

December 5, 2006

TECHNICAL MEMORANDUM

TO: U.S. Army Corps of Engineers
Attn: Cindy Lester
3636 N. Central Ave.
Suite 900
Phoenix, AZ 85012-1936

FROM: Devin Keane, SWCA Environmental Consultants

RE: Non-jurisdictional Determination of Waters of the United States for Casa Grande
Mountain Ranch in Pinal County

SWCA FILE: 12080-256

INTRODUCTION

SWCA Environmental Consultants (SWCA) recently conducted a field survey on the Casa Grande Mountain Ranch property (the Parcel), located in Sections 10, 11, 14 and 23, Township 7 South, Range 6 East, Pinal County. The purpose of the JWD is to determine if any natural or man-made drainages on the Parcel: 1) meet the definition of WUS as described by regulation at 33 CFR Part 328.3 that would be subject to federal regulation under Section 404 of the Clean Water Act (33 U.S.C. §1344); and, 2) if WUS are present, determine the limits of Federal jurisdiction as outlined in 33 CFR Part 328.4-5. Enclosed are three aerial photographs at a 1-inch equals 100-foot (1"=100') scale, one depicting SWCA Environmental Consultant's (SWCA) preliminary jurisdictional delineation and two blank copies for your use (Appendix A). Photographs taken with the parcel are attached in Appendix A. Please provide a formal delineation of waters of the U.S. on one of the enclosed blank aerial photographs. SWCA will then make a copy and provide the original to the applicant.

This JWD was completed at the request of Chasse Real Estate & Financial Group in support of the Casa Grande Mountain Ranch development, and SWCA will act as the agent and U.S. Army Corps of Engineers (USACE) point of contact for any necessary Clean Water Act Section 404 permitting at the Parcel. Owners of the Parcel have provided proof of ownership and a letter that designates SWCA as their agent and authorizes the USACE access to the Parcel for field verification of the JWD (Appendix B).

METHODS AND RESULTS

SWCA personnel reviewed an aerial photograph taken in October 2006 and a topographic map of the Parcel and vicinity. SWCA then conducted a field reconnaissance to identify and map, if present, the location of the ordinary high water mark (OHWM) of potential WUS within the Parcel boundary. Federal regulation defines the OHWM as: "...the line on the shore established by the fluctuations of water and indicated by the presence of characteristics such as clear, natural line impressed on the bank, shelving,

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changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, and or other appropriate means that consider the characteristics of the surrounding area” (33 CFR 328.3(e)). Additional physical characteristics that the ACOE may consider indicators of the OHWM are listed in Guidance developed by the ACOE.¹

SWCA examined the entire Parcel during our field visit. This included a pedestrian survey of all areas that, when evaluated on the aerial photograph, appeared to potentially convey storm water flow. The drainage areas thought to be potentially jurisdictional were moderately defined on the aerial photograph. During field reconnaissance, the width of the OHWM was measured at regular intervals along the length of each ephemeral drainage on the Parcel that the ACOE might consider WUS. The width and channel characteristics of ephemeral drainages were recorded, and representative photographs were taken for reference at various data points.

The current extent of the parcel is bordered by State Route 84 (SW84) and Mountain Shadows Drive on the north and south, respectively, and by Lamb Road and Interstate 10 (I-10) on the east. The Casa Grande Mountains abut the parcel on the west. Interstate 8 (I-8), traversing east-west, splits the parcel into two segments as it merges with I-10. The parcel totals 1,222 acres.

The Parcel is located within the Lower Colorado River Valley subdivision of the Sonoran desertscrub biotic community, as defined by Brown.² Vegetation in and adjacent to the Parcel consists of disturbed and undisturbed native desert habitat. The Parcel consists of native desert vegetation, with many linear wash areas sloping off the Casa Grande Mountains toward I-8 and I-10. Moderate braiding occurs, and several small associated tributaries along the foothills of the Casa Grande Mountains slope into the Parcel. SWCA determined that all channels observed on the property are considered to be non-jurisdictional due to their lack of connectivity to surrounding wash systems or perennial streams. These washes are isolated from downstream waters because they: 1) terminate in one of two sinks on the Parcel (an abandoned gravel pit³ on the south half, and a stock tank on the north half); 2) dissipate into open sheet flow; or 3) are cut off by Lamb Road or the two interstates that surround the parcel. A segment of the Casa Grande Canal traverses the upper northern edge of the Parcel.

The terrain is both flat (on the northern half of the parcel, sloping between 1 and 3 percent to the north and east) and rugged (on the Casa Grande Mountain foothills, sloping up to 8 percent to the east). There were no perennial surface water features on the Parcel, and no wetland vegetation or stands of deciduous, broad-leaved riparian trees were present anywhere within the Parcel. Descriptions and photos of areas that support non-jurisdiction are listed below. Location maps and an aerial photo referencing the data points and other areas of concern are provided in Appendix A.

After observing the potential areas of concern in and around the property, SWCA determined that no jurisdictional WUS are currently present on-site. The following is a list and description of the potential areas of concern, along with evidence of non-jurisdiction.

Potentially Jurisdictional Areas

SWCA fieldwork indicates no drainages, channels or man made structures on the Parcel meet the criteria for potential WUS. However, several areas of interest, ultimately judge non-jurisdictional are described below. Corresponding data points are located on SWCA’s delineation of the Parcel aerial (Appendix A).

¹ U.S. Army Corps of Engineers: Regulatory Guidance Letter No. 05-02. June 14, 2005.

² Brown, D.E. (ed.). 1994. *Biotic Communities: Southwestern United States and Northwestern Mexico*. Salt Lake City: University of Utah Press. 342 pp.

³ A gravel pit was depicted on the Casa Grande Mountain 7.5’ USGS topographic map. The pit appears to have not been in use for some time (Figure 5).

Data Points 1 and 2: Casa Grande Canal

The Casa Grande Canal (Figure 1) is unlined, trenched, and roughly 30 feet wide. Its banks are elevated slightly from the surrounding areas, which prohibit surface runoff on the Parcel from entering the channel. The result is isolated areas of sheet flow that pond and percolate along the southern bank of the Canal (Figure 2). The Canal itself is property of the San Carlos Irrigation Project, an entity under Bureau of Indian Affairs jurisdiction, which receives irrigation water from Picacho Reservoir and San Carlos Lake. At the time of survey, the Canal was not delivering water.

SWCA does not consider the Canal to be jurisdictional WUS. While originating as surface water, the supply delivered by the Canal is probably not connected to a downstream surface water; rather, it is dispersed and consumptively used for irrigation throughout the San Carlos Irrigation Project area. Furthermore, the Canal itself is under the ownership of a federal entity, and may not be considered part of the project area for the purposes of assessing impacts on jurisdictional WUS.



Figure 1. A downstream view of the Canal, looking west.



Figure 2. Extent of surface flow adjacent to the Canal, which is behind the vegetation.

Data Points 3 and 4: Northern Half of Parcel

The northern portion of the Parcel consists of desert scrub vegetation and a recreational vehicle (RV) park. The majority of surface runoff terminates in the middle of the area, in a depression formerly used for stock watering (Figure 3). I-10 separates storm waters that collect east of the depression from downstream waters (Figure 4). In addition to the isolation from downstream waters, either by the depression or because of the presence of I-10, there is virtually no evidence of ACOE OHWM characteristics on this half of the Parcel. In all cases, there is no connectivity with surrounding areas or downstream waters.



Figure 3. Sheet flow dissipating into the ground and bounded by I-10, which is behind the vegetation to the right.



Figure 4. Depression and confluence of washes from the parcel, including some washes south of I-8.

Data Points 5 through 7: Southern Half of Parcel

There are many washes on the southern half of the Parcel that exhibit OHWM characteristics and that would normally be considered for potential jurisdiction. However, all washes here either dissipate into sheet flow within the Parcel or are channeled to one of the two sinks; most washes terminate in a gravel pit on the southern half of the Parcel (Figure 5); wash channels that avoid this depression pass under I-8 through a culvert by the northwest corner of the Parcel (Figure 6). These washes: 1) end up in the northern depression (see Figure 3); 2) dissipate as sheet flow on the property offsite, through culverts crossing under I-8, to the northwest of the Parcel (Figure 7); 3) or are isolated by I-10. Consequently, there is no perceptible surface connectivity between ephemeral washes beyond the parcel and adjacent properties.



Figure 5: Abandoned gravel pit in the southern portion of the parcel that captures most runoff.



Figure 6: A culvert seen from the extreme northwest portion of the Parcel. Flows from the northern slopes of the Parcel are channeled here and other culverts under I-8 off property, which dissipate to sheet flow.



Figure 7: Resulting offsite dispersion and dissipation of flows from the culvert in Figure 6.

CONCLUSIONS

Based on the evidence collected during field reconnaissance, SWCA does not believe that the ephemeral washes present on the Parcel constitute jurisdictional WUS. As such, any dredge or fill of these washes would not be subject to Section 404 of the CWA; thus, no notification or permits would be required from the ACOE.

Sincerely,

Contact: Attn: Devin Keane
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 2120 N. Central Ave. Suite 130
 Phoenix, AZ 85004
 Phone: 602 274-3831 Fax: 602 274-3958
 dkeane@swca.com

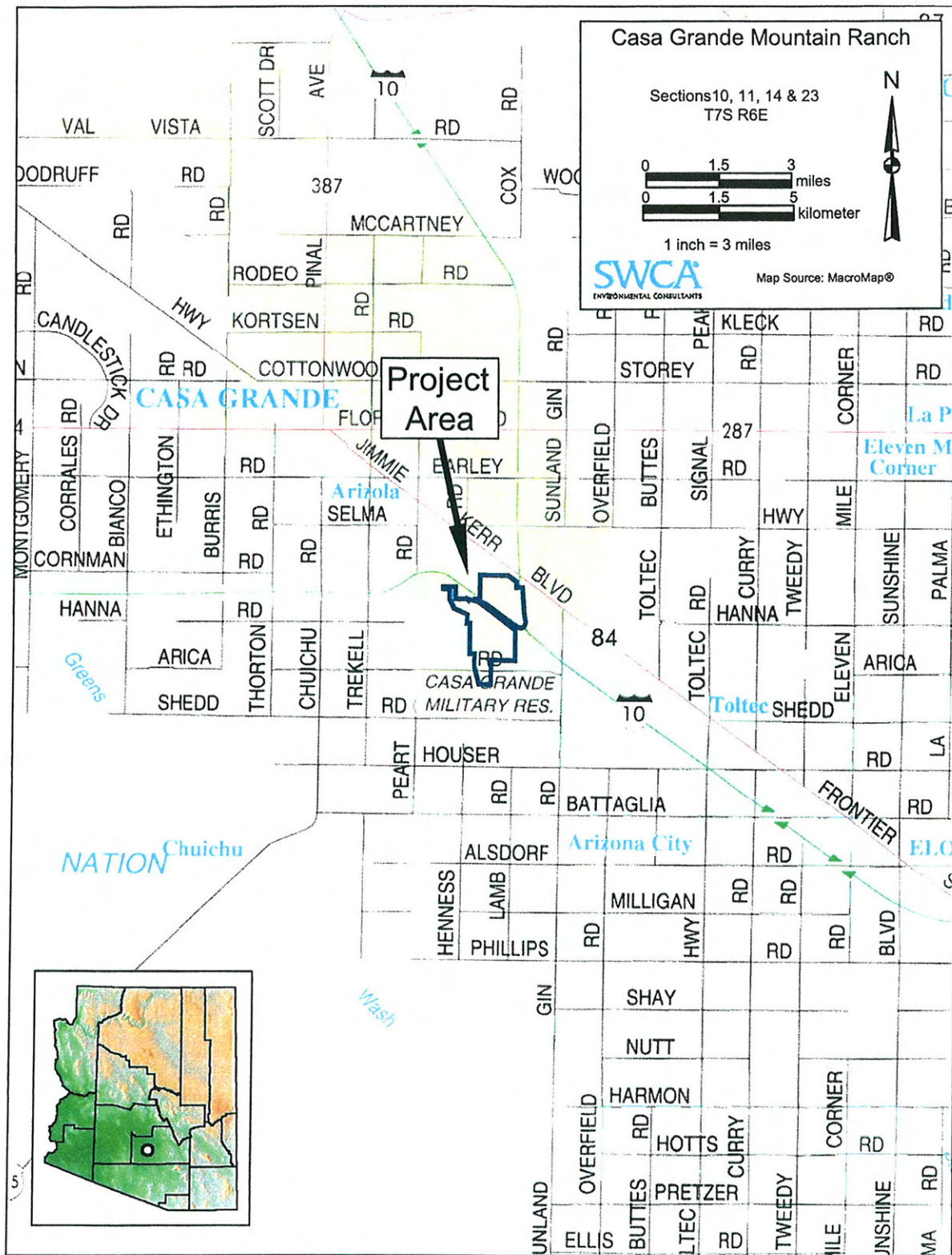


Figure 1. General location of the project area.

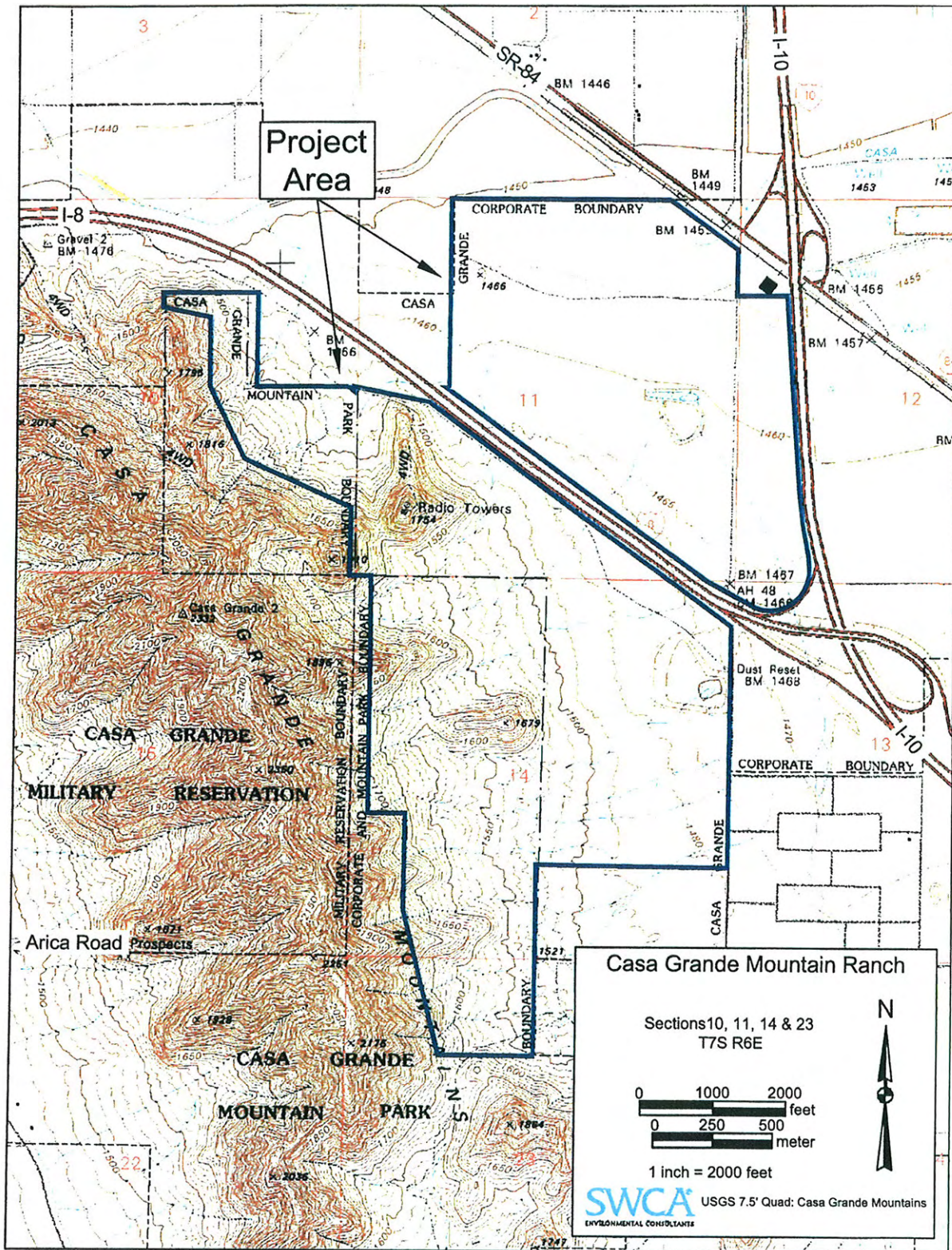


Figure 2. Project area location.

APPENDIX B

**AGENT AUTHORIZATION LETTER AND PROOF OF OWNERSHIP
DOCUMENTATION**

December 1, 2006

U.S. Army Corps of Engineers
Regulatory Section
3636 North Central Avenue, Suite 900
Phoenix, Arizona 85012-1936

Statement of Authorization

As the landowner (Chasse Real Estate & Financial Group), I, George T. Chasse hereby designate and authorize SWCA Environmental Consultants (SWCA) to act on our behalf as the agent for the jurisdictional water delineation application and/or the agent for the Section 404 application under Section 404 of the Clean Water Act and to furnish, upon request, supplemental information in support of this delineation/application. Correspondence related to the project should be directed to SWCA.

I authorize SWCA and the U.S. Army Corps of Engineers to access the project area for purposes of conducting any necessary fieldwork that is required to complete this Permit Application. If there are any questions concerning this authorization, please contact George Chasse at (602) 952-2200.

George T. Chasse
Applicant Name (printed)

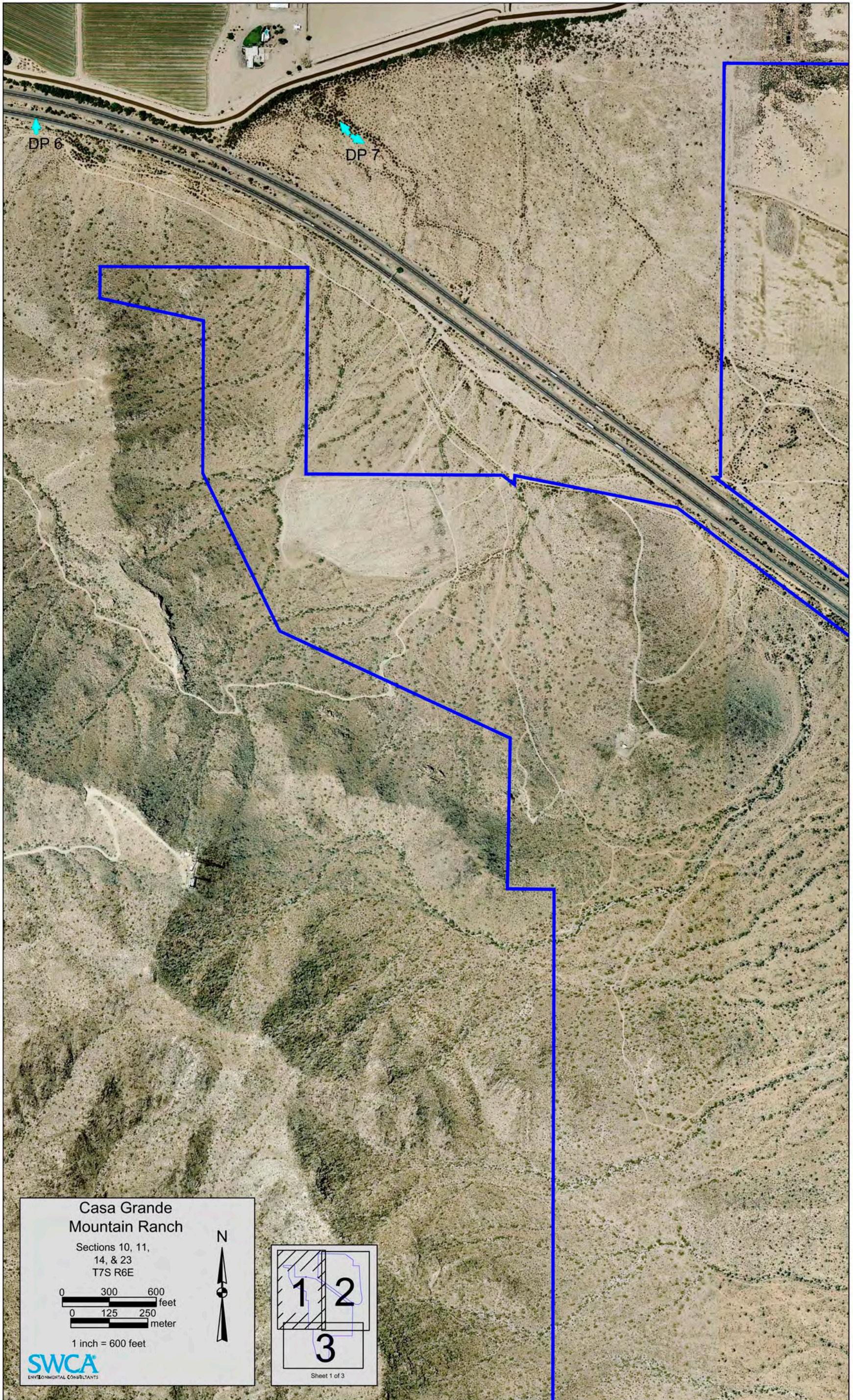
Dec 1, 2006
Date

George T. Chasse
Applicant Signature

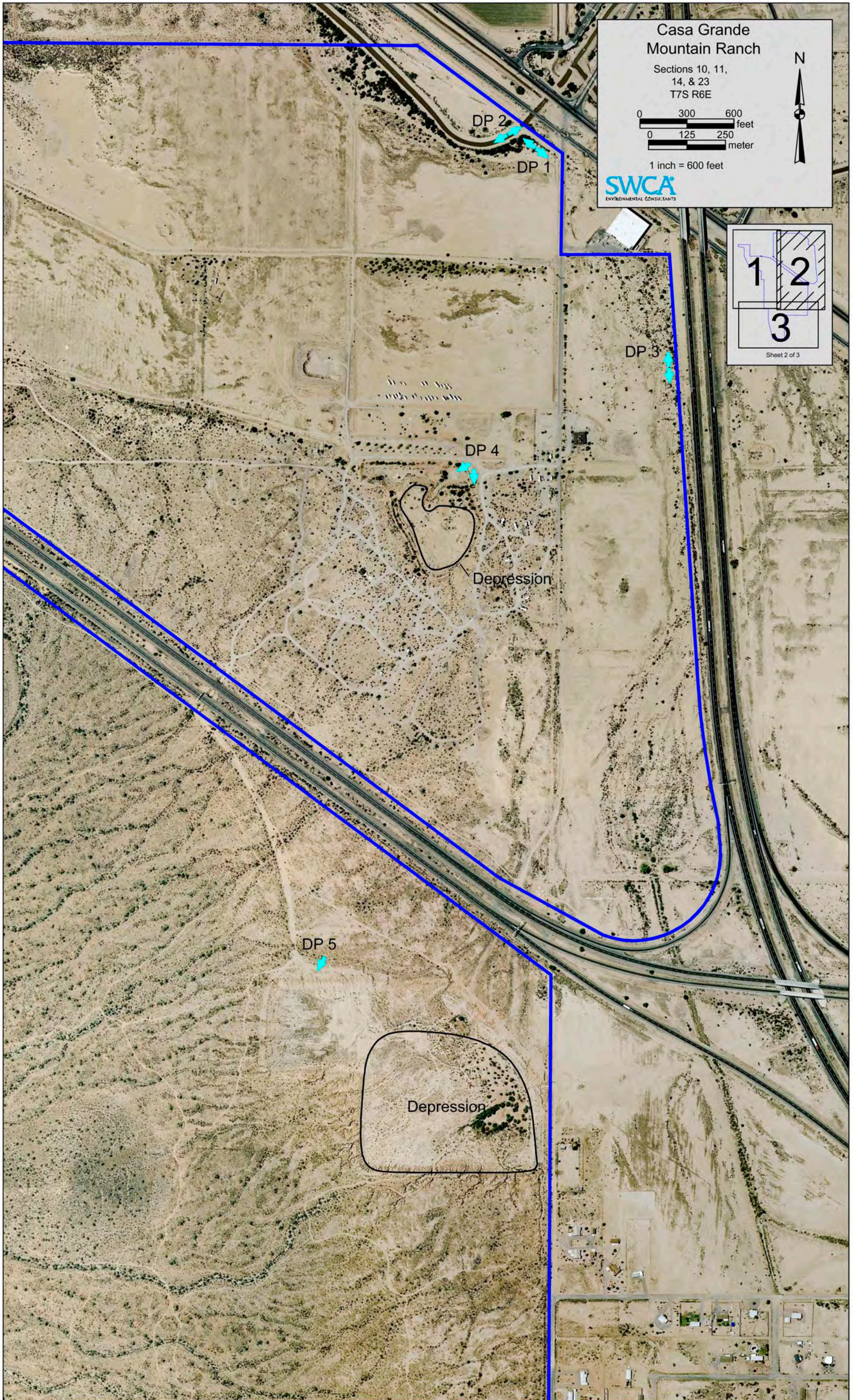
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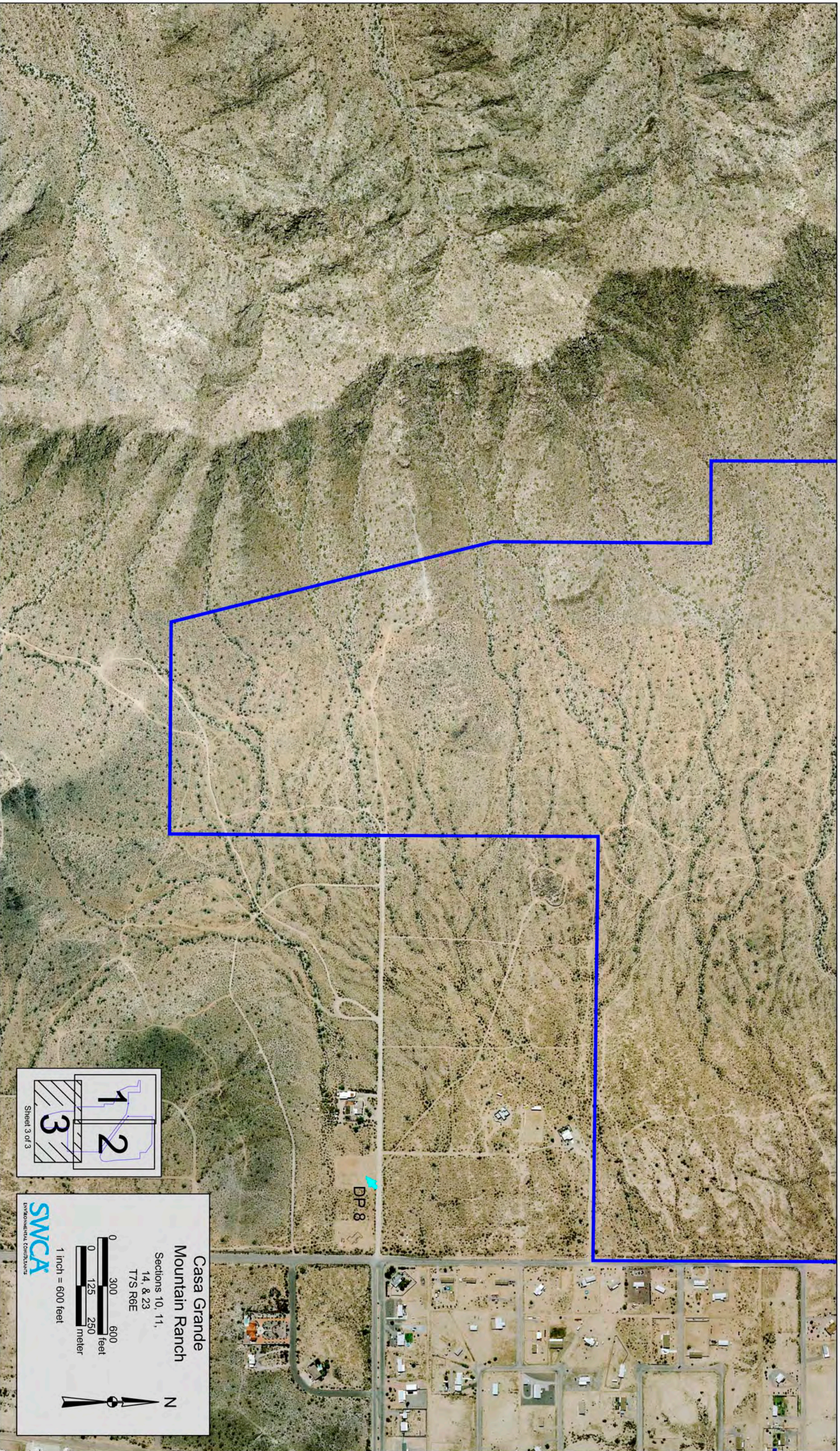
Applicant Company Name (if applicable)

Chasse Real Estate & Financial Group



Appendix A-3.1





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