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**SOLITARIO EXPLORATION & ROYALTY REPORTS ADDITIONAL HIGH-GRADE  
DRILLING RESULTS ON ITS BONGARÁ ZINC PROJECT, PERU  
INTERSECTS 3.2 METERS GRADING 28.2% ZINC + LEAD and 52.8 GPT SILVER**

**Denver, Colorado:** Solitario Exploration & Royalty Corp. (NYSE Alternext US: **XPL**; TSX: **SLR**) announced that it has received assay results for another 19 drill holes (19 other holes were previously reported on January 13, 2009) of 54 core drill holes completed in the last five months on its high-grade Bongará zinc-lead project in northern Peru. Highlights include drill hole V-110 that cut 3.2 meters grading 24.07% zinc, 4.14% lead and 52.8 grams per tonne ("gpt") silver and hole V-130 that intersected 9.0 meters grading 10.17% zinc, 0.95% lead and 7.35 gpt silver. The 54-hole, 16,468 meter program was managed and entirely funded by Solitario's joint venture partner Votorantim Metais.

The Bongará project hosts the Florida Canyon zinc deposit where high-grade zinc mineralization has been intersected over a four square kilometer area. The deposit is open to expansion in all directions. A complete listing of all assay results for these 19 drill holes can be accessed at <http://www.solitarioxr.com/art/2008BongaraDrillHoleResults.jpg> Additional project information can be found at <http://www.solitarioxr.com/bongara.html>. The eight best drill holes for these latest assay results are provided in the table below:

<b>Drill Hole Number</b>	<b>Intercept* (meters)</b>	<b>Zinc %</b>	<b>Lead %</b>	<b>Zinc+Lead %</b>	<b>Silver g/t</b>
V-130	9.0	10.17	0.95	<b>11.12</b>	7.35
V-113	1.0	32.49	8.89	<b>41.38</b>	103.0
V-121	2.0	30.92	0.98	<b>31.9</b>	11.3
V-112	7.0	5.96	1.30	<b>7.25</b>	12.4
V-128	4.7	6.54	0.66	<b>7.20</b>	3.5
V-110	3.2	24.07	4.14	<b>28.21</b>	52.8
V-138	2.0	13.50	0.16	<b>13.66</b>	3.2
V-89	7.0	11.85	0.38	<b>12.23</b>	3.3

**\* True thickness has not been estimated for each individual intercept, but in all cases are thought to represent at least 75% of true thickness**

The 2008 drilling program focused upon two separate areas. Results contained within this release are located in a 600 x 500 meter area within the central part of the currently defined Florida Canyon deposit. Previously reported assay results (January 13, 2009) were all from a large area in the southern part of the presently defined Florida Canyon mineralized footprint. Assay results are pending for the final 16 holes drilled in 2008.

Chris Herald, President and CEO of Solitario commented, "Drilling results continue to validate our belief that the Bongará project is a world class zinc deposit that could ultimately be developed into one of the world's most important zinc mines, with significant silver and

lead credits. We expect to release the results of the final 16 drill holes within the next several weeks."

The drill hole information contained within this release is reported under a quality control program reviewed by Mr. Walt Hunt, COO for Solitario Exploration & Royalty Corp., who is a qualified person as defined by National Instrument 43-101. Samples are 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 air transportation companies and analyzed by ALS Chemex Inc., North Vancouver, Canada, an ISO9002 registered company.

### **Bongará Agreement with Votorantim Metais**

Votorantim Metais can earn up to a 70% interest in the project by committing to place the project into production based upon a positive feasibility study and spending a minimum of \$18.0 million on exploration and development. After earning 70%, Votorantim Metais has further agreed to finance Solitario's 30% participating interest for construction. Solitario will repay the loan facility through its cash flow distributions.

### **About Votorantim Metais**

Votorantim Metais belongs to a privately held Brazilian business conglomerate that is a leader in every market segment in which it operates, including cement, pulp and paper, metals, chemicals, orange juice, and finance. In 2007, Votorantim Group's revenues amounted to US\$15.6 billion. The metals business division accounted for 29% of revenues from production of zinc, nickel, steel and aluminum. Votorantim Metais is the world's fifth largest primary zinc producer with three operating zinc smelters and two operating zinc mines. It owns the Cajamarquilla zinc smelter and is a major shareholder of Milpo, both located in Peru. Votorantim Metais also acquired US Zinc, a zinc recycling company based in the USA with a plant located in China.

### **About Solitario**

Solitario is a gold, silver, platinum-palladium, and base metal exploration and royalty company actively exploring in Brazil, Mexico, Peru and Bolivia. Besides Votorantim, Solitario has significant business relationships with Newmont Mining and Anglo Platinum. Solitario has approximately US\$22 million in cash and marketable securities and no debt. Solitario is traded on the NYSE Alternext US ("XPL") and on the Toronto Stock Exchange ("SLR"). Additional information about Solitario is available online at [www.solitarioxr.com](http://www.solitarioxr.com)

FOR MORE INFORMATION, CONTACT:

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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.*

## **2008 BONGARÁ DRILLING RESULTS**

**For Assays Received Between December 10, 2008 to January 22, 2009**

	<b>Width</b> (meters)	<b>From</b> (meters)	<b>To</b> (meters)	<b>Pb</b> %	<b>Zn</b> %	<b>Ag</b> grams/tonne	<b>Pb+Zn</b> %
V_130	9	113.5	122.5	0.95	10.17	7.35	11.12
V_113	1	222.2	223.2	0.01	7.64	0.76	7.64
	1	269.2	270.2	8.89	32.49	103.00	41.38
V_121	2	259.3	261.3	0.98	30.92	11.30	31.90
V_133	1	210.7	211.7	0.34	5.47	2.70	5.81
	2	215.7	217.7	0.32	2.58	5.89	2.90
V_112	7	199.9	206.9	1.30	5.96	12.42	7.25
V_122	1	314	315	0.11	3.94	1.58	4.04
V_136	n/a						
V_137	n/a						
V_109	1.3	204.9	206.2	6.17	10.35	39.80	16.52
V_128	4.7	254.5	259.2	0.66	6.54	3.47	7.20
incl.	2.7	256.5	259.2	1.12	10.27	5.62	11.40
	0.7	282.5	283.2	0.01	4.56	0.70	4.57
	0.7	286.5	287.2	0.15	10.95	2.30	11.10
V_110	3.2	173.5	176.7	4.14	24.07	52.83	28.21
	2	181	183	0.03	2.54	1.54	2.57
V_125	1.7	270.1	271.8	0.59	6.20	5.22	6.79
V_114	n/a						

V_87	0.7	51.2	51.9	0.01	5.49	15.40	5.50
	1.4	70.5	71.9	0.17	12.48	3.26	12.64
V_138	0.7	59.6	60.3	1.82	23.20	42.00	25.02
	2	239.1	241.1	0.16	13.50	3.19	13.66
V_127	n/a						
V_135	n/a						
V_134	n/a						
V_89	7	86.7	93.7	0.38	11.85	3.34	12.23
	0.7	101	101.7	0.12	4.12	0.30	4.24



**SOLITARIO**  
EXPLORATION  
& ROYALTY

**BONGARA PROJECT**  
Florida Canyon Zinc Deposit

**LEGEND**

- Drill Hole Pre 2008
- Drill Hole 2008
- Drill Hole Trace
- Results Pending

<b>FC-08</b>	Drill Number
<b>9.0@7.3</b>	Length (m) @Pb+ Zn pct
<b>14.8@14.5</b>	≥ 10 Pb + Zn pct

