



# LAGUNA RESOURCES NL

ASX Release

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LAGUNA RESOURCES NL

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## ARQUEROS EXPLORATION UPDATE – UNDERGROUND DRILLING RESULTS

The Company is pleased to announce that it has successfully completed its drilling programme on its 100% owned Arqueros Gold Project which is located in the World Class Maricunga Gold Belt of Chile.

The focus of the campaign was to validate the big historical data base of drill and assay results from previous miner, to expand and delineate the mineralisation for an upgrade in the JORC resource to be announced at the end of the second quarter 2010. The Company has achieved its drilling objectives.

Since the beginning of December 2009, surface drilling completed 8398 metres of reverse circulation drilling in 43 holes and 840 metres of diamond drilling in 8 holes. Underground drilling, which has just finished, completed 1420 metres in 15 drillholes.

Assay results showed that the mineralisation in both the silver and gold domains is consistent and predictable. The next milestone will be the presentation of the upgraded JORC Resource, followed by conceptual mine plan and processing options.

Recent underground diamond drilling on vertical gold-bearing structures located underneath the silver domain undertaken in Arqueros Sur included the following exceptional drill intersects of:

**15 metres at 3.5 g/t gold equivalent in VC10-03, including 5 metres at 6.3 g/t gold equivalent**

**29 metres at 3.3 g/t gold equivalent in VC10-10, including 4 metres at 6.0 g/t gold equivalent.**

Other higher grade mineralised intercepts include:

**VC10-01 3 metres at 4.7 g/t gold equivalent**

**VC10-05 12 metres at 2.2 g/t gold equivalent, including 3 metres at 5.9 g/t gold equivalent**

**VC10-07 3 metres at 4.3 g/t gold equivalent**

**VC10-10 (separate intersection) 3 metres at 3.8 g/t gold equivalent.**

**VC10-13 2.5 metres at 3.5 g/t gold equivalent**

**VC10-16 6 metres at 2.4 g/t gold equivalent, including 2 metres at 5.4 g/t gold equivalent**



Location of Arqueros and Cachitos Gold Projects in Northern Chile

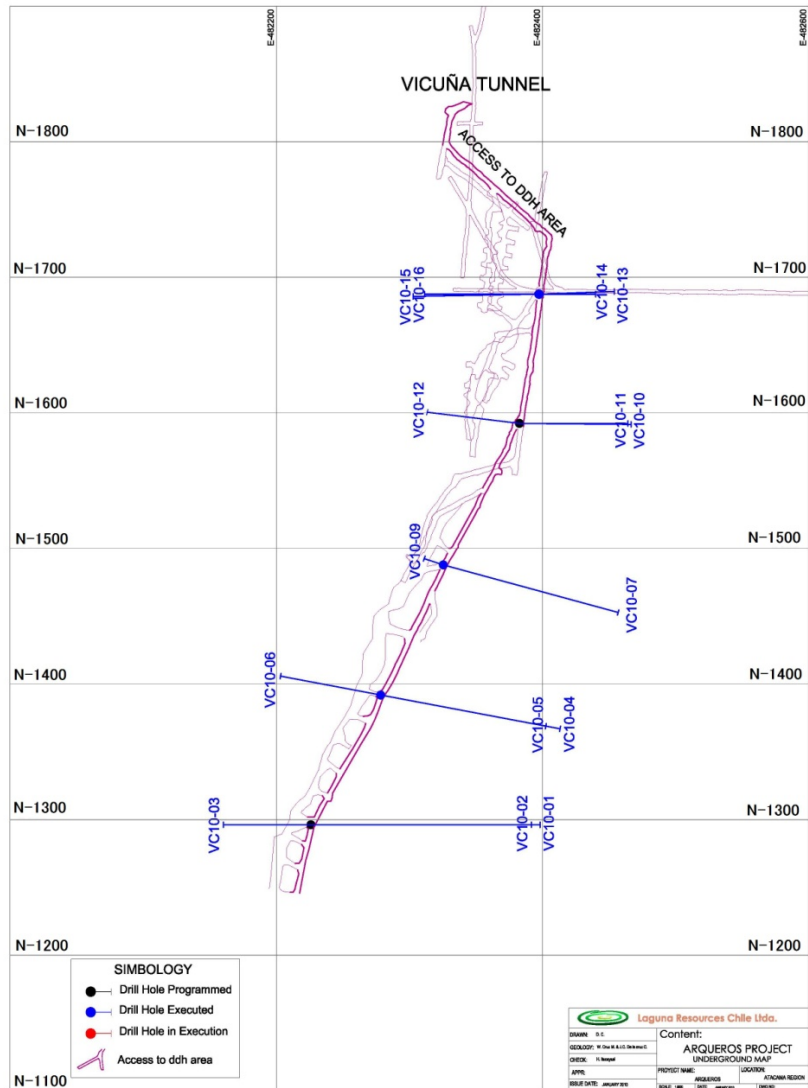


RC drilling at Arqueros Sur

Underground drilling commenced in late February 2010, and was completed by mid-April with a total of 1420 metres drilled in 15 diamond NQ drillholes. This programme was designed to test gold mineralisation that occurs in vertical structures which drape down from the main silver mineralised horizon, as well as to verify the historical drilling performed on the gold domain.

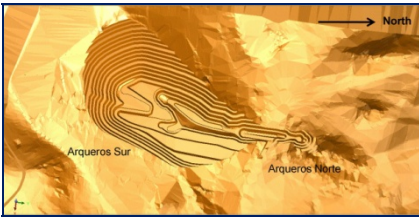
Reverse circulation drilling from surface (8398 metres in 43 drillholes) had previously demonstrated the continuity of grade and extent of the horizontal silver domain but provided limited information on the vertical structurally controlled gold domain. This has now been addressed by underground drilling with a series of sub-horizontal holes extending out from the main development drive that extends along the axis of the mineralisation on Arqueros Sur (Figure 1).

Figure 1. Plan-view of underground drilling positions



Underground assay results have been summarised on Table 1, with details presented on Table 2.

**Table 1. Underground DDH intersections (AuEQ60)**



Conceptual open cut

**Table 1.**

Gold equivalence (AuEQ) is estimated as  $AuEQ = Au + (Ag * EQ)$ , where Au = gold content, Ag = silver content and EQ = equivalence factor, which is calculated as the ratio of gold price to silver price \* ratio of gold metallurgical recovery to silver metallurgical recovery.

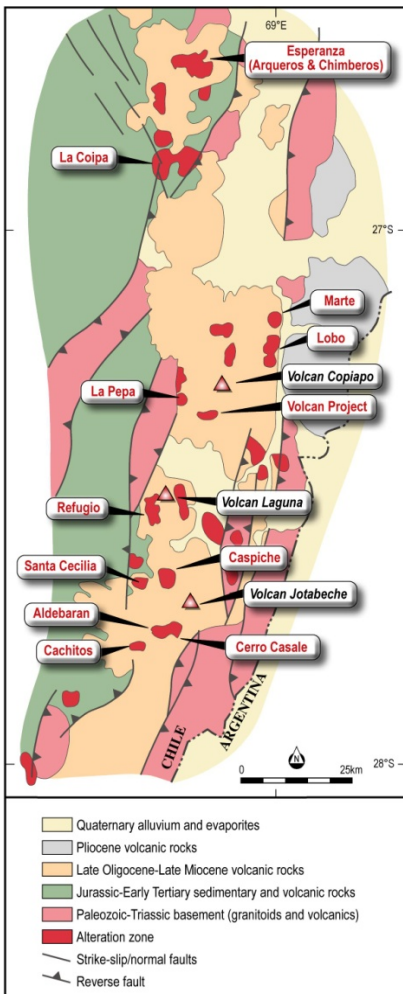
$EQ60 = P_{Au}/P_{Ag} * R_{Au}/R_{Ag} = 60$ , based on long-range prices of gold at US\$800/oz. & silver US\$15/oz, and recoveries of gold at 90% and silver at 80% respectively



Early winter snowfall in the Mazricunga

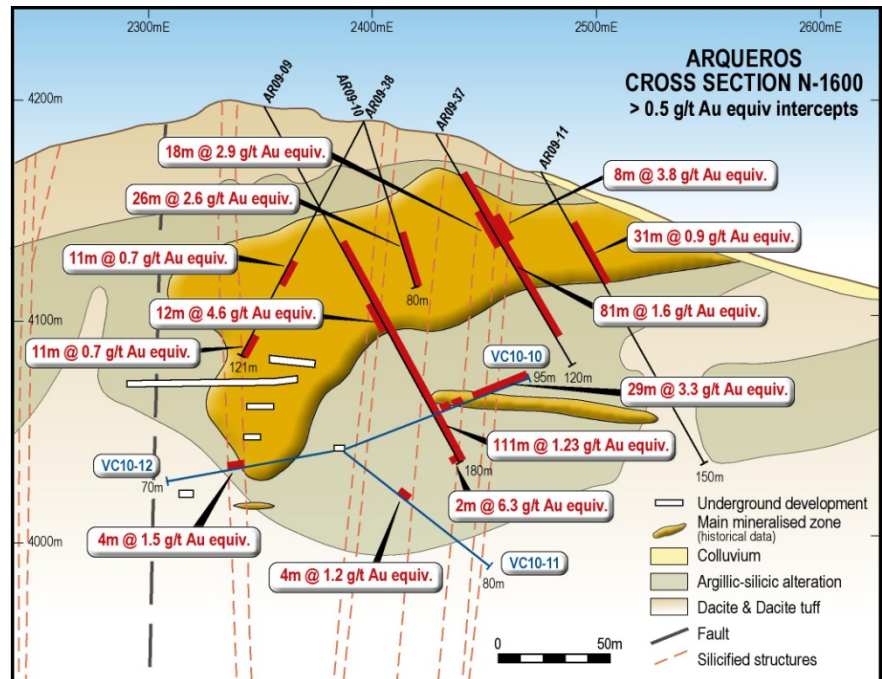
Drillhole	Intersection, metres			Grade, g/t		
	From	To	Length	Gold	Silver	Gold equivalent
VC10-01	105	110	5	0.05	71	1.24
	116	125	10	1.25	56	2.18
	147	156	9	2.06	16	2.33
.. includes	153	156	3	4.37	18	4.67
	163	166	3	0.56	32	1.09
VC10-02	125	131	6	0.99	13	1.21
VC10-03	14.5	29	15	3.26	13	3.48
.. includes	22	27	5	5.96	18	6.26
VC10-04	42	74	32	0.01	34	0.58
VC10-05	90	102	12	1.91	14	2.15
.. includes	93	96	3	5.71	10	5.89
VC10-06	27	29	2	0.42	16	0.69
	34	38	4	1.29	14	1.52
VC10-07	24	36	12	0.36	44	1.08
	72	79	7	nd	45	0.75
	81	92	11	1.57	23	1.96
.. includes	83	86	3	3.80	30	4.30
VC10-10	42	44	3	3.01	46	3.77
	53	55	2	0.31	64	1.37
	63	68	5	0.33	48	1.13
	71	100	29	0.97	142	3.34
.. includes	74	91	17	1.60	172	4.47
VC10-11	26	30	4	0.79	26	1.22
VC10-12	35	38	4	1.16	22	1.53
VC10-13	4	7	3	0.23	28	0.70
	18	20	2	0.23	21	0.58
	24	27	2.5	1.69	107	3.47
VC10-14	17	19	2	0.39	18	0.68
VC10-15	0	1	1	1.00	13	1.22
	18	19	1	0.81	13	1.03
VC10-16	0	3	3	0.75	7	0.87
	50	56	6	2.26	6	2.35
.. includes	53	55	2	5.29	7	5.41

The Maricunga Gold Belt is a 200 km long belt of Early to Middle Tertiary andesite to rhyolite volcanic centres controlled by north-south and northeast trending regional structures, overlying older sedimentary and volcanic rocks of Mesozoic and Paleozoic age. These complexes host a large number of epithermal and porphyry gold deposits, with at least 90 Moz gold equivalent resources of discovered and published since 1980, including two operating mines, Refugio and La Coipa, which produced 465,000 oz gold equivalent in 2009. Laguna Resources NL is developing the Arqueros Gold Project in the northern section of the belt, and has an option over Cachitos in the southern section.



Underground drilling successfully tested the gold domain with holes extended from the main development drive in four sections (Figure 2). It confirmed the presence of high grade pods in the gold gold-bearing structures.

Figure 2. Cross-section through Arqueros Sur



### Exploration Highlights of the Arqueros Gold Project:

- JORC Inferred Resource of 783,000 oz gold equivalent at 1.5 g/t gold equivalent. (0.5 g/t gold equivalent cut off grade) announced on 4 November 2009
- Surface and underground drilling completed, generating exceptional results, consistent with historical data and showing significant opportunities for growth in the resource base.
- Data is now being prepared for the reconciliation of recent and historical assays from drilling, and calculation of an upgraded resource.
- The Company has commenced an open cut “Base Case” scenario for the recommencement of mining at a rate of 100,000 to 120,000 ounces per annum of gold equivalent. This is based on an exploration target<sup>1</sup> for the project of between 20 to 40 million tonnes at a grade of between 1.5 and 2.0 g/t gold equivalent for between one and two million ounces.

Nick Lindsay  
Managing Director

*Dr Nicholas Lindsay is a Member of the Australian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Lindsay is the Managing Director of Laguna Resources NL and consents to the inclusion in this release of the matters based on his information and information presented to him in the form and context in which it appears.*

#### CONSENT

*The **Mineral Resource** has been estimated by Mr P Ball (Director of DataGeo Geological Consultants) from information provided by Laguna Resources NL and its agents. Mr Ball is a member of the Australian Institute of Mining and Metallurgy and has sufficient experience relevant to the style of mineralisation under consideration to qualify as a competent person as defined in the 2004 edition of the "Australian Code of Reporting of exploration results, mineral resources and ore reserves". Mr Ball consents to the inclusion of the mineral resource estimate in the form and context in which it appears based on the information presented to him.*

#### DISCLAIMER

*This release contains certain **forward-looking statements**. These forward-looking statements are based on management's expectations and beliefs concerning future events. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, some of which are outside the control of Laguna Resources N, which could cause actual results to differ materially from such statements.*

*The **Exploration Target** presented for Arqueros is 1 to 2 million gold equivalent ounces of potential gold-silver mineralisation grading between 1.5 and 2.0 g/t gold equivalents. The potential quantity and grade is conceptual in nature. There has been insufficient exploration to define a Mineral Resource under the JORC Code and it is uncertain if further exploration will result in the determination of a Mineral Resource.*

***Gold equivalence** (AuEQ60) is estimated as  $AuEQ60 = Au + (Ag * EQ60)$ , where Au = gold content, Ag = silver content and EQ = equivalence factor, which is calculated as the ratio of gold price to silver price \* ratio of gold metallurgical recovery to silver metallurgical recovery.  $EQ60 = P_{Au}/P_{Ag} * R_{Au}/R_{Ag} = 60$ , based on long-range prices of gold at US\$800/oz & silver US\$15/oz, and recoveries of gold at 90% and silver at 80% respectively.*



**Table 2. Summary of results from underground diamond drillholes (NQ) drilled and assayed.**

Drill Hole	ARQUEROS Sector	Section	Total Metres	Collar coordinates, metres			Azimuth (°)	Dip. (°)	Intersection, metres			Grades, g/t			
				North	East	Elevation			From	To	Length	Gold	Silver	Gold equivalent	
VC10-01	SUR	N-1300	180	7,051,297	482,226	4045	90	17	105	110	5	0.05	71	1.24	
									116	125.7	9.7	1.25	56	2.18	
									147	156	9	2.06	16	2.33	
									153	156	3	4.37	18	4.67	
							<i>includes</i>	163	166	3	0.56	32	1.09		
VC10-02	SUR	N-1300	160	7,051,296	482,226	4045	90	-13	125.3	131	5.7	0.99	13	1.21	
VC10-03	SUR	N-1300	60	7,051,296	482,226	4045	270	-30	14.5	29.2	14.7	3.26	13	3.48	
									<i>includes</i>	22	27	5	5.96	18	6.26
									<i>or</i>	22	24	2	7.55	20	7.88
									25.5	27	1.5	7.09	19	7.40	
VC10-04	SUR	N-1400	74	7,051,392	482,276	4047	100	21	42	73.8	31.8	0.01	34	0.58	
VC10-05	SUR	N-1400	125	7,051,392	482,279	4047	100	-5	90	102	12	1.91	14	2.15	
									<i>includes</i>	93	96.1	3.1	5.71	10	5.89
VC10-06	SUR	N-1400	101	7,051,392	482,279	4047	280	-30	27.3	29	1.7	0.42	16	0.69	
									34	38	4	1.29	14	1.52	
VC10-07	SUR	N-1500	140	7,051,487	482,328	4051	105	13	24	36	12	0.36	44	1.08	
									72	79	7	nd	45	0.75	
									81	92	11	1.57	23	1.96	
									<i>includes</i>	83	86	3	3.80	30	4.30
VC10-08	SUR	N-1500	n.d.	7,051,488	482,326	4047	90	-15	Abandoned						
VC10-09	SUR	N-1500	17	7,051,490	482,323	4049	286	-27	Mineralisation absent or less than 0.5 g/t Au equivalent						

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Drill Hole	ARQUEROS Sector	Section	Total Metres	Collar coordinates, metres			Azimuth (°)	Dip. (°)	Intersection, metres			Grades, g/t		
				North	East	Elevation			From	To	Length	Gold	Silver	Gold equivalent
VC10-10	SUR	N-1600	100	7,051,597	482,388	4040	91	33	42	44	3	3.01	46	3.77
									53	55	2	0.31	64	1.37
									63	68	5	0.33	48	1.13
									71	100	29	0.97	142	3.34
									<i>includes</i>	73.8	91	17.2	1.60	172
<i>or</i>	73.8	78	4.2	2.35	217	5.98								
VC10-11	SUR	N-1600	80	7,051,592	482,383	4042	90	-25	26	30	4	0.79	26	1.22
VC10-12	SUR	N-1600	71	7,051,597	482,381	4037	277	-10	35	38	4	1.16	22	1.53
VC10-13	SUR	N-1700	61	7,051,689	482,401	4051	89	21	4	7	3	0.23	28	0.70
									18	20	2	0.23	21	0.58
									24	27	2.5	1.69	107	3.47
VC10-14	SUR	N-1700	56	7,051,689	482,401	4049	90	-41	17	19	2	0.39	18	0.68
VC10-15	SUR	N-1700	95	7,051,689	482,394	4050	269	-5	0	1	1	1.00	13	1.22
									18	19	1.2	0.81	13	1.03
VC10-16	SUR	N-1700	100	7051689	482,395	4049	270	-30	0	3	3	0.75	7	0.87
									50	56	6.3	2.26	6	2.35
									<i>includes</i>	53	55	2	5.29	7

**Gold equivalence** ( $AuEQ60$ ) is estimated as  $AuEQ60 = Au + (Ag * EQ60)$ , where  $Au$  = gold content,  $Ag$  = silver content and  $EQ$  = equivalence factor, which is calculated as the ratio of gold price to silver price \* ratio of gold metallurgical recovery to silver metallurgical recovery.  $EQ60 = PAu/PAg * RAu/RAg = 60$ , based on long-range prices of gold at US\$800/oz & silver US\$15/oz, and recoveries of gold at 90% and silver at 80% respectively.