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***RESSOURCES D'ARIANNE INC.***

***GREENHOUSE GAS ACCOUNTING REPORT  
2011***

**Accounting completed on January 20, 2012**

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This report is a summary of our efforts to compile greenhouse gas (GHG) emissions resulting from the Company's exploration work during the year 2011. The report also provides a summary of the offset measures implemented to date.

○ **Accounting**

The Company owns numerous projects in Quebec and Mexico but is currently focussing its efforts on the development of the Lac à Paul phosphorus-titanium deposits located north of the Saguenay–Lac-Saint-Jean region, in the province of Quebec, Canada. All properties held by Arianne are listed in **Table 1**.

**Table 1: List of properties held by Ressources d’Arianne Inc. as of January 1, 2012**

Canada	Area	Province	Commodity	Claims	Interest
<b>PROPERTIES</b>					
Opinaca	James Bay	Québec	Au	165	Optioned to Virginia Mines
Black Dog	James Bay	Québec	Au	23	100% Ressources d’Arianne
Penaroya	North of Abitibi	Québec	Au-Cu-Zn- Ni	6	100% Ressources d’Arianne
Brouillan-Ouest	North of Abitibi	Québec	Au-Cu-Zn- Ni	15	Optioned to NQ Exploration
R-14	Chibougamau	Québec	Au	78	100% Ressources d’Arianne
Chico	Chibougamau	Québec	Au	6	100% Ressources d’Arianne
Héva Ouest	Abitibi	Québec	Au	4	100% Ressources d’Arianne
Héva Est	Abitibi	Québec	Au	25	100% Ressources d’Arianne
Mirepoix	Saguenay-Lac-St-Jean	Québec	P-Ti	30	100% Ressources d’Arianne
Lac de la Roche	Saguenay-Lac-St-Jean	Québec	P-Ti	95	100% Ressources d’Arianne
Zone 4	Saguenay-Lac-St-Jean	Québec	P-Ti	3	100% Ressources d’Arianne
Duhamel	Saguenay-Lac-St-Jean	Québec	P-Ti	95	100% Ressources d’Arianne
Lac aux Canots	Saguenay-Lac-St-Jean	Québec	P-Ti	27	100% Ressources d’Arianne
Laliberté	Saguenay-Lac-St-Jean	Québec	P-Ti	68	100% Ressources d’Arianne
Perceneige	Saguenay-Lac-St-Jean	Québec	P-Ti	44	100% Ressources d’Arianne
Étienniche	Saguenay-Lac-St-Jean	Québec	P-Ti	67	100% Ressources d’Arianne
Taillon	Saguenay-Lac-St-Jean	Québec	P-Ti.	10	100% Ressources d’Arianne
Île Blanche	Saguenay-Lac-St-Jean	Québec	P-Ti	288	100% Ressources d’Arianne
Pipmuacan	Saguenay-Lac-St-Jean	Québec	P-Ti	40	100% Ressources d’Arianne
Lac des Jones	Saguenay-Lac-St-Jean	Québec	REE	23	100% Ressources d’Arianne
Lac Tremblant	Saguenay-Lac-St-Jean	Québec	REE	12	100% Ressources d’Arianne
Catherine	Saguenay-Lac-St-Jean	Québec	REE	9	100% Ressources d’Arianne
Lac de la Cache	Saguenay-Lac-St-Jean	Québec	REE	12	100% Ressources d’Arianne
Lac Gracien	Saguenay-Lac-St-Jean	Québec	REE	14	100% Ressources d’Arianne
<b>DEPOSITS</b>					
<b>Lac à Paul</b>	<b>Saguenay-Lac-St-Jean</b>	<b>Québec</b>	<b>P-Ti</b>	<b>471</b>	<b>100% Ressources d’Arianne</b>
Capellière/Dulain	Saguenay-Lac-St-Jean	Québec	White marble	31	100% Ressources d’Arianne
Boileau	Saguenay-Lac-St-Jean	Québec	Quartzite	4	100% Ressources d’Arianne
Moly Hill	Abitibi	Québec	Mo	2	100% Ressources d’Arianne

Mexico	State	Commodity	Interest
<b>El Rey</b>	<b>Sinaloa</b>	<b>Au, Ag</b>	<b>Option to acquire 100%</b>

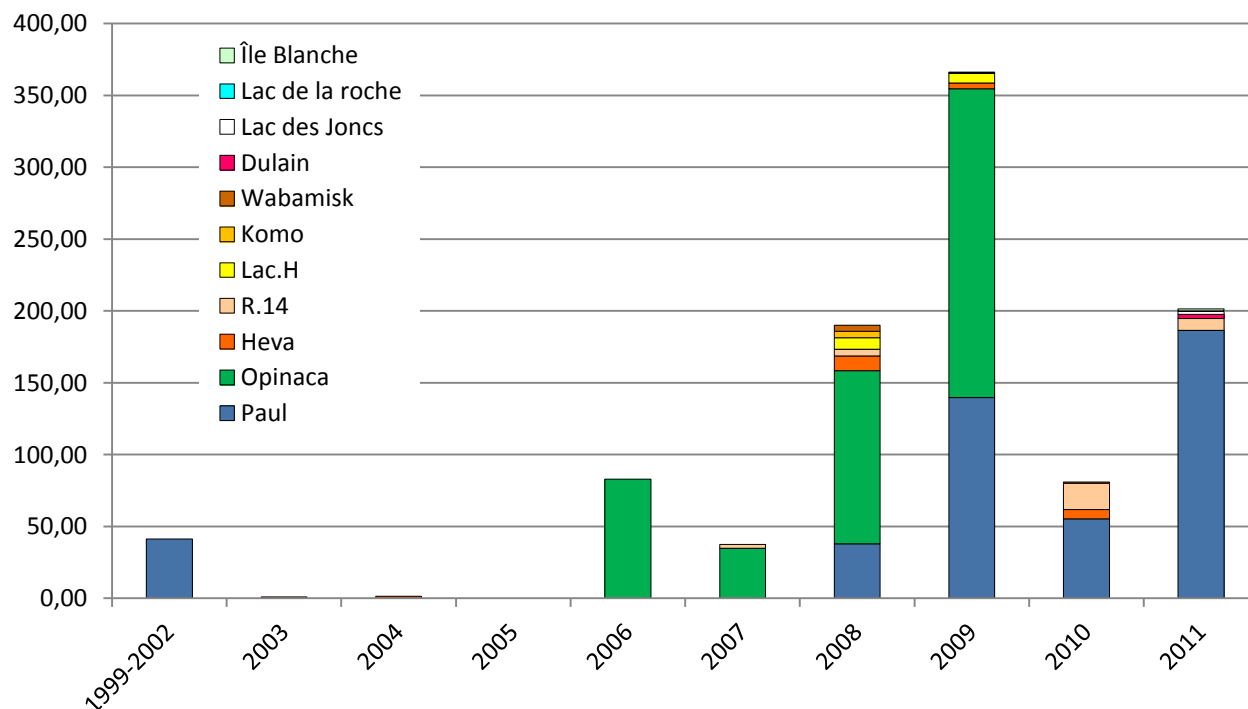
GHG emissions were accounted by a team member (Guylaine Blackburn with the assistance of Daniel Boulianne) and not by a third party. The accounting was limited to whatever invoices were available and whatever information could be reliably confirmed (estimated consumption of certain vehicles for example). The results of the GHG emission accounting process for the year 2011 are summarized in **Table 2**.

**Table 2: Greenhouse gas emissions for each property and Company representation efforts for the year 2011 (metric tonnes)**

Greenhouse gas emissions per property in metric tonnes						
	Total	Arianne	Logging	Drilling	Excavation	Other
Lac à Paul	186.40	54.25		79.36	32.43	20.36
R-14	8.40	0.53			7.67	0.2
Dulain	2.76	2.76				
Lac des Joncs	2.12	2.12				
Lac de la Roche	0.36	0.36				
Île Blanche	1.25	1.25				
Representation	21.00					21
<b>Total</b>	<b>222.29</b>	<b>61.27</b>	<b>0.00</b>	<b>79.36</b>	<b>40.10</b>	<b>41.56</b>
<b>Percentage (%)</b>	<b>100%</b>	<b>27.56%</b>	<b>0.00%</b>	<b>35.70%</b>	<b>18.04%</b>	<b>18.70%</b>

Activities carried out by Arianne Resources are therefore responsible for the emission of **222.29 tonnes of CO<sub>2</sub> equivalent for the year 2011**. The highest emissions are noted on the Lac à Paul project, where drilling and stripping activities took place, both of which produce high amounts of emissions (**Figure 1**).

**Figure 1 : Annual GHG emissions in CO<sub>2</sub> equivalent for all Company projects from 1999 to 2011**



- *Offset measures*

- *Amounts to be offset*

For the demonstration that follows, the rates used are found on the Carbone boreal website at <http://carboneboreal.uqac.ca/> and proposed by Pierre-Luc Dessureault. Carbone boreal offers rates in the mid-range (\$28/tonne for offsets and \$56/tonne for the climate positive option).

Activities carried out by Arianne Resources are responsible for the emission of **867.21 tonnes of CO<sub>2</sub> equivalent since 1999, in addition to 222.29 tonnes of CO<sub>2</sub> equivalent emitted in 2011**. This means that to offset our total CO<sub>2</sub> emissions would require **planting 7,782 trees or investing \$30,506**. Furthermore, offsetting through the "**Climate Positive**" program would cost **\$61,012**. This solution is the simplest and the most widely used to offset GHG emissions and become carbon neutral.

- *Proposed offset measures*

Of the three offset measures proposed, which are purchasing carbon credits, tree planting or investing in a research and innovation project, Arianne Resources decided to prioritize the third option since the beginning of its offset program. Indeed, the company collaborates on **two research project aiming to limit the environmental impact of our product (phosphorus concentrate) during its life cycle** : the Global TraPs project and a Laval University research project.

- *Offset measures implemented during the year 2011*

- *Research Project on mycorrhizae*

Arianne Resources is collaborating with the research team led by Dr. André Fortin and Dr. Hani Antoun to a minor extent, since the company provided rock samples. **Laboratory tests were carried out in late 2011 and appear to yield positive results**. The fungus successfully used our concentrate to provide nutrients to the selected vegetable (carrot) with no prior chemical treatment. **The research team would like to have a greater amount of concentrate to continue their work in a greenhouse setting, as well as financial support. Our increased involvement in this project (financial, material, and time) could yield highly positive spin-offs for our project. Moreover, this investment introduces the notion of "life cycle" for our product. Arianne Resources has not yet invested money in this project.**

- *Global TraPs project*

Ressources d'Arianne is involved in this project since August 2011. Our involvement consists in having certain members of our team attend meetings and workshops dealing with exploration and mining within the scope of the Global TraPs project. Documents related to the Lac a Paul phosphorus project were also provided to make it a case study. To date, the company has invested **\$5,180.83**.

- *UQAC Chair on Eco-advising*

Since 2009, the Company has established several tools to makes its activities more socially and environmentally responsible. To do so, Arianne Resources decided to collaborate with the Chair on Eco-advising of the Université du Québec à Chicoutimi (UQAC) (<http://ecoconseil.uqac.ca/>). Through this process, the UQAC Chair on Eco-advising used the e3 Plus toolkit to gain a better understanding of

issues related to the mining industry. All of Arianne's efforts to make its activities more responsible are focused on three components:

- Component 1: Sustainable Development Policy (introduced in 2011)
- Component 2: GHG accounting (GHG emissions for the Company's activities from 2003 to June 2011 have been accounted and accounting for activities from June 2011 onward is underway)
- Component 3: public consultation meetings with communities affected by the development of the Lac à Paul phosphorus-titanium project (first phase on June 8-9, 2011 - second phase in December 6-7, 2011).

Expenses related to components 1 and 2 may be considered as an investment aiming to reduce or offset our GHG emissions. These expenses may therefore be considered as part of our offset program. The company has invested **\$4,240.00** in these activities.

- *Assessment of offsets and emissions*

The Company's **GHG emissions in tonnes of CO<sub>2</sub> equivalent since 1999 amount to a total of 1,089.50 tonnes.** This represents an amount of **\$30,505.98** to be invested in offset measures to become carbon neutral. To date, the company has invested a total of **\$9,420.83** in research projects. **Table 3** provides a summary of these investments and the amounts required in the future:

**Table 3: Summary of Arianne Resources' offset measures as of December 31, 2011**

<b>Emissions</b>	
1999-2010	867.21
2011	222.29
Total	1,089.50
<b>Financial equivalents</b>	
Price / tonne CO <sub>2</sub> (\$/tonne)	28
Amount to offset (\$)	30,505.98
<b>Amount already invested (\$)</b>	
Global TraPs 2011	5,180.83
UQAC Chair on Eco-advising	4,240.00
<b>Amount to be invested (\$)</b>	<b>21,085.15</b>

**References:**

- <http://carboneboreal.uqac.ca/>
- <http://www.arianne-inc.com/>
- <http://www.carbonpositive.net/>