

**ADDENDUM TO THE *PIMA PINEAPPLE CACTUS SURVEY: PROPOSED ROSEMONT PROJECT SANTA RITA ROAD ALIGNMENT REPORT: APPROXIMATELY 38 ACRES AROUND A UTILITY LINE PINCH POINT NEAR THE HELVETIA TOWNSITE, PIMA COUNTY, ARIZONA***

**PREPARED FOR:** Rosemont Copper Company

**PREPARED BY:** WestLand Resources, Inc.

**DATE:** October 31, 2011

**PROJECT NO.** 1049.32 342 342

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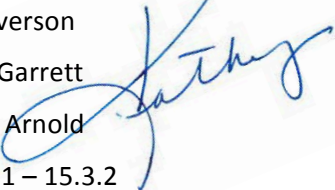
(Figure follows text)

Figure 1. Vicinity Map

Figure 2. Aerial Overview

## Memorandum

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**To:** Bev Everson  
**Cc:** Chris Garrett  
**From:** Kathy Arnold   
**Doc #:** 121/11 – 15.3.2  
**Subject:** **Transmittal of Addendum Report**  
**Date:** November 8, 2011

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Rosemont Copper is transmitting the following report.

- *Addendum to the Pima Pineapple Cactus Survey: Proposed Rosemont Project Santa Rita Road Alignment Report: Approximately 38 Acres Around a Utility Line Pinch Point Near the Helvetia Townsite, Pima County, Arizona*, prepared by WestLand Resources, dated October 31, 2011

Rosemont is providing CNF and SWCA with hardcopies and electronic copies of these reports.

## **1. INTRODUCTION**

This report is an addendum to the report “*Pima Pineapple Cactus Survey: Proposed Rosemont Project Santa Rita Road Alignment*,” dated December 18, 2009, produced by WestLand Resources, Inc. (WestLand) for Rosemont Copper Company (Rosemont). Approximately 38 acres of additional lands (Addendum Area) were subsequently added adjacent to the alignment, near a “pinch point” (a narrow connection of Rosemont Holdings between other privately owned lands) around the old Helvetia Townsite, in portions of Sections 22 and 23, Township 18 South, Range 15 East, Gila and Salt River Base Meridian (**Figure 1**). **Figure 2** depicts the location of the pinch point covered by this survey, as well as a pinch point location covered by the original survey. At the request of Rosemont, WestLand surveyed the Addendum Area for Pima pineapple cactus (*Coryphantha scheeri* var. *robustispina*; PPC).

## **2. METHODS**

The survey followed guidelines recommended by the U.S. Fish and Wildlife Service (Roller 1996), the same protocol followed for the original survey. On September 2, 2011, WestLand field technicians with PPC survey experience walked transects approximately 15 feet apart to attain 100-percent coverage of portions of the Addendum Area that they evaluated to be potentially suitable for PPC.

The Addendum Area is at the eastern end of where PPC survey was ended during survey of the original area, due to encountering unsuitable substrate and slope conditions. As described in further detail in the original survey report, WestLand used slope angle and surficial geology to assess portions of the Project Area that did not warrant survey. Survey was not conducted where slopes exceeded approximately 15 percent grade, or on sandy wash bottom and bedrock substrates.

Any PPC found during the survey would have the UTM coordinates recorded on a GPS unit, be assigned a tag with a unique number that would be wired to a small rock and placed next to the PPC, and have the number of stems and general health of the PPC recorded.

## **3. PIMA PINEAPPLE CACTUS SURVEY RESULTS**

No PPC were found in the Addendum Area. The substrate surveyed is mapped Qgth, a Pleistocene age alluvium (Drewes 1971). Most of the 48 live and 6 dead PPC found during the original survey were on the Qgth geologic unit. All except 2 of those PPC were 7 miles or more to the northwest, even though most of the 7 miles between is on Qgth surface. One PPC was found approximately 1 mile to the northwest during the original survey. The remainder of the surface within the Addendum Area, as mapped by Drewes, are three bedrock units; granodiorite and quartz monzonite, Concha limestone, and Scherrer Formation (fine-grained quartzitic sandstone and a medial dolomite). The report for the original survey includes a map of geologic units within the project area. In addition, the Addendum Area, at the foot of

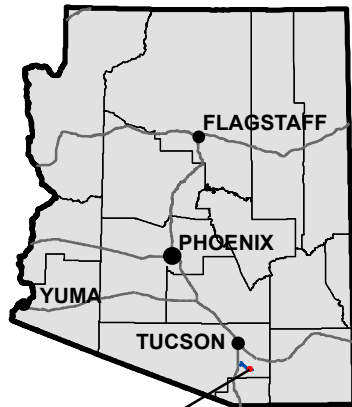
the Santa Rita Mountain slopes, is beginning to take on a steeper grade that approaches or exceeds 15 percent in much of the area.

#### **4. REFERENCES**

Drewes, H. 1971. Geologic map of the Sahuarita Quadrangle, southeast of Tucson, Pima County, Arizona. Miscellaneous Geologic Investigations Map I-613. Department of the Interior, United States Geologic Survey.

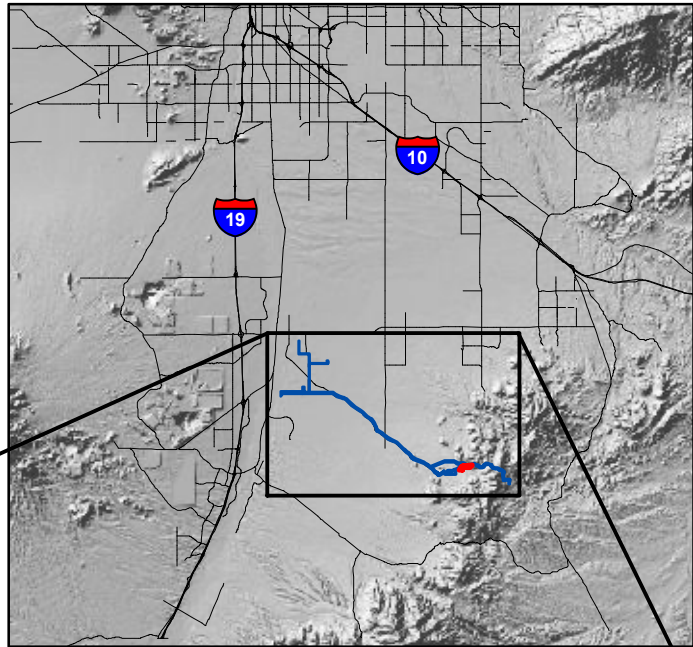
Roller, P. S. 1996. Pima Pineapple Cactus 3-tier Survey Methods. Unpublished report. U.S. Fish and Wildlife Service, Phoenix, Arizona.

ARIZONA

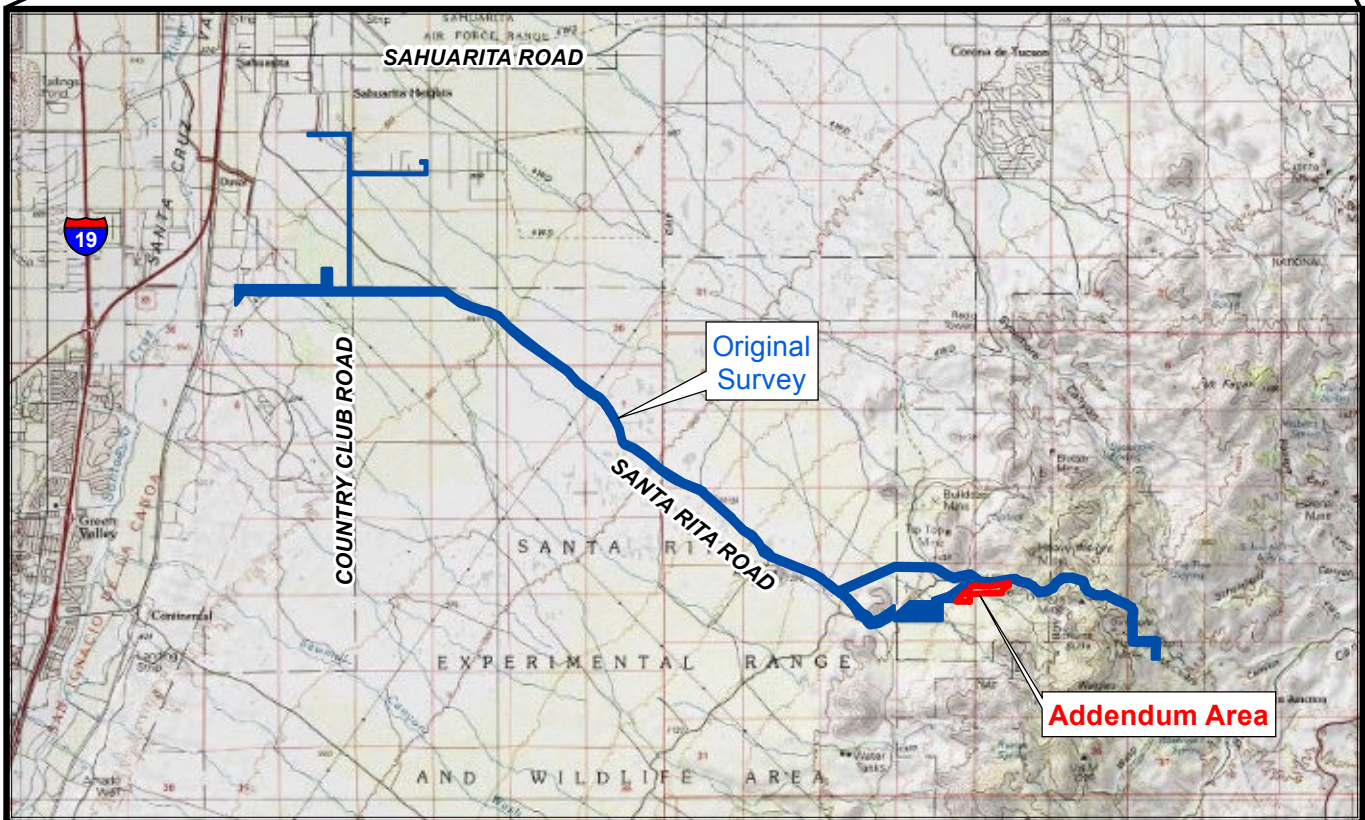


PROJECT LOCATION

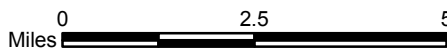
TUCSON METROPOLITAN AREA



Approximate Scale 1 Inch = 10 Miles



Survey Area Located:  
T18S, R15E, Portion of Sections 22 & 23,  
Pima County, Arizona  
Helvetia USGS 7.5' Quadrangle



**ROSEMONT PROJECT**  
Santa Rita Road Utility Line  
Pinch Point Addendum  
Pima Pineapple Cactus Survey

VICINITY MAP  
Figure 1