PRELIMINARY SUMMARY OF 2011 ROSEMONT BAT ROOST SURVEY

Prepared for: Rosemont Copper Company

Prepared by: WestLand Resources, Inc.

Date: October 28, 2011

Project No.: 1049.23 B 300

WestLand Resources, Inc. (WestLand) biologists made 10 field visits and inspected a total of 33 mines in 2011 to investigate the level of bat use within the Rosemont Mine project area and adjacent National Forest Service lands (Figures 1 through 4). We surveyed sites that were used by bats in previous years and evaluated additional mines not covered during prior surveys conducted by WestLand in 2008 through 2010. Evaluations included mine entry (internal surveys) where we searched for evidence of bats (i.e., live bats, bone material, insectivorous guano (fecal pellets), nectar bat splatter (fecal stain), insect debris, and staining on walls or ceilings) and/or conducted external roost evaluations (emergence surveys). Ultrasonic detectors were also used during external evaluations to further aid in species identification. In 2011, we also continued to monitor roost microclimate characteristics, specifically temperature and humidity, in mine complex R37 and R38 “Helena,” mine 38 (old Adit S), and complex R46 and R47.

In 2011, we documented potentially seven bat species (Table 1). Two species of bats observed are nectar bats in the family Phyllostomidae, while the remaining species are in the family Vespertilionidae.

Table 1. Bat Species observed during 2011 surveys on Rosemont Mine Company and adjacent Coronado National Forest Service property. Rankings obtained from Arizona Game and Fish Department sensitive status species list updated November 2010. Ranking Definitions: WSC=wildlife species of concern, S=sensitive, and LE=listed endangered.

<table>
<thead>
<tr>
<th>Code</th>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Arizona Game and Fish Department</th>
<th>Forest Service</th>
<th>Fish and Wildlife Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHME</td>
<td>Choeronycteris mexicana</td>
<td>Mexican long-tongued bat</td>
<td>WSC</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>COTO</td>
<td>Corynorhinus townsendii</td>
<td>Townsend's big-eared bat</td>
<td>--</td>
<td>S</td>
<td>--</td>
</tr>
<tr>
<td>LEYE</td>
<td>Leptonycteris yerbabuenae</td>
<td>Lesser long-nosed bat</td>
<td>WSC</td>
<td>--</td>
<td>LE</td>
</tr>
<tr>
<td>MYCA</td>
<td>Myotis californicus</td>
<td>California myotis</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>MYCI</td>
<td>Myotis ciliolabrum</td>
<td>Western small-footed myotis</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>MYTH</td>
<td>Myotis thysanodes</td>
<td>Fringed myotis</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>MYVE</td>
<td>Myotis velifer</td>
<td>Cave myotis</td>
<td>--</td>
<td>--</td>
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</tr>
</tbody>
</table>

*This species is unconfirmed. MYCA was observed in 2010, and in 2011 a “small myotis” was observed, which is likely either MYCA or MYCI.

In addition to evaluating known roost sites, we surveyed 14 abandoned mines that were previously unsurveyed by WestLand (Table 2 [denoted by prefix DR]). Signs of bat use were observed in four of these mines, while the remaining appeared to be unused by bats (Table 2, Figures 1 through 4).
Memorandum

To: Bev Everson
Cc: Chris Garrett
From: Kathy Arnold
Doc #: 119/11 15.3.2
Subject: Transmittal of Analysis
Date: November 2, 2011

Rosemont Copper is transmitting the latest reports on biological resources.

- Preliminary 2011 Ranid Survey Summary of the Rosemont Holdings and Vicinity, WestLand Resources, dated October 27, 2011
- Preliminary Summary of 2011 Rosemont Bat Roost Survey, WestLand Resources dated October 28, 2011
- 2010 Ranid Survey of the Rosemont Holdings and Vicinity, WestLand Resources, dated October 26, 2011

Rosemont is providing CNF with three (3) hardcopies and one (1) disk copies of the above Technical Memoranda and reports and SWCA with two (2) hardcopies and one (1) disk copy.
Rosemont Copper Company is having delivered by courier, the following materials in hard copy format as were previously submitted electronically. One (1) hard copy of each is being delivered to both the Forest Service and SWCA.

- *Preliminary 2011 Ranid Survey Summary of the Rosemont Holdings and Vicinity, WestLand Resources, Inc., October 27, 2011*
- *2010 Ranid Survey of the Rosemont Holdings and Vicinity, WestLand Resources, Inc., October 26, 2011*
- *2011 Ranid Survey of the Rosemont Holdings and Vicinity* dated December 23, 2011 by WestLand Resources, Inc. Three (3) hardcopies and one (1) cd to FS and two (2) hardcopies and one (1) cd to SWCA.

Please do not hesitate to contact me should you require anything further.
### Table 2. Summary of 2011 findings from bat surveys conducted within the Rosemont Mine project area and adjacent National Forest Service lands. Some sites were visited multiple times.

<table>
<thead>
<tr>
<th>Mine Number</th>
<th>Survey Date</th>
<th>Survey Type</th>
<th>Presence of Bat Sign</th>
<th>Bat Species and/or Evidence of Bat Use (number of individuals observed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mines Previously Surveyed by WestLand</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>July 26</td>
<td>Internal</td>
<td>Yes</td>
<td>LEYE (3)</td>
</tr>
<tr>
<td>R8A, B</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (13)</td>
</tr>
<tr>
<td>R9</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (7)</td>
</tr>
<tr>
<td>R10</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>Insectivorous guano; insect parts</td>
</tr>
<tr>
<td>R44</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (4)</td>
</tr>
<tr>
<td>R47</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (1), unidentified bat (1)</td>
</tr>
<tr>
<td>R48</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (4)</td>
</tr>
<tr>
<td>R49</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (2)</td>
</tr>
<tr>
<td>R46 and R47</td>
<td>August 29</td>
<td>Emergence</td>
<td>Yes</td>
<td>COTO, MYVE, MYTH, CHME (approx. 94)</td>
</tr>
<tr>
<td>R49 and R55</td>
<td>September 1</td>
<td>Emergence</td>
<td>Yes</td>
<td>CHME, MYTH, MYVE (approx. 118)</td>
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<tr>
<td>Helena Mine*</td>
<td>August 26</td>
<td>Emergence</td>
<td>Yes</td>
<td>LEYE (approx. 4,650)</td>
</tr>
<tr>
<td>Helena Mine*</td>
<td>September 15</td>
<td>Emergence</td>
<td>Yes</td>
<td>LEYE (approx. 2,021)</td>
</tr>
<tr>
<td>9 (Chicago Mine)</td>
<td>July 15</td>
<td>Internal</td>
<td>Yes</td>
<td>LEYE (1), CHME (6), COTO (1), MYCI or MYCA (1)</td>
</tr>
<tr>
<td>17 (formerly F)</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (2)</td>
</tr>
<tr>
<td>33 (formerly P)</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>Insectivorous guano</td>
</tr>
<tr>
<td>38 (formerly S)</td>
<td>August 28</td>
<td>Internal</td>
<td>Yes</td>
<td>COTO (approx. 109)</td>
</tr>
<tr>
<td>40 (formerly T)</td>
<td>July 14</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (5), MYTH (1)</td>
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<tr>
<td>49 (formerly AC)</td>
<td>July 15</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (3)</td>
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<td>59 (formerly AL)</td>
<td>July 15</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (2)</td>
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<tr>
<td>62 (formerly AO)</td>
<td>July 15</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (3)</td>
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<tr>
<td>62 (formerly AO)</td>
<td>July 26</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (4)</td>
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<tr>
<td><strong>Mines Previously Unsurveyed by WestLand</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>DR01</td>
<td>July 26</td>
<td>Internal</td>
<td>None</td>
<td>--</td>
</tr>
<tr>
<td>DR02</td>
<td>July 26</td>
<td>Internal</td>
<td>None</td>
<td>--</td>
</tr>
<tr>
<td>DR03</td>
<td>July 26</td>
<td>Internal</td>
<td>None</td>
<td>--</td>
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<tr>
<td>DR04</td>
<td>July 26</td>
<td>Internal</td>
<td>Yes</td>
<td>Insectivorous guano; beetle parts</td>
</tr>
<tr>
<td>DR05</td>
<td>July 26</td>
<td>Internal</td>
<td>Yes</td>
<td>Possible nectar bat splatter</td>
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<tr>
<td>DR06</td>
<td>July 26</td>
<td>Internal</td>
<td>Yes</td>
<td>CHME (2), COTO (1)</td>
</tr>
<tr>
<td>DR07</td>
<td>July 26</td>
<td>Internal</td>
<td>No</td>
<td>--</td>
</tr>
<tr>
<td>DR08</td>
<td>July 26</td>
<td>Internal</td>
<td>No</td>
<td>--</td>
</tr>
<tr>
<td>DR09</td>
<td>July 26</td>
<td>Internal</td>
<td>No</td>
<td>--</td>
</tr>
<tr>
<td>DR10</td>
<td>July 26</td>
<td>Internal</td>
<td>No</td>
<td>--</td>
</tr>
<tr>
<td>DR11</td>
<td>July 26</td>
<td>None</td>
<td>No</td>
<td>backfilled</td>
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<tr>
<td>DR12</td>
<td>July 26</td>
<td>Internal</td>
<td>Yes</td>
<td>Nectar bat exited; nectar bat splatter</td>
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<tr>
<td>DR13</td>
<td>July 26</td>
<td>Internal</td>
<td>No</td>
<td>--</td>
</tr>
<tr>
<td>DR14</td>
<td>July 26</td>
<td>Internal</td>
<td>No</td>
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</tr>
</tbody>
</table>

*The Helena Mine complex includes adits R37A, B and 38A, B*
Legend

- Rosemont Holdings Boundary
- Bat Presence
  - No Evidence of Bat Use
  - Noted Insectivorous Bat Use
  - Noted Nectar Feeding Bat Use
  - Noted Nectar Feeding and Insectivorous Bat Use

ROSEMONT PROJECT
2011 Bat Roost Survey

Surveyed Mine Features
Figure 2
Figure 3
2011 Bat Roost Survey

ROSEMONT PROJECT
Surveyed Mine Features
Figure 3
Legend
- Rosemont Holdings Boundary
- Footprint of Mine Boundary
- Bat Presence
  - No Evidence of Bat Use
  - Noted Insectivorous Bat Use
  - Noted Nectar Feeding Bat Use
  - Noted Nectar Feeding and Insectivorous Bat Use

ROSEMONT PROJECT
2011 Bat Roost Survey
Surveyed Mine Features
Figure 4