



## El Nino Releases Phase 1 Metallurgical Results for the Murray Brook Base Metal Deposit, Bathurst Mining Camp, New Brunswick

**January 16, 2013**, Vancouver, BC; El Nino Ventures Inc. (“ELN” and the “Company”) (TSX.V: ELN; OTCQX: ELNOF Frankfurt: E7Q) is pleased to announce the results from Phase 1 metallurgical testwork commissioned by its partner, Votorantim Metals Canada Inc. (Votorantim), on samples from the Murray Brook polymetallic deposit, located in the Bathurst Mining Camp, New Brunswick. The purpose of the testwork was to investigate flotation options for sequential recovery of copper, lead and zinc concentrates from Murray Brook feed.

The metallurgical testwork was completed at RPC Science & Engineering Laboratories (RPC) in Fredericton (New Brunswick), under the direction of metallurgists Ross Gilders and Leo Cheung. Further information on RPC may be found at the laboratories’ website at <http://www.rpc.ca>

### Results

Testwork was completed on bulk drill core samples from the Eastern Zone and from the Western Zone of the Murray Brook deposit (Figure 1; Table 1). The test program consisted of sample preparation and compositing, characterization, and batch flotation tests followed by locked cycle tests on a composite sample. The composite sample head grade for the testwork is similar to the grade of the current high confidence Measured resources for Murray Brook.

Locked cycle tests by RPC successfully produced individual copper, lead and zinc concentrates with the following recoveries and grades (Table 2):

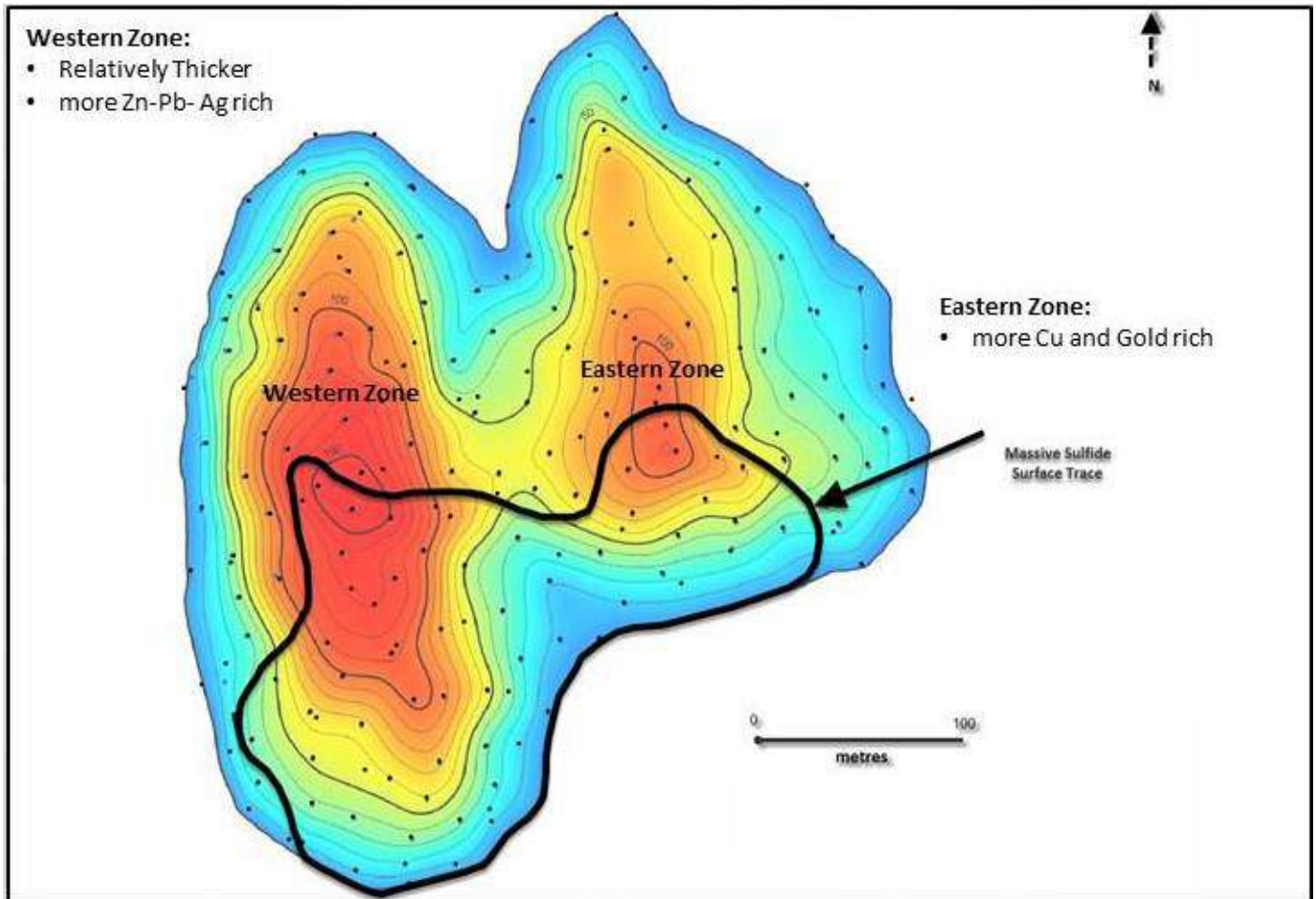
- Recoveries of 51.4% copper, 1.7% zinc, 4.5% lead, and 12.5 % silver in a **copper concentrate** grading 17.5% copper, 6.0% zinc, 6.2% lead, and 591 g/t silver;
- Recoveries of 36.6% lead, 7.2% copper, 1.4% zinc, and 17.5% silver in a **lead concentrate** grading 50.3% lead, 2.4% copper, 5.3% zinc, and 833 g/t silver; and
- Recoveries of 88.8% zinc, 15.8% copper, 8.3% lead and 25.3% silver in a **zinc concentrate** grading 53.8% zinc, 0.5% copper, 1.1% lead, 95 g/t silver.

A copy of the report is available for viewing on the [Company’s website](#). Additional metallurgical work has been commissioned by Votorantim and RPC, which involves completing expanded and extended locked cycle tests to optimize copper, lead and precious metal recoveries in support of a planned Preliminary Economic Assessment in 2013.

Harry Barr, Chairman & CEO states: “The results of the Phase 1 metallurgical testwork on Murray Brook are encouraging, particularly the 89% zinc recovery combined with good silver recovery. These initial metallurgical results plus the results of 18,500 metres of drilling completed since 2011 and the resource estimation of February 2012, confirm the robustness of Murray Brook as this well-located project is steadily advancing towards the planned completion of a Preliminary Economic Assessment in H1 2013.”

## Sampling

The sample materials were derived from three HQ size drill cores (Table 1). Hole MB-2012-121 was drilled in the Eastern Zone, the shallower and more copper-rich of the two massive sulfide zones at Murray Brook. Holes MB-2012-124 and MB-2012-132 were drilled in the deeper, more zinc-lead-precious metal rich Western Zone. (Description and assay results for each of the three holes are provided in ELN press releases dated July 30, August 14, August 28, 2012). The drill core was logged, split, sampled and shipped to RPC. Intervals of potential secondary mineralization and fracturing were sampled separately. In total 3226 kg of material was delivered to RPC for testwork.



**Figure 1. Massive Sulfide Thickness, 10 metre contours:** Colour contour map of Murray Brook showing the location of the Eastern Zone and the Western Zone plus the surface trace of the massive sulfides. Metallurgical hole MB-2012-121 was drilled in the Eastern Zone. Metallurgical holes MB-2012-124 and -132 were drilled in the Western Zone.

**Table 1.** Drill Core Sample Material for the metallurgical Testwork on Murray Brook

Description	Zone	Sample	Mass	Mass Dist.	Assays/Values					Distribution Ratio%				
			g	%	Cu%	Pb%	Zn%	Ag (g/t)	Au (g/t)	Cu	Pb	Zn	Ag	Au
MB-2012-121	Eastern	bottom	15908	33.3	0.5	1.0	1.9	42	0.906	60	27	148	31	52
MB-2012-124	Western	bottom	15908	33.3	0.2	0.8	2.9	35	0.263	23	24	28.4	26	15
MB-2012-132	Western	whole	15908	33.3	0.1	1.7	5.5	59	0.591	17.0	49	53.2	435	34
<b>Summary results: average or total as appropriate</b>			<b>47724</b>	<b>100</b>	<b>0.3</b>	<b>1.2</b>	<b>3.4</b>	<b>45</b>	<b>0.590</b>	100	100	100	100	100
Measured*	both	average			0.3	1.2	3.5	44	0.500					
Meas+Ind*	both	average			0.4	1.0	2.6	39	0.510					

\*Grade of current Measured and Measured + Indicated resources (see Technical Report on [www.elventures.com](http://www.elventures.com))

**Table 2.** Assay and Recovery Results of Locked Cycle Tests for Murray Brook

Description	Sample/Circuit	Assays					Recovery%				
		Cu%	Pb%	Zn%	Ag (g/t)	Au (g/t)	Cu	Pb	Zn	Ag	Au
Feed Grade	blend of 3 holes	0.27	1.15	3.42	45	0.590					
<b>Cu Concentrate</b>	final	<b>17.45</b>	6.16	6.04	591	1.051	<b>51.4</b>	4.5	1.7	12.5	2
<b>Pb Concentrate</b>	final	2.40	<b>50.30</b>	5.27	833	0.923	7.2	<b>36.6</b>	1.4	17.5	1.8
<b>Zn Concentrate</b>	final	0.48	1.08	<b>53.78</b>	95	0.360	15.8	8.3	<b>88.8</b>	25.3	5.5

### Grindability Tests

Composite samples for each of the three Murray Brook drill holes were submitted for grindability test work. Rod Mill Grindability Indices for the Murray Brook bulk sample materials averaged 14.6 kWh/t with a hardness percentile of 55%. Bond Ball Mill Grindability Indices averaged 10.7 kWh/t with a hardness percentile of 10%. These data suggest that Murray Brook mineralization is of moderate hardness for a rod mill and lower hardness for a ball mill.

### Mineralogy

SEM-EDS mineralogical studies of the overall composite sample and each individual drill core by RPC indicate that sphalerite and galena occur as interstitial grains, inclusions, veinlets and attachments to pyrite. Chalcopyrite occurs as interstitial grains to pyrite. Chalcopyrite is less common hole MB-2012-132, consistent with the lower copper grades in the Western Zone. Covellite is present in MB-2012-124. Generally, the principal silver mineral is tetrahedrite. The sulfide grains are mainly <20 µm in size. However, sphalerite grains 50-100 µm in size are present interstitial to pyrite grains.

### Flotation

Primary bulk sulfide rougher floats were carried out to estimate flotation performance. The reagent regime included 400 g/t CuSO<sub>4</sub>, pH 10.0-10.5, 33.3 g/t 3418A, 10g/t PAX, 15 g/t MIBC and 11 minutes total at 1250 rpm. Rougher target liberation grind size was established to be D80 of ~30 µm. Initial testwork found that flotation

performance was adversely affected by the presence of secondary (oxidized) material. This latter material therefore was excluded from the overall composite sample used in locked cycle testing.

#### **Next Steps**

Additional metallurgical testwork is planned to be carried out by RPC in early 2013. The results will be reported in a planned Preliminary Economic Assessment to be completed in Q1 2013. The additional testwork will focus on optimizing copper, lead and precious metal recoveries, in part through processing of larger samples in bigger equipment. An expanded metallurgical test program, including pilot plant testing, may be warranted if PEA studies are positive.

#### **Qualified Persons Statement**

This news release has been reviewed and approved for technical content by Ali Hassanizadeh M.Sc. P.Geo., a qualified Person under the provisions of National Instrument 43-101.

#### **About El Niño Ventures Inc. Bathurst Projects**

El Niño Ventures Inc. has two active projects in the Bathurst Mining Camp;

##### **1. Murray Brook Project**

The Murray Brook project is a polymetallic, massive sulfide deposit and is **the fifth largest deposit discovered to date in the Bathurst Mining Camp, New Brunswick**. The Murray Brook property is located 60 km west of Bathurst. It is supported by excellent infrastructure, including paved roads, grid electricity and communities to provide goods, services and skilled labour.

A \$3 million exploration budget was approved for the 2012 exploration program. It included \$2.5 million for drilling to bring resources into the measured category at the Murray Brook deposit and \$500,000 for exploration of the Murray Brook and Camel Back properties, both of which are covered by the option agreement with Murray Brook Minerals. To date, more than 28,000 metres of drilling has been completed with encouraging results. In February 2012, an NI43-101 compliant resource estimation was announced ([see news release](#)). The technical report is filed on [SEDAR.com](#) and also available on [ELN's website](#). An updated NI43-101 mineral resource estimation and metallurgical test results are slated for completion in the first quarter of 2013. Results of these will be incorporated in a Preliminary Economic Assessment "PEA" that is slated for completion in the first quarter of 2013.

**ELN and VMC currently own 70% of the project, of which 35% is held by each of the two parties.** Under a purchase agreement signed by VMC on August 28, 2012 with MBM and Murray Brook Resources Inc. (collectively the owners), VMC acquired the right to purchase the additional 30% of the Murray Brook Project from the owners. **ELN has been provided the option to purchase an additional 15% in the project for a combined total of 50% (35% +15%).**

**Although the terms of the Participation Agreement provided for a three-year period to earn the initial 50% and two years to earn the additional 20%, ELN and VMC completed their earn-in in less than 18 months.**

##### **2. Bathurst Option Joint Venture Project (BOJV)**

Consists of an initial 4,712 claims in the Tri-Party Agreement with Xstrata & VM Canada whereby VM Canada may incur exploration expenditures of \$10 million over a period of 5 years to earn a 50% interest. VM Canada may further increase its interest to 70% by spending an additional \$10 million over 2 years.

#### **Votorantim Metals Canada Inc. Statement**

Technical details in this news release were provided by Votorantim whose professional geologists conduct operations consistent with mineral industry best practices. Votorantim accepts no responsibility for this

news release.

### **About Votorantim Metals Canada**

Votorantim Metals Canada Inc. is a subsidiary of Votorantim Metais, a company that is part of the Votorantim Group that was founded in Brazil in 1918. The Votorantim Group operates in twenty countries and has over 40,000 employees. Votorantim Metais is the largest electrolytic nickel producer in Latin America and one of the world's leaders in the production of zinc, aluminum and nickel. Votorantim Canada Metals Inc. in conjunction with Xstrata Zinc and El Nino Ventures is operator of the Bathurst Option and Joint Venture which is actively exploring for base metal deposits within the Bathurst Mining Camp.

### **About El Nino Ventures Inc.**

El Niño Ventures Inc. is an international exploration company, focused on exploring for lead, zinc, copper, gold and silver in New Brunswick, Canada and copper in the Democratic Republic of Congo ("DRC").

On Behalf of the Board of Directors



**Harry Barr**

**Chairman & CEO**

**El Niño Ventures Inc.**

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