

July 24, 2008

FIVE DRILLS NOW OPERATING ON SOLITARIO PROJECTS
30,000 METERS OF DRILLING SLATED FOR 2008

Denver, Colorado: Solitario Exploration and Royalty Corp. ("Solitario") announces that there are five drill rigs currently operating on three of its exploration properties as part of the most aggressive drilling campaign in its corporate history. Solitario anticipates a total of 30,000 meters of drilling will be completed on six separate projects located in Mexico, Brazil and Peru during 2008. This drilling is being funded by our respective joint venture partners on the high-grade Bongará zinc-lead project in Peru, the Pedra Branca platinum-palladium (PGM) project in Brazil and the Pachuca Real silver-gold project in Mexico.

JOINT VENTURE PROJECTS

Bongará (Zinc-Lead, Peru): Solitario's joint venture partner, Votorantim Metais, has just recently mobilized three rigs to the high-grade Bongará zinc-lead project. The largest drilling program in the history of the Bongará project consisting of at least 20,000 meters of drilling is planned before the end of 2008. This program is comprised of both step-out drilling and further infill drilling. Previously, Votorantim Metais completed 15,793 meters of drilling during 2007 and late-2006. The current three-core rig program is expected to be ongoing into December, weather permitting. New drilling results should become available by late-summer.

Solitario's subsidiary Minera Bongará S.A. ("Bongará") holds title to 100% of the project's mineral rights and assets. Votorantim Metais can earn up to a 70% interest in Bongará by funding \$18.0 million in exploration and development expenditures, making annual cash payments to Solitario beginning in August 2007 and committing to place the project into production based upon a feasibility study. Once Votorantim has fully funded its work commitments, it has further agreed to finance Solitario's 30% participating interest for construction.

Pedra Branca (Platinum-Palladium, Brazil): Solitario initiated a 2,000-meter drilling program (100% funded by Anglo Platinum Ltd.) in early-June 2007. The objective of this program is to identify new PGM deposits to add to the mineralization thus far delineated in four separate near-surface deposits. Six high-quality targets are being further drill tested with initial drilling results expected by late-August. Late last year the joint venture increased the size of its land holdings from 45,365 hectares to over 178,500 hectares that cover new areas of prospective ultramafic rock formations discovered late last year. Solitario is also conducting a regional surface exploration program aimed at developing drill targets on these new properties.

Pedra Branca Mineração S.A. ("PBM") holds title to 100% of the project's mineral rights and assets. Currently, Solitario owns 85% of PBM and Anglo Platinum owns 15%. Anglo Platinum may earn a 51% interest in PBM by spending a total of \$7 million on exploration at Pedra Branca by February 28, 2010. Anglo Platinum can earn an additional 9% interest in PBM (for a total of 60%) by either (i) completing a bankable feasibility study or (ii) spending an additional \$10.0 million on exploration or development. Anglo Platinum can also earn an additional 5% interest in PBM (for a total of 65%) by arranging for 100% project financing to put the project into commercial production.

Pachuca Real (Silver-Gold, Mexico): Solitario's joint venture partner, Newmont Mining, began its 2008 drilling program on the project in April with two core rigs. Assay results have been received for the first eight drill holes and are provided in the table below. Drilling has been temporarily suspended due to rainy conditions, but will resume shortly with a single core drilling rig continuing until the end of summer. Additional drilling results are expected within the next several weeks.

The 46,350-hectare (114,500 acres) Pachuca Real silver-gold project is situated in and around the prolific Pachuca-Real del Monte historic mining district that produced 1.4 billion ounces of silver and over 7.0 million ounces of gold. Solitario's property encompasses about 35 percent of the historic district, but more importantly, covers over 95% of the potential extensions of the district to the north and northwest.

Newmont can earn a 51% interest in the project by spending \$12 million on exploration and development over a 4.5 year period and may earn up to a 65% interest by completing a positive feasibility study for the project (see Solitario's press release dated September 25, 2006 <http://solitarioresources.com/news/092506.html>).

Target	Hole	Thickness (m)	Interval		Au (g/T)	Ag (g/T)
			From (m)	To (m)		
Tierras Coloradas	PAC-10	1.50	215.40	216.90	0.15	6.63
		1.40	380.30	381.70	0.03	119.34
Investigadora	PAC-11	16.55	312.80	329.35	0.20	13.84
		0.85	314.40	315.25	1.28	173.00
Tierras Coloradas	PAC-12	0.50	346.20	346.70	0.15	7.04
		0.55	401.35	401.90	0.11	7.79
San Juan Gallo	PAC-13	2.15	142.85	145.00	0.29	87.14
		1.95	156.90	158.85	0.63	144.67
		0.45	158.40	158.85	1.98	335.00
		1.00	235.00	236.00	0.44	141.84
		0.30	242.10	242.40	0.24	291.00
		0.70	251.50	252.20	0.06	95.00
		0.25	272.30	272.55	0.90	158.00
La Cruz	PAC-14	0.40	13.60	14.00	0.42	50.70
Toledana	PAC-15	0.25	235.30	235.55	0.14	9.51
El Jaspe	PAC-16	Hole was lost, redrilled as PAC-19 results pending				
San Juan Gallo	PAC-17	2.75	234.75	237.50	0.16	86.44

No estimate of true width of mineralized intercepts shown above can yet be made.

As the Pachuca Real project is operated by Newmont, drill hole information contained within this release is reported under a quality control program reviewed by Mr. Walt Hunt, Chief Operating Officer for Solitario, who is a qualified person as defined by National Instrument 43-101. Samples were derived from 50% splits of HQ and NQ (2.5 and 1.9 inch) diameter core. Samples are then shipped via secured third-party land and/or air transportation companies and analyzed by an ISO9002 registered company. In addition to the laboratory's quality control program, a check assay program is ongoing.

FUTURE DRILLING PROGRAMS

Cajatambo (Gold, Peru): A 1,500 meter core drilling program is planned on Solitario's 100%-owned Cajatambo high-sulfidation gold project pending permitting approval, expected in late September of this year. Excellent rock chip and soil sampling results have been returned from an area measuring about 300 meters by 300 meters. A new area of strongly anomalous gold and silver values in rock samples measuring approximately 300 meters by 1.5 kilometers has recently been discovered. Neither of these strongly altered areas has ever been drill tested.

Chonta (Silver, Peru): A 1500 meter core drilling program is being planned to test the polymetallic replacement deposits at the historic Chonta district in the central mineral belt of Peru. Geochemical sampling has defined an area of 300 by 400 meters of highly anomalous rock samples with silver values locally exceeding one kilogram per ton in select sampling of manto replacements. The schedule of drilling will be determined by the receipt of permits.

Purica (Copper, Mexico): A 1,500 meter core drilling program is currently being planned on Solitario's 100%-owned Purica copper project. Core drilling is expected to begin in October. The Purica property is strategically located between the giant Cananea and La Caridad operating copper mines in northern Mexico. Detailed geologic mapping and geochemical sampling conducted by Solitario has identified a six by three kilometer area of phyllic alteration with surface showings of copper oxides, suggesting the presence of a buried copper porphyry system.

ABOUT SOLITARIO

Solitario is a gold, silver, platinum-palladium, and base metal exploration company actively exploring in Brazil, Mexico, Peru and Bolivia. Solitario has significant business relationships with Votorantim Metais, Newmont Mining and Anglo Platinum. Solitario has approximately US\$30 million in cash and marketable securities and no debt. Solitario is traded on the American Stock Exchange (AMEX: XPL) and on the Toronto Stock Exchange (TSX: SLR). Additional information about Solitario is available online at www.solitarioxr.com.

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This press release 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 release also contains information about adjacent properties on which Solitario has 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.