



February 22, 2012

**SOLITARIO ANNOUNCES MT. HAMILTON FEASIBILITY STUDY RESULTS**  
**US\$535 PER OUNCE CASH OPERATING COSTS**

Denver, Colorado: Solitario Exploration & Royalty Corp. (“Solitario;” NYSE Amex: **XPL**; TSX: **SLR**) and Ely Gold & Minerals (“Ely Gold;” TSX.V: **ELY**) are pleased to announce positive Feasibility Study results on the Centennial Gold deposit situated on the Mt. Hamilton property in eastern Nevada, U.S.A. The Feasibility Study demonstrates robust economics with excellent potential for developing additional resources. Development of the project will deliver significant economic benefits to the local economy of White Pine County with an estimated 120 fulltime jobs.

With the completion of this Feasibility Study, Solitario will hold an 80% interest in Mt. Hamilton LLC (the “Company”), a limited liability company which holds 100% of the Mt. Hamilton project assets. Ely Gold will hold a 20% interest in the Company. The Feasibility Study has been prepared on behalf of the Company by SRK Consulting (U.S.) Inc. (SRK).

**Project Economics**

All currency figures in U.S. \$’s; Economic base case in bold; M=millions

Item	Pre-Tax				After Tax (Federal=35%, State=5%)			
Gold US\$/oz.	<b>\$1,323</b>	\$1,500	\$1,700	\$1,900	<b>\$1,323</b>	\$1,500	\$1,700	\$1,900
Silver US\$/oz.	<b>\$25.34</b>	\$29.00	\$33.00	\$37.00	<b>\$25.34</b>	\$29.00	\$33.00	\$37.00
Cash Flow (US\$M)	<b>\$226.4</b>	\$284.9	\$389.9	\$476.1	<b>\$136.4</b>	\$183.9	\$237.5	\$290.8
NPV @ 8% (US\$M)	<b>\$111.1</b>	\$154.4	\$207.0	\$259.3	<b>\$60.7</b>	\$87.3	\$120.0	\$152.3
NPV @ 5% (US\$M)	<b>\$145.3</b>	\$198.5	\$261.5	\$324.1	<b>\$83.1</b>	\$116.0	\$155.0	\$193.7
IRR	<b>35.0%</b>	41.3%	51.2%	60.6%	<b>25.4%</b>	30.5%	37.9%	44.9%
Payback (Years)	<b>2.7</b>	2.5	2.2	1.9	<b>3.2</b>	2.9	2.6	2.3

Life-of-mine cash operating costs on a gold equivalent basis (at a 52:1 silver to gold ratio) are estimated at \$535 per gold-equivalent ounce recovered, well below world-average industry cash costs. The economic base case assumes a \$1,323 life-of-mine gold price and a \$25.34 silver price, generating approximately \$226 million in cash flow (operating margin – EBITDA) on a pre-tax basis over the mine’s currently anticipated eight-year mine-life. At gold and silver prices of \$1,700 and \$33 per ounce, respectively, the project will generate nearly \$390 million in life-of-mine cash flow. Initial capital costs are estimated at \$71.9 million, including a contingency of \$6.3 million. On average, silver production contributes approximately 11% to the overall project revenues.

The Mt. Hamilton gold project will be an open pit mining operation with heap leach processing and projected gold recoveries of 79%. The reserves are contained within a well-defined ore body displaying excellent continuity of mineralization that will be mined within a single open pit. Processing is straight-forward with two-stage crushing to minus ¾-inch, no agglomeration and rapid gold leach rates, followed by conventional ADR (adsorption-desorption-recovery) metal extraction. The project also incorporates several innovative design concepts to minimize surface disturbance and environmental impacts, such as a vertical ore pass and underground conveying system to reduce surface disturbance and improve air quality. The Company is also pleased to report mineral resources adjacent to the reserves reported in the Feasibility Study that have the potential to significantly extend the mine life.

### **Feasibility Study Highlights:**

**Base Case: Gold Price-\$1,323; Silver Price- \$25.34**

Production Rate: 8,500 tons ore per day

Mine Life: 8.0 years

Average Gold Recovery: 79% (70% of recoverable gold in the first 30 days )

Average Silver Recovery: 90% of soluble silver (~ 36% of total contained silver)

Life of mine strip ratio: 2.4:1.0 (waste:ore)

Initial Capital Cost: \$71.9 M (including \$6.3 M contingency)

Sustaining Capital: \$35.3 M (including \$4.3 M contingency and \$10.3 M end-of-mine closure costs)

Working Capital: \$7.1 M

Underlying NSR-Royalty: 1%

Cash Costs per Gold-Equivalent Ounce Recovered: \$535

Average Annual Gold Production: 48,000 ounces

Average Annual Silver Production: 330,000 ounces

Average Annual Gold-Equivalent Production: 54,000 ounces (at a 52:1 silver to gold ratio)

The economic analysis in the Feasibility Study assumed a declining price curve for gold and silver. Realized gold/silver prices were set at \$1,600/\$35.45 per ounce for the first year of production, \$1,420/\$28.25 for the second year, and \$1,280/\$23.90 per ounce for all subsequent years. These prices are based on the 12-month, 24-month and 36-month trailing average of gold and silver prices, respectively. This declining gold price scenario results in an average life-of-mine price of \$1,323 per ounce for gold and \$25.34 per ounce for silver.

Chris Herald, President and CEO of Solitario, stated “Completion of this comprehensive Feasibility Study represents the culmination of an intensive one-year effort by our staff and SRK. With this study in hand, we are now moving forward with permitting the mine, arranging project financing and adding new reserves. With its robust economics, we believe we will have an array of financing opportunities available to us. Our mine plan is well conceived from both an operational and environmental standpoint, however, we will continue to evaluate a number of opportunities identified in the Feasibility Study that have the potential to reduce capital and operating costs. Additionally, we believe with a modest amount of infill drilling marginal to the current reserves and confirmation drilling in the historic Seligman pit area, we will be able to add several years of additional low-cost production.”

“The completion of the Mt. Hamilton Feasibility Study is an exciting milestone for Ely Gold. The project represents an important building block in our corporate strategy of participating in North American precious metal development projects.” stated Trey Wasser, Ely Gold’s President and CEO.

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

Reserve Category	Tons (millions)	Gold Grade		Silver Grade*		Contained Gold (oz)	Contained Silver (oz)
		Oz/Ton	g/Tonne	Oz/Ton	g/Tonne		
Proven	0.923	0.032	1.10	0.155	5.31	29,300	142,700
Probable	21.604	0.021	0.72	0.134	4.59	457,800	2,884,300
Prov.+Probable	22.527	0.022	0.75	0.136	4.66	487,100	3,028,200

\*Reported silver grade is cyanide soluble.

Mineral reserves were estimated from a pit design based on \$1,200/oz. gold and \$20/oz. silver prices. The cutoff grade used to estimate reserves was 0.006 oz/t gold equivalent (0.20 grams/tonne) and is the internal cutoff grade. Multiple pit scenarios were evaluated using these criteria under a range of gold prices to determine the most favorable pit design for both optimal resource extraction and cash flow.

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

Resource Category	Tons (000's)	Gold Grade (oz/t)	Contained Gold(oz)	Silver Grade (oz/t)	Recoverable Silver(oz)*
Measured	918	0.032	29,524	0.155	142,152
Indicated	22,732	0.022	497,330	0.132	3,010,471
<b>Measured and Indicated</b>	<b>23,650</b>	<b>0.022</b>	<b>526,854</b>	<b>0.133</b>	<b>3,152,624</b>
Inferred	3,454	0.018	60,859	0.079	273,457

- Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources estimated will be converted into Mineral Reserves estimate;
- Resources stated as contained within a potentially economically minable open pit above a 0.006 oz/t AuEq CoG;
- Pit optimization is based on assumed gold and silver prices of US\$1,600/oz and US\$40.00/oz, respectively, effective heap leach recoveries of 75% and 30% for gold and silver, respectively, a mining, processing and G&A cost of US\$5.81/t; Net Smelter Return 1% and pit slopes of 50°.
- Reported Au ounces are contained metal subject to process recovery which will result in a reduced number of payable ounces;
- \* Reported Ag ounces have already received a recovery discount during resource modeling; therefore, there will be minimal further reduction of payable Ag ounces after processing; and
- Mineral resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding.

The Feasibility Study resource and reserve estimations demonstrate a potential to increase the size of the existing Centennial deposit through step-out exploration drilling around the east and southeast margins of the current pit configuration. This mineralization falls entirely within a pit design based on \$1,600/oz. gold and \$40/oz. silver and is situated immediately adjacent to the reserve pit. Approximately 2.6 million tons of Indicated Resources grading 0.017 oz/t gold (45.3 koz of gold) and 0.153 oz/t silver (397.6 koz of silver) and 2.8 million tons of Inferred Resource grading 0.018 oz/t gold (50.2 koz of gold) and 0.080 oz/t silver (223.5 oz of silver) above a 0.006 oz/t gold cut-off have been identified outside of the reserve pit, but within the resource envelope (Whittle™ shell). Drilling is planned in these areas with the objective to upgrade the mineralization to Measured and Indicated Resources.

Solitario is also planning a drilling program to upgrade mineralization around the nearby historic Seligman pit area. The Seligman deposit, situated approximately 2,000 feet north

of the planned Centennial pit, was partially mined in the mid-1990's. About 310 drill holes define a well mineralized, near surface gold deposit that was abandoned due to low gold prices. Solitario believes these two resource expansion programs may have the potential to extend mining for three to four years.

**Cautionary Note to U.S. Investors concerning estimates of Resources:** This section uses the terms “Measured, Indicated and Inferred Resources.” The Company advises U.S. investors that while these terms are recognized and required by Canadian regulations, the SEC does not recognize the terms. U.S. investors are cautioned not to assume that any part or all of Measured or Indicated Mineral Resources will ever be converted into Reserves. Inferred 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. Under Canadian rules, estimates of Inferred Mineral Resources may not form the basis of feasibility or pre-feasibility studies, except in rare cases. U.S. investors are cautioned not to assume that any part or all of a *measured, indicated or inferred* resource exists, or is economically or legally minable.

The Feasibility Study was prepared by SRK Consulting (U.S.), Inc., an independent and internationally recognized mining engineering firm. The Feasibility Study provides mineral resource and mineral reserve estimates, and a classification of resources and reserves in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves: Definitions and Guidelines, November 27, 2010 (CIM). It also meets the standards of the U.S. Securities and Exchange Commission Industry Guide 7 for estimating and reporting reserves. This release has been reviewed for accuracy by Mr. J. B. Pennington of SRK and for Solitario by Walter Hunt, Chief Operating Officer, both of whom are “qualified persons” as that term is defined in NI 43-101.

### **Terms of the Mt. Hamilton LLC Joint Venture**

Solitario and Ely Gold formed Mt. Hamilton LLC (“MH-LLC”), a limited liability company which now holds 100% of the Mt. Hamilton project assets under an Operating Agreement (“MH-Agreement”). Per the terms of the MH-Agreement, with the completion of this Feasibility Study, Solitario will hold an 80% interest in MH-LLC, and DHI-US. Ely Gold’s wholly owned US subsidiary, will hold a 20% interest in MH-LLC. Further Solitario obligations include arranging project financing, and making future property and advanced royalty payments.

### **About Solitario**

Solitario is a gold, silver, platinum-palladium, and base metal exploration and royalty company actively exploring in Brazil, Mexico, and Peru. Solitario has significant business relationships with Votorantim Metais on its high-grade Bongará zinc project in Peru and Anglo Platinum on its Pedra Branca platinum-palladium project in Brazil. Solitario is traded on the NYSE Amex (“XPL”) and on the Toronto Stock Exchange (“SLR”). Additional information about Solitario is available online at [www.solitarioxlr.com](http://www.solitarioxlr.com)

### **About Ely Gold**

Ely Gold is focused on the acquisition and development of gold resources in North America. Besides its interest in the Mt. Hamilton project, Ely Gold has entered into a series of transactions to acquire a portfolio of assets in the Abitibi Gold Camp in Quebec. Ely Gold is traded on the TSX Venture Exchange (“ELY”). Additional information about Ely Gold is available online at [www.elygoldandminerals.com](http://www.elygoldandminerals.com)

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*Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.*

#### **Cautionary Statement Regarding Forward Looking Information**

*This press release contains forward-looking statements within the meaning of the U.S. Securities Act of 1933 and the U.S. Securities Exchange Act of 1934, and as defined in the United States Private Securities Litigation Reform Act of 1995 (and the equivalent under Canadian securities laws), that are intended to be covered by the safe harbor created by such sections. Forward-looking statements are statements that are not historical fact. They are based on the beliefs, estimates and opinions of the Company's management on the date the statements are made and address activities, events or developments that Solitario expects or anticipates will or may occur in the future, and are based on current expectations and assumptions. Forward-looking statements involve a number of risks and uncertainties. Consequently, there can be no assurances that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Such forward-looking statements include, without limitation, statements regarding the Company's expectation of the projected timing and outcome of engineering studies; expectations regarding the receipt of all necessary permits and approvals to implement the mining plan at Mt. Hamilton; the potential for confirming, upgrading and expanding oxide gold and silver mineralized material at Mt. Hamilton; reserve and resource estimates; operating cost estimates; estimates of gold and silver grades; estimates of recovery rates; expectations regarding the cash flow generated by the property; and other statements that are not historical facts. Although Solitario management believes that its expectations are based on reasonable assumptions, it can give no assurance that these expectations will prove correct. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, among others, risks relating to risks that Solitario's exploration and property advancement efforts will not be successful; risks relating to fluctuations in the price of gold and silver; the inherently hazardous nature of mining-related activities; uncertainties concerning reserve and resource estimates; availability of outside contractors in connection with Mt. Hamilton and other activities; uncertainties relating to obtaining approvals and permits from governmental regulatory authorities; the possibility that environmental laws and regulations will change over time and become even more restrictive; and availability and timing of capital for financing the Company's exploration and development activities, including uncertainty of being able to raise capital on favorable terms or at all; as well as those factors discussed in Solitario's filings with the U.S. Securities and Exchange Commission (the "SEC") including Solitario's latest Annual Report on Form 10-K and its other SEC filings (and Canadian filings) including, without limitation, its latest Quarterly Report on Form 10-Q. The Company does not intend to publicly update any forward-looking statements, whether as a result of new information, future events, or otherwise, except as may be required under applicable securities laws.*