supplies and labor. While most of the regional male population has had some involvement in prospecting or small-scale mining, training would be necessary for a labor force to be used for mine development.

Security is provided in the district by a military base (Guadalupe) and troops (Batallón Pedro Nel Ospina). Police patrol the town of Santa Rosa de Osos and vicinity.

Local resources and infrastructure in the Santa Rosa de Osos district are good. A 44Kv power line to the west and a 13.2Kv line to the north (both within 8km) service the area. Water is abundant in main rivers but is not potable.

## **HISTORY**

### **Exploration History**

Gold mining in the Department of Antioquia pre-dates, and continued during, Spanish colonial rule, mostly exploiting alluvial deposits and oxidized veins (West, 1952). The Santa Rosa de Osos region was discovered in 1541 by Captain Juan Francisco Vallejo, who named the area Valley of the Bears (de Osos) because of the large number of the animals found in the region. Fifty years later, the gold potential of the area was recognized, and hundreds of miners led by Captain Antonio de Espejo Serrano founded the town of Santa Rosa de Osos in 1636. Gold production from the upland placers in the region reached its peak in the 18<sup>th</sup> century. Mines within the Santa Rosa project area reportedly produced gold and silver from bonanza-grade oxide ores during their heyday in the 1940s, but production declined as free milling ores were exhausted. Small-scale gold mining continued intermittently and was recently in operation at the Yaruma and Hilo Azul (Blue Vein) mines, which lie within the current resource area. Exploration and small-scale gold mining by artisanal miners is ongoing about 10 km from the San Ramon deposit within the Santa Rosa Gold Project area.

According to Jemielita (2011b), there was no known modern mineral exploration activity in the Santa Rosa project area prior to the initial visit by the Corporation in July 2010. Since that date, the Corporation has undertaken surveying and mapping of old mine workings, sampling and assaying in areas of known mineralization, soil and saprolite grid geochemistry, airborne magnetic and radiometric geophysics, and drilling of the San Ramon shear zone. These activities are described in Section 9.0 of the Santa Rosa Report.

There are no known historical mineral resources or reserves estimates for the Santa Rosa Gold Project. The first mineral resource estimate for the San Ramon deposit was reported in the Corporation's 2013 technical report. Based upon the existence of the extensive abandoned mine workings, past gold production appears to have been significant, but actual historic gold production is unknown.

## **GEOLOGIC SETTING**

### **Geologic Setting**

#### ***Regional Geology***

The northwest margin of South America, comprising Colombia and adjacent Ecuador and western Venezuela, is a complex elongated mosaic of Paleozoic and younger, autochthonous and allochthonous terranes that were accreted to the South American continent (Guyana Shield) and subjected to transpressional tectonics and subduction-related magmatism along a 2,000km-long segment of the Pacific Rim (Aspden and Litherland, 1992, and Cediel et al., 2003, as cited by Jemielita, 2011a, 2011b). Regional-scale structural geology is characterized by anastomosing, sub-parallel, dominantly north-northeast-striking, major faults and shear zones, some of which are interpreted to be terrane boundary sutures. Subduction-related magmatic arcs were superimposed on these terranes during the Jurassic, Cretaceous, Eocene to late Miocene, and Late Miocene to Recent and produced porphyry copper



mineralization related to each period of arc magmatism (Figure 7.1 of the Santa Rosa Report). These arcs are characterized by plutonic batholiths, sub-volcanic intrusions, and associated volcanic rocks.

The Andean Cordillera in Colombia is composed of three distinct mountain chains: the Western Cordillera (Occidental), Central Cordillera (Central), and eastern Cordillera (Oriental) that are separated by broad inter-Andean valleys. The Santa Rosa gold project is located in the Central Cordillera within the Cajamarca-Valdivia terrane. This terrane dominates the geology of the northern portion of the Central Cordillera and is a composite lithotectonic unit that includes a metamorphic basement complex and the Antioquia batholith (Cediel and Caceres, 2000, and Cediel *et al.*, 2003, as cited by Jemielita, 2011b).

The Cajamarca-Valdivia basement terrane is made up of early Paleozoic metamorphic rocks, mostly lower greenschist- to lower amphibolite-grade metasedimentary units and oceanic ophiolitic volcanic and intrusive rocks. These comprise a para-autochthonous prism that was accreted to the continental margin along the Palestina fault system in the Ordovician-Silurian and subsequently underwent regional metamorphism (Cediel *et al.*, 2003, as cited by Jemielita, 2011b). The Cajamarca-Valdivia terrane is bounded on the west by the Romeral fault, a north-striking, dextral transcurrent, suture that defines the eastern limit of allochthonous oceanic terranes accreted to the northern Andean margin during the late Mesozoic and Cenozoic.

During the Mesozoic, the metamorphic rocks of the Cajamarca-Valdivia terrane were overlapped by volcano-sedimentary lithologies. Reactivation of the Palestina fault system and initiation of the Romeral fault system occurred from the Aptian-Albian, together with a period of uplift and erosion of the Paleozoic basement and Mesozoic volcano-sedimentary sequences (Cediel and Caceres, 2000, as cited by Jemielita, 2011b). The basement and Mesozoic lithologies were intruded by the Antioquia batholith during the Cretaceous under a regional tectonic regime of dextral transpression.

The Antioquia Batholith occupies more than 7,000 square kilometers and is a subduction-related, multi-phase, calc-alkaline, I-type plutonic-intrusive complex composed mostly of quartz-diorite and granodiorite (Feininger and Botero, 1982, as cited by Jemielita, 2011b). Rock textures are holocrystalline, medium to coarse grained and phaneritic. Mineralogy is dominated by plagioclase and quartz +/- potassium feldspar and up to 20% mafic minerals ranging from biotite to hornblende dominant. Trace minerals include magnetite and titanite. Local- to regional-scale metasomatism is evident as chlorite after biotite and epidote after hornblende. The batholith is cut in places by centimeter- to meter-scale dikes of porphyritic diorite, quartz diorite, aplite, and granite pegmatite. Small plugs of bi-pyramidal quartz- and biotite-phyric hypabyssal granodiorite porphyry have been identified at various localities. Radiometric age dates are scattered from around 90 to 60 Ma but cluster around 70 Ma.

The Antioquia Batholith was intruded during dextral-oblique accretion and transpression of the Andes during the late Cretaceous-Eocene. Major lineaments, especially in the east, strike west-northwest to northwest and may be related to dextral reactivation of the Palestina fault system in the east and dextral transpression along the Romeral fault system in the west.

### ***Local Geology***

The rocks in the vicinity of the Santa Rosa gold project are dominated by hornblende-biotite diorite and quartz diorite typical of the Antioquia batholiths (Figure 7.3 of the Santa Rosa Report). Metamorphic rocks including amphibolites and metasedimentary rocks occur as isolated roof pendants, primarily in the western half of the deposit area. Pleistocene-Holocene volcanic ash cover is extensive. River valleys contain unconsolidated alluvium.

## ***Property Geology***

The geology within the Santa Rosa gold project is characterized by relatively monotonous, coarse grained, grey colored, granular hornblende-biotite diorite and quartz diorite of the Antioquia Batholith (Figure 7.3 of the Santa Rosa Report). Metamorphic rocks, including amphibolites (Valdivia & others Gr. on Figure 7.3 of the Santa Rosa Report) and metasedimentary rocks (Valdivia Gr. on Figure 7.3 of the Santa Rosa Report), occur as isolated roof pendants, and dikes of micro-diorite, dacite, felsite, aplite, and pegmatite are common. Red-brown saprolite is widespread and often deep (up to 50m). Deep weathering associated with saprolite formation has intensely altered the granites to clay. Oxidized saprock continues below the saprolite and consists of more competent, albeit somewhat decomposed, granitic rocks. Soils are generally about 50cm thick and rarely up to 2m. Schistose fault-zone mylonite was observed at several locations in outcrop and adits.

## **EXPLORATION**

### ***Geologic Mapping***

The Corporation has undertaken an extensive program of mapping and sampling old colluvial gold workings, adits, and quartz veins within the Santa Rosa gold project area. Mapping and sampling of several adits, including the Bernardina, Guaguas, and Hipopotamo adits located in the eastern portion of the San Ramon shear zone and the San Francisco adit at the west end, have identified significant zones of low-grade gold mineralization (*e.g.* 35m averaging 0.62g Au/t in the Bernadina adit).

### ***Geochemistry***

Quartz veins and diorite-granodiorite wall rocks exposed in artisanal adits and mines have been extensively grab, channel, and panel sampled. A total of 2,874 samples have been taken.

Channel or panel sampling was used to test the quartz veins while a program of continuous channel sampling in adits that cut across the broader vein and shear structures in the oxide zone was initiated in January 2011. Among key adits sampled which exposed the San Ramon shear zone and some of the hanging wall structures are the Hilo Azul (Blue Vein) shaft, the Bernadina adit (approximately 100m east and adjacent to Hilo Azul), the Hipopotamo adit (approximately 140m east of Hilo Azul) and the Guaguas adit (approximately 200m west of Hilo Azul).

Further sampling was carried out where sulfides were found to be present. Hilo Yaruma had been previously sampled underground at a depth of 65m and returned values of 95.8g Au/t in a vein approximately 30cm wide (the shaft has since collapsed). The Hilo Azul shaft (quartz veins within the shear zone) was sampled at a depth of 45m and returned 41.6g Au/t in the principal vein intersected; a second vein approximately 20m into the footwall gave values to 18.8g Au/t. The shear zone away from the quartz vein gave values up to 7.4g Au/t. The recently reopened El Gato adit, which lies between the San Francisco adit and the Hilo Azul shaft, also gave access to old stopes in partially oxidized mineralization both in quartz veins and shear zone. Work is still in progress in this adit, but initial samples returned up to 19.6g Au/t in the sulphide-rich mylonitic shear zone material and 10.3g Au/t in quartz vein samples.

A 200m by 200m ground auger saprolite sampling program was completed over the eastern part of concession B7560005 with the objective of comparing the results with MMI sampling over the same area. It was concluded that MMI was superior as an exploration tool, and significantly easier to implement.

A soil-sampling program was conducted over the project's concessions and applications acquired in 2010 and samples were analyzed for mobile metal ion ("MMI"). The grid covering the concessions was on 50m spacing north-south and 200m spacing east-west, with some areas expanded to 400m east-west spacing to expedite the initial reconnaissance survey. Anomalies were identified corresponding to the San Ramon shear zone as well as other areas that have not been fully explored to date (Figure 9.1 of the Santa Rosa Report). Conventional soil geochemistry was also conducted, but MMI soil geochemistry showed stronger results and involved easier sample collection.

The Corporation recently commenced exploration of the newest concessions beyond the San Ramon resource area that were acquired in 2012. This work includes stream-sediment, rock-chip and trench, adit, and MMI and conventional soil geochemical sampling. This work is being conducted beyond the area of the San Ramon resource that is the focus of this report with the objective of identifying potential targets for mineralization that may become future satellite feed to the San Ramon gold project.

MDA has not analyzed the sampling methods, quality, and representativity of surface sampling on the Santa Rosa property because drilling results form the basis for the mineral resource estimate described in Section 14.0 of the Santa Rosa Report. Drilling is described in Section 10.0 of the Santa Rosa Report.

### ***Geophysics***

A helicopter-borne, high resolution, magnetic and radiometric survey was completed over the western part of the Santa Rosa Gold Project area by MPX Geophysics on November 18 and 19, 2010. Initial interpretation of the results was received by the end of the same month. A total of 451.9 line-kilometers of data were acquired over the project area (total area 19.6 km<sup>2</sup>). The survey was flown at a nominal mean terrain clearance of 70m along north-south-oriented flight lines spaced at 50m with tie lines spaced at 500m.

The Corporation retained consultants Paterson, Grant & Watson to interpret the aeromagnetic survey (Ugalde and Misener, 2011). Results were received in January 2011 and are shown in Figure 9.2 and Figure 9.3 of the Santa Rosa Report

A similar aerial survey was subsequently flown over the eastern part of the project area.

The Corporation notes that the magnetic data (Figure 9.2 of the Santa Rosa Report) indicated major structures that influenced the geology, particularly the San Ramon shear zone. The radiometrics, especially potassic alteration (Figure 9.3 of the Santa Rosa Report), correlated to "*baticiones*" and the extensive artisanal mining areas that were being uncovered.

An induced-polarization ("IP") survey was conducted by Geofisica TMC SA de CV of Mazatlan, Mexico over a 50m (north-south) by 200m (east-west) grid in the San Ramon area (most of concession B7560005) in June and July 2011 (Simard, 2011). The survey consisted of 13 north-south lines of 2.5 to 2.8km in length, totaling 32.6 line-km. The pole-dipole array was used. The Corporation felt that the results were inconclusive and decided not to continue IP surveying following unsuccessful drilling into interpreted IP targets.

### ***Topography***

As described in more detail in Section Figure 12.1.1 of the Santa Rosa Report, initial topography for the project was provided by Terranalisis, Ltda., based in Santiago, Chile, and MPX Geophysics Colombia SAS ("MPX") based in Medellín, Colombia. Subsequently, a ground survey for topography was commissioned through the project surveyor, MSc. Ricardo Lozano Botache with Estudio T-Rural

Consultores. Finally, MPX performed a Lidar topographic survey that covers concession B7560005, on which the San Ramon deposit is located.

## MINERALIZATION

Hypogene gold mineralization within the Santa Rosa Gold Project is generally associated with the shear zones developed in homogeneous diorite country rock, with higher grades occurring in sulfide-mineralized quartz veins. There are also related saprolitic gold deposits (Figure 7.4 of the Santa Rosa Report) and colluvial gold deposits, both of which have been mined by artisanal miners underground and in hydraulically mined areas known locally as "*baticiones*." The shear zone and veins are best exposed in adits and *baticiones*.

Colluvial and saprolitic gold workings and adits are concentrated in two principal areas: one cutting concession B7560005 from west to east across the center of the concession; and one covering the northwestern part of the property in concession H5790005 and the northern portions of concessions B7171005 and H5791005. These two areas contain large abandoned colluvial workings and both abandoned and some active tunnels made by artisanal miners. At the time of the initial resource estimate, a total of 256 adits had been surveyed on the Santa Rosa property, totaling 5,794m; many more underground workings have been discovered since then. These adits are nearly all developed in oxidized saprolite. The northwestern area has more adits than the southeastern one. Gold mineralization is processed in local water-powered California stamp mills (Figure 7.5 of the Santa Rosa Report) with mercury amalgamation or, in the southeastern area, a jaw crusher and mercury amalgamation mills.

Exploration by the Corporation within concession B7560005 has identified a mineralized shear zone (San Ramon shear zone) containing sulfide-bearing quartz veins, sheeted veins, and anastomosing vein networks. The shear zone is characterized by both ductile deformation in the form of mylonite development in the most intense zones and brittle deformation in the form of breccia and gouge zones. The structural zone strikes roughly east-west with a strike length of approximately 2.0km, predominantly dips about 70° to the north, and has an average width that ranges from about 8m in the western half to 21m in the eastern half. The dip of the shear zone steepens to near vertical close to the surface and shallows to 50° to 60° at depth.

East-west-trending structures, including the San Ramon shear zone, appear to be related to northwest-trending regional structures. Sinistral movement along these structures may have created east-west dilation zones, up to 60m wide in the case of the San Ramon shear zone, into which quartz and quartz-carbonate veins and veinlets were emplaced. Most of the quartz veins and contained sulfides have been brecciated by post-mineralization deformation, which suggests that the mineralization is syn-deformational.

Numerous micro-diorite dikes and a few dacite dikes are generally intruded along shear-zone structures. They are strongly fractured and brecciated and are commonly mineralized, which suggests the dikes are pre-mineral and pre- to syn-deformational. Numerous dacite dikes also cross-cut the shear zone structures. These may have been intruded along a fabric in the diorite country rock that is parallel to the included schist bodies. These dacite dikes appear to be only weakly deformed by shearing and may be predominantly post-mineral and post-deformational. However, assays of dike material commonly show the presence of mineralization, so some of these dikes may have been emplaced during but late in the mineralizing and deformational history of the deposit.

In the San Ramon shear zone, mineralization occurs in fractured, brecciated, and ductily deformed rock. The lowest levels of mineralization (~0.035g Au/t to ~0.1g Au/t) consist of very weak to moderate ductile shearing that locally contains quartz veinlets and/or pyrite. At slightly higher grades (~0.1 to ~0.6g Au/t),

mineralization is characterized by moderate to strong ductile deformation that contains scattered quartz veinlets and sulfides, although the overall quantity of veinlets and sulfides is low. Some sericite, weak to moderate brittle overprinting, and quartz veins greater than 12mm in thickness that are mostly, if not completely, barren of sulfides, may also be present. The boundary between the two grade ranges is likely gradational, and there are numerous instances where quartz veins or pyrite are not apparent in both. Shear zone intercepts containing these low grades of mineralization may be up to 80m wide; the maximum true width of the mineralized shear zone is about 60m.

High-grade mineralization, >0.6g Au/t, within the San Ramon shear zone is characterized by strong shearing that variably contains thick quartz veins (but less than 2m), with coarse-grained sulfides (pyrite, sphalerite, and galena with traces of chalcopyrite), finer-grained sulfide minerals and quartz vein fragments in gouge zones, and sericite. At relatively lower grades (~0.6 to 5.0g Au/t), strong ductile shearing with abundant sulfide minerals and sericite is almost ubiquitous; quartz veins may or may not be present. Brittle overprinting is moderate to strong and may be genetically related to the high-grade mineralization. At grades in excess of ~5.0g Au/t, massive and coarse-grained pyrite, pyrite stringers, medium-grained sphalerite, and fine-grained galena are present in quartz veins and quartz vein fragments, although some massive pyrite and pyrite stringers occur independent of quartz veins. In the highest-grade intercepts (>50g Au/t), relatively thick (≥2cm) massive pyrite veins are intermixed with quartz veins that contain coarse-grained and massive pyrite, coarse-grained sphalerite, and fine-grained galena.

The predominant distinguishing characteristic between low- and high-grade mineralization, and for the strength of gold mineralization in general, is the quantity of sulfide minerals. Both domains may appear exactly alike in terms of strong ductile deformation and the presence of quartz veins, but the sulfide-mineral content is the factor that distinguishes high-grade mineralization in most cases.

The zones of strongest shearing have some demonstrable continuity between drill holes on individual sections and between sections. The San Ramon shear zone contains a pair of moderately high-grade zones between 1 and 2m in width that is present over a significant length of the deposit. Higher-grade zones, particularly with the more extreme grades associated with coarse-grained sulfides in quartz veins, lack this continuity within the shear zone. This lack of continuity of the higher-grade mineralization is due in part to displacement of the veins by shearing and the generally narrow thicknesses of the veins. The Corporation's staff has observed that one high-grade vein in the Hilo Azul workings is approximately 30m in total length along strike. The vein appears to pinch out, then reappears after some distance.

Vein-quartz textures are mostly massive to ribbon-textured and, in places, medium- to coarse-grained crystalline and often containing late calcite-infilled tensional features. Sulfides range from 1% to 5% but can reach 10%, and there appears to be a direct correlation between sulfide and gold grade. Sulfides are dominated by fine- to coarse-grained pyrite with subordinate sphalerite and galena and traces of chalcopyrite and pyrrhotite. Oxides include hematite, goethite, and limonite. Black oxides are a weathering effect caused by the migration of manganese away from organic-rich soil into fractures. There is no preferential association of manganese oxides with gold mineralization. Gold and minor amounts of silver occur as inclusions in sulfides, mostly in sphalerite and less commonly pyrite and galena. In addition to a mixed oxide/sulfide transition zone, unoxidized sulfide minerals are commonly present within the oxidized and saprolitized rocks within the shear zone.

There are calcite veins of various ages at San Ramon. Shear-zone controlled weak propylitic alteration of regional extent pre-dates mineralization and consists of calcite-chlorite-prehnite veins with over 80 percent calcite. These veins are low in sulfides and do not contain gold. Calcite and calcite veining are common in the main stage of the shear-zone mineralization; the veins are often brecciated, suggesting they were an earlier part of the mineralizing event. This calcite is characteristically iron-rich and weathers to a brown color. It is associated with sulfides, euhedral quartz, and the best gold

mineralization. There are also low-temperature veins of pure calcite that are late and cut all other features. These calcite veins are regionally distributed. They contain only low levels of iron but no sulfides, gold, or silicate minerals.

Generally little silver is present, but there can be significant quantities of zinc, which is accompanied by minor quantities of lead. The presence of copper is insignificant.

## **DRILLING**

### ***Summary***

The Corporation has conducted all of the known drilling at San Ramon. Drilling began in September 2011, and from September 2011 to May 2012, the Corporation drilled 42 holes, including re-drills, of which 23 were drilled into the San Ramon mineralized shear zone and the remaining 19 holes were drilled into other areas of interest within the Santa Rosa project area. From May 2012 to July 2012, an additional 27 holes were drilled, consisting entirely of in-fill drilling in the sulfide mineralization to achieve 100m centers within the San Ramon shear zone. From July 2012 through October 2012, 74 holes were completed, designed to infill the oxide mineralization to 50m centers. From October 2012 through May 2013, 95 holes were completed to test continuity of the mineralization in the sulfide zones and extend the known deposit down dip. Holes drilled to date at San Ramon by the Corporation are SR-001 through SR-233 plus SR-028A, SR-032A, SR-045A, SR-050A and SR-146B. These 238 holes total 45,609m.

Figure 10.1 of the Santa Rosa Report shows drill-hole locations on Concession B7560005 in the San Ramon deposit area.

In general, holes were drilled sub-perpendicular to the strike of the generally east-trending shear structure at various dips. Drill holes for the initial phases (SR-001 to SR-065) were collared some distance north of the shear zone and intercepted the zone at depth (up to 300m vertically). Subsequent holes (SR-066 to SR-139) were collared closer to the shear and intercepted the shear mineralization closer to the surface. New drilling for the resource update (SR-140 to SR-233) was intended to infill sulfide zones to 50m spacing and extend known mineralization down-dip; the deepest shear zone intercept is approximately 550m.

### ***Drilling by the Corporation***

All drilling to date by the Corporation has been core drilling. The drilling through July 2012 was conducted by Cabo Drilling (Colombia) Corp. using two skid-mounted Boyles drill rigs, a BBS-37 and a BBS-56. Through July 2012, holes were drilled with HQ core, reducing to NQ core as required by drilling conditions.

Drilling from July 2012 to October 2012 was conducted by Energold Drilling Corp. using a smaller skid-mounted EGD II (Hydracore 600 Series II) for drilling in oxidized areas. This drilling consisted entirely of HQ core.

For the drilling from October 2012 through May 2013, drilling of HQ-diameter core was performed by Cabo using four rigs, two skid-mounted Boyles (BBS-37 and BBS-56) and two man-portable rigs (Duralite 1000 and Hydracore 2000). Skid-mounted rigs were moved between sites with a Caterpillar D6 bulldozer, while the man-portable rigs were moved by a crew of up to 12 laborers and/or using winches.

The core is laid out, reassembled to a best fit, and cleaned prior to collection of core recovery and RQD measurements and logging. Geologists log lithology, alteration, mineralization, and structural data. The

core is photographed using a digital camera mounted on a tripod; MDA has observed that the photographs are of excellent quality.

### ***Drill-Hole Collar Surveys***

Drill holes were staked-out by GPS and oriented by setting up a string-line laid out with a Brunton compass. Collars were surveyed after completion of drilling by MSc. Ricardo Lozano Botache, a licensed professional surveyor with Estudio T-Rural Consultores based in Bucaramanga. At the end of MDA's 2012 site visit, the surveyor was setting up to resurvey all drill-hole collars, primarily to check suspected discrepancies between drill collars and topography. All collar surveys to date, as well as all project data, are now normalized to the currently used co-ordinate system.

### ***Down-Hole Surveys***

Holes drilled through July 2012 were initially surveyed down-the-hole by Cabo Drilling Corp., and subsequently by the Corporation, using a Reflex Ez-Trac® tool. Readings were taken every 100m, starting at 100m. The planned azimuths (azimuths of string lines placed on pads to set up the drill rig) and dips were used for the orientation at the surface; actual azimuths and dips were not measured once the drill rig was set up and drilling. MDA noted some large differences between the surface azimuth and dip and the first REFLEX reading at 100m in previous phases of drilling. The most significant of these differences were checked by the Corporation, and modifications to the collar and down-hole survey were made as appropriate.

No down-hole surveys were conducted for drilling from July to October 2012, primarily because the oxide holes are short and the Corporation determined that the deviations at shallow depths in previous drilling phases were not significant.

For the drilling from October 2012 through May 2013, holes over 100m deep (66 of 95 holes) were surveyed at 100m intervals using a Reflex EZ-Shot®/manual single-shot instrument with an external reader, operated by Cabo's drillers. First readings were taken between 6m and 100m depths. The planned azimuths and dips were used for the orientation at the surface.

## **SAMPLE PREPARATION, ANALYSIS**

### **Sampling Procedures**

#### ***Surface and Adit Sampling***

The Corporation's geologists have taken composite rock-chip, channel, and panel samples from surface outcrops and adit walls from all known accessible locations throughout the San Ramon area. Sampling was performed and/or supervised by the Corporation's geologists. Channel sampling was used on zones of dispersed mineralized quartz veinlets using a maximum of 2m sample lengths where there appeared to be little mineralization. Areas of possible mineralization were sampled across that specific zone. The channels were cut with a pick with a width of 5 to 10cm, with best efforts to maintain consistent and unbiased samples; generally, approximately 3kg samples were collected for each sample interval.

MMI soil sampling was conducted by digging shallow pits 10cm to 15cm deep into the "B" soil horizon on a 50m (north-south) by 200m (east-west) grid. Saprolite was sampled using an auger (to 5.5m maximum depth) on a 200m by 200m grid and analyzed using conventional geochemistry.

### ***Drill Sampling***

Geologists determined sample intervals using geology as a guide. Maximum sample length for drilling through July 2012 was two meters; from July through October 2012, it was one meter. For drilling since October 2012, mineralized material was sampled at 1m intervals, except in narrow zones where the sample length could be reduced to a minimum of about 0.6m. If less than 0.4m of a geological zone would remain when a 1m sample was taken, the sample length was adjusted to match the geology and provide maximum sample lengths. Outside of a mineralized zone, samples up to 2m in length were taken.

For the earliest drilling, the entire hole was sampled. As the geologists became familiar with the various rock and alteration types and the grades associated with them, they began sampling only core in the shear zones or zones that appeared to be mineralized, with two or more buffer samples above and below these zones. This selective sampling covered the primary mineralized zones, as long as they were recognized, but did not allow for a holistic assessment of a deposit that includes country rock.

For drilling through July 2012, the core was halved with a diamond saw; for infill drilling in oxide material from July to October 2012, the entire core was sampled. For drilling from SR-140 and higher (October 2012 to May 2013), core was again cut in half with a diamond saw for sampling. The sample for assay was placed into plastic bags containing the sample ID tag and sealed immediately. The bags were zip-tied closed. Individual samples were placed into rice bags labeled with the contained sample number range and zip-tied closed.

Sampling is carried out or supervised by the Corporation's geologists.

### **Sample Preparation and Analysis**

#### ***Surface and Tunnel Sampling***

Rock-chip and channel samples originally were sent to ALS Minerals ("ALS;" formerly called ALS Chemex) for sample preparation in Bogota and analysis in Lima. Subsequently, the Corporation changed laboratories and sent samples for analysis to SGS del Perú, S.A.C. ("SGS") for precious-metal and multi-element assays and then later sent to Acme Analytical Laboratories S.A. ("Acme"). Some channel samples from adits were re-sampled and then assayed using metallic screen analysis.

Saprolite auger samples were delivered to SGS in Medellín or Bogota for preparation, then 30g pulps were forwarded to SGS in Lima for analysis. Analyses are performed by SGS using gold fire assay plus 52 elements by ICP. Duplicates are analyzed by ALS using gold fire assay plus 35 elements by ICP. Some samples are screened for coarse gold.

MMI soil samples are delivered to SGS in Medellín and forwarded directly to Lima for sample preparation followed by analysis in Australia.

#### ***Drilling Samples***

Drill samples are shipped to Acme in Medellín for sample preparation. The samples are dried, crushed, and pulverized to 200 mesh.

Following sample preparation, pulps were forwarded to Acme in Santiago, Chile for analysis. If there is a backlog at the Santiago laboratory, the pulps were sent to Acme's laboratory in Vancouver, Canada, for analysis. For drilling through October 2012, the analytical lab performed gold fire assays on 30g samples with an AA finish plus a 36-element ICP scan. All assays returning values greater than 10g Au/t (>0.2g



Au/ton in early drilling) were fire assayed again with a gravimetric finish. For the drilling from October 2012 through May 2013, 50g charges were used for both fire assay-AA and fire assay gravimetric analyses.

Field and preparation duplicates at the time of MDA's 2012 site visit were analyzed in sequence with the original at Acme.

For SR-001 to SR-028A, checks are made on samples suspected of coarse gold and were subjected to metallic screen analyses; no metallic screen assays have been performed on drilling samples since completion of those holes.

## **SECURITY OF SAMPLES**

### ***Surface and Tunnel Sampling***

Chain of custody is maintained for all samples. Rock samples (average 2kg) are placed into a plastic bag marked with the sample number on both sides and on a piece of flagging tape that is placed inside the bag; the bag is sealed immediately. The sample and sample location are then photographed. Bagged samples are put into larger sacks in the field, and when filled, these are sealed in the field. Sample sacks are then securely transported to the sample storage location. Every Friday or Saturday, the sample sacks are transported directly to the sample preparation laboratory in Medellín, together with dispatch documents. Logistics are supervised and monitored by the Corporation's security staff and support. The Corporation then confirms receipt of the samples with the laboratory.

### ***Drilling Samples***

Core is checked and collected by the Corporation geologists from the drill rig at least once per shift and transported to the core-processing facility at the the Corporation camp. The wooden core boxes were covered and kept closed with inner-tube strips. The core-logging area and storage buildings consist of metal-framed structures with corrugated plastic roofs, and brick walls and/or plastic-covered wire fencing on all sides. The building is locked when no one is on site. On a weekly basis, the Corporation personnel transport the samples via truck to the sample preparation laboratory in Medellín, where custody is transferred to Acme.

The remaining core is stored in locked buildings at the camp, as are coarse rejects and pulps returned from the labs.

## **Quality Assurance/Quality Control**

### ***Surface and Tunnel Sampling***

The Corporation purchases certified standards and certified blanks and uses field duplicates for QA/QC on their analytical work for rock samples. A duplicate, standard or blank are included with every 10 samples sent for analysis.

For MMI soil geochemistry samples, a duplicate is included with every 30 samples, but no blanks or standards are used.

### ***Drill Sampling***

Approximately 10% of the samples shipped to the Acme either a blank, a standard comprising one of four standard samples, or a duplicate. Pulp blanks and standards are submitted to Acme with the original samples and are not "blind" to the lab.

Standards for gold are inserted into the sample stream every 40 samples. For all drilling, a total of 11 certified standards were obtained and submitted with original drill samples. Of the 11 standards, nine were used for all but four of the submitted pulps. No sample pulps were re-assayed as a result of standard failures for all drilling prior to the initial resource estimate (SR-001 to SR-139). For the drilling from October 2012 to May 2013, when standards failures occurred, the Corporation assembled and renumbered all pulps in their possession in the batches associated with the failures, and resubmitted samples to the laboratory. These were accompanied by two to four standards, two to four pulp blanks, and one or two pulp duplicates for each batch. In all, 173 original assays were submitted for re-assay from SR-160 (66), SR-197 (58), and SR-213 (49). At least three different standards were alternately used at any given time for drilling prior to the initial resource estimate; however, only one at a time was submitted for drilling associated with the resource update (SR-140 to SR-233).

For all drilling, four certified blank pulps have been inserted into the sample stream at a rate of one for every 40 samples prior to shipment to the preparation laboratory in Medellín.

A field or preparation duplicate is submitted with samples from San Ramon at a rate of one for every 20 samples. All duplicates are assigned a consecutive sample number after the original, and both are analyzed. Field duplicates consisted of quarter-core splits (also quarter-core original) in the first two phases of drilling (SR-001 to SR-065), half-core splits (also half-core original) in the next phase of drilling (SR-066 to SR-139), and quarter-core splits for the remainder of the drilling (SR-140 to SR-233). Preparation duplicates are splits of coarse rejects.

In addition to the standards, blanks, and duplicates, 169 samples were sent for check assays to SGS at their laboratory in Lima, Perú; these were discussed in MDA's first Technical Report (Lindholm and Schlitt, 2013a). Two batches totaling 131 pulp samples and representing a randomly selected 5% of original mineralized samples were submitted to ALS in Lima for check assaying in April 2013. Samples were analyzed by 50g fire assay with an AA finish (ALS code Au-AA26), with analysis by 50g fire assay with a gravimetric finish (ALS code Au-GRA22) for samples exceeding 100 ppm Au. QA/QC results are discussed in Section 12.2 of the Santa Rosa Report.

### ***Bulk Density and Specific Gravity***

Bulk-density data were regularly collected from drill holes SR-001 to SR-155, with measurements for selected samples taken about every 10m. The samples were weighed in air and then, after wrapping in cling film to prevent any water absorption, were suspended in water, and the weight of the water displaced was measured, using a simple overflow system.

At MDA's request, 65 specific gravity measurements were performed by the Corporation on oven-dried samples. A similar process and apparatus for measuring bulk wet densities was used, except that the weight of wrapped and suspended sample submerged in water rather than the weight of the water displaced was used to calculate specific gravities.

For drill samples from holes SR-156 through SR-233, bulk dry densities were obtained using the same procedures that were used for wet-density determination, except that all samples were oven dried at 125°C. Fresh rock was usually dried between two and three hours, saprock for three to five hours, and

saprolite no less than 12 hours. According to the Corporation, only saprolite samples were wrapped in plastic before being suspended in water.

### ***Summary Statement***

The San Ramon drill-core sampling procedures, sample security protocols, and analytical methods are acceptable. A QA/QC program has been in place for all drilling that is adequate for evaluation of assay quality. The overall results of the QA/QC program indicate that the analytical data are of sufficient quality for use in the resource estimate.

## **MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES**

### **Introduction**

MDA classifies resources in order of increasing geological and quantitative confidence into Inferred, Indicated, and Measured categories to be in compliance with the "CIM Definition Standards - For Mineral Resources and Mineral Reserves" (2010) and therefore Canadian National Instrument 43-101. CIM mineral resource definitions are given below, with CIM's explanatory material shown in italics:

### ***Mineral Resource***

*Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.*

A Mineral Resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.

*The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of technical, economic, legal, environmental, socio-economic and governmental factors. The phrase 'reasonable prospects for economic extraction' implies a judgement by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. A Mineral Resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions might become economically extractable. These assumptions must be presented explicitly in both public and technical reports.*

### ***Inferred Mineral Resource***

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

*Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.*

### ***Indicated Mineral Resource***

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

*Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions.*

### ***Measured Mineral Resource***

A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

*Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.*

MDA reports resources at cutoffs that are reasonable for deposits of this nature given anticipated mining methods and plant processing costs, while also considering economic conditions, because of the regulatory requirements that a resource exists "in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction."

### **Database**

The initial resource estimate for the San Ramon project (Lindholm and Schlitt, 2013a) utilized a database with an effective date of November 21, 2012. The Corporation had completed 143 drill holes (SR-001 to 139, SR-028A, SR-032A, SR-045A and SR-050A) for a total of 23,015.25m of core in the San Ramon deposit area. The San Ramon database contained 11,844 records, of which 11,665 had gold assays.

Other elements, including silver, base metals, and trace elements, were assayed in SR-001 to 065. The database also contained logged lithology and recovery data, summarized redox data, and bulk wet-density and specific gravity measurements. All of these drilling data were used in the initial estimate.

Since November of 2012, the Corporation has completed an additional 95 drill holes (SR-140 to SR-233, SR-146B) for a total of 22,593.75m of core. Of these, 76 were infill drill holes within the previous resource area, and three were exploration holes drilled north of the San Ramon shear zone. Twelve holes extended mineralization down-dip within the shear zone, and four extended mineralization to the west. The Corporation supplied the data for the new drilling to MDA on June 5, 2013, which is the effective date of the database for the updated resource estimate. The new collar, survey, and assay data were audited and appended to the previously audited database. As noted in Section 12.1.2 of the Santa Rosa Report, additional down-hole survey certificates were provided by the Corporation and were used by MDA to audit some of the older survey data, which were modified as needed; none of the previous collar and assay data were changed. Table 14.1 of the Santa Rosa Report summarizes the data in the updated San Ramon database, which contains 19,938 records, of which 17,286 have gold assays. Only gold was analyzed for the new drilling program. The other 2,652 records include blank records that are automatically added by database software to indicate drill-hole gaps and intervals added for specific gravity data. The Corporation also provided geological and geotechnical data for all drilling, including major and minor lithologies, alteration, weathering, oxidation, structure, density, recovery, RQD and hardness. Much of this information came from re-logging from core photos in an effort to standardize geologic interpretations.

### **Underground Workings**

For the initial resource estimate, the Corporation provided MDA with digital outlines of 14 underground workings in the San Ramon deposit. With average floor-to-back heights and floor elevations, MDA constructed solids of the adits and shafts. These were used to code the block model by assigning percentages of mined material to individual blocks, from which mined tonnes was calculated. The mined tonnes were subtracted from the resource on a block-by-block basis. The Corporation is continually discovering new underground workings, which are rehabilitated to the extent practical and sampled if they intersect the shear zone. Although the total volume of mined material is likely very small, there is certainly some unknown quantity of the resource that has already been mined, which is not taken into account in the reported estimate.

### **Mineral Domains**

Low- and high-grade gold domains were modeled on north-south, 50m-spaced cross sections for the resource at San Ramon. The lower boundary of the low-grade domain, which represents mineralization in weak to moderately sheared rock that contains scattered small quartz veins, is at ~0.05g Au/t. The grade break between the low- and high-grade domains is gradational between 0.35 and 0.6g Au/t. The high-grade domain (>~0.35/0.6g Au/t) represents zones of strong shearing that variably contain relatively thick quartz veins (less than 2m) with coarse-grained sulfides (sphalerite, pyrite, and galena), coarse-grained sulfide veins, finer-grained sulfide minerals and quartz vein fragments in gouge zones, and sericite. The domains, and the primary shear zone, strike roughly east-west and dip to the north at around 70° to near-vertical. At depths below an elevation of approximately 2100m, the dip shallows to 50° to 60°. Figure 14.1 and Figure 14.2 of the Santa Rosa Report show these domains.

A quantile plot of coded high-grade domain samples indicates the high-grade domain is trimodal, with one grade break at ~1.0 and another above 5.0 to 9.0g Au/t. No geological characteristics that would distinguish separate domains above and below ~1.0g Au/t were observed; therefore, the modeling did not separate domains above and below ~1.0g Au/t. However, above ~5.0g Au/t, the samples most commonly

consist of quartz veins with coarse-grained sulfides. These higher-grade samples constitute only ~15 percent of the high-grade domain. Gold grade appears to increase with increasing content of sulfide minerals, and galena, abundant coarse-grained sphalerite, and massive pyrite are generally associated with extremely high grades. Neither MDA nor the Corporation geologists were able to model the thicker quartz/sulfide veins with any consistency. This is not unexpected, since the quartz veins observed in core and adits are sheared and fragmented, which explains the discontinuous nature of quartz veins within the shear zone. High-grade samples above 5.0g Au/t were evaluated separately in 3-D space, and it was determined that the continuity and predictability of the potentially highest-grade domain are not demonstrable with existing data; therefore, no separate high-grade domain above ~5.0 to 9.0g Au/t was modeled. The lack of continuity and inability to predict or model this very high-grade portion of the trimodal high-grade mineralization imparts a risk into the estimate.

To further characterize the very high-grade mineralization, MDA identified a total of 98 sample intervals within the modeled deposit. Core photos for 45 of these were examined, and various geological criteria were summarized. Veins, sulfide minerals, and breccia make up ~50% of the total length of the samples. Angles to core axes of mineralized zones are most commonly 40° to 60°, although structures were intersected as shallow as 20° and as steep as 80°. Also, and most importantly, the mineralized structures are sub-parallel to the surrounding shear-zone fabric in nearly all cases. This indicates that the mineralization is strongly associated with the shear-zone and only infrequently occurs as cross-cutting features.

Two extremely high-grade intercepts (SR-042, 184m to 189m and SR-053, 201.8m to 211m) deserve special attention. Core photos indicate that the quartz and sulfide veins were intersected by these holes at very shallow angles; in other words, the veins are sub-parallel to the core axis. The true widths of the high-grade zones are, therefore, much narrower than the 9.2m and 5m intercepts. Also, since the holes were drilled at a relatively high angle to the overall shear zone, the near-parallel orientation of the veins in core might suggest a secondary orientation of the extreme high-grade mineralization. However, core photos also show that the holes are sub-parallel to the surrounding shear zone fabric, which may indicate that there is a local bend in the structure that hosts the veins. These bends and associated very high-grade mineralization are likely localized and could easily be missed at 50m, or even tighter, drill-spacing. There is potential to encounter similar high-grade zones during mining that were not located by drilling, although this potential cannot be quantified.

The San Ramon high-grade domain ( $> \sim 0.35/0.6$ g Au/t) was modeled as continuous zones for the initial resource estimate. High-grade zones were intercepted in multiple drill holes on almost all sections, and domains were drawn in plan and section that connect these intercepts. Modeling in this manner implies that intercepts in the same domain are part of the same continuous zone of strong shearing. However, as noted in the previous paragraph, there is a risk that the apparent highest-grade sub-domain within the high-grade domain is not geologically continuous.

The continuity of individual zones within the high-grade domain and the geologic and mineral domain models, in general, were tested with the recent 50m-spacing infill drilling program. The location and presence of the shear zone and low-grade domain were confirmed within reasonable limits. In a majority of cases, the location and presence of individual zones within the high-grade domain were validated as well, in the sense that strong shear zones with samples that assayed above 0.6g Au/t were intersected in the approximate locations indicated by the previous model. However, the previous model was less successful in predicting local grades, particularly those in the very high-grade sub-domain ( $> \sim 5.0$ g Au/t) described above. Because the very high-grade mineralization occurs in discontinuous zones of limited extent within the high-grade domain, any model will likely be a poor predictor of grade locally, although the overall estimated metal content may still exist in a global sense.

## Density

In the early drilling programs (SR-001 to SR-139), the Corporation regularly measured core samples for bulk wet densities at *in-situ* moisture conditions. At the request of MDA, Red Eagle also measured 64 samples for bulk specific gravities for use in the initial estimate; these were taken from core holes SR-001 to SR-010 and SR-059. The immersion method was used to obtain both sets of values. Wet-density samples were wrapped in cellophane, and the weight of the displaced water determined for calculations. Oven-dried bulk specific gravity samples were also wrapped in cellophane, but the weight of the dry sample suspended in water was used for calculations per standard testing procedures for specific gravity determination.

Frequent wet-density measurements were obtained for new drill holes SR-140 to SR-155. Starting with drill hole SR-157 and continuing to the end of the 2013 program, 862 dry densities were measured, which provided a total of 926 bulk specific gravity/dry-density values for use in the current estimate. The dry-density procedure was identical to the immersion method used for wet-density determination, except an oven-dried sample was tested. Proper drying times for various sample types, including saprolite, were determined by weighing test samples every hour until a constant weight was achieved.

The combined specific gravity/dry-density data were evaluated in terms of lithology (shear zone, granite country rock, dikes), redox (oxide, mixed, or sulfide) and saprolite. Table 14.2 of the Santa Rosa Report summarizes density measurements and the values applied to the model. Each data set represented in the table (*i.e.* All Saprolite) was evaluated individually, and up to seven relatively extreme outliers (nearly all low) were removed from each.

Table 14.2 Density Measurements and Values Applied to the Block Model

Rock unit	No. of Samples	Range	Mean	% Adjustment	Applied SG
All Saprolite	229*	1.22-2.39	1.55	0%	1.55
All Saprock	92*	1.21-2.84	2.14	0%	2.14
All Oxide	259	1.21-2.70	1.60	0%	1.60
Transitional Redox – Shear Zone	3	1.83-2.77	2.41	1%	2.38
Transitional Redox – Country Rock	75	2.52-2.75	2.26	0%	2.26
Unoxidized – Shear Zone	152	2.23-3.45	2.68	1%	2.66
Unoxidized – Schist	17	2.52-2.98	2.75	0%	2.75
Unoxidized – All Other Lithologies	414	2.16-2.91	2.67	0%	2.67
All Data	932**	1.21-3.45	2.32	0%	2.32

\* Saprolite and saprock values overlap with redox and lithology types

\*\*No outliers removed

The specific gravity/dry-density data are sufficiently representative of the various lithology, redox, and weathering types in the deposit, both in terms of quantity and spatial distribution. The only exception is the transitional redox within the shear zone; however, this material makes up a very small portion of the overall volume in the block model. The shear zone mean density values were adjusted down by one percent, due to: 1) slightly lower core recoveries in the shear zone (generally by 2-4%), and 2) the predominance of fractured and broken core, which is difficult to measure for specific gravity, thereby instilling a sample selection bias against broken (lower density) samples.

### Sample and Composites Descriptive Statistics

Once the domains were defined, the north-south sectional interpretations were used to code drill-hole samples. Also, all samples outside modeled low- and high-grade domains were assigned to a unique domain for statistical and estimation purposes. Quantile plots were made; outlier grades were reviewed on screen; and descriptive statistics were completed (Table 14.3 of the Santa Rosa Report). Samples from within each of the two domains, as well as for assays outside modeled mineral domains, were capped. It is noteworthy that the coefficients of variation ("CV"), in spite of apparently low capping grades, remain high (1.77 and 2.10 for the low- and high-grade domains, respectively). As noted earlier, the high-grade domain appears to be trimodal, but continuity that would allow for modeling of the separate higher-grade sub-domains was not evident. There is no geological evidence that would support modeling separate domains within the low-grade domain. As a consequence, and to compensate for the relatively high variability, the projection distance of higher-grade assays was limited during the estimation within each mineral domain.

Table 14.3 Descriptive Statistics of Coded Samples

<b>Gold Domain</b>	<b>51</b>	<b>Low-grade; weak shear zone with quartz veinlets</b>						
	<b>Valid N</b>	<b>Median</b>	<b>Mean</b>	<b>Std.Dev.</b>	<b>CV</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>
Length	4183	1	1.07			0.03	4.5	m
AuPPM	4164	0.092	0.167	0.406	2.43	0.0025	15.1	g/t
AuCapped	4164	0.092	0.161	0.285	1.77	0.0025	3.5	g/t
SG	87	2.68	2.65	0.11	0.04	2.25	2.86	

<b>Gold Domain</b>	<b>52</b>	<b>High-grade; strong shear zone, QV w/coarse-grained sulfides</b>						
	<b>Valid N</b>	<b>Median</b>	<b>Mean</b>	<b>Std.Dev.</b>	<b>CV</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>
Length	1225	1	1.01	0	0	0.1	3.96	m
Au	1220	1.037	3.509	9.253	2.64	0.0025	157.7	g/t
AuCapped	1220	1.037	3.257	6.848	2.10	0.0025	50	g/t
SG	50	2.72	2.70	0.33	0.12	1.39	3.45	



<b>Gold Domain</b>	<b>99</b>	<b>Outside domains</b>						
	<b>Valid N</b>	<b>Median</b>	<b>Mean</b>	<b>Std.Dev.</b>	<b>CV</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>
Length	14530	1	2.75			0.01	205.35	m
Au	11902	0.007	0.061	0.754	12.27	0.0025	57.3	g/t
AuCapped	11902	0.007	0.044	0.261	5.89	0.0025	4	g/t
SG	795	2.58	2.27	0.55	0.24	0.97	3.21	

QV = quartz veins

Capping for each domain was determined, first, by assessing the grade above which the outliers occur. Then those outlier grades were reviewed on screen to determine materiality, grade and proximity of the closest samples, and general location. Caps of 3.5g Au/t, 50.0g Au/t and 4.0g Au/t were applied to the low-grade, high-grade, and outside domains, respectively. The cap applied to low-grade domain assays is lower than capping of assays outside mineral domains; however, the influence of assays outside domains is greatly restricted during the estimation process. Once the capping was completed, the drill holes were down-hole composited to 2m intervals, honoring the domain boundaries. The descriptive statistics of the composite database are given in Table 14.4 of the Santa Rosa Report.

Table 14.4 Descriptive Statistics of Coded Composites

<b>Gold Domain</b>	<b>51</b>	<b>Low-grade; weak shear zone with quartz veinlets</b>						
	<b>Valid N</b>	<b>Median</b>	<b>Mean</b>	<b>Std.Dev.</b>	<b>CV</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>
Length	2566	2	1.73			0	2	m
AUPPM	2556	0.106	0.167	0.273	1.64	0.0025	7.6	g/t
AUCAP	2556	0.106	0.161	0.197	1.22	0.0025	3.5	g/t

<b>Gold Domain</b>	<b>52</b>	<b>High-grade; strong shear zone, QV w/coarse-grained sulfides</b>						
	<b>Valid N</b>	<b>Median</b>	<b>Mean</b>	<b>Std.Dev.</b>	<b>CV</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>
Length	838	1.8	1.47			0	2	m
AUPPM	837	1.200	3.504	7.828	2.23	0.0025	157.7	g/t
AUCAP	837	1.200	3.253	5.706	1.75	0.0025	50	g/t

Gold Domain	99	Outside domains						
	Valid N	Median	Mean	Std.Dev.	CV	Minimum	Maximum	Units
Length	20259	0	0.66			0	2	m
AUPPM	7457	0.009	0.062	0.477	7.75	0.0025	23.5	g/t
AUCAP	7457	0.009	0.044	0.183	4.12	0.0025	4	g/t

QV = quartz veins

## Estimation

Four estimates were completed: polygonal, nearest neighbor, inverse distance, and kriged. These estimates were run multiple times in order to evaluate the results and determine sensitivity to estimation parameters. The inverse distance estimate is the reported estimate. Estimation parameters are given in Table 14.5 of the Santa Rosa Report.

Two successive estimation passes were run for the low- and high-grade domains. A first long pass projecting 300m along the primary axis in the low-grade domain, and 200m in the high-grade domain, was run to fill in all blocks (all the blocks affected by this long pass were Inferred). This was followed by a short pass of 100m in both low- and high-grade domains. The search ellipse is oriented such that the major axis is along an east-west strike, with a variable semi-major axis in the dip direction. Dips of 85°, 70°, and 55° were used above an elevation of 2400m, between 2115m and 2400m, and below 2115m, respectively, to reflect the changing orientation of the shear zone and mineralization at various depths.

Numerous test cases of the estimate at various parameters resulted in the selection of the estimation parameters given in Table 14.5 of the Santa Rosa Report. Modifications made to the initial resource estimation parameters include addition of multiple search dips for various elevation ranges and application of restriction grades of 0.7 and 9.0g Au/t to low-grade and high-grade domains, respectively (changed from 0.4 and 7.0g Au/t). Also, the inverse-distance power was increased from third to fourth; anisotropy was narrowed from 3:1 to 4:1; and the maximum number of composites from one drill hole was lowered from three to two for estimation of high-grade domains only (these original parameters for the low-grade domain were not changed).

The highest grades (>5.0 to 9.0g Au/t) at San Ramon have shown no predictability or continuity, so MDA chose to restrict their impact on the estimate by limiting the projection of those high values. Without question these high grades exist, but the volume of material that these assays represent cannot be determined with certainty. In using a restriction in the estimation process rather than explicitly confining the high-grade intervals with modeled domains (although there are a few cases where it was deemed necessary to separate isolated samples with extreme high grades from low-grade domains with short high-grade domains), the block model cannot be expected to be a good estimator of the precise location of the high-grade material. For example, within the high-grade domain, any composite with a grade over 9.0g Au/t was projected only 65m of the full distance of long and short passes. The 9.0g Au/t limit represents the approximate lower end of the upper domain of the trimodal population (very high-grade domain, not modeled) and was chosen based on the quantile plot of the high-grade domain samples. From the quantile plot of the low-grade domain, it appears that the upper five percent of values are not part of the same geological population, so a restriction of 0.7g Au/t within 65m for each pass was deemed necessary. A restriction of 1.0g Au/t within 10m for each pass was applied to blocks outside modeled mineral domains.

The block model is not rotated, and the blocks are 2m north-south by 2.5m vertical by 2.5m east-west. The dimensions were chosen to best reflect possible block sizes for underground mining.

Table 14.5 Estimation Parameters

Description	Parameter
<b>Low-grade Domain</b>	
Samples: minimum/maximum/maximum per hole	1 / 12 / 3
Rotation/Dip/Tilt (variogram and searches):	
Above elevation 2400m	90° / 0° /85°
Elevation 2115m to 2400m	90° / 0° /70°
Below elevation 2115m	90° / 0° /55°
Search (m): major/semi-major/minor (vertical)	
Inverse distance power	3
High-grade restrictions (grade in g/t and distance in m)	
Anisotropic weighting	yes

Table 14.5 Estimation Parameters (continued)

<b>High-grade Domain</b>	
Samples: minimum/maximum/maximum per hole	1 / 12 / 2
Rotation/Dip/Tilt (variogram and searches):	
Above elevation 2400m	90° / 0° /85°
Elevation 2115m to 2400m	90° / 0° /70°
Below elevation 2115m	90° / 0° /55°
Search (m): major/semi-major/minor (vertical)	
Inverse distance power	4
High-grade restrictions (grade in g/t and distance in m)	

Anisotropic weighting	yes
<b>Outside mineral domains</b>	
Samples: minimum/maximum/maximum per hole	1 / 12 / 3
Rotation/Dip/Tilt (variogram and searches):	90° / 0° / 70°
Search (m): major/semi-major/minor (vertical)	100 / 100 / 33
Inverse distance power	2
High-grade restrictions (grade in g/t and distance in m)	0.1 / 10
Anisotropic weighting	yes

## Mineral Resources

MDA classified the San Ramon resources, giving consideration to a combination of distance to the nearest sample, number of samples and holes, confidence in the underlying database, sample integrity, analytical precision/reliability, and geologic interpretations. The criteria for resource classification are given in Table 14.6 of the Santa Rosa Report. The classification of the resource was upgraded primarily on the basis of the substantial amount of infill drilling, which brought the overall drill-spacing to ~50m to a depth of about 200m in the west half of the deposit and to a depth of about 250m in the east half. Red Eagle also made significant improvements to their QA/QC program (*i.e.* real-time analyses and corrections), collected much more dry-density and geotechnical data that sufficiently characterize all lithologic types, improved understanding of the geology of the San Ramon deposit, and performed more comprehensive metallurgical test work. As a result, a Measured category was added, and the overall quantity of Measured and Indicated material increased to about 75%. Measured material makes up approximately 20% of total Measured and Indicated. The discontinuous nature of the high-grade material and the demonstrated natural heterogeneity of the gold in the deposit add some risk and decrease confidence in the resource estimate somewhat. Even closer-spaced drilling may be necessary to increase the level of confidence in the predicted location and grade of high-grade mineralization.

Distance parameters for material in intensely weathered rock were made stricter because core recoveries are on average 17% less in saprolite and 10% in saprock relative to unweathered rock. Also, there is a demonstrated decrease in grade at recoveries below ~70%, which may suggest a loss of gold in samples in soft rock. These factors impart a sample bias and loss of confidence in the data for saprolite and saprock.

Table 14.6 Classification Criteria

<b>Measured</b>	
Inside Domains, in Saprolite,	
<b>And</b>	
No. of holes / closest distance / avg. distance of all samples used	>=4 / 10m from closest sample / <=40m

Inside Domains, Below Saprolite, <b>And</b>	
No. of holes / closest distance / avg. distance of all samples used	$\geq 4$ / 15m from closest sample / $\leq 60$ m
<b>Indicated</b>	
Inside Mineralized Domains, in Saprolite, <b>And</b>	
No. of holes / closest distance	$\geq 3$ / 25m from closest sample
<b>Or</b>	
No. of samples / closest distance	$\geq 2$ / 15m from closest sample
Inside Mineralized Domains, Below Saprolite, <b>And</b>	
No. of holes / closest distance	$\geq 3$ / 40m from closest sample
<b>Or</b>	
No. of samples / closest distance	$\geq 2$ / 25m from closest sample
<b>Inferred</b>	
Inside any mineral domain that is not Indicated <b>Or</b> Outside the mineralized domains within 20m of a sample	

Table 14.7 of the Santa Rosa Report presents the total Measured, Indicated, and Inferred block-diluted resources for San Ramon. These are reported at cutoffs that are based on preliminary metallurgical test work and operations cost estimates. The initial resource estimate was reported at a single cutoff grade, because nearly all material had the potential to be mined by open-pit methods. The majority of the updated resource is still reported at an open-pit cutoff of 0.3g Au/t; the remainder is reported at a grade of 1.2g Au/t and includes newly-drilled deeper material that would potentially be mined from underground. Unlike the reported open-pit resource, the underground resource does not include material outside modeled mineral domains, because it is unlikely to be mined from underground. Table 14.8 and Table 14.9 of the Santa Rosa Report present the Measured, Indicated, and Inferred diluted model resources separately for the open-pit and underground zones, respectively.

Multiple reporting cutoffs of 0.3g Au/t and 1.2g Au/t are based on the potential for mining material relatively close to the surface by open pit methods and from underground for deeper material, respectively. The lower boundary for open-pit resources is at an elevation of 2325m (~170m below the surface) at the west end of the deposit, and steps down to 2110m (~330m below the surface) at the east end. Both possible mining scenarios would likely utilize Carbon-in-Leach ("CIL") processing. Preliminary metallurgical test work indicates that whole-ore CIL processing technology will potentially be suitable for all materials at San Ramon, with an average gold recovery in excess of 90% weighted for all ore types.

Preliminary studies indicated that all material, regardless of oxidation or weathering state, will be processed in a similar manner. Therefore, only the total resources are reported here.

Figure 14.3 and Figure 14.4 of the Santa Rosa Report present examples of the gold block-model estimated grades.

Table 14.7 San Ramon Gold Combined Resources

**Total Reported - Measured**

Cutoff			
g Au/t	Tonnes	g Au/t	oz Au
Variable	<b>1,771,000</b>	<b>2.00</b>	<b>114,100</b>

**Total Reported - Indicated**

Cutoff			
g Au/t	Tonnes	g Au/t	oz Au
Variable	<b>8,577,000</b>	<b>1.77</b>	<b>487,000</b>

**Total Reported - Measured & Indicated**

Cutoff			
g Au/t	Tonnes	g Au/t	oz Au
Variable	<b>10,348,000</b>	<b>1.81</b>	<b>601,100</b>

**Total Reported - Inferred**

Cutoff			
g Au/t	Tonnes	g Au/t	oz Au
Variable	<b>2,966,000</b>	<b>1.69</b>	<b>161,000</b>

Table 14.8 San Ramon Gold Resources - Open-Pit Potential

Total Measured - Open Pit Cutoff				Total Indicated - Open Pit Cutoff			
Cutoff				Cutoff			
g Au/t	Tonnes	g Au/t	oz Au	g Au/t	Tonnes	g Au/t	oz Au
0.000	6,105,000	0.661	130,000	0.000	25,103,000	0.64	519,000
0.050	5,382,000	0.746	129,000	0.050	22,620,000	0.71	516,000
0.100	3,999,000	0.978	126,000	0.100	18,176,000	0.87	506,000
0.150	2,928,000	1.291	122,000	0.150	13,366,000	1.13	487,000
0.200	2,310,000	1.590	118,000	0.200	10,668,000	1.37	471,000
0.250	1,977,000	1.820	116,000	0.250	9,201,000	1.56	461,000
<b>0.300</b>	<b>1,770,000</b>	<b>2.001</b>	<b>114,000</b>	<b>0.300</b>	<b>8,298,000</b>	<b>1.70</b>	<b>453,000</b>
0.350	1,626,000	2.150	112,000	0.350	7,618,000	1.82	446,000
0.400	1,492,000	2.309	111,000	0.400	7,008,000	1.95	439,000
0.450	1,374,000	2.470	109,000	0.450	6,508,000	2.06	432,000
0.500	1,273,000	2.629	108,000	0.500	6,095,000	2.17	426,000
0.750	950,000	3.315	101,000	0.750	4,647,000	2.66	397,000
1.000	774,000	3.873	96,000	1.000	3,746,000	3.09	372,000
1.200	677,000	4.271	93,000	1.200	3,196,000	3.43	352,000
1.400	599,000	4.658	90,000	1.400	2,768,000	3.76	335,000
1.600	536,000	5.029	87,000	1.600	2,427,000	4.08	318,000
1.800	487,000	5.364	84,000	1.800	2,147,000	4.39	303,000
2.000	443,000	5.709	81,000	2.000	1,912,000	4.69	288,000
3.000	297,000	7.312	70,000	3.000	1,140,000	6.22	228,000
4.000	217,000	8.732	61,000	4.000	741,000	7.72	184,000

**Table 14.8 San Ramon Gold Resources - Open-Pit Potential (continued)**

Total Measured & Indicated - Open Pit				Total Inferred - Open Pit Cutoff			
Cutoff				Cutoff			
g Au/t	Tonnes	g Au/t	oz Au	g Au/t	Tonnes	g Au/t	oz Au
0.000	31,208,000	0.65	649,000	0.000	35,385,000	0.11	127,000
0.050	28,002,000	0.72	645,000	0.050	8,478,000	0.42	113,000
0.100	22,175,000	0.89	632,000	0.100	6,072,000	0.55	108,000
0.150	16,294,000	1.16	609,000	0.150	4,084,000	0.76	100,000
0.200	12,978,000	1.41	589,000	0.200	2,988,000	0.98	94,000
0.250	11,178,000	1.61	577,000	0.250	2,467,000	1.14	90,000
<b>0.300</b>	<b>10,068,000</b>	<b>1.75</b>	<b>567,000</b>	<b>0.300</b>	<b>2,153,000</b>	<b>1.26</b>	<b>87,000</b>
0.350	9,244,000	1.88	558,000	0.350	1,925,000	1.37	85,000
0.400	8,500,000	2.01	550,000	0.400	1,752,000	1.47	83,000
0.450	7,882,000	2.14	541,000	0.450	1,626,000	1.55	81,000
0.500	7,368,000	2.25	534,000	0.500	1,515,000	1.63	79,000
0.750	5,597,000	2.77	498,000	0.750	1,104,000	2.01	71,000
1.000	4,520,000	3.22	468,000	1.000	857,000	2.34	64,000
1.200	3,873,000	3.57	445,000	1.200	709,000	2.60	59,000
1.400	3,367,000	3.93	425,000	1.400	597,000	2.84	55,000
1.600	2,963,000	4.25	405,000	1.600	502,000	3.10	50,000
1.800	2,634,000	4.57	387,000	1.800	419,000	3.37	45,000
2.000	2,355,000	4.87	369,000	2.000	352,000	3.66	41,000
3.000	1,437,000	6.45	298,000	3.000	152,000	5.28	26,000
4.000	958,000	7.95	245,000	4.000	76,000	7.15	17,000



Table 14.9 San Ramon Gold Resources - Underground Potential

Total Measured - Underground Cutoff				Total Indicated - Underground Cutoff			
Cutoff				Cutoff			
g Au/t	Tonnes	g Au/t	oz Au	g Au/t	Tonnes	g Au/t	oz Au
0.000	12,000	0.50	200	0.000	3,361,000	0.51	55,000
0.050	10,000	0.57	200	0.050	2,838,000	0.60	54,000
0.100	9,000	0.65	200	0.100	2,070,000	0.79	53,000
0.150	8,000	0.70	200	0.150	1,551,000	1.01	50,000
0.200	7,000	0.75	200	0.200	1,229,000	1.23	49,000
0.250	6,000	0.85	200	0.250	1,072,000	1.38	48,000
0.300	4,000	1.18	100	0.300	925,000	1.56	46,000
0.350	2,000	1.67	100	0.350	838,000	1.68	45,000
0.400	2,000	1.74	100	0.400	771,000	1.80	45,000
0.450	2,000	1.91	100	0.450	706,000	1.92	44,000
0.500	2,000	2.09	100	0.500	635,000	2.09	43,000
0.750	1,000	3.59	100	0.750	443,000	2.73	39,000
1.000	1,000	3.59	100	1.000	340,000	3.29	36,000
<b>1.200</b>	<b>1,000</b>	<b>3.78</b>	<b>100</b>	<b>1.200</b>	<b>279,000</b>	<b>3.78</b>	<b>34,000</b>
1.400	1,000	3.78	100	1.400	243,000	4.14	32,000
1.600	1,000	3.88	100	1.600	215,000	4.49	31,000
1.800	1,000	3.97	100	1.800	190,000	4.84	30,000
2.000	1,000	3.97	100	2.000	168,000	5.25	28,000
3.000	1,000	4.36	100	3.000	111,000	6.67	24,000
4.000	-	4.78	100	4.000	76,000	8.15	20,000

**Table 14.9 San Ramon Gold Resources - Underground Potential (continued)**

Total Measured & Indicated - Underground				Total Inferred - Underground Cutoff			
Cutoff				Cutoff			
g Au/t	Tonnes	g Au/t	oz Au	g Au/t	Tonnes	g Au/t	oz Au
0.000	3,373,000	0.51	55,200	0.000	15,516,000	0.30	151,000
0.050	2,848,000	0.59	54,200	0.050	12,226,000	0.38	148,000
0.100	2,079,000	0.80	53,200	0.100	8,156,000	0.53	138,000
0.150	1,559,000	1.00	50,200	0.150	5,587,000	0.71	128,000
0.200	1,236,000	1.24	49,200	0.200	3,888,000	0.95	119,000
0.250	1,078,000	1.39	48,200	0.250	3,208,000	1.10	114,000
0.300	929,000	1.54	46,100	0.300	2,622,000	1.29	109,000
0.350	840,000	1.67	45,100	0.350	2,347,000	1.40	106,000
0.400	773,000	1.82	45,100	0.400	2,135,000	1.50	103,000
0.450	708,000	1.94	44,100	0.450	1,953,000	1.60	101,000
0.500	637,000	2.10	43,100	0.500	1,796,000	1.70	98,000
0.750	444,000	2.74	39,100	0.750	1,286,000	2.13	88,000
1.000	341,000	3.29	36,100	1.000	979,000	2.53	80,000
<b>1.200</b>	<b>280,000</b>	<b>3.79</b>	<b>34,100</b>	<b>1.200</b>	<b>813,000</b>	<b>2.82</b>	<b>74,000</b>
1.400	244,000	4.09	32,100	1.400	685,000	3.11	68,000
1.600	216,000	4.48	31,100	1.600	580,000	3.40	63,000
1.800	191,000	4.90	30,100	1.800	488,000	3.72	58,000
2.000	169,000	5.17	28,100	2.000	412,000	4.05	54,000
3.000	112,000	6.69	24,100	3.000	193,000	5.93	37,000
4.000	76,000	8.23	20,100	4.000	112,000	7.72	28,000

## Discussion of Resources

San Ramon is a steeply north-dipping, shear-zone-hosted gold deposit. New drilling since the previous resource estimate has identified extensions of mineralization that project 100m to 200m deeper and 100m farther to the west, so that the currently defined limits of the deposit are roughly 2,000m in an east-west direction and 350 to 550m below the surface. A significant outcome of Red Eagle's latest work has been improvement of an already good geologic model, based on 95 new core holes (total 238) providing a solid base for the updated resource estimate.

About 75% of the total resource is classified as Measured and Indicated, with the remainder as Inferred. Upgrade of the initial resource classification is a reflection of the substantial amount of infill drilling, improvements in geologic understanding and QA/QC practices, and the addition of more comprehensive density and geotechnical data and metallurgical test work. The work done has shown a strong and predictable mineralized shear zone and indications of two styles of mineralization with distinctive geological characteristics (the low- and high-grade domains) that can be modeled within the shear. The infill drilling to approximately 50m spacing was generally successful at verifying the location of the shear zone and modeled mineral domains, although it was somewhat less able to verify the location and grade of very high-grade mineralization ( $\sim >5\text{g Au/t}$ ). It is likely that even closer-spaced drilling will be required to properly define the grade and extent of these higher-grade zones; this would also help to mitigate the risk associated with this mineralization, which is the principal reason for the relatively small amount of Measured resources.

There is potential to encounter high-grade zones during mining that were not located by drilling, although this potential cannot be quantified. For example, even at drill spacing tighter than 50m, the localized bends and associated very high-grade mineralization similar to that encountered in SR-042 and SR-053 could easily be missed.

Multiple test cases of the estimate at various capping grades, restrictions on interpolation distances at varying grades, inverse-distance powers, anisotropies, and maximum number of composites per drill hole were performed to determine the model's sensitivity to these parameters. Also, multiple point-validation tests of inverse-distance to the first through fifth powers, as well as ordinary kriged estimates, were performed for various parameters. Overall, these test cases confirmed the lack of continuity of very high-grade mineralization, and estimation parameters were chosen, based in part on the results.

Increased drilling density will upgrade Inferred material into Indicated, and Indicated to Measured. Most of the resources deeper than 200m to 250m below the surface are Inferred because of the wide drill spacing. The most recent drilling has already added new Inferred material to the resource, and the deposit is still open-ended at depth.

The initial resource was reported at a single cutoff grade of  $0.3\text{g Au/t}$ . The resource for this update is reported as a combination of open-pit-mineable material at a cutoff grade of  $0.3\text{g Au/t}$  and underground-mineable material at a cutoff of  $1.2\text{g Au/t}$ . The change in reporting cutoff was necessary because deeper material beyond the limits that can be considered open-pit mineable was delineated by new drilling. Consequently, the reported resource in this update cannot be directly compared to the initial resource estimate, and the apparent decrease in the current estimate is somewhat misleading. The total resource at a  $0.3\text{g Au/t}$  cutoff actually increased, even though the majority of new drilling was designed to infill rather than expand the resource. Changes to the initial estimated resource included increases in the total resource at depth as a result of expansion drilling, but these increases were offset by decreases due to lower applied densities in the saprolite, decreased influence of mineralization  $\sim >5\text{g Au/t}$ , and the change in reporting cutoff grades (*i.e.* underground resources were reported at a higher cutoff grade of  $1.2\text{g Au/t}$  below an elevation of 2325m at the west end of the deposit and 2110m at the east end).

Although MDA is not an expert with respect to any of the following aspects of the project, MDA is not aware of any unusual environmental, permitting, legal, title, taxation, socio-economic, marketing, or political factors that may materially affect the San Ramon mineral resources as of the date of this report.

## **MINING OPERATIONS**

### **Mining Methods**

The San Ramon mine has been planned as an underground operation. The primary reasons for selection of underground methods as opposed to open-pit mining are:

- Underground mining helps to reduce the footprint of the mine and its environmental impacts;
- The San Ramon deposit is a high-grade, narrow vein deposit, and open-pit mining would cause excessive dilution from the mining process; and
- Underground selectivity will help to control dilution.

It is planned to let contracts for both the underground development and the stope production operations. On this basis, it has been assumed that the mining contractor(s) will provide all the infrastructure necessary to maintain their mining activities, including workshops, warehouse, fuel supply, transport, and accommodation for their employees.

### **Underground Development**

The mine will be accessed through a portal entrance. Development will include construction of a decline, main haulage levels, and sublevels. Underground ventilation will require raises to the surface. The decline and the primary haulage levels will be utilized to intake air, while the ventilation raises will be used as exhaust.

All of the development has been designed on the footwall side of the deposit. Cross-cuts will connect the development with production locations and, in some circumstances, may be driven through the vein beyond the deposit and into the hanging wall so that additional exploration/delineation drilling may be done from the hanging-wall side of the deposit.

Figure 16.1 and Figure 16.2 of the Santa Rosa Report show the underground development design. The following sections discuss the various components of the development.

### **Portal Construction**

The portal will be the primary access to the mine for personnel, equipment, supplies, and transportation of waste and ore. The current portal design is conceptual in nature and is shown in Figure 16.3 of the Santa Rosa Report. The portal location was chosen to provide access on the footwall side of the deposit while maintaining access to the process and tailings facility.

Construction of the portal will require digging back the hillside until a face can be developed. The face will be benched as required and supported using shotcrete and soil bolts. Initial digging in the portal will be done using a backhoe followed by use of a Load-Haul-Dump ("LHD") loader. Initial material will be saprolite, and as such will require substantial reinforcement to protect the portal entrance. Options may

include cement structure or steel sets at the entrance to ensure that the areas protected from erosion and spillage.

The portal entrance has been designed to have a zero gradient for the first 30m to facilitate the transition of equipment from the surface to the underground.

### **Primary Development**

The primary development extends from the portal entrance to the deposit. The primary development has been designed as a decline (incline in some areas) parallel to the deposit approximately 100m into the footwall providing access to main haulage routes. The primary development gradient is designed at 7:1 (horizontal to vertical) where the development is straight. In places where curves are required, the development is designed at a slope of 9:1 (horizontal to vertical).

Design dimensions are 4.0m wide by 4.5m high with a crowned profile to reduce stresses at the back of the development. The dimensions are designed to accommodate haulage of material using 20-tonne-class, underground, articulated haul trucks. Primary development will be finished with utility lines, electrical cable, and ventilation ducting as required. A total of 8,322m of primary access have been designed for the PEA.

### **Sublevels and Haulage Drifts**

Sublevels are driven every 30m of depth parallel to the deposit with a zero gradient and are used to extend access from the primary development to the deposit. The sublevels are offset from the deposit by approximately 75m to facilitate multiple accesses to the deposit. The sublevels are designed to accommodate the primary haulage and loading equipment from the mine, and consequently they have the same 4.0m wide by 4.5m high designed profile as the primary development.

There are three main haulage levels that are designed to connect across the deposit from east to west. These are located on the 2382, 2332, and 2085 levels. These are simply extensions of the sublevels across the entire strike length of the deposit allowing for easier transfer of material and equipment from one side of the deposit to another. The main haulage levels have the same dimensions as those of the primary and sublevel development.

In total, 13,586m of sublevel and main haulage drifts have been designed for the PEA.

### **Crosscuts**

Crosscuts and attack ramps are used to access the deposit from each of the sublevels. The crosscuts will be driven at gradients required to access the different levels of stope panels. Crosscuts have been designed with dimensions of 2.5m wide by 2.5m high and will be mined using single boom jumbos and smaller 1.5 cubic meter LHD's. A total of 414m of crosscuts have been designed for the PEA.

### **Ventilation Drifts and Raises**

Ventilation raises will be utilized to exhaust air to the surface. Three ventilation raises have been incorporated into the design. These would be approximately 3m in diameter, though the final design diameter may change depending on the final configuration and ventilation requirements for the mine. A total of 1,150m of ventilation raises have been designed for the PEA.

Ventilation drifts connect the ventilation raises with the primary and sublevel development. Ventilation drifts will have dimensions of 4.0m by 4.5m. A total of 735m of ventilation drifts have been designed.

### **Other Development**

Additional development will be required for muck-bays, shops, and drill stations. Ten-meter-long drill stations have been designed every 50m along the decline from approximate elevation 2380 to 2220. Initially these will be used for delineation drilling of the deposit. After that, they will be used for passing areas and muck bays.

### **Stoping Methods**

Two stoping methods have been considered for mining the San Ramon deposit: long-hole stoping and cut-and-fill. Long-hole stoping provides a lower cost and will be used in the areas where veins are thicker or multiple veins can be mined together. In order to maximize selectivity and reduce dilution, cut-and-fill will be the predominant mining method.

While these are the only methods considered in the PEA, it is expected that other methods will be investigated and used during mining as required. Long-hole and cut-and-fill mining methods are described in the following sections.

### **Long-Hole Stoping**

Areas where long-hole mining will be used will require the development of crosscuts from the main haulage drift to the vein. These crosscuts will be 100m apart. Once the access to the top and the bottom of the stope is reached, preparation will occur along the vein. This mining method also will require backfill to provide ground stability and access to the upper levels. Figure 16.4 of the Santa Rosa Report shows the development above and below the production stope. Figure 16.5 of the Santa Rosa Report shows broken ore ready to be mucked out from the stope, and Figure 16.6 of the Santa Rosa Report shows the mined-out stope being backfilled.

The backfill medium will be dry processed tailings in most stopes, with a layer of mine-development waste placed on the top of the filled stope as a base for mobile equipment access. Where necessary, cemented rock fill ("**CRF**") will be added to construct vertical pillars at the ends of stopes or to establish a consolidated floor allowing for stoping below filled areas. The dry-tailings backfill will be back-hauled by the mine ore-haulage trucks. CRF will be manually mixed directly in the LHD bucket by adding dry cement and sprayed water or a cement slurry mix as needed.

Each long-hole stope mines up to 100m by 20m of material. Three of the long-hole stopes can be stacked together to create a panel of stopes as shown in Figure 16.7 of the Santa Rosa Report. The sublevels and main haulage levels are designed with 30m vertical separation. Stope access connects the sublevels and main haulage levels with the long-hole stopes. Due to the geometry, some sublevels will service more than one stoping level.

### **Cut-and-Fill**

Cut-and-fill mining allows for good selectivity of material, but it is more costly than other methods. Cut-and-fill mining is done by mining tunnels or "drifts" from the secondary access through the deposit. The minimum width is limited by the equipment, and if required, the walls can be slashed or widened to mine

up to the width of the vein. This method requires backfill after each "slice." Cut-and-fill mining at San Ramon will start at the bottom of the stope and progress upward; thus equipment and personnel will always be standing on top of backfill material. Figure 16.8 of the Santa Rosa Report shows the development of access to a cut-and-fill mining location, and Figure 16.9 of the Santa Rosa Report shows the production sequence.

### **Potentially Mineable Resources**

Potentially mineable resources were developed using the modeled high-grade domains along with undiluted grade estimates. The high-grade domains were used as a basis for stope designs. It should be noted that "potentially mineable resources" are not resources and do not have demonstrated technical and economic viability. To build up the potentially mineable resources, the following steps were performed:

- Clip the high-grade zones (estimation domains for the resource modeling) using a 1.30g Au/t grade shell and expanding them to meet a minimum mining width of 2m;
- Clean the resulting polygons and merge polygons that are too close together to be mined separately (generally 1m to 2m minimum width);
- Calculate the proportion of blocks that are inside of the stope polygons;
- Calculate the diluted stope grades using the undiluted high-grade and low-grade estimates;
- Estimate the stope values using a 10m length by 10m height (thickness varied depending on the nature and size of the veins) and the economic parameters in Table 16.2 of the Santa Rosa Report;
- Eliminate those stopes without value;
- Eliminate those blocks that are within mined-out areas as was done with the resource model;
- Drop the topo surface by 10m, followed by calculation of the proportion of the blocks below this surface (this proportion was used as a volume adjustment factor to eliminate material that is within 10m of the surface);
- Calculate Measured and Indicated resources above economic cutoff (oxide 2.1g Au/t, transition 2.3g Au/t, and sulfide 2.1g Au/t);
- Calculate classified internal dilution (this includes any Measured, Indicated, or Inferred material grades);
- Calculate non-classified internal dilution (blocks that were not included in official resource reporting and were inside of the mineable shapes were used with zero grade); and
- Sum the total diluted potentially mineable resources.

Table 16.1 and Figure 16.10 of the Santa Rosa Report show the total potentially mineable resource used for the PEA.

Table 16.1 Total Diluted Potentially Mineable Resource

	Stope Resources above COG			Classified Internal Dilution			Total Diluted Material to Process		
	Tonnes	g Au/t	Ozs	Tonnes	g Au/t	Ozs	Tonnes	g Au/t	Ozs
Measured	377,000	6.95	84,300	113,000	1.40	5,100	490,000	5.67	89,400
Indicated	1,792,000	5.82	335,300	440,000	1.51	21,400	2,232,000	4.97	356,700
Measured and Indicated	2,169,000	6.02	419,600	553,000	1.49	26,500	2,722,000	5.10	446,100
Inferred	718,000	4.56	105,300	114,000	1.61	5,900	832,000	4.16	111,200

## Economic Parameters

After design, the viability of stope blocks was checked by estimating the value of each stope block and then deleting stope blocks that had a zero or negative gross value. Stope blocks were developed by combining continuous resource blocks in 10m-long (along the easting) by 10m-high groups of blocks. The stope blocks were further separated by thickness (along the northing) to reflect blocks within different veins.

Table 16.2 of the Santa Rosa Report shows the economic parameters that were used to estimate the value of each stope block. The milling cost of \$27.50/t was used for stope elimination, even though the final cost for milling is \$27.33/t.

Table 16.2 Economic Parameters

Mining Costs		Oxide	Primary	
UG Mining Cost		\$ 38.94	\$ 38.94	\$/t Mined
Processing Costs				
Milling		\$ 27.50	\$/t Processed	
Refining		10	\$/oz Au Produced	
Recoveries		Oxide	Mixed	Sulfide
Milling - Au		95%	87%	93%
Payable		99.5%	99.5%	99.5%
Royalties				
Government		3.20%	nsr	
Liberty Mutual Insurance		2%	nsr	
G&A Costs				
G&A Per Year		\$ 2,000,000		
Throughput (t/day)		1,000		
Days per Year		360		
Throughput (t/year)		360,000		
G&A \$/t Processed		\$ 5.56		

Subsequent to the above model the Company sold an additional 1% royalty to Liberty.

## Dilution and Ore Loss

Internal dilution is incorporated into the potentially mineable resources using the grades of Measured, Indicated, and Inferred blocks below the mining cutoff grade, but above the resource cutoff grades. This



ensures that only metal from the officially reported resources contribute to value generation in the cash-flow analysis.

Additionally, mineable material may include material that is not classified as resource, and while the tonnage is included into the potentially mineable resource as dilution, no additional metal content is included. On a tonnage basis, the total internal dilution included in the mineable resource is about 26%.

The San Ramon deposit is considered a narrow vein deposit. Many of the veins are narrower than the block width. During mining, it will be important to better define these veins through delineation drilling prior to final planning for each stope or set of stope blocks. In this manner, it should be possible to adjust the minimum mining width around the veins to get the best value out of the ore and avoid mining areas where dilution will destroy value. Thus, no external dilution has been added.

Ore loss is accounted for by removing areas that will not be mined because either they are too remote from other potential ore to pay for additional development or the potential value has been diluted to a point where the material is eliminated from consideration. No other ore loss has been considered.

## **Ventilation**

A preliminary ventilation system has been configured by dividing mine development and production into five main phases. At the start of production, the ventilation system will consist of one intake and one exhaust opening. Later in the mine life, ventilation will be expanded to two intakes and two exhaust openings for the remainder of the life of the mine. The ultimate configuration relies on the portal and a ventilation raise, located about in the center of the mine strike length, to be used as main air ventilation intakes and two raises, each located east and west of the deposit, will serve as exhausts.

In Phase 1 and Phase 2, a fan located on the surface will exhaust the contaminated air from the haulage drifts and mining location through the central ventilation raise, and in Phase 3 and through the remaining life of the mine, two raises will serve as exhaust ways.

Airflow required to ventilate contaminated air at production locations is assumed to be 130m<sup>3</sup>/s (115m<sup>3</sup>/s for ventilating contaminated air at production locations with an additional 10%, approximately 11.5m<sup>3</sup>/s, added).

Ventilation will be regulated to adjust the amount of air delivered to working areas via access drifts. Bulkheads or air doors will be installed in access drifts connecting to inactive levels and in the main haulage drift. Interlocking doors will be needed on the ramp to keep air flow from leaving the main haulage area.

Air requirements are at an order-of-magnitude level of detail and are estimated based on similar operations and estimated equipment requirements for this project. Detailed ventilation designs will be required as mine development and production progress.

The five ventilation phases for the operation are described below.

### **Phase 1**

Development and preparation will occur in the upper levels of the central zone of the deposit (Figure 16.11 of the Santa Rosa Report). Exploration drilling is also planned during this phase. Mine production will begin with the completion of the development for Phase 1 ventilation. The exhaust raise central will be fitted with ladders to allow its use as an emergency escape way.

### **Phase 2**

Development and production in the upper levels will continue as well as underground exploration drilling (Figure 16.12 of the Santa Rosa Report). During Phase 2, the eastern vent raise is driven to the 2233 level to be used as exhaust, and vent raise the central vent raise is used for intake ventilation. Development below Phase 2 continues using booster fans underground to support development ventilation as needed.

### **Phase 3**

Development and production continues to level 2233 and is expanded to the west zone of the deposit (Figure 16.13 of the Santa Rosa Report). During phase 3, an additional vent raise is developed in the west, which is used for exhaust.

### **Phase 4**

Phase 4 develops the ventilation network to the 2083 level (Figure 16.14 of the Santa Rosa Report). This extends the eastern raise to the 2083 level.

### **Phase 5**

Phase 5 completes the mine ventilation system by extending the main development to the 1873 level (Figure 16.15 of the Santa Rosa Report). This is the completion of the ventilation development for the known deposit. Portions of the ventilation network that are no longer needed will be blocked off and shut down as those portions of the mine cease to be used. Beyond the mine life, additional exploration development may be constructed to allow drilling below the known deposit. Operation of portions of the ventilation network may be extended beyond the mine life in support of exploration.

## **Geotechnical Studies**

No underground geotechnical investigations have been conducted to date. The development is primarily located in granodiorites, and the rock should be fairly competent. However, some areas of the development, especially near the surface, will be in saprolite. This can be a significant issue as to stability and/or advancement rates. Furthermore, the development within mineralized material will be conducted within a shear zone, which may be less competent than the granodiorite.

Current costs and production rates assume that any geotechnical difficulties can be overcome. However, a detailed underground geotechnical study will need to be completed prior to making a decision to proceed with development.

A geotechnical assessment will also be needed to recommend maximum opening sizes for stopes.

## **Hydrological Studies**

Some hydrology studies have been completed with respect to permitting activities. These may provide a basis for underground hydrology studies, but none have been completed at this time. The hydrology studies should provide recommendations on methods to control underground water and provide appropriate dewatering requirements.

## **Development and Production Scheduling**

Mine development and production were scheduled using MineSched software by Geovia. Development and production locations and rates were input based on the anticipated ramp-up schedule. The scheduling has been performed assuming that the development of the San Ramon deposit would be done in two phases: exploration and project mining.

The exploration phase of work would begin with construction of the portal and about 1,400m of the primary development. Drill stations along the ramp would be mined out, and a total of 11,500m of delineation drilling would be completed to confirm mineralization for the first few years of mining. The purpose of this work would be to:

- Confirm mineralization within material that would be mined during the payback period;
- Better understand rock characteristics that will be encountered underground;
- Perform test mining to allow for optimization of mining methods; and
- Establish development to allow early production once the process plant is commissioned.

The exploration phase is expected to be completed over a year's time and is shown as year -2 in Table 16.3, Table 16.4, and Table 16.5. The exploration phase is estimated to cost approximately \$9.0 million, which is considered a sunk cost with respect to the cash flow analysis in Section 22.0.

During the project mining phase, development will continue and some pre-production will begin in test stopes (year -1). Production will start in year 1, concentrating on high-grade zones. Production is expected to ramp up, allowing the processing of 1,000 tonnes per day in year 1. The following subsections describe the mine development and mine production scheduling through both the exploration and mining phases.

### **Mine Development Schedule**

Development plan centerlines and development rates were entered into the MineSched software. Precedents were used to ensure that development was completed in a sequential manner. The centerline design is shown as solids in Figure 16.1 and Figure 16.2 of the Santa Rosa Report. The development rate used is 3.75m per day for all drift development and 5m per day for ventilation raises. The development rates assume 2m rounds are completed for drifts each shift and two shifts per day are working. An 85% efficiency factor is added to account for days where a second round is not completed, resulting in the 3.75m per day production rate.

Ventilation raises are to be drilled with a raise bore machine or Alimak raise mining. The rate assumes 6m per day with an 85% efficiency. Table 16.3 of the Santa Rosa Report shows the development through both the exploration phase (year -2) and the mining phase.

Table 16.3 Yearly Development Schedule

		Yr -2	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
Stope Access	m	180	1,303	1,242	1,120	569	549	663	824	730	373	405	-	7,958
Main Ramp	m	1,430	833	894	383	1,322	626	607	472	259	1,072	425	-	8,322
Drill Stations	m	54	42	-	-	-	-	-	-	-	-	-	-	96
Haulage Drifts	m	454	3,166	2,321	1,563	1,336	1,217	667	1,145	1,119	587	281	-	13,856
Cross-Cuts	m	54	50	39	-	51	39	39	26	26	65	26	-	414
Ventilation Drifts	m	16	83	60	139	31	44	214	-	148	-	-	-	735
Ventilation Raises	m	143	-	316	141	-	116	291	-	150	-	-	-	1,156
Total	m	2,332	5,477	4,871	3,346	3,308	2,590	2,481	2,467	2,431	2,098	1,136	-	32,538
Stope Access	Tonnes	2,895	20,925	19,951	17,995	9,139	8,817	10,654	13,239	11,720	5,996	6,500	-	127,831
Main Ramp	Tonnes	61,260	35,661	38,290	16,383	56,604	26,814	25,990	20,210	11,095	45,930	18,185	-	356,422
Drill Stations	Tonnes	2,309	1,797	-	-	-	-	-	-	-	-	-	-	4,106
Haulage Drifts	Tonnes	19,449	135,615	99,395	66,953	57,205	52,119	28,547	49,055	47,909	25,146	12,029	-	593,423
Cross-Cuts	Tonnes	2,319	2,137	1,654	-	2,188	1,663	1,668	1,112	1,108	2,796	1,103	-	17,746
Ventilation Drifts	Tonnes	672	3,572	2,554	5,969	1,307	1,887	9,168	-	6,337	-	-	-	31,468
Ventilation Raises	Tonnes	2,603	-	5,730	2,559	-	2,097	5,283	-	2,723	-	-	-	20,995
Total	Tonnes	91,508	199,708	167,573	109,859	126,444	93,397	81,309	83,616	80,893	79,868	37,816	-	1,151,991

## Mine Production Schedule

Mine production was scheduled along with the development. Precedents were used to ensure that required development was completed before a mining location was scheduled. Each mining location was comprised of a mining panel, which is a group of stope blocks. The mining panels were modeled as 100m long by 30m high. The width in the northing direction was adjusted to contain the different veins to be mined.

Production rates were ramped up through the pre-production year -1 to 1,000 tonnes per day. A calendar of 360 days per year was applied, making the annual production rate 360,000 per year. Each mining panel or mining location was limited to 250 tonnes per day production, thus requiring four panels to be producing in order to fulfill the 1,000 tonne per day production target. With on-going backfill operations, this means that up to eight locations may be active at one time (four in production and up to four being backfilled). Table 16.4 of the Santa Rosa Report shows the yearly mine production.

Table 16.4 Yearly Mine Production

		Yr -2	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Total
Total Diluted Material	K Tonnes	-	40	320	360	360	360	361	360	360	360	361	360	39	-	3,641
	g Au/t	-	11.46	7.69	6.46	4.88	3.95	3.48	3.93	4.32	4.08	5.31	3.15	4.12	-	4.76
	K ozs Au	-	15	79	75	57	46	40	45	50	47	62	36	5	-	557
Mined as Cut & Fill	K Tonnes	-	38	193	260	246	252	230	237	312	326	296	247	36	-	2,673
Mined as Long Hole	K Tonnes	-	1	127	100	114	108	131	123	48	34	65	113	3	-	968
Total Mined	K Tonnes	-	40	320	360	360	360	361	360	360	360	361	360	39	-	3,641
Mining Cost: Cut & Fill	K USD	\$ -	\$ 1,745	\$ 8,842	\$ 11,884	\$ 11,234	\$ 11,537	\$ 10,500	\$ 10,819	\$ 14,268	\$ 14,905	\$ 13,546	\$ 11,315	\$ 1,642	\$ -	\$ 122,237
Mining Cost: Long Hole	K USD	\$ -	\$ 29	\$ 2,566	\$ 2,022	\$ 2,309	\$ 2,175	\$ 2,653	\$ 2,492	\$ 968	\$ 687	\$ 1,308	\$ 2,273	\$ 69	\$ -	\$ 19,550
Mining Cost: Total	K USD	\$ -	\$ 1,774	\$ 11,408	\$ 13,905	\$ 13,543	\$ 13,712	\$ 13,153	\$ 13,311	\$ 15,237	\$ 15,592	\$ 14,853	\$ 13,588	\$ 1,711	\$ -	\$ 141,788

Year -1 production is retained in a stockpile until the start of production (year 1), during which the plant is available. Yearly process production is shown in Table 16.5. Oxide, transition, and sulfide material fed to the mill is shown so that the recovery can be varied by material type. Recovered gold is shown based on 95% recovery for oxide, 87% recovery for transition, and 93% recovery for sulfide material.

Table 16.5 Yearly Process Production

		Yr-2	Yr-1	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12	Total
Oxide	K Tonnes	-	-	2	6	36	5	24	25	-	-	-	-	-	-	97
	g Au/t	-	-	5.10	6.48	4.45	3.67	3.11	3.34	-	-	-	-	-	-	3.95
	K ozs Au	-	-	0	1	5	1	2	3	-	-	-	-	-	-	12
	K Ozs Rec	-	-	0	1	5	1	2	3	-	-	-	-	-	-	12
Transition	K Tonnes	-	-	5	1	0	3	3	19	-	-	-	-	-	-	32
	g Au/t	-	-	6.71	5.20	4.01	4.54	3.40	2.67	-	-	-	-	-	-	3.69
	K ozs Au	-	-	1	0	0	0	0	2	-	-	-	-	-	-	4
	K Ozs Rec	-	-	1	0	0	0	0	1	-	-	-	-	-	-	3
Sulfide	K Tonnes	-	-	353	352	324	353	335	316	360	360	361	360	39	-	3,512
	g Au/t	-	-	8.14	6.46	4.93	3.95	3.51	4.05	4.32	4.08	5.31	3.15	4.12	-	4.79
	K ozs Au	-	-	92	73	51	45	38	41	50	47	62	36	5	-	541
	K Ozs Rec	-	-	86	68	48	42	35	38	47	44	57	34	5	-	503
Total	K Tonnes	-	-	360	360	360	360	361	360	360	360	361	360	39	-	3,641
	g Au/t	-	-	8.11	6.46	4.88	3.95	3.48	3.93	4.32	4.08	5.31	3.15	4.12	-	4.76
	K ozs Au	-	-	94	75	57	46	40	45	50	47	62	36	5	-	557
	K Ozs Rec	-	-	87	70	53	42	38	42	47	44	57	34	5	-	518
	Net Rec	0.0%	0.0%	92.9%	93.0%	93.2%	93.0%	93.1%	92.9%	93.0%	93.0%	93.0%	93.0%	93.0%	0.0%	93.0%

## Recovery Methods

The San Ramon proposed processing facilities include a complete circuit to process gold-bearing material from an underground mining operation. The facilities consist of a carbon-in-leach ("CIL") precious-metals recovery plant to produce a gold doré product, including primary and secondary crushing, crushed-ore storage, ball-mill grinding, thickening, agitated leaching (CIL), an elution recovery system, cyanide destruction, tailings filtration, and a combination of tailings disposal with approximately one-half placed underground, and the other half as dry-stack tailings placed in a surface impoundment. The criteria used for the design of the agitated-leach processing circuit are summarized in Table 17.1 of the Santa Rosa Report.

## Process Summary

In the early stages of the study, an economic trade-off was conducted between the whole-ore leach and a whole-ore flotation with re-grind followed by intensive leaching of the float concentrate. Based on the relative cyanide consumptions and recoveries between the two methods as determined in laboratory test work, the economics slightly favored the whole-ore leach method. Therefore, the whole-ore leach (CIL) circuit was chosen for processing the ore for the Santa Rosa project.

A general process flow sheet is presented in Figure 17.1 of the Santa Rosa Report. A general site layout, a detailed layout of the process-plant area, and a detailed layout of the mine portal/tailings-handling area are presented in Figure 17.2, Figure 17.3, and Figure 17.4 of the Santa Rosa Report, respectively. Figure 17.3 of the Santa Rosa Report shows the layout has been designed to incorporate an additional ore processing line to at least double the plant throughput in the future.

The basic unit operations included in the circuit are:

- Primary crushing with a fixed scalping grizzly, vibrating grizzly feeder, and jaw crusher, with the associated conveyors;
- Secondary crushing with a cone-crusher in closed circuit with a double-deck vibrating screen, plus the associated recycle and discharge conveyors;
- Crushed-ore reclaim with two belt feeders, ball-mill feed conveyor, weightometer, and a lime silo and feeder;

- A small gravel-handling circuit used for road maintenance, which includes a splitter chute to periodically reroute gravel from the secondary screen, a dedicated gravel-stacking conveyor, and a separate stockpile;
- Grinding and classification consisting of an overflow ball mill in closed circuit with hydrocyclones, a vibrating trash screen for the cyclone overflow, and associated conveyors, pumps, tanks, instrumentation, etc.;
- Thickening of the cyclone overflow, followed by cyanide leaching in an agitated-leach circuit with one air-sparged pre-leach tank and five air-sparged CIL tanks with associated accessory equipment, carbon transfer pumps, carbon safety screen, and instrumentation;
- Thickening of leached slurry in a high-rate thickener followed by cyanide detoxification in an agitated SO<sub>2</sub>/air process with associated pumps, tanks, reagent-dosing systems, instrumentation, etc.;
- Transfer of the detoxified tailings slurry to the mine-portal area for tailings disposal that includes pumps and surge tanks, which combined will have a minimum 12-hour effective storage capacity;
- Pressure filtering of the tailings slurry to produce a filter cake, which will be conveyed to a temporary storage area;
- A portion (50%) of the dry tailings to be placed underground by back-loading the mine ore-haulage trucks;
- Trucking the remaining portion (50%) of the tailings (along with a portion of the waste rock from the mine, estimated to be 50%) to a surface impoundment area;
- A solution-collection pond for process solutions for recycle to the grinding area and the agitated cyanide-leach area, including associated pumps and accessories;
- An acid wash and Zadra pressure elution circuit to strip precious metals from the loaded carbon, including associated pumps, tanks, instrumentation, and accessories;
- An activated-carbon-handling circuit, which includes a carbon-regeneration kiln and fines filter press, and associated pumps, tanks, instrumentation, etc.;
- Gold and silver recovery in an electrowinning circuit;
- Refinery consisting of a mercury retort, a smelting furnace, and a bag house, including associated pumps, tanks, instrumentation, and accessories;
- Reagent addition, which consists of sodium-cyanide mix and storage tanks, flocculant preparation system and storage tank, hydrated-lime mix tank, and copper sulfate and sodium metabisulfite mix and storage tanks for the detoxification process; and
- Water distribution system, which includes a combined fire/process water-storage tank, pump gland water tanks, and associated pumps to distribute water for fire suppression, process use, and dust suppression.

## **Crushing**

The crushing plant will operate 12 hours a day, 7 days per week. The 12 hours of operation will be on day shift only in order to prevent excessive noise levels during the night. Ore will be delivered to the crusher by mine haul trucks and either be directly dumped into the crusher-feed hopper or deposited in a stockpile area. It is estimated that about one-half of the feed material might be re-handled from the stockpile area by a front-end loader.

The crushing plant consists of a run-of-mine ("**ROM**") feed bin with a scalping grizzly, a vibrating grizzly feeder, a jaw crusher, and a discharge conveyor.

The stationary grizzly deck over the ROM feed bin has an aperture of 300mm x 300mm. Oversize material will be stockpiled adjacent to the stationary grizzly, where it will be broken up periodically by a backhoe with a rock-breaker attachment.

The vibrating grizzly oversize coarse ore will discharge to a single toggle jaw crusher. The jaw crusher will be operated with a discharge setting of approximately 75mm to assure that the primary crushed-product size will be 80% passing 75mm.

The jaw-crusher product and the grizzly-feeder undersize will drop onto the primary crushing-discharge conveyor, which will transfer coarse crushed material to a secondary screen feed conveyor, which in turn will deliver ore to the secondary crushing circuit.

Crushed ore from the secondary feed conveyor will be delivered directly to an inclined double-deck vibrating screen with an upper-deck aperture size of 51mm and a lower-deck aperture of 16mm. Oversize from both screen decks will feed into a standard cone crusher with a closed side setting of 17mm. The cone-crusher product will fall on to a crushed-ore discharge conveyor and then to a recycle conveyor, which will return crushed ore to the secondary feed conveyor.

Screen undersize with a  $P_{80}$  of approximately 11mm will be the crushing-circuit final product and will drop onto a transfer conveyor, which will feed a stacking conveyor. The stacker will discharge the crushed material to the crushed-ore stockpile.

## **Road Gravel Production**

Periodically, gravel will be produced by the crushing plant for use in maintaining on-site roads.

It is assumed that gravel will be produced approximately once per week and that the required gravel product size is sufficiently close to the crushed-ore particle size that no adjustment of equipment settings will be required for gravel production. The estimated demand for gravel is approximately 50 tonnes per day, therefore the gravel is assumed to be produced and stockpiled in batches of 350-400t. Since the crushing circuit is sized to operate on one 12-hour shift per day for processing ore, sufficient surplus capacity will exist to produce gravel by operating part of a second shift one day per week.

In preparation for a gravel campaign, all ore inventory in the primary and secondary crushing circuits will be processed through until depleted. Then gravel feed will be introduced and processed until the necessary amount has been stockpiled, after which the circuit will be flushed of all gravel inventory and ore processing will resume.

During gravel production, secondary-screen undersize will be redirected to a separate dedicated gravel-stacking conveyor by a diverter chute, which will feed a separate stockpile. The gravel stockpile will be reclaimed by a loader.

### **Ore Reclaim and Grinding**

Stockpiled crushed ore will be reclaimed and fed to the grinding circuit, which consists of a ball mill in closed circuit with a cluster of hydrocyclones.

During normal operations, two belt feeders situated below the stockpile will deliver crushed ore to the ball-mill feed conveyor equipped with a belt sampler and weigh scale. The conveyor will transfer the crushed ore to the ball mill for grinding. Pebble lime will be added to the conveyor for pH control and will be controlled by the weigh scale.

The crushed ore will be conveyed via a feed chute to the ball mill. Ground ore slurry will gravity discharge from the ball mill through a trommel screen into the cyclone feed pump box. The trommel screen will protect the cyclone feed pumps from balls and chips.

A rubber-lined centrifugal cyclone feed pump with a variable-speed drive will deliver ore slurry from the cyclone feed pump box to a cyclone cluster. The cyclone feed pressure will be maintained as needed to achieve the required ground product particle-size distribution of 80% passing 74 microns (200 mesh).

The overflow from the cyclones will flow to a trash screen, which in turn will discharge to a grinding thickener. The underflow from the cyclone cluster will be returned to the ball mill.

Cyanide from recirculated process solution will be present in the grinding circuit, allowing for the start of leaching.

### **Thickening and Leaching**

Additional leaching will be accomplished in the grinding thickener feed mix box, grinding thickener, and the agitated-leach tanks.

The grinding-circuit cyclone overflow passing the trash screen will flow to a high-rate thickener for slurry dewatering and to obtain the required density of the slurry prior to the leaching circuit. The solids will settle in the thickener to a final density of approximately 45 weight percent solids with the help of a flocculant. The flocculant will be added as a 0.20% solution to the feed slurry.

Grinding-thickener overflow solution will flow back to the cyclone feed pump box. The grinding-thickener underflow will be pumped to the leach circuit by rubber-lined pumps. The thickener has been oversized to accommodate the additional throughput of a second processing line, if constructed.

The leach circuit will contain six agitated-leach tanks. The first tank is designated as a "pre-leach" tank, and the remaining five tanks are CIL tanks, which simultaneously leach and adsorb gold.

Sodium cyanide will be added to the "pre-leach" tank in the series to maintain the desired concentration level of cyanide. The ability to add sodium cyanide to the first two CIL tanks is also included.

Since the dissolution of gold and silver requires oxygen, air will be sparged into each of the six tanks by a low-pressure compressor to help maintain dissolved-oxygen levels.



The five CIL tanks will be fitted with NKM-type carbon retention screens. Carbon will be added to the CIL tanks and will be advanced counter-current to the flow of slurry by five vertical submersible pumps installed in each CIL tank. Carbon will be advanced once per day. Gold- and silver-loaded carbon (with ore slurry) from the first CIL tank will be transferred to a carbon-recovery screen; de-slurried carbon will be rinsed and will overflow to a holding tank for processing in the recovery circuit, and the ore slurry will be returned to the first CIL tank. Eluted carbon from the recovery circuit will be transferred to the last CIL tank.

Each of the pre-leach and CIL tanks will be 10.4m in diameter and 11.6m high. Each tank will provide eight hours of retention time for a total of 48 hours for the complete circuit.

### **Washing**

Leached slurry exiting the CIL circuit will pass over a carbon safety screen and will be discharged into a wash thickener. The underflow from the wash thickener (at a density of 55 percent solids by weight) will be pumped to the cyanide-destruction circuit. This thickener has been similarly oversized to accommodate a second processing line, if constructed in the future. Overflow solution, containing residual cyanide from the leach circuit, will report back to the grinding circuit as necessary (to the ball-mill feed chute and/or the cyclone pump box) or will discharge to the process pond, where it will be used in the recovery circuit and for reagent mixing.

### **Cyanide Destruction**

The thickened tailings slurry from the wash thickener will be run through an agitated SO<sub>2</sub>/air cyanide-destruction process. The tailings slurry will be pumped to the two detoxification reactor tanks, each 9.75m in diameter and 10.75m in height. Air will be sparged into the tank, along with additions of sodium metabisulfite and copper sulfate solutions, as required, to give a maximum final cyanide concentration of less than 1ppm (WAD CN<sup>-</sup>). Lime slurry will be added as required to maintain the pH between 7 and 8. A low-pressure compressor will supply the required air.

### **Tailings Slurry Handling**

The detoxified tailings slurry will be discharged to a surge tank located in the processing-plant area. Slurry will then be pumped overland to a second surge tank located near the mine portal, where the tailings filter plant will be located. The combined surge capacity between the two surge tanks will be 12 hours minimum (6 hours per tank).

Each surge tank will be 7.8m in diameter and 8.8m high and will be fitted with an agitator to prevent sanding in the tank. The second surge tank will feed the filtration plant.

### **Tailings Filtration and Disposal**

Tailings slurry from the mine area surge tank will be pumped to the tailings filtration plant. The filtration plant will consist of two recessed plate filter presses (one operating and one standby) with the associated supporting equipment. Each press will have the capacity to handle 100% of the tailings.

A dedicated filter feed pump will feed the operating filter. The press will operate in a cycle consisting of filter closing and clamping, filter feed, air blow, cake discharge, and finally cloth washing. The wash water will be used for cloth washing prior to beginning a new filtration cycle. Filtrate will be collected in the filtrate tank and pumped to a clarifier system (consisting of a small clarifier and underflow pump) as make-up for wash water. Cloth-wash discharge will be collected in sumps and pumped back to the

clarifier with the overflow returned to the wash-water tank. Excess water will be pumped overland back to the process pond for re-use in the process area. The small amount of underflow from the clarifier will be periodically pumped back to the mine surge tank.

Tailings will be discharged from the filters as a damp solid assumed to contain nominally 15% to 18% moisture. The filtered tailings cake will be transported via conveyors to a covered tailings-storage area. The storage area can store up to two days of filtered tailings.

Filtered tailings will be reclaimed by a front-end loader and transferred both underground and to a surface impoundment area as dry-stack tailings. On average, 50% of the total tailings will be placed underground. The remaining 50% of the tailings, along with waste rock, will be trucked to a surface impoundment area. At the surface tailings site, the tailings and waste will be spread and compacted with a wide-track bulldozer.

The mine backfill operation may experience periodic interruptions during which a buildup of tailings would occur. For shorter interruptions, the buildup will be addressed using the surge capacity in the two surge tanks. For longer interruptions, the filtration storage area, which is sized for two days of tailings storage, will be used. During excessive rainfall periods, it will be important to maximize the delivery of dry tailings to underground as back-fill, thereby minimizing activities on the surface impoundment.

### **Surface Tailings Impoundment (Dry-Stack Tailings Facility)**

The tailings impoundment will be located to the east of the process-plant facilities. It will be designed to contain a minimum of 2.0 million dry tonnes of tailings plus approximately 1.0 million tonnes of waste rock, for a total of 3.0 million tonnes. The ultimate volume required for the tailings impoundment will be approximately 2.0 million m<sup>3</sup>. Two tailings facilities were studied: the East and the West dry-stack tailings options (see Figure 17.2 of the Santa Rosa Report) with the West one being the option preferred by the Corporation.

The small amount of solution that will seep from the deposited tailings will be collected in a seepage pond and pumped to the process solution pond using submersible pumps. Any runoff during periods of rainfall will be collected in a separate pond, tested, and either discharged or sent to the seepage pond where it will be returned to the process.

Geotechnical studies on the west tailings impoundment location are underway.

### **Precious-Metal Recovery**

Loaded carbon from the CIL circuit will be pumped to a loaded carbon storage tank for subsequent transfer to the elution circuit. To begin an elution cycle, the loaded carbon will be pumped to the elution column. A complete elution cycle, including carbon transfers and strip-solution preparation, will take nominally 14 to 18 hours.

### **Elution**

After a batch of loaded carbon is transferred to an elution column from the loaded-carbon tank, a caustic-cyanide strip solution will be pumped through heat exchangers and introduced to the elution column at a temperature of 135°C and a pressure of approximately 450 kPa. As the strip solution rises through the bed of loaded carbon in the strip vessel, the precious metals will be desorbed from the carbon. The gold-laden strip solution will exit the column, flow through a heat-recovery heat exchanger (to pre-heat the incoming solution), then through a cooling heat exchanger where raw water will be used to further cool

the strip solution. The cooled solution at approximately 80°C will flow through two electrowinning cells, where the gold will be deposited onto stainless-steel wool cathodes.

The barren strip solution will be pumped from the electrowinning cells discharge tank back to the strip-solution storage tank. The solution will be continually recycled until stripping of the carbon is completed.

The gold precipitated in the electrowinning cells will be washed in-situ using high-pressure water sprays, then filtered in a filter press. The filter cake, consisting primarily of gold with some silver, will be sent to a mercury retort to remove any contained mercury and then periodically smelted.

The strip solutions will be discarded to the process-water pond after approximately every third strip cycle, and fresh solution will be made up in the strip-solution tank. Sodium hydroxide (caustic) and sodium cyanide solution will be added as required.

After stripping, the carbon will be transferred via recessed impeller pumps to either the acid-wash circuit or to the carbon regeneration kiln dewatering screen.

### **Acid Wash**

Each batch of stripped carbon will be treated in an acid-wash vessel. Fresh water will be circulated through the bed of carbon to remove any residual caustic and cyanide. The rinse water will be drained to the process-water pond. Concentrated hydrochloric acid will then be metered from the acid-storage tank into the acid-mix tank. The acid-wash solution at nominally 2% HCl by weight will be circulated up-flow through the acid-wash vessel to achieve and maintain a pH ranging from 1.0 to 2.0. Completion of the cycle is indicated when the pH stabilizes between 1.0 and 2.0 without acid addition for a full hour of circulation. This process will remove scale and other inorganic contaminants that inhibit gold adsorption onto carbon.

After acid washing is complete, the spent acid-wash solution will be pumped to the process pond. The carbon will then be washed with process solution to neutralize any residual acid. The total time required for a batch of carbon to be acid washed is typically five to six hours. Washed carbon will then be pumped to the carbon-regeneration circuit or returned to the CIL circuit (final CIL tank).

### **Carbon Regeneration**

Following acid washing, the carbon will be transferred via a recessed impeller pump to the dewatering screen, where it will be dewatered and discharged to the kiln feed hopper. If the carbon is not scheduled to be reactivated, it will be pumped to the final CIL tank.

The carbon to be regenerated will be fed at a controlled rate by a screw feeder into the kiln and then thermally reactivated at approximately 750°C. The hot carbon will discharge into a "quench" tank, which will be partially filled with solution. The quench will help increase the reactivity of the carbon and enhance the gold adsorption capabilities. Quenched carbon will be pumped to the dewatering screen to remove any fine carbon (less than 24 mesh or 710 microns) produced in the regeneration process. The kiln will be fitted with an off-gas scrubber to capture any mercury vaporized in the process.

It is recommended that all carbon batches be reactivated before returning to the CIL circuit.

## **Carbon Handling**

Carbon handling will include the components necessary to condition, store, and add carbon to the system. Fine-carbon collection will also be incorporated.

Carbon will be transferred between the various unit operations in the recovery plant by recessed impeller pumps. This type of pump minimizes attrition of carbon during transfer.

The movement and regeneration of carbon will produce fines. Prior to the transfer of regenerated carbon to the CIL tanks, the carbon will be screened on a vibrating carbon-sizing screen. The undersize material will gravitate to the carbon-fines tank and will then be pumped through the carbon-fines filter press. The carbon fines will be placed in plastic-lined containers and eventually sent off-site to an appropriate facility for residual metal recovery from the carbon.

New carbon, supplied in 500kg bulk bags, will be periodically added to the circuit to make up for carbon lost through abrasion or during reactivation. Typical carbon losses are 3% of the carbon stripped. Fresh carbon will be pre-conditioned in an attritioning tank prior to transfer to the CIL circuit.

## **Refining**

The refining area will include a mercury retort, a tilting crucible-type smelting furnace with 430kg red brass capacity, and a furnace off-gas collection system, including a hood, baghouse, and induced-draft exhaust fan.

Retorting and smelting will take place up to three times per week. The precious-metal sludge from the electrowinning-circuit filter press will be placed in the mercury retort, where it will be heated to dry the sludge and to drive off mercury, which will be then be recovered. A carbon-drum mercury absorber will be included to remove any residual mercury vapors leaving the retort system. The retorted precious-metal sludge will then be added to the smelting furnace along with smelting fluxes. Fluxes will be a combination of borax, fluorspar, soda ash, and niter. The doré produced in the smelting furnace will be poured into ingot molds, sampled, cleaned, weighed, and prepared for shipment.

A slag treatment system will be provided to recover the precious metals retained in the slag.

A hood will collect the furnace fumes, which will pass through a baghouse to remove particulates, then through an induced-draft fan. The system will be designed to remove over 99.5% of the particulates present in the exhaust fumes.

## **Sampling and Metallurgical Balance**

Sampling equipment for both solids and liquids is located at many locations within the plant, in order to maintain good metallurgical accountability. Primary metallurgical control will be obtained from the cyclone-overflow head sample and the final tailings sample.

## **Reagents**

General information on the reagents required for the mill operation, such as the delivery, use, and storage of these chemicals, is presented in Table 17.2. In general, packaged reagents will be stored under cover in an area near the plant location. Liquid reagents will be stored in such a manner that spillage can be contained and returned to use, or disposed of safely. The cyanide system will meet the International Cyanide Management Institute standards for containment, storage, and handling of cyanide.

## **Sodium Cyanide**

Sodium cyanide will be delivered in 1-tonne bulk bags. A jib crane will lift the bulk bags over the cyanide mix tank. The sodium cyanide briquettes will be gravity-discharged into a carbon steel tank equipped with an agitator, which will be used to dissolve the cyanide briquettes in water. Approximately 25kg of sodium hydroxide will be added to the tank solution prior to addition of the briquettes to help maintain the pH level higher than 10.5. A cyanide solution concentration of 20 percent will be prepared in this manner. The cyanide solution will be transferred from the mixing tank to a storage tank for process distribution. Cyanide solution will be metered from the storage tank to the grinding and leaching circuits.

The Corporation has already committed to and become a signatory company of the International Cyanide Management Code for the management of the use of cyanide during its operations.

## **Pebble Lime**

Pebble lime will be received by trucks and transported into a lime silo. It is assumed that the lime-delivery trucks will be equipped with the proper air-delivery system to transfer lime to the silo. The lime will be screw-fed onto the ball-mill feed conveyor at a rate which will be controlled by a weigh scale located prior to lime addition.

## **Hydrated Lime**

Hydrated lime will be received by trucks and transported into a separate, but identical lime silo. The lime from this silo will be screw-fed to a lime mix/storage tank. The hydrated-lime solution will be pumped from the storage tank to the cyanide-destruction tanks for pH control.

## **Antiscalant**

Provisions will be made for the receipt and storage of antiscalant agents in bulk cube containers. Antiscalant will be added by metering pumps to various areas of the mill, including thickening and leach, tailings and cyanide neutralization, and process-solution distribution. Antiscalant will be used to prevent carbonate scaling in pumps and piping.

## **Smelting Fluxes**

Fluxes for the smelting of the precipitate will be stored in the refinery adjacent to the smelting-furnace location. Smelting fluxes will be batch-weighed for each smelt and mixed in a small mixer.

## **Flocculant**

Flocculant will be received in bulk bags. The flocculant will be prepared in a package flocculant preparation system. Metering pumps will be positive displacement pumps and will control the desired quantity of flocculant to a series of addition points located on the thickener-feed mix tanks. A separate transfer pump will transfer flocculant solution from the storage tank to a day tank located in the mine-portal area for use in the clarifier. A separate metering pump will feed the clarifier.

### **Copper Sulfate**

The copper sulfate will be received as dry copper sulfate pentahydrate in bags. It will be mixed with water in an agitated-mix tank. From the mix tank, it will be pumped into a storage tank. From the storage tank, it will be metered into the detoxification reactor tank.

### **Sodium Metabisulfite**

Sodium metabisulfite will be received in bags in dry form. It will be mixed with water in an agitated-mix tank. From the mix tank, it will be pumped into a storage tank. From the storage tank, it will be metered into the detoxification reactor tank.

### **Caustic**

Caustic will be received in dry form in bags. It will be mixed with water in an agitated-mix tank, which also serves as a storage tank. From the mix/storage tank, it will be metered primarily into the strip-solution tank as needed. The concentration of sodium hydroxide typically contained in the hot strip solution will be 1% to 2%. Caustic solution will also be metered to the acid wash vessel for pH control and to the cyanide mix tank.

### **Hydrochloric Acid**

Hydrochloric acid ("**HCl**") will be used for acid washing of carbon. Concentrated HCl will be received in drums or bulk cube containers and metered directly to the acid-wash tank.

### **Environmental Studies**

The Corporation is completing an Environmental Impact Assessment ("**EIA**") for the Santa Rosa project under contract with the consulting firm Conestoga Rovers and Associated, which has recently been acquired by Tetra Tech. The EIA includes a preliminary Environmental Baseline Study ("**EBL**") conducted by teams of specialist from the Universidad de Antioquia and Fundación Universitaria Católica del Norte. These universities are local to the Santa Rosa region and are highly respected for their expertise and professionalism by the Colombian environmental agencies.

The EBL was conducted as a preliminary component of the EIA in order to submit it for the Environmental Licensing process. The EBL was carried out from September 2012 to May 2013 and included characterization of the renewable natural resources and environment within the area of influence of the San Ramon project. Monitoring and further data collection have been maintained since May 2013 and will continue throughout the life of the project. The key areas investigated for the EBL are:

- Water quality, quantity and uses within the main basins in the Area of Influence of the project
- Conceptual and numerical model for the hydrogeology of the main basins
- Air quality, climate, and environmental noise sampling and monitoring
- Biotic assessment (wildlife: fauna and flora)
- Geology, geotechnical, geomorphology, soils, and landscape studies
- Archeological diagnosis and prospection

- Community diagnosis, public health, and epidemiology studies.

Prior to commencement of the EBL, the Corporation requested terms of reference to be adopted by the project based on the type and size of the project to be developed. ANLA, the national environmental authority, issued the terms to be used as a generic guideline for the EIA; this was later supplemented by CORANTIOQUIA, who issued specific terms to be adopted according to the scope and size of the Santa Rosa project as is described in this PEA.

### **Waste and Tailings Disposal, Site Monitoring, Water Management**

Designs and estimated quantities for waste and tailings disposal have been completed (2.0 million tonnes of dry tailings and 1.0 million tonnes of acid-consuming granodiorite mine-waste rock). Site monitoring and water management are well established and on-going and are a component of the EIA Management Plan. The regional environmental authority, CORANTIOQUIA, will review all natural-resource measures, including mine development and construction, operation, and post-mine closure. These measures will be set out in the environmental license.

### **Qualitative Assessment of Acid Rock Drainage from Tailings**

A field-based study was initiated to enable an understanding of the acid rock drainage ("ARD") risks associated with exposing the mineralization and its host rocks to atmospheric oxygen and moisture during mining. The findings were as follows:

- The geological make-up of the deposit includes granite/granodiorite, a shear-zone structure hosting the sulfidic mineralized body, a thick saprolitic and oxidized cap, and small volumes of a pyrrhotite-bearing schist.
- Sulfide sulfur contents in the mineralized zone average 2%, while HCl testing of core shows high calcite contents in the mineralized zone.
- The mineralized shear zone has average sulfide sulfur contents of 0.5%, and again, HCl testing on core shows high calcite contents.
- The granite/granodioritic lithology is devoid of pyrite and shows the widespread presence of calcite.
- Saprolitized granite/granodiorite is devoid of both pyrite and calcite.
- The schist material, located in the far western part of the deposit, shows an abundance of pyrrhotite and a lack of calcite.
- It is apparent that the low sulfide contents and the abundance of calcite will render the deposit non-acid generative in the short, medium, and long terms.
- The pyrrhotitic schist and the partially weathered mineralized material could generate acidity, but these materials are present in such small quantities that they can easily be dealt with.
- With the bulk of the mining development being in the granite/granodiorite body, the waste rock can be expected to be net acid neutralizing.

- Focused field tests included an initial assessment of the various material types encountered in the deposit, using "pH" touch paper on drill core to identify and establish the possibility of ARD materials being present, their material types, and their locations within the deposit. This was followed by a larger-scale, long-term, leach-pad test-work program, exposing the various materials to the local weather and environmental conditions over a period of more than six months (Figure 20.1 of the Santa Rosa Report). The long-term leach pad tests were used to conclusively test the above predictions.
- Samples of the water discharged from the leach test pads were collected on a weekly basis and sent to a local accredited laboratory for analysis, including pH, total dissolved solids ("TDS"), conductivity, and presence of any heavy metals.
- As a further means of confirming the site assessment and leach-pad test work, 15 samples of various material types from the deposit were sent to SGS (Canada) for acid-base accounting ("ABA") tests. The results of the ABA tests aligned with those of the leach-pad tests and confirmed the same low risk of ARD within the materials contained in the deposit. Samples types sent for ABA testing are shown on Table 20.1 of the Santa Rosa Report.
- The results of these analyses have confirmed the initial site assessment and leach-pad results, confirming a low risk from ARD materials, which are in small quantities compared to the net acid-neutralizing materials.
- This low risk can be easily and effectively mitigated by using the net acid-neutralizing waste-rock materials when mixed with the tailings from the ore following processing.
- Engineering of the waste-storage area can include using the granite as a drainage and an erosion-resistance media.
- The small quantity of mildly acid-generative materials can be mixed with the far more abundant net acid-neutralizing materials to mitigate the low risk of any ARD potential.

## **Permitting**

According to Colombian law, mining projects require different environmental permits depending on which stage of the mining project is underway. For the exploration stage, an Environmental Guideline and specific permits for drilling (water concession and sewage permits) are required. For building, operation, and mine closure stages, an Environmental License is required.

The Corporation submitted to CORANTIOQUIA the Environmental Guideline for the exploration phase; water concession and sewage permits were granted by CORANTIOQUIA for the drilling campaign (exploration stage).

The final terms of reference of the Environmental License will cover all aspects of the project, including the mine development and construction, operation, and mine-closure stages.



## **EXPLORATION AND DEVELOPMENT**

A Definitive Feasibility Study for the San Ramon Gold Deposit is currently underway including detailed metallurgical testwork and geotechnical drilling with a budget of \$1,500,000. Permitting is ongoing with a budget of \$350,000. Regional exploration of the 320 km<sup>2</sup> Santa Rosa Gold Project including mapping, surface geochemistry and underground channel sampling is ongoing with a budget of \$1,200,000.

### **Other projects**

The Corporation holds another project in Colombia being the Pavo Real Project. Information on the terms of the relevant option agreements are provided in the Corporation's Financial Statements for the year ended December 31, 2013.

## **ARTICLE 4 DIVIDENDS**

No dividends on the Common Shares have been paid by the Corporation. Management anticipates that the Corporation will retain all future earnings and other cash resources for the future operation and development of its business. The Corporation does not intend to declare or pay any cash dividends in the foreseeable future. Payment of any future dividends will be at the discretion of the Corporation's board of directors after taking into account many factors including the Corporation's operating results, financial condition and current and anticipated cash needs.

## **ARTICLE 5 DESCRIPTION OF CAPITAL STRUCTURE**

The Corporation's authorized capital consists of an unlimited number of Common Shares and an unlimited number of preferred shares, of which 73,832,714 Common Shares are issued and outstanding as at the date of this Annual Information Form. The holders of Common Shares are entitled to one vote for each Common Share held, and shall be entitled to dividends if and as when declared by the board of directors.

Holders of Common Shares are entitled on liquidation, to receive such assets of the Corporation as are distributable to the holders of the Common Shares. All of the Common Shares are fully paid and non-assessable.

## **ARTICLE 6 MARKET FOR SECURITIES**

### **6.1 TRADING PRICE AND VOLUME**

The following tables set out the high and low daily closing prices and the volumes of trading of the Corporation's Common Shares on the Exchange from January 1, 2013 to December 31, 2013.

<b>COMMON SHARES</b>			
<b>Period</b>	<b>Price Range</b>		<b>Trading Volume</b>
	<b>High(\$)</b>	<b>Low(\$)</b>	
December 1-31, 2013	0.21	0.16	1,521,768

<b>COMMON SHARES</b>			
<b>Period</b>	<b>Price Range</b>		<b>Trading Volume</b>
	<b>High(\$)</b>	<b>Low(\$)</b>	
November 1-30, 2013	0.30	0.17	1,231,101
October 1-31, 2013	0.40	0.20	732,491
September 1-30, 2013	0.35	0.18	1,277,570
August 1-31, 2013	0.28	0.17	732,786
July 1-31, 2013	0.25	0.18	771,771
June 1-30, 2013	0.33	0.21	900,028
May 1-31, 2013	0.30	0.23	444,081
April 1-30, 2013	0.42	0.25	213,277
March 1-31, 2013	0.50	0.33	263,150
February 1-28, 2013	0.60	0.43	1,866,760
January 1-31, 2013	0.60	0.43	987,760

## 6.2 PRIOR SALES

During the financial year ended December 31, 2013, the Company issued the following common shares in accordance with the Pavo Option agreement.:

<b>Date Issued</b>	<b>Number Issued</b>	<b>Price (\$)</b>
June 24, 2013	100,000	0.28

## ARTICLE 7 ESCROWED SECURITIES

In connection with the completion of the Corporation's initial public offering on June 24, 2011, 8,452,002 Common Shares and 3,375,000 share purchase warrants were placed in escrow with Computershare Trust Company of Canada as escrow agent. On August 2, 2013 the Corporation was accepted as a Tier 1 issuer on the TSX Venture Exchange and accordingly the remaining share purchase warrants in the amount of 1,057,500 and Common Shares in the amount of 2,535,600 were released from escrow on or about August 13, 2013.

## ARTICLE 8 DIRECTORS AND OFFICERS

### 8.1 NAME, OCCUPATION AND SECURITY HOLDINGS

The following are the names, province and country of residence of the directors and officers of the Corporation, the positions and offices they hold with the Corporation and their principal occupations during the five preceding years.

Each director will hold office until the next annual general meeting of the shareholders of the Corporation unless his office is earlier vacated in accordance with the *Business Corporations Act* (British Columbia) and the Articles of the Corporation.

<b>Name and Municipality of Residence and Position with the Corporation</b>	<b>Director/ Officer Since</b>	<b>Principal Occupation for the Past Five Years</b>
Ian Slater BC, Canada  <i>Chairman, Chief Executive Officer and Director</i>	Chairman and Chief Executive Officer since January 4, 2010	Chartered Accountant, Chairman and Chief Executive Officer
Robert Bell Perth, Australia  <i>Director, Chief Operating Officer</i>	Director since January 4, 2010 Chief Operating Officer since January 15, 2013	Mining Engineer, Chief Operating Officer
Jeffrey Mason <sup>(1)(2)</sup> BC, Canada  <i>Director</i>	Director since January 4, 2010	Chartered Accountant, Chief Financial Officer of Wellgreen Platinum Ltd. (formerly named Prophecy Platinum Corp.)
Tim Petterson BC, Canada  <i>Director</i>	Director since January 4, 2010	Mining Engineer, Chief Executive Officer of Black Eagle Mining Corporation
Jay Sujir <sup>(1)(2)</sup> BC, Canada  <i>Director</i>	Director since January 4, 2010	Lawyer
Ken Cunningham <sup>(2)</sup> Nevada, U.S.A.  <i>Director</i>	Director since March 28, 2011	Geologist, Chief Executive Officer of Miranda Gold Corp.
Robert Bruce Pease <sup>(1)</sup> BC, Canada  <i>Director</i>	Director since April 14, 2011	Geologist, Chief Executive Officer, of Sabina Gold & Silver Corp.

<b>Name and Municipality of Residence and Position with the Corporation</b>	<b>Director/ Officer Since</b>	<b>Principal Occupation for the Past Five Years</b>
Jeffrey Toohey BC, Canada <i>Vice President Exploration</i>	Vice President Exploration since January 1, 2013	Geologist, Vice President Exploration of Peregrine Metals Ltd
James Howson BC, Canada <i>Chief Financial Officer</i>	Chief Financial Officer since October 1, 2011	Chartered Accountant, Chief Financial Officer
Surita Banger BC, Canada <i>Corporate Secretary</i>	Corporate Secretary since October 1, 2011	Paralegal, Corporate Secretary

(1) *Denotes member of Audit Committee*

(2) *Denotes member of Corporate Governance and Compensation Committee*

The directors and officers of the Corporation, as a group, own, directly or indirectly, 8,452,002 Common Shares of the Corporation, representing approximately 11.44% of the total issued and outstanding Common Shares of the Corporation.

## **8.2 CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS**

Other than as described below, during the ten years preceding the date of this Annual Information Form and as at the date of this Annual Information Form, no director or executive officer of the Corporation has, to the knowledge of the Corporation, been a director, chief executive officer or chief financial officer of any company that:

- (a) was subject to a cease trade order or similar order or an order that denied the relevant company access to any exemption under securities legislation that was in effect for a period of more than 30 consecutive days, and that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer; or
- (b) was subject to a cease trade order or similar order or an order that denied the relevant company access to any exemption under securities legislation that was in effect for a period of more than 30 consecutive days, and that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

Other than as described below, during the ten year period preceding the date of this Annual Information Form and as at the date of this Annual Information Form, no director or executive officer of the Corporation or a security holder who holds a sufficient number of securities of the Corporation to affect materially the control of the Corporation:

- (c) is a director or executive officer of any company (including the Corporation) that, while that person was acting in that capacity, or within a year of that person ceasing to act in

that capacity, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold its assets; or

- (d) has become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, officer or shareholder.

Mr. Jay Sujir is currently a director of Rio Silver Inc. (formerly Escape Gold Inc.) and a former director of American Bullion Minerals Limited, both of which companies were subject to cease-trade orders in Alberta and British Columbia for extended periods of time for failure to file financial statements. Mr. Sujir had no association with these companies whatsoever at the time the financial statements became overdue or when the cease trade orders were made, and he became a director solely to assist in the resurrection of such companies.

Mr. Jay Sujir was an independent director of Norwood Resources Ltd. from May 2008 until January 2011. In the last quarter of 2010, the board of directors of Norwood determined that the delays through the last quarter of 2010 had made the company insolvent and believed that the company was unfinanceable, and determined that the interests of all stakeholders would best be protected by an assignment into bankruptcy. Norwood declared bankruptcy on January 19, 2011. Mr. Sujir resigned as a director on January 19, 2011.

### **8.3 CONFLICTS OF INTEREST**

The directors and officers of the Corporation are directors, officers and/or shareholders of other private and publicly listed corporations, including corporations that engage in mineral exploration and development. Conflicts may arise between their duties to the Corporation and their duties to such other corporations. All such conflicts will be dealt with pursuant to the provisions of the applicable corporate legislation. In the event that such a conflict of interest arises at a meeting of the Directors, a Director affected by the conflict must disclose the nature and extent of his interest and abstain from voting for or against matters concerning the matter in respect of which the conflict arises. Directors and executive officers are required to disclose any conflicts or potential conflicts to the board of Directors as soon as they become aware of them.

## **ARTICLE 9 PROMOTERS**

Mr. Ian Slater, the Chairman and CEO of the Corporation, is the promoter of the Corporation. Mr. Slater owns 2,150,001 common shares of the Corporation, representing 2.91% of the issued and outstanding Common Shares.

## **ARTICLE 10 LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

Management knows of no legal proceedings, contemplated or actual, involving the Corporation which could materially affect the Corporation.

Management knows of no:

- (a) penalties or sanctions imposed against the Corporation by a court relating to securities legislation or by a securities regulatory authority during the financial year ended December 31, 2013; or
- (b) any other penalties or sanctions imposed by a court or regulatory body against the Corporation that would likely be considered important to a reasonable investor in making an investment decision; or
- (c) settlement agreements the Corporation entered into before a court relating to securities legislation or with a securities regulatory authority during the financial year ended December 31, 2013.

#### **ARTICLE 11**

#### **INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

No

- 1. director or executive officer of the Corporation;
- 2. person or company that beneficially owns, or controls or directs, directly or indirectly, more than 10% of any class or series of the Corporation's outstanding voting securities; and
- 3. associate or affiliate of any of the persons or companies referred to in paragraphs 1 or 2;

has, during any of the financial year ended December 31, 2013 and during the current financial year, any material interest in any transactions or any proposed transactions which has materially affected or will materially affect the Corporation.

#### **ARTICLE 12**

#### **TRANSFER AGENT AND REGISTRAR**

The Registrar and Transfer Agent for the Corporation's Common Shares is Computershare Investor Services Inc., 2nd Floor, 510 Burrard Street, Vancouver, BC V6C 3B9.

#### **ARTICLE 13**

#### **MATERIAL CONTRACTS**

The following is a list of all contracts which the Corporation or its subsidiaries are a party to, and which currently can reasonably be regarded as material to a security holder of the Corporation:

- 1. Santa Rosa Purchase Agreement referred to under "General Development of the Business".
- 2. Management Services Agreement between the Corporation and SB Management Ltd. dated January 4, 2010.
- 3. Executive Employment Agreement between the Corporation and Ian Slater dated October 16, 2012.
- 4. NSR Royalty Agreement between the Corporation, Red Eagle Mining de Colombia Limited and Liberty Metals and Mining Holdings, LLC dated October 22, 2012.

5. Closed Mining Pledge Over Future Productions Contract between Red Eagle Mining de Colombia Limited and Liberty Metals and Mining Holdings, LLC dated October 22, 2012.
6. Bullet Purchase Agreement between the Corporation, Red Eagle Mining de Colombia Limited, Bullet Holding Corp. and La Pena Som; El Molina Som; El Percal Som, Esquimal Som; Frontera Som; Grupo de Bullet S.A.S; Jupiter Som; Costa Som; Gongora Som dated October 24, 2012.
7. Addendum no. 1 to the Closed Mining Pledge Over Future Productions Contract between Red Eagle Mining de Colombia Limited and Liberty Metals and Mining Holdings, LLC dated December 19, 2013.

#### **ARTICLE 14 INTERESTS OF EXPERTS**

The following are the persons or companies:

1. who were named as having prepared or certified a statement, report or valuation described or included in a filing, or referred to in a filing, made under National Instrument 51-102 by the Corporation during, or relating to, the fiscal year ending December 31, 2013, being the Corporation's most recently completed financial year; and
2. whose profession or business gives authority to the statement, report or valuation made by the person or company:
  - (a) Ernst & Young LLP, Chartered Accountants:
    - (i) provided an auditor's report dated April 14, 2014 in respect of the Corporation's financial statements for the year ended December 31, 2013 and incorporated by reference into this Annual Information Form; and
    - (ii) is independent in accordance with the Rules of Professional Conduct of the Institute of Chartered Accountants of British Columbia.
  - (b) Michael S. Lindholm, W. Joseph Schlitt, Carl Defilippi and Thomas L. Dyer are the authors responsible for the preparation of the Technical Report dated October 10, 2013, amended March 31, 2014, entitled "Amended Technical Report and Preliminary Economic Assessment, San Ramon Deposit, Santa Rosa Project, Colombia "

#### **ARTICLE 15 ADDITIONAL INFORMATION**

##### **15.1 AUDIT COMMITTEE INFORMATION**

National Instrument 52-110 – Audit Committees requires companies that file an Annual Information Form to provide certain disclosure with respect to their audit committee, including the text of the audit committee's charter, the composition of the audit committee and the fees paid to the external auditor. This information is provided in Schedule "A" hereto.

## **15.2 ADDITIONAL INFORMATION**

Additional information concerning the Corporation is available through the Internet on the Canadian System for Electronic Document Analysis and Retrieval ("SEDAR") which may be accessed at [www.sedar.com](http://www.sedar.com). Copies of such information may also be obtained on the Corporation's website at [www.redeaglemining.com](http://www.redeaglemining.com) or on request without charge from Surita Banger, Corporate Secretary of the Corporation, Suite 920 – 1030 West Georgia Street, Vancouver, British Columbia, V6E 2Y3.

Additional information, including information as to directors and officers remuneration and indebtedness, principal holders of the Corporation's securities and securities authorized for issuance under equity compensation plans is contained in the Information Circular of the Corporation dated November 6, 2013. Additional financial information is provided in the Corporation's Financial Statements and the Management's Discussion and Analysis for the year ended December 31, 2013. Copies of such documents may be obtained in the manner set forth above.



**SCHEDULE "A"**  
**TO THE ANNUAL INFORMATION FORM OF**  
**RED EAGLE MINING CORPORATION**

**AUDIT COMMITTEE INFORMATION**

**ITEM 1: AUDIT COMMITTEE CHARTER**

**PURPOSE**

The Audit Committee ("Committee") is appointed by the Company's board of directors (the "Board") to assist the Board in overseeing and monitoring: (1) the integrity of the financial statements of the Company; (2) the compliance by the Company with legal and regulatory requirements; (3) the independence and performance of the Company's independent auditors, which independent auditors shall report directly to the Audit Committee; and (4) the auditing, accounting and financial reporting processes generally.

**1. COMPOSITION, PROCEDURES AND ORGANIZATION**

- 1.1 The Committee shall consist of at least three (3) members of the Board of Directors (the "**Board**"). Members of the Audit Committee shall be appointed by the Board and may be removed or replaced by the Board, from time to time, in its discretion. There shall be a chairman of the Audit Committee, who shall be appointed by the Board. The members of the Audit Committee shall meet the independence and experience requirements for Audit Committee members of applicable securities laws and any exchange or quotation system upon which the Company's securities are listed or quoted.
- 1.2 Review and reassess the adequacy of this Audit Committee Charter ("Charter") annually and recommend any proposed changes to the Board for approval.
- 1.3 The quorum for meetings shall be a majority of the members of the Committee, present in person or by telephone or other telecommunication device that permits all persons participating in the meeting to speak and to hear each other.
- 1.4 The Committee shall have access to such officers, employees and consultants of the Company and to the Company's external auditors, and to such information respecting the Company, as it considers being necessary or advisable in order to perform its duties and responsibilities.
- 1.5 Meetings of the Committee shall be conducted as follows:
  - a. the Committee shall meet as necessary to fulfill its duties and responsibilities in person or via telephone at such times and at such locations as may be requested by the chair of the Committee.
  - b. The external auditors or any member of the Committee may request a meeting of the Committee;
  - c. the external auditors shall attend meetings at the request of the Committee; and
  - d. management representatives may be invited to attend meetings except private sessions with the external auditors.
- 1.6 The external auditors shall have a direct line of communication to the Committee through its chair and may bypass management if deemed necessary. The Committee, through its chair, may contact directly any employee/consultant of the Company as it deems necessary, and any

employee/consultant may bring before the Committee any matter, including questionable, illegal or improper financial practices or transactions and or positive input on good sound practices and transactions.

1.7 The Committee shall have the authority:

- a. to engage independent counsel and other advisors as it determines necessary to carry out its duties,
- b. to set and pay the compensation for any advisors employed by the Committee; and
- c. to communicate directly with the external auditors.

1.8 While the Audit Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Audit Committee to plan or conduct audits or to determine that the Company's financial statements are complete and accurate and are in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. This is the responsibility of management and the independent auditor. Nor is it the duty of the Audit Committee to conduct investigations, to resolve disagreements, if any, between management and the independent auditor or to assure compliance with laws and regulations.

## **2. OVERALL DUTIES AND RESPONSIBILITIES**

2.1 The overall duties and responsibilities of the Committee shall be as follows:

- a. review and approval of the annual audited financial statements, the interim financial statements, management's discussion and analysis, and press releases with respect to disclosure of financial information;
- b. review of the Company's accounting principles, reporting practices and adequacy of internal controls;
- c. review an analysis prepared by management and the independent auditor of significant financial reporting issues and judgments made in connection with the preparation of the Company's financial statements, including an analysis of the effect of alternative accounting methods, if any, on the Company's financial statements;
- d. ensure that adequate procedures are in place for the review of the Company's public disclosure of financial information extracted or derived from the Company's financial statements;
- e. establish a procedure for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters;
- f. establish a procedure for the confidential, anonymous submissions by employees of the Company of concerns regarding questionable accounting or auditing matters;
- g. establish and maintain a direct line of communication with the Company's external auditors and assess their performance;
- h. ensure that the management of the Company has designed, implemented and is maintaining an effective system of internal financial controls; and

- i. report regularly to the Board on the fulfillment of its duties and responsibilities.

### **3. EXTERNAL AUDITORS**

- 3.1 The duties and responsibilities of the Committee as they relate to the external auditors shall be as follows:
  - a. recommend to the Board a firm of external auditors to be engaged by the Company, and to verify the independence of such external auditors;
  - b. review and approve the fee, scope and timing of the audit and other related services rendered by the external auditors;
  - c. review the audit plan of the external auditors prior to the commencement of the audit; and
  - d. review with the external auditors:
    - i. non-audit services provided by the external auditors;
    - ii. the quality including the acceptability of the Company's accounting principles; and
    - iii. procedures to ensure that the Committee meets with the external auditors on a regular basis in the absence of management.

### **4. INTERNAL CONTROLS**

- 4.1 The duties and responsibilities of the Committee as they relate to the internal control procedures of the Company shall be as follows:
  - a. review the appropriateness and effectiveness of the company's policies, internal controls, and business practices which have a financial impact on the company, including those relating to insurance, accounting, information systems and financial controls, management reporting, tax and risk management;
  - b. concurrently with the corporate governance committee review compliance under the company's business conduct and ethics policies, and to periodically review these policies and recommend to the board changes which the committee may deem appropriate;
  - c. review any unresolved issues between management and the external auditors that could affect the financial reporting or internal controls of the company; and
  - d. periodically review the company's financial and internal control procedures and the extent to which recommendations made by the external auditors have been implemented.

### **5. OTHER DUTIES AND RESPONSIBILITIES**

- 5.1 Other duties and responsibilities of the Committee shall be as follows:
  - a. review, approve and report to the board with respect to the financial sections of:

- i. the annual report to shareholders;
  - ii. the annual information form, if required;
  - iii. prospectuses; and
  - iv. other public reports of a financial nature requiring approval by the board;
- b. review regulatory filings and decisions as they relate to the company's consolidated financial statements;
- c. review the appropriateness of the policies and procedures used in the preparation of the company's consolidated financial statements and other required disclosure documents, and consider recommendations for any material change to such policies;
- d. review the minutes of any audit committee meeting of subsidiary companies;
- e. review with management, the external auditors and, if necessary, with legal counsel, any litigation, claim or other contingency, including tax assessments that could have a material effect upon the financial position or operating results of the company and the manner in which such matters have been disclosed in the consolidated financial statements;
- f. review the company's compliance with regulatory and statutory requirements as they relate to financial statements, tax matters and disclosure of financial information; and
- g. develop a calendar of activities to be undertaken by the committee for each ensuing year based on this charter.

## **ITEM 2: COMPOSITION OF THE AUDIT COMMITTEE**

The current members of the Committee are Jeffrey Mason, Jay Sujir and Robert Pease. All of the members are financially literate and are all independent. "Independent" and "financially literate" have the meaning used in National Instrument 52-110 (the "instrument") of the Canadian Securities Administrators.

## **ITEM 3: RELEVANT EDUCATION AND EXPERIENCE**

The relevant education and/or experience of each member of the Audit Committee is as follows:

### Mr. Jeffrey Mason

Mr. Mason is a Director of the Corporation. Mr. Mason is the Chief Financial Officer of Wellgreen Platinum Ltd. (formerly named Prophecy Platinum Corp.). Mr. Mason holds a Bachelor of Commerce degree from the University of British Columbia (May 1980) and obtained his Chartered Accountant designation from the Institute of Chartered Accountants, BC in August 1982 while at the international accounting firm of Deloitte & Touche. Following comptrollership positions at Homestake Mining Group of companies Mr. Mason has spent the last several years as a corporate officer and director to a number of publicly-traded mineral exploration companies. Until early 2008, Mr. Mason was employed as Chief Financial Officer of Hunter Dickinson Inc. and his principal occupation was the financial administration of the public companies to which Hunter Dickinson Inc. provides services.

Mr. Jay Sujir

Mr. Sujir is a Director of the Corporation. Mr. Sujir is a securities and natural resources lawyer who has extensive experience in advising and assisting public companies. He has been a partner with Anfield Sujir Kennedy & Durno and its predecessor firms since 1991. Mr. Sujir obtained his Bachelor of Arts degree from the University of Victoria in 1981 with a double major in Economics and Philosophy and obtained his Bachelor of Law degree from the University of Victoria in 1985. He is a member of the Law Society of British Columbia, the Canadian Bar Association, and the British Columbia Advisory Committee of the TSX Venture Exchange.

Mr. Robert Pease

Mr. Robert Pease is a Director of the Corporation. Mr. Pease is the Chief Executive Officer of Sabina Gold & Silver. He was previously the founder, CEO and a Director of Terrane Metals which was acquired in 2010 by Thompson Creek Metals. He was employed by Placer Dome for twenty five years, most recently as General Manager, Canada Exploration and Global Major Projects. He was responsible for managing all aspects of Placer Dome's Canadian exploration, and overseeing the geological aspects of world-wide advanced, major exploration and developments projects. Mr. Pease holds a B.Sc. degree in Earth Science from the University of Waterloo, a Professional Geologist (British Columbia) certification and is a Fellow of the Geologic Association of Canada. He is also a past Chairman of the Association for Mineral Exploration British Columbia.

**ITEM 4: AUDIT FEES**

Ernst & Young LLP, Chartered Accountants, will be nominated at the Meeting for re-appointment as the auditors of the Corporation with their remuneration to be fixed by the Board of Directors. Ernst & Young LLP have been the Corporation's auditors since December, 2010.

Fees billed by Ernst & Young and its affiliates for the year ended December 31, 2013 and the year ended December 31, 2012 were approximately C\$85,000 and C\$77,000 respectively. The aggregate fees billed by the auditors in fiscal 2013 and fiscal 2012 are detailed below.

<i>(Canadian \$ in 000's)</i>	<u>2013</u>	<u>2012</u>
Audit Fees (a)	\$58	\$55
Audit Related Fees (b)	-	5
Tax Fees (c)	\$23	\$17
All Other Fees (d)	4	-
Total	<u>\$85</u>	<u>\$77</u>

- (a) Fees for audit services billed or expected to be billed relating to the year ending December 31, 2013 and the year ending December 31, 2012 consisted of the audit of the Company's annual financial statements;
- (b) Fees related to audit services consisting of on call accounting advice;
- (c) Fees for tax services consisted of Colombian VAT and mining taxation advice; and
- (d) Fees for translation services

***Pre-Approval Policies and Procedures***

All services to be performed by the Corporation's independent auditor must be approved in advance by the Audit Committee or a designated member of the Audit Committee ("Designated Member"). The Designated Member is a member of the Audit Committee who has been given the authority to grant pre-approvals of the permitted audit and non-audit services.

The Audit Committee has considered whether the provision of services other than the audit services is compatible with maintaining the auditors' independence and had adopted a policy governing the provision of these services. This policy requires the pre-approval by the Audit Committee or the Designated Member of all audit and non-audit services provided by the external auditor, other than the *de minimis* non-audit services allowed by the applicable law or regulation. The decisions of the Designated Member to pre-approve a permitted service are reported to the Audit Committee at its regularly scheduled meetings.

Pre-approval from the Audit Committee or Designated Member can be sought for planned engagements based on budgeted or committed fees. No further approval is required to pay pre-approved fees. Additional pre-approval is required for any increase in the scope or in final fees.

Pursuant to these procedures, 100% of each of the services provided by the Corporations's external auditors relating to the fees reported as audit, audit-related, tax and all other fees were pre-approved by the Audit Committee or the Designated Member.