



Building Value & Royalties Through Successful Exploration

European Gold Forum
Zurich, Switzerland

NYSE Amex: XPL | TSX: SLR

April 13-16, 2010



Solitario Exploration & Royalty

This presentation includes certain "Forward-Looking Statements" within the meaning of section 21E of the United States Securities Exchange Act of 1934, as amended. All statements, other than statements of historical fact, included herein, including without limitation, statements regarding potential mineralization and reserves, exploration results and future plans and objectives of Solitario, are forward-looking statements that involve various risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Development of Solitario's properties are subject to the success of exploration, completion and implementation of an economically viable mining plan, obtaining the necessary permits and approvals from various regulatory authorities, compliance with operating parameters established by such authorities and political risks such as higher tax and royalty rates, foreign ownership controls and our ability to finance in countries that may become politically unstable. Important factors that could cause actual results to differ materially from Solitario's expectations are disclosed under the heading "Risk Factors" and elsewhere in Solitario's documents filed from time to time with Canadian Securities Commissions, the United States Securities and Exchange Commission and other regulatory authorities. This presentation also contains information about adjacent properties on which we have no right to explore or mine. We advise U.S. investors that the SEC's mining guidelines strictly prohibit information of this type in documents filed with the SEC. U.S. investors are cautioned that mineral deposits on adjacent properties are not indicative of mineral deposits on our properties.



Solitario Exploration & Royalty

An Event Driven Company - Discovery Oriented

- *Multiple new opportunities generated annually*
- *Staying power with \$20 million*
- *Six drilling projects in 2010*

A Value Company - NPI Royalty Structured Joint Ventures

- *Advanced high-quality projects*
- *Reduced financial risk with \$10 million in partner funding in 2010*
- *Experienced global operating partners*



Corporate Overview

- *Basic shares - 29.7 million*
Fully diluted shares – 30.4 million
- *Shares issued in past nine years - 6.4 million*
- *Market cap (fully diluted) - \$65 million*
- *Total cash & securities - \$20 million; no debt*
- *Annual burn rate - \$5 million*
- *Listings: NYSE Amex: XPL; TSX: SLR*
- *Major shareholders*
Sprott (14%); Management (12%); Newmont (9%)



Net Profit Royalties

Generate revenues by participating in a significant percentage (typically 20-40%) of the net profits from an operation

Favorable NPI Royalty Attributes

- *Insulation from equity dilution for feasibility/construction costs*
- *Significantly higher revenues and earnings than a NSR royalty for the same producing asset*
- *Limited management time administering asset; reduced staffing requirements; continued focus on exploration*

NPI Royalty Risks

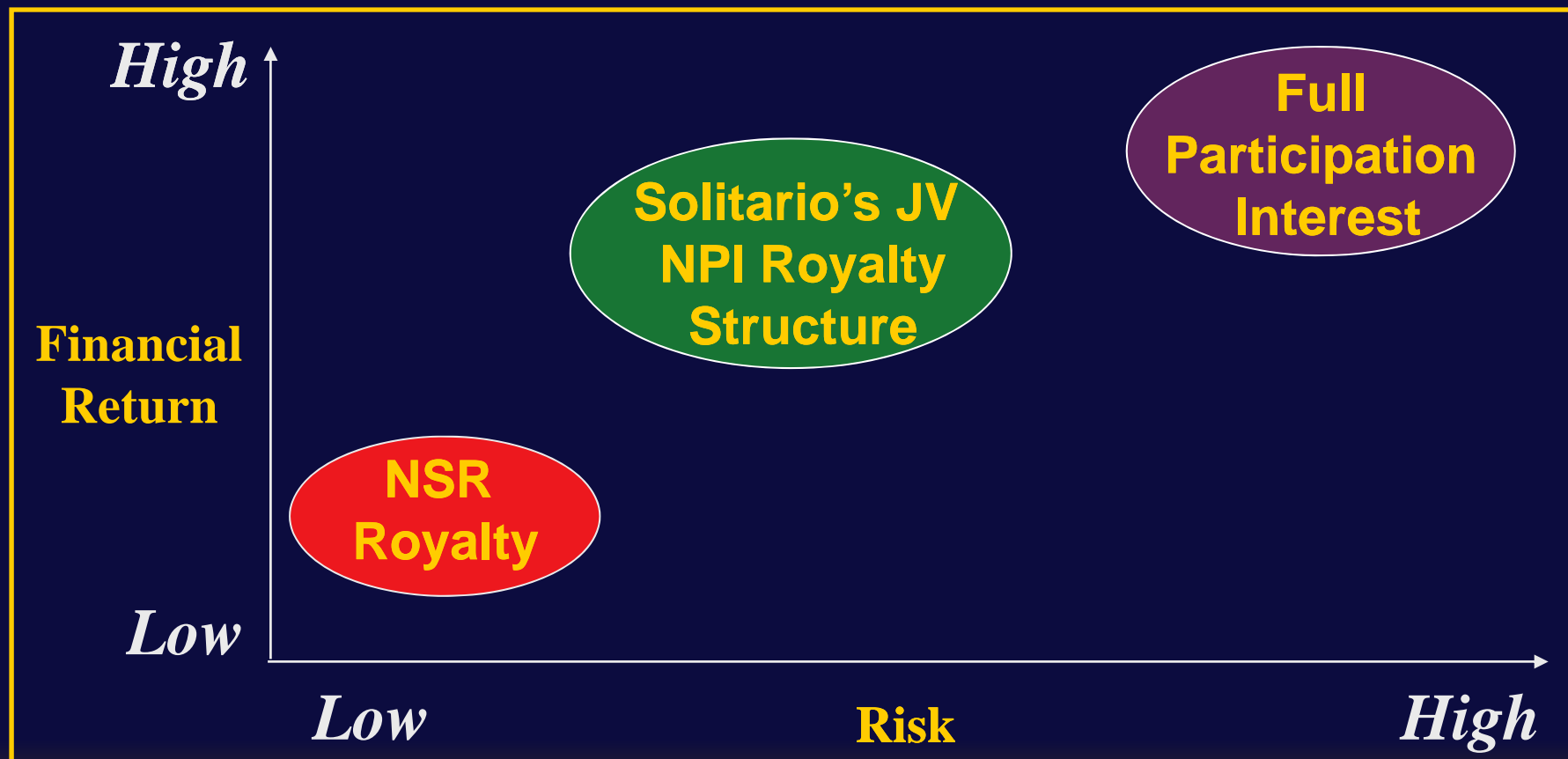
- *Exposure to increases in capital/operating costs*
- *Pay-back of construction costs, but only from production profits*
- *Exposure to the operational capabilities of the operator*



Advantages of Solitario's JVs Over Traditional NPI Royalties

- *Solitario will receive 20-50% of its share of cash flow beginning with production whereas NPI royalties usually do not receive any cash-flow distributions until construction capital has been paid-back*
- *Solitario has influence over production decisions*

Financial Return vs Risk





Bongará High-Grade Zinc Project, Peru

One of the world's largest undeveloped zinc deposits

- *Solitario carried to production (30%) with no participation in any funding costs until cash flow is achieved*
- *Joint ventured with Votorantim Metais – world's 3rd largest zinc producer with a zinc smelter in Peru*
- *Advanced exploration project with \$30 million in past exploration expenditures (205 drill holes)*
- *Potential for +20 million tonnes of 10% Zn + Pb and 0.5 opt Ag*

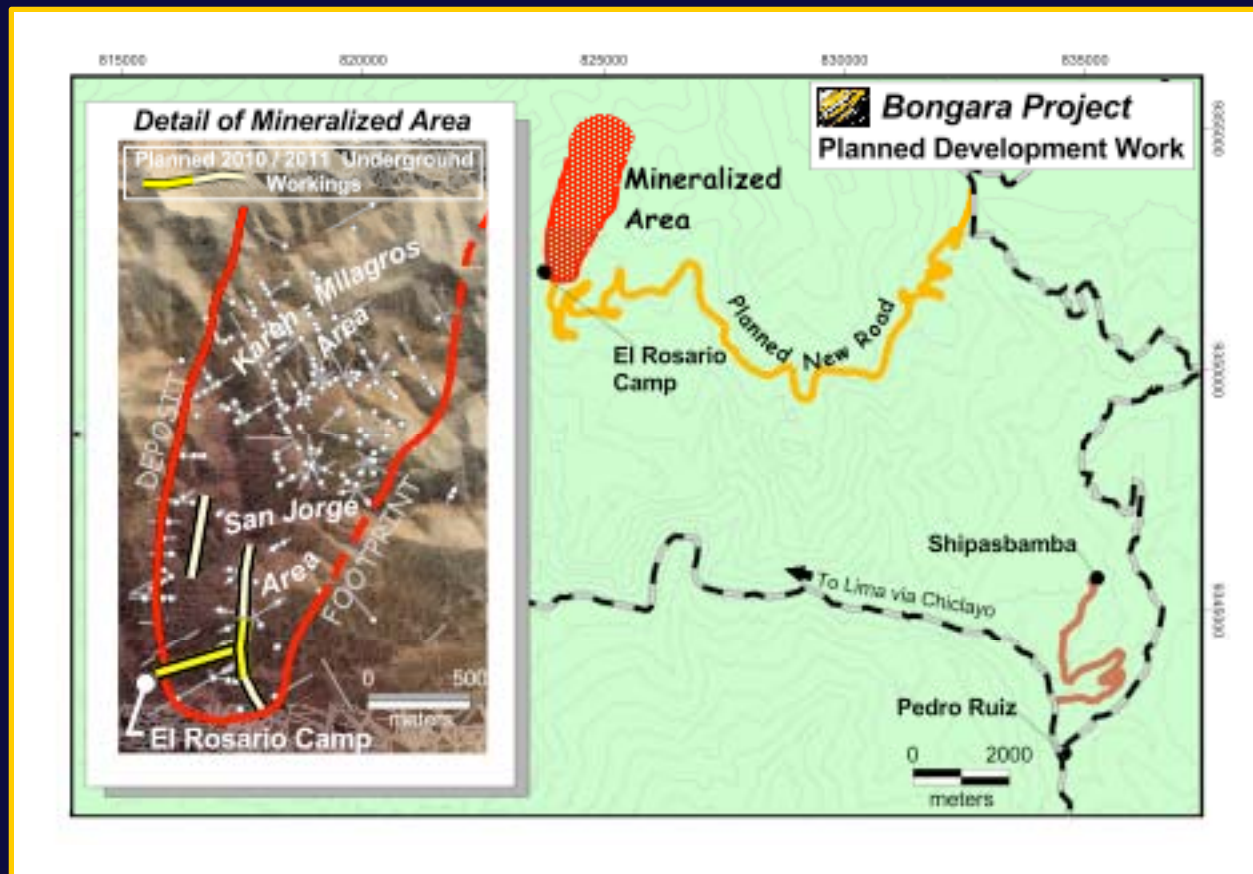


Bongará 2010 Major Expansion of Exploration & Development

- *Initiation of 23km access road to the deposit*
- *700 meters of underground workings*
- *Metallurgical testing*
- *10,000 meters of drilling*
- *Advanced permitting*

Bongará Zinc Project, Peru

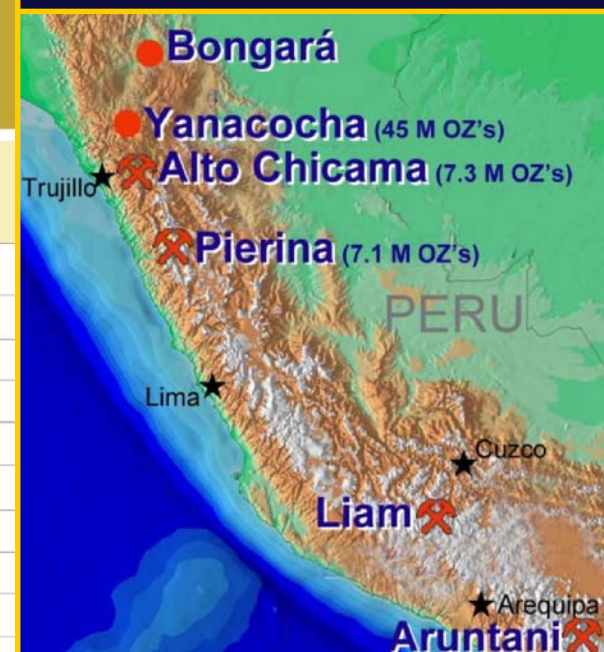
2010 Planned Development Work



Highlights of 2009 Bongará Drill Hole Results

BONGARÁ 2009 DRILLING PROGRAM HIGHLIGHTS

Drill Hole	Intercept (meters)	Zinc (%)	Lead (%)	Lead + Zinc (%)
V-168	2.0	27.5	1.8	29.3
V-169	51.6	7.1	0.7	7.8
V-171	6.3	20.0	2.0	22.0
V-172	9.0	20.5	1.5	22.0
V-173	4.0	14.1	1.1	15.2
V-173	13.7	9.8	4.9	14.7
V-177	2.7	11.0	1.8	12.7
V-178	5.1	8.6	1.3	9.9
V-178	5.2	10.2	1.1	11.4
V-178	3.0	30.0	7.3	37.3



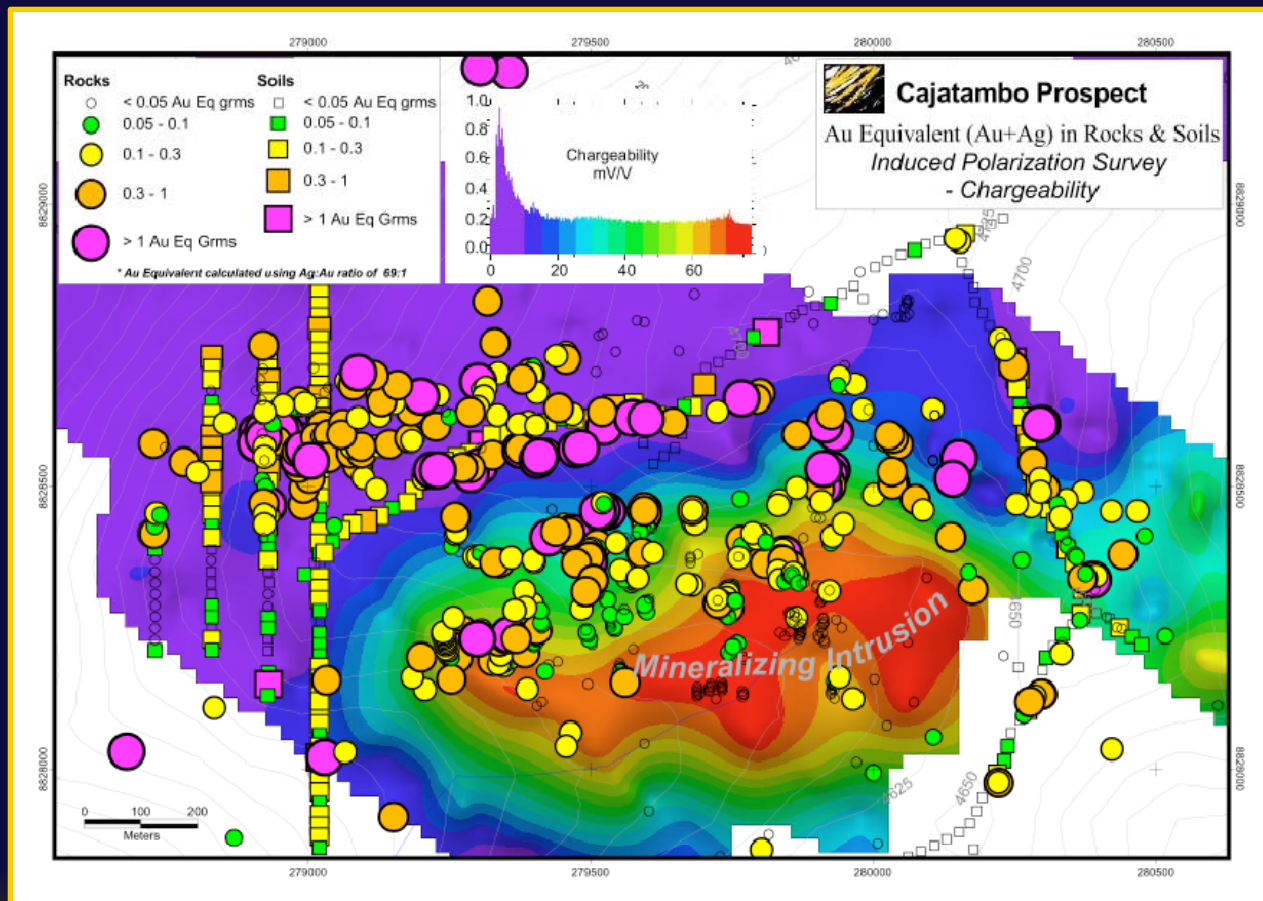
**True thickness has not been estimated for each individual intercept, but in all cases are thought to represent at least 85% of true thickness.*



Cajatambo Gold Project, Peru

- *100%-owned, 9,000 hectares subject to Peru Alliance*
- *Strong gold anomaly measuring 3500 x 800 meters in altered Tertiary volcanic rocks*
- *Geophysics indicates an intense IP anomaly (sulfides)*
- *Drilling planned for mid-2010*

Cajatambo Gold Project, Peru



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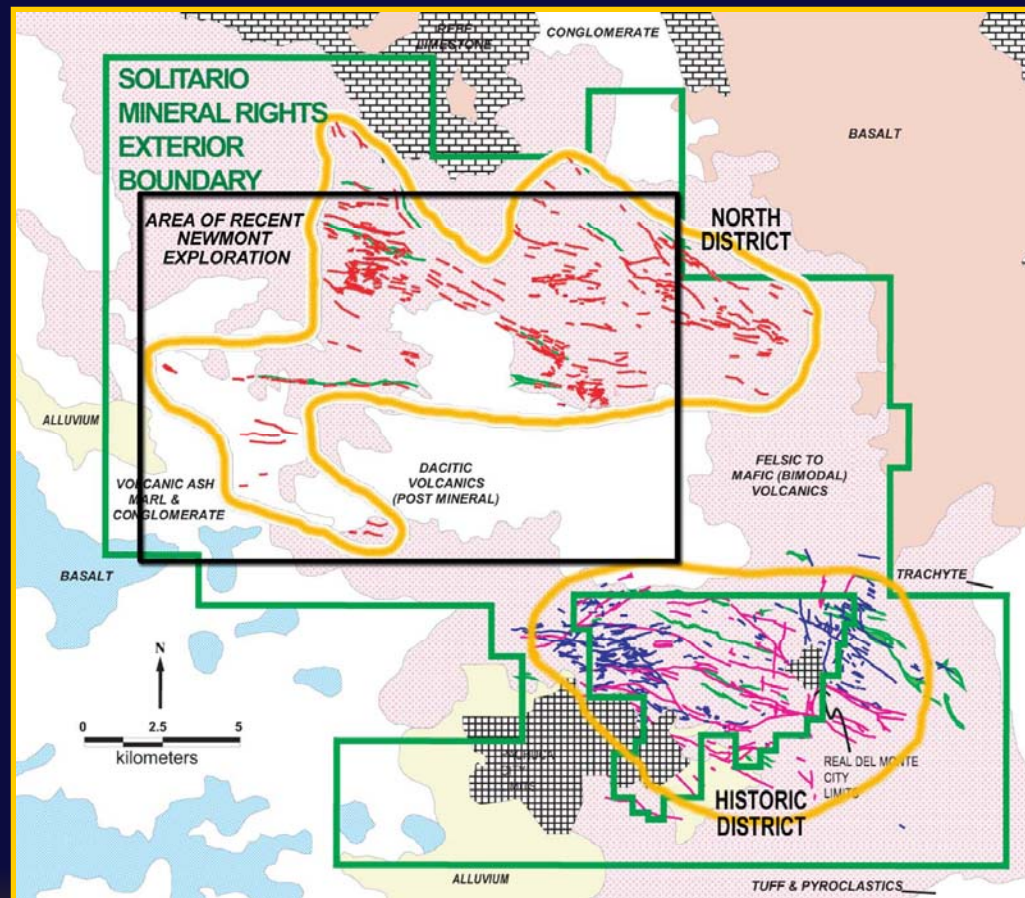


Pachuca Real High-Grade Silver-Gold Project, Mexico

Could this be the next world-class silver discovery?

- *100%-owned 31,000-hectare property situated within and adjacent to one of the world's greatest silver districts with:*
 - *1.4 billion ounces in past silver production*
 - *7.0 million ounces in past gold production*
- *Recent drilling and surface work in the Pachuca Norte area confirms similar mineralization to the historic district*
- *Currently in joint venture discussions*

Pachuca Real Silver-Gold



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Pedra Branca Platinum-Palladium Project, Brazil

Most advanced PGM project in South America

- *Joint ventured with Anglo Platinum – world's largest platinum producer*
- *Solitario substantially carried to production with Anglo Platinum funding next \$11.5 million and Solitario's share of construction financing*
- *Advanced exploration project with \$12 million in past exploration expenditures (318 drill holes)*
- *Potential for 2 million ounces of platinum-palladium*
- *\$1.5 million, 3,500-meter drilling program scheduled for 2010*

Highlights of 2009 Pedra Branca Drill Hole Results

PEDRA BRANCA 2009 DRILLING PROGRAM HIGHLIGHTS

Prospect	Drill Hole	Interval (Meters)	Grade (GPT PGM + Gold)
Curiu	CU-28	5.6	4.25
	CU-34	11.0	2.64
	CU-35	11.3	3.90
	CU-36	8.0	2.05
	CU-37	11.1	3.95
	and	10.2	2.41
	CU-38	6.6	5.30
	CU-40	10.4	2.12
Cedro I	CD-66	11.5	1.75
	CD-67	12.5	2.02

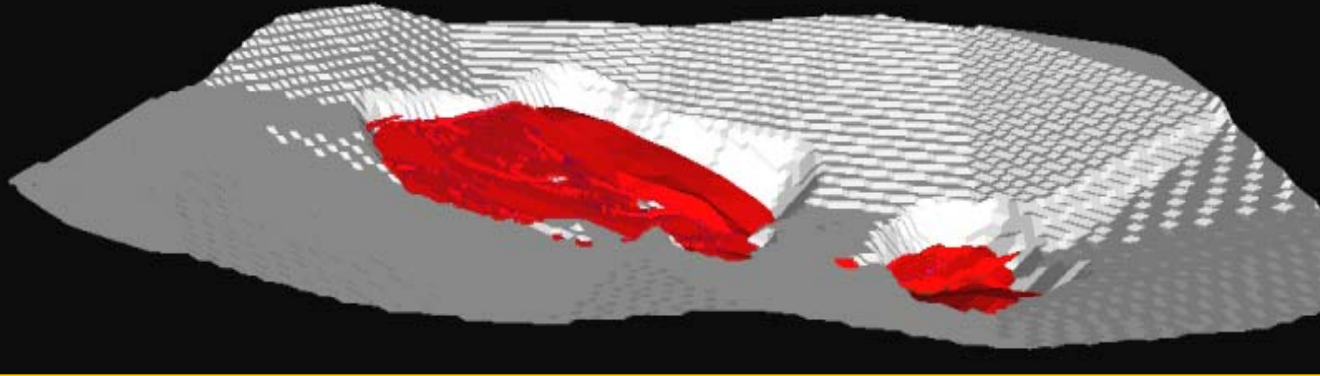


**True thickness has not been estimated for each individual intercept, but in all cases are thought to represent at least 85% of true thickness.*

Anglo Platinum Scoping Studies Completed

Most advanced PGM project in South America

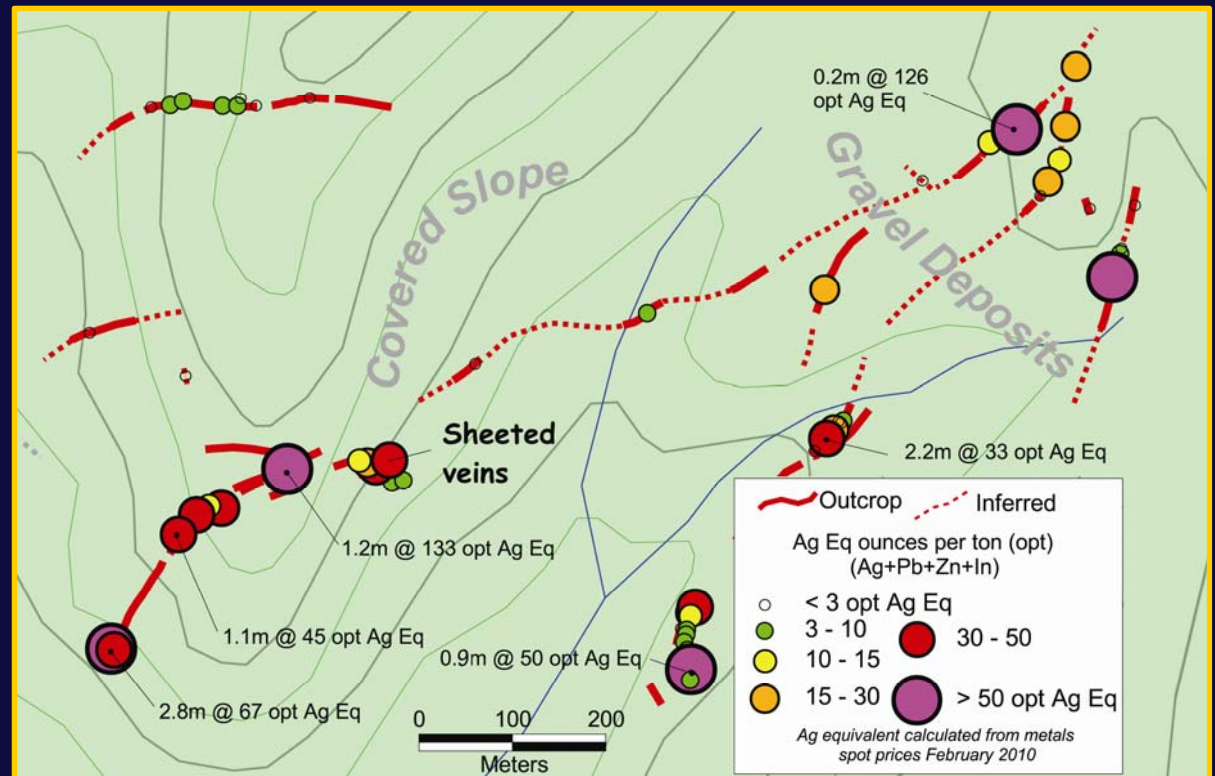
Esbarro Pit Design



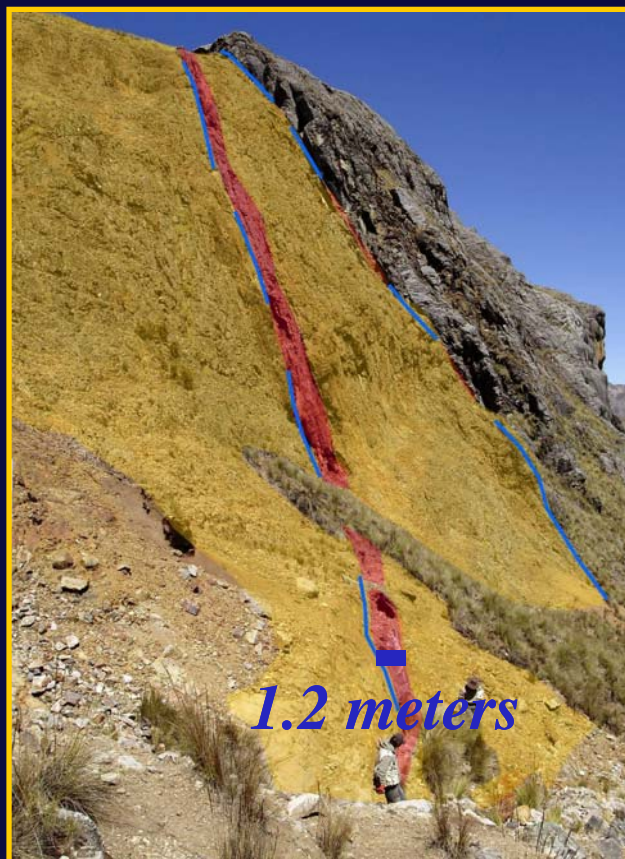
- *Geologic resource estimation, preliminary metallurgical testing and initial infrastructure scoping underway*
- *Anglo Platinum has funded \$5.5 million in expenditures to date*
- *35 drill holes planned in 2010*

La Promesa High-Grade Silver, Zinc, Lead Veins - Peru

- *High-grade silver/base metal veins at surface*
- *Veining observed over an area 1,200 x 600 meters*
- *100%-owned; subject to Newmont Alliance*
- *8-hole, 1,200 meter drilling program planned for Q3-10*



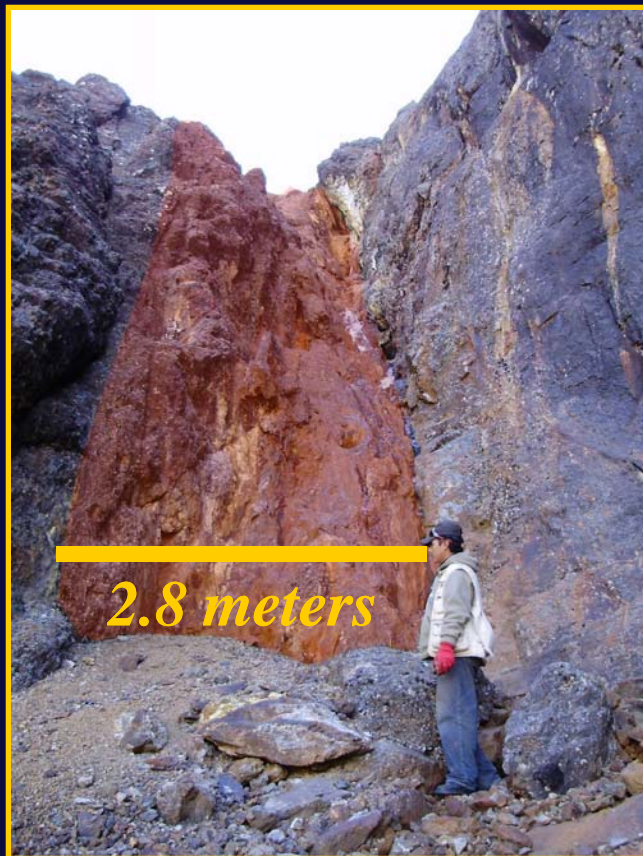
La Promesa Western Vein



Higher Elevation 1.2 Meter Channel Sample

- *1975 gpt silver*
- *33.1% zinc*
- *5.6% lead*
- *430 gpt indium*

La Promesa Western Vein

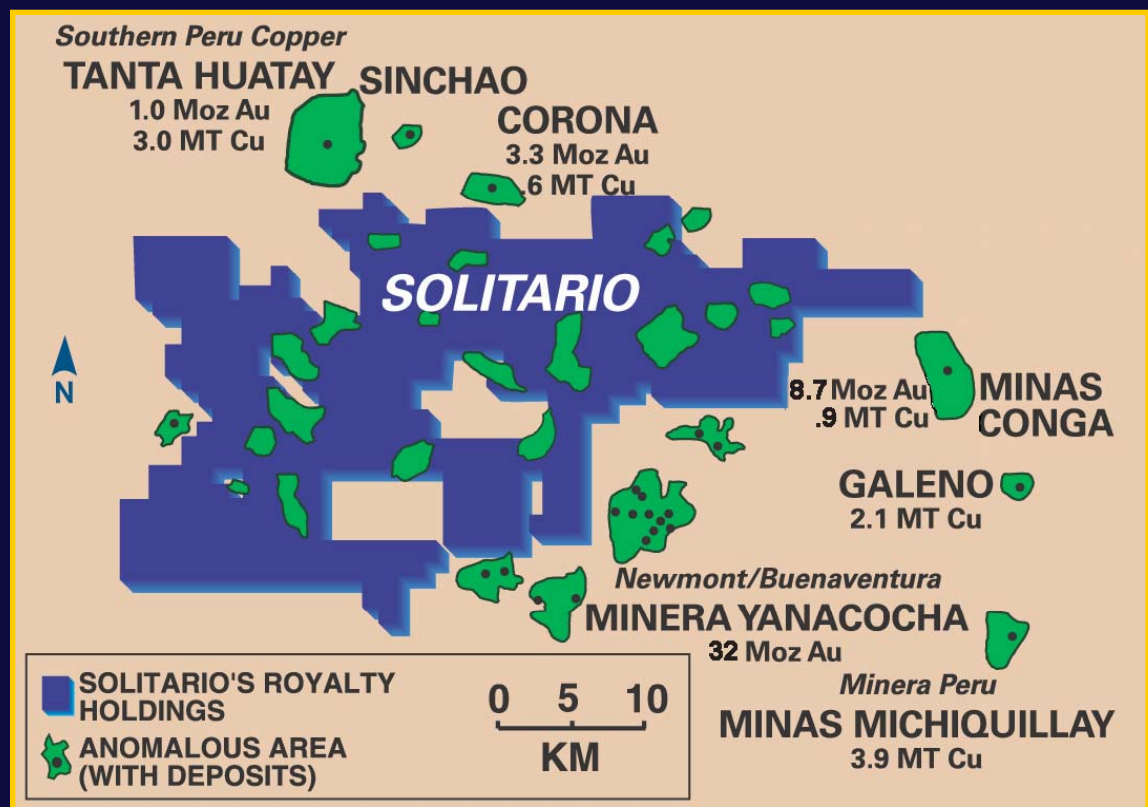


Lower Elevation 2.8 Meter Channel Sample

- *758 gpt silver*
- *19.4% zinc*
- *7.2% lead*
- *150 gpt indium*

Yanacocha NSR Royalty, Peru

- *61,000-hectare property*
- *Borders largest gold mine in South America*
- *NSR royalty*
 - *Gold 1%-2.75%*
 - *Silver 2%*
 - *Copper 1%*





Mercurio NSR Gold Royalty, Brazil

- *Regent Holding Ltd. (private) is project operator*
- *\$1.0 million in cash payments due to Solitario over four years*
- *8,000 meters of drilling over three years by Regent*
- *1.5% NSR royalty for first 2.0 million ounces of production; and 2% thereafter*
- *25 of 36 drill holes contained significant gold intercepts on this 8,500-hectare property*



Why Own Solitario

- *An event-driven company – exploration discoveries*
- *Financial staying power with \$20 million*
- *NPI royalty structured joint ventures with \$10 million in 2010 expenditures*
- *Foundation of advanced projects managed by experienced global partners*
- *Pipeline of new 100%-owned projects*
- *Long history of minimal share dilution*
- *Experienced management and exploration team*



Solitario Exploration & Royalty

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Stock Exchange Listings:

*NYSE Amex: XPL
TSX: SLR*