



**Rio Silver Announces New Surface Channel Samples at Niñobamba:
131 g/t (3.82 oz/t) Silver over 42 metres and 119 g/t (3.48 oz/t) Silver
over 30 metres.**

September 4, 2012, Toronto, Ontario, Canada – Rio Silver Inc. (the "Company") (TSX.V: RYO) is pleased to announce further channel sample results at its 100% owned 2100 hectare Niñobamba project, located approximately 330 kilometres southeast of Lima, in the Department of Ayacucho, Peru. Trenching exposed strong silver mineralization in Trenches TR-02 and TR-03 hosted in a second parallel mineralized zone located 400 metres south of the gold-silver mineralization exposed in TR-01 that returned 56 metres of 1.03 g/t Au and 98.9 g/t Ag (see Company's news release dated July 12, 2012).

Trenches TR-02 and TR-03 are located approximately 350 metres apart and placed perpendicular to the NE-SW trend of southern mineralized zone. Trench TR-02 returned 42.62 metres of 130.98 g/t Ag and TR-03 returned 29.62 metres of 119.33 g/t Ag. The precious metal mineralization thus far determined in the southern zone is predominantly silver compared to the northern mineralized zone which has considerable gold credits. The southern mineralized zone is located higher in elevation compared to the parallel northern zone and suggests a distinct precious metal vertical zonation present at Niñobamba. The following table shows detailed channel results from TR-02 and TR-03.

Trench #	From m	To m	Interval m	Ag g/t	Ag troy Oz
TR-02	32.68	34.69	2.01	5.2	0.15
TR-02	34.69	42.73	3.07*	63.8	1.86
TR-02	42.73	44.73	2.00	158.3	4.62
TR-02	44.73	46.98	2.25	89.3	2.60
TR-02	46.98	49.16	2.17	93.7	2.73
TR-02	49.16	51.15	1.99	30.7	0.90
TR-02	51.15	53.32	2.17	98.6	2.87
TR-02	53.59	55.65	2.07	56.2	1.64
TR-02	55.65	57.70	2.05	45.5	1.33
TR-02	57.70	59.73	2.02	42.1	1.23
TR-02	59.73	61.80	2.08	326.0	9.50
TR-02	61.80	63.85	2.04	355.0	10.35
TR-02	63.85	66.50	2.66	146.6	4.27
TR-02	66.50	68.45	1.95	429.0	12.51
TR-02	68.45	73.54	5.09**	NA	
TR-02	73.54	76.44	2.90	67.7	1.97
TR-02	76.44	79.34	2.90	269.1	7.85
TR-02	79.34	89.39	2.11*	135.1	3.94
TR-02	89.39	91.48	2.09	61.0	1.78
TR-02	91.48	93.57	2.10	34.8	1.01
Totals			42.62	130.98	3.82
* Note - due to topography, corrected to the horizontal					
** Note sample unobtainable due to precipitous topography estimated distance corrected to the horizontal approximately 1 metre					

Trench #	From m	To m	Interval m	Ag g/t	Ag troy Oz
TR-03	84.39	86.33	1.94	14.0	0.41
TR-03	86.33	88.33	2.00	44.7	1.30
TR-03	88.33	90.29	1.97	64.4	1.88
TR-03	90.29	92.30	2.01	56.3	1.64
TR-03	92.30	94.30	1.99	247.0	7.20
TR-03	94.30	96.26	1.96	283.0	8.25
TR-03	96.26	98.18	1.93	140.9	4.11
TR-03	98.18	100.17	1.99	228.0	6.65
TR-03	100.17	102.12	1.95	207.0	6.03
TR-03	102.12	104.08	1.96	357.0	10.41
TR-03	104.08	106.06	1.98	51.6	1.50
TR-03	106.06	108.02	1.96	69.4	2.02
TR-03	108.02	110.01	1.99	5.8	0.17
TR-03	110.01	112.01	2.00	19.6	0.57
TR-03	112.01	114.00	1.99	7.4	0.22
Totals			29.62	119.33	3.48

The southern mineralized zone is visually exposed for over a 500 metre strike length. Strong surface mineralization in TR-02 shows that the mineralization is open to the SW and historic drilling on this zone shows the mineralization is open to the NE. Further trenching on the southern zone is expected to increase the strike and further define the grade and controls of the mineralization. See the attached map for the location of the trenches and historic drill site locations. The trenching program is continuing both on the northern and southern zones

Geochemical samples were collected by Mine Gate Exploration SA personnel using rock saws cutting continuous channels in bedrock averaging 2.5 inches wide and 3.5 inches deep. Samples were collected irrelevant of geological boundaries and later surveyed. The quality of the sampling is considered high and representative of the grade of the mineralized system at surface.

Standards and blanks were inserted for internal quality assurance/quality control. Under chain of custody the samples were delivered to Inspectorate Services Peru SAC, in Callao, Peru which is an ISO 9001:2000 certified laboratory at the global level with ABS QUALITY EVALUATIONS. The samples were prepared for analysis by standard procedures and were analyzed for 32 elements determined by multi-element ICP (inductively coupled plasma) with aqua regia digestion. Silver was assayed for by acid digestion with an atomic absorption finish (Ag-4-OR) and gold was analyzed separately by fire assay with an atomic absorption finish (1AT FA-AA). Jeffrey Reeder, P.Geo., Director of the Company is the Qualified Person who has reviewed and is responsible for the technical data contained in this news release.

ON BEHALF OF THE BOARD OF DIRECTORS OF
RIO SILVER INC.

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