

---

**QUARTERLY ACTIVITY REPORT  
FOR THE PERIOD ENDED 31 MARCH 2009**

---

- **Remaining assays received for Llamara drilling**
- **All results received for the initial drill programme for Cerro Soledad**
- **A drilling programme comprising 50 holes for 1000 meters completed at Pampas**
- **A drilling programme of 21 holes for 680 meters completed at Salar Grande**
- **Metallurgical leach tests initiated for lithium and other elements from drill samples from high grade intercepts from Llamara**

**Chile and Peru - Exploration Update**

**Llamara**

Assays were received for the remaining seven drill holes not reported in the last Quarterly Report and re-assays for all high grade lithium intercepts have also been received. The results are summarised in Table 1. No further significant uranium assays were returned from the remaining seven holes with the best uranium result remaining 5m @ 104 ppm U from 1-6m in hole LLRC18 (including 2m @170 ppm U from 3-5m). The initial drilling programme has demonstrated the presence of stratabound uranium mineralisation associated with organic matter and only 10% of the title area of 46km<sup>2</sup> has been explored to date and hence the potential for the discovery of higher grade uranium within the tenements remains.

Re-assay for lithium in samples grading >250ppm Li have returned consistently high results, generally falling within the range 900 – 1100 ppm Li over mineralised zones of 20-30m thickness. In many cases the mineralised zone remains open at the end of the hole. The summary results presented in Tables 1 and 2 have been selected on the basis of natural breaks which generally correspond to an arbitrary cut off of 500ppm Li. It should be noted that at this stage an economic cut off grade is unknown and could be higher or lower than the 500ppm Li selected.

**Table 1****Llamara - Summary Drill Results**

Hole	Uranium				Lithium			
	From	To	Metres	Grade ppm	From	To	Metres	Grade ppm
LLRC01	13	18	5	20	12	30	18	523
LLRC02	7	14	7	21	7	30	23	734
					7	20	13	999
LLRC03	0	12	12	22	0	21	21	889
					5	20	15	1006
LLRC04				**NSA	10	15	5	454
LLRC05	0	13	13	32	0	20	20	986
	0	7	7	47	5	17	12	1094
LLRC06	1	8	7	42	1	21	20	964
					6	20	14	1044
LLRC07				NSA	0	24	24	1002
					7	23	16	1153
LLRC08				NSA	0	23	23	988
					6	22	16	1083
LLRC09	0	3	3	84	0	18	18	1004
					2	15	13	1070
LLRC10				NSA	3	30	27	782
					20	30	10	1061
LLRC11	1	3	2	27	0	24	24	824
LLRC12	0	5	5	20	0	21	21	964
					3	17	14	1074
LLRC13				NSA	7	30	23	753
					9	21	12	1010
LLRC14				NSA	0	13	13	955
LLRC15				NSA	0	30	30	853
					7	23	16	1143
LLRC16				NSA	0	28	28	887
					11	22	11	1101
LLRC17				NSA	0	14	14	1135
LLRC18	1	6	5	104	0	29	29	1064
	3	5	2	170	7	23	16	1143
LLRC19	8	17	9	25	8	30	22	980
					17	27	10	1116
LLRC20	3	4	1	34	0	23	23	972
LLRC21	0	1	1	33	0	22	22	911
					7	15	8	1161
LLRC22				NSA	5	26	21	976
LLRC23	15	16	1	36	1	23	22	989
					6	18	12	1087
LLRC24	0	10	10	27	0	16	16	979
					3	15	12	1057
LLRC25				NSA	0	17	17	956
LLRC26				NSA	0	9	9	1069
LLRC27	1	8	8	42	0	19	19	958
LLRC28	2	11	9	26	2	22	20	918
					5	19	14	1071
LLRC29				NSA	0	14	14	958
LLRC30	4	6	2	26	1	30	29	964
LLRC31	2	10	8	37	2	20	18	1080
LLRC32	0	5	5	23	0	12	12	1131

LLRC33	0	3	3	40	0	21	21	946
					6	20	14	1060
LLRC34	0	4	4	53	1	24	23	960
LLRC35	2	5	3	54	2	27	25	882
	14	16	2	36	12	26	14	958
LLRC36				NSA	21	30	9	934
LLRC37	2	3	1	62	1	29	28	920
	6	7	1	68	8	22	14	1060
	5	10	5	34				

**\*\*NSA – No significant assays**

The lithium zone corresponds to an evaporite unit which appears extensive and consistent throughout the area tested by drilling to date. While the mineralogy of the evaporite is unknown at present the lithium (and other elements) is thought to be in a soluble form. To determine the leachability of the lithium and to gain an early understanding of the potential economics of the project, a sequence of leaching tests is currently being undertaken by Sociedad Terral S.A., a metallurgical bench testing laboratory in Santiago.

### **Cerro Soledad**

The uranium results from the 30 holes drilled at Cerro Soledad are similarly disappointing to those received for Llamara with narrow intercepts (1-3m) of 20-50ppmU. The maximum assay was 1m @ 47ppm U from hole CSRC11. The nature and distribution of the uranium mineralisation is as described for the Llamara project which is hosted in the same geological sequence approximately 25km to the SE. As with the latter project, the drilling at Cerro Soledad has demonstrated the presence of highly anomalous uranium mineralisation of the “sandstone hosted” type and similarly only a small proportion (11%) of the prospective lithology has been covered by radiometric surveys to date. The uranium potential of the project is therefore considered only partially tested.

The lithium assays, while not as high as the Llamara project are considered highly encouraging. Intercepts range from 5-18m @ 400-700ppm Li with a maximum intercept of 17m @ 744ppm Li from CSRC17. In the area drilled to date the host lithology has been eroded to a lower level than at Llamara. This has resulted in the evaporite sequence hosting the lithium being truncated and hence the thickness of the sequence is decreased comparatively. In some locations tested by the drilling, the sequence has been completely eroded to the volcanic basement below. The host sequence thickens to the north and east in the project area.

**Table 2**

<b>Summary Drill Results Cerro Soledad</b>								
<b>Hole</b>	<b>Uranium</b>				<b>Lithium</b>			
	<b>From</b>	<b>To</b>	<b>Metres</b>	<b>Grade ppm</b>	<b>From</b>	<b>To</b>	<b>Metres</b>	<b>Grade ppm</b>
<b>CSRC01</b>				**NSA	1	7	6	475
<b>CSRC02</b>	0	1	1	41.2	1	13	12	507
<b>CSRC03</b>	No	Samples	Taken					
<b>CSRC04</b>	1	3	2	28.1	3	21	18	532
<b>CSRC05</b>	5	11	6	20.15	11	17	6	571
<b>CSRC06</b>	No	Samples	Taken					
<b>CSRC07</b>				NSA	1	6	5	356
<b>CSRC08</b>	0	7	7	35	3	20	17	521
<b>CSRC09</b>	2	11	9	30.74	7	23	16	463
<b>CSRC10</b>	1	2	1	20	0	5	5	614

<b>CSRC11</b>	0	4	4	24.35	2	18	16	535
	6	7	1	56.7				
<b>CSRC12</b>	1	9	8	28.5	7	25	18	549
<b>CSRC13</b>				NSA	13	26	13	610
<b>CSRC14</b>	6	7	1	22.5	7	18	11	630
<b>CSRC15</b>	17	18	1	20.9	20	30	10	656
<b>CSRC16</b>				NSA	0	12	12	688
<b>CSRC17</b>	2	11	9	35	9	26	17	744
<b>CSRC18</b>	22	23	1	25.6	21	30	9	554
<b>CSRC19</b>				NSA	13	18	5	601
<b>CSRC20</b>				NSA	3	7	4	452
					10	15	5	392
<b>CSRC21</b>				NSA	0	4	4	477
					7	13	6	615
<b>CSRC22</b>	4	5	1	23.7	5	7	2	680
					10	14	4	678
<b>CSRC23</b>				NSA	0	11	11	524
<b>CSRC24</b>				NSA	0	3	3	383
					7	11	4	468
					24	28	4	748
<b>CSLRC25</b>	6	7	1	20.8	5	13	8	718
<b>CSRC26</b>	0	3	3	27.8	8	11	3	380
					13	18	5	366
<b>CSRC27</b>	0	1	1	26.3	16	25	9	353
	13	14	1	40.4				
<b>CSRC28</b>	2	6	4	26.31	21	28	7	521
	7	8	1	31.9				
	17	20	3	22.78				
<b>CSRC29</b>	2	5	3	34.66	19	23	4	472
<b>RCRC30</b>	2	4	2	28.5				<250

**\*\*NSA – No significant assays**

## **Pampas**

A reverse circulation drilling programme was completed at the Pampas project comprising a total of 50 drill holes each 20m deep. The drilling tested a uranium-channel radiometric and soil anomaly approximately 1km<sup>2</sup>. Highly encouraging results have been returned from the initial wide-spaced and shallow drilling programme at Pampas:

- 30% of the holes returned intercepts with grades >80ppm U and 26% of holes returned intercepts >100ppm U.
- The highest grade intercept was 1m @ 358ppm U from PSRC15 from 14-15m.
- Mineralisation has been intersected throughout the drill profile with mineralisation open at depth in hole PSRC20 with 209ppm U reporting from the last meter.
- The initial drill programme indicates mineralised intervals of 2-10m e.g. 11m @ 81ppm U (PSRC15), 5m @ 141ppm U (PSRC21).

The summary intercepts are provided in the Table 3. Samples were collected at 1m intervals via a cyclone and passed through a riffle splitter to produce a sample of 1-2kg in weight for shipment to the laboratory. Holes have been probed with a down-hole

Gamma Surveyor differential spectrometer with readings taken every meter. Differential spectrometer readings were also taken from the sample bags prior to shipping to the laboratory. Samples were analysed by A.L.S Laboratories in La Serena, Chile. Uranium was analysed by both XRF and ICP methods with a suite of additional elements analysed by ICP.

The results indicate that the uranium mineralisation is stratabound to specific organic-bearing horizons as was initially interpreted from surface observations. Initial interpretation of the drilling has shown that many of the holes in the northern part of the grid failed to reach the prospective horizons due to barren strata overlying the prospective stratigraphy and the potential of the prospect area is open in all directions and particularly to the north.

In addition to the drilling, the radiometric grid was extended a further 1km to the south. While this data is yet to be processed, the results appear to be of equal tenor to those received from the initial survey and extend the anomalous zone to the south. The initial drill programme has tested approximately 2km of strike of a total of 18km of prospective host lithologies. The results warrant further drilling.

**Table 3**

<b>Summary Drill Results Pampas</b>				
<b>Hole</b>	<b>Uranium</b>			<b>Grade ppm</b>
	<b>From</b>	<b>To</b>	<b>Metres</b>	
<b>PSRC01</b>				<b>NSA</b>
<b>PSRC02</b>				<b>NSA</b>
<b>PSRC03</b>				<b>NSA</b>
<b>PSRC04</b>				<b>NSA</b>
<b>PSRC05</b>				<b>NSA</b>
<b>PSRC06</b>				<b>NSA</b>
<b>PSRC07</b>				<b>NSA</b>
<b>PSRC08</b>				<b>NSA</b>
<b>PSRC09</b>				<b>NSA</b>
<b>PSRC10</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>21.4</b>
<b>PSRC11</b>				<b>NSA</b>
<b>PSRC12</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>105</b>
	<b>0</b>	<b>3</b>	<b>3</b>	<b>66</b>
<b>PSRC13</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>21</b>
	<b>0</b>	<b>1</b>	<b>1</b>	<b>35</b>
<b>PSRC14</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>46.5</b>
	<b>7</b>	<b>8</b>	<b>1</b>	<b>125.5</b>
<b>PSRC15</b>	<b>5</b>	<b>16</b>	<b>11</b>	<b>81</b>
	<b>13</b>	<b>15</b>	<b>2</b>	<b>293</b>
	<b>12</b>	<b>16</b>	<b>4</b>	<b>206</b>
<b>PSRC16</b>				<b>NSA</b>
<b>PSRC17</b>				<b>NSA</b>
<b>PSRC18</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>140</b>

	2	3	1	288
PSRC19	2	7	5	105.4
	5	7	2	167
PSRC20	0	1	1	128
	0	3	3	70
	19	20	1	209
PSRC21	0	5	5	80
	1	2	1	195
PSRC22	3	15	12	77
	4	9	5	141
PSRC23				NSA
PSRC24	1	4	3	77
PSRC25	4	7	3	127
PSRC26	1	3	2	172
PSRC27	13	14	1	112.5
	11	14	3	96
	4	15	11	52
PSRC28	1	2	1	36.3
PSRC29	1	3	2	45
PSRC30	3	4	1	88
	2	7	5	41
PSRC31	2	3	1	100
PSRC32	0	5	5	34
PSRC33	4	5	1	58
	1	9	8	36
PSRC34				NSA
PSRC35	0	5	5	72
PSRC36	2	4	2	81
	1	7	6	65
PSRC37				NSA
PSRC38				NSA
PSRC39	2	4	2	40
PSRC40	1	2	2	50
	17	19	2	55
PSRC41	0	3	3	46
PSRC42				NSA
PSRC43				NSA
PSRC44	0	1	1	37
	9	12	3	37
PSRC45				NSA
PSRC46	0	2	2	43
PSRC47	3	6	3	105
PSRC48	2	4	2	57
PSRC49	1	5	4	42
PSRC50	0	4	4	50

## **Salar Grande**

A drilling programme was initiated at Salar Grande to test radiometric and geochemical uranium anomalies. The planned 1000m programme was terminated after drilling 21 holes for a total of 680m after drilling failed to penetrate a sequence of colluvial material. Drilling of this material returned low radiometric responses with a differential spectrometer except at the very top meter of some holes. These observations indicate that the extensive surface anomalies identified to date most probably represent hydromorphic dispersion from probably structurally controlled uranium mineralisation at depth. The initial drilling programme was designed on the assumption that the mineralisation was stratabound. The project is currently being re-evaluated on the basis that mineralisation is structurally controlled with a programme of structural interpretation to allow drill testing of the inferred structures.

## **Proposed Fourth Quarter Exploration**

Exploration during the fourth quarter will comprise:

- Continuation of the laboratory metallurgical bench tests (leaching) to gain an early understanding of the potential economics of the Llamara project.
- Interpretation of the drilling results from Llamara, Cerro Soledad, Pampas and Salar Grande using 2D and 3D sections and additional detailed mapping.
- Extension of the radiometric grid at Pampas.
- Stratigraphic correlation between Llamara and Cerro Soledad to allow accurate definition of prospective horizons to enable selection of further drill targets.
- Field checking of the remaining airborne radiometric anomalies at Macusani in Peru to determine the potential of that project.

## **CORPORATE**

### **FINANCIAL POSITION**

At the end of the quarter Lefroy had a cash balance of \$4.5 million.

For further details contact:

Tom Kelly  
Lefroy Resources Limited  
1/64 Thomas Street, West Perth WA 6005  
Ph: (08) 9382 8711, Fax: (08) 9382 8722

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Carl Swensson who is a Member of the AUSIMM. Mr. Swensson is a Director of the Company. Mr. Swensson 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 "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Swensson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.