

**WETLAND DELINEATION  
SUNSHINE VALLEY PROPERTY  
TAOS COUNTY, NEW MEXICO**

*Prepared for—*

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August 4, 2006

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**Introduction**

On behalf of Chadwick Ecological Consultants, ERO Resources Corporation (ERO) conducted a wetland delineation of the Sunshine Valley Property. The approximate location of the property is portions of Sections 1 and 2, T30N, R12E of the Cerro quadrangle (USGS 7.5 minute series map) in Taos County, New Mexico, north of Questa (Figure 1).

**Methods**

On June 6, 2006, ecologists with ERO surveyed the project area for wetlands and other waters of the U.S. Using methods outlined in the 1987 *Corps of Engineers Wetlands Delineation Manual*, wetlands were determined based on the presence of three wetland indicators: hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland indicators, as described by the National Wetland Inventory (NWI 1988), was used. The wetland boundaries were drawn on a color infrared aerial photograph of the property.

**Overall Site Description**

The site occurs within the broad, relatively flat sagebrush-covered Sunshine Valley. A large northeast to southwest trending playa occurs in the approximate center of the site. Two stock ponds have been dug in the center of the site and several agricultural ditches cross the property.

The uplands surrounding the wetlands are a mixture of shrublands and upland meadows. The shrublands are dominated by sagebrush (*Artemisia tridentata*) and rubber rabbitbrush (*Chrysothamnus nauseosus*) shrubs with patches of greasewood (*Sarcobatus vermiculatus*). The herbaceous layer growing beneath and in the shrubs and in the upland meadows contain a variety of species including western wheatgrass (*Pascopyrum*

*smithii*), Kentucky bluegrass (*Poa pratensis*), Baltic rush (*Juncus arcticus*), dandelion (*Taraxacum officinale*), yarrow (*Achillea millefolium*), and saltgrass (*Distichlis spicata*).

### **Wetlands and Waters of the U.S. Description**

An approximately 232-acre wetland occurs in a shallow depression within the Sunshine Valley property (Figure 2, attached data sheets, and photo log). This wetland is mainly a herbaceous wet meadow with patches of shrub wetlands especially at the edges. Cattail (*Typha latifolia*) marshes surround the ponds. This large wetland does not appear to have a surface connection to the nearby Rio Grande River or other navigable waters as described in Data Sheet 8.

### **Vegetation**

In the persistently saturated areas, water sedge (*Carex aquatilis*, OBL<sup>1</sup>), Baltic rush (OBL), seaside buttercup (*Ranunculus cymbalaria*, OBL), and spikerush (*Eleocharis sp.*, OBL) dominate. Clustered field sedge (*Carex praegracilis*, FACW+), Baltic rush (OBL), saltgrass (FACW), Pursh seepweed (*Suaeda calceoliformis*, FACW), foxtail barley (*Hordeum jubatum*, FACW), and sowthistle (*Sonchus asper*, FACW) dominate the more seasonally saturated areas. Rubber rabbitbrush (UPL) occurs along the edges of the wetlands. Cattails (OBL) surround the ponds.

### **Hydrology**

Hydrology in the wetlands range from areas saturated at the surface to 4 inches below the surface to areas with oxidized root channel that meet the FAC neutral test. Around the ponds and in small patches scattered in the wetlands, the soils are shallowly inundated.

### **Soils**

Hydric soils are indicated by low chroma silty sandy loams to clay loams.

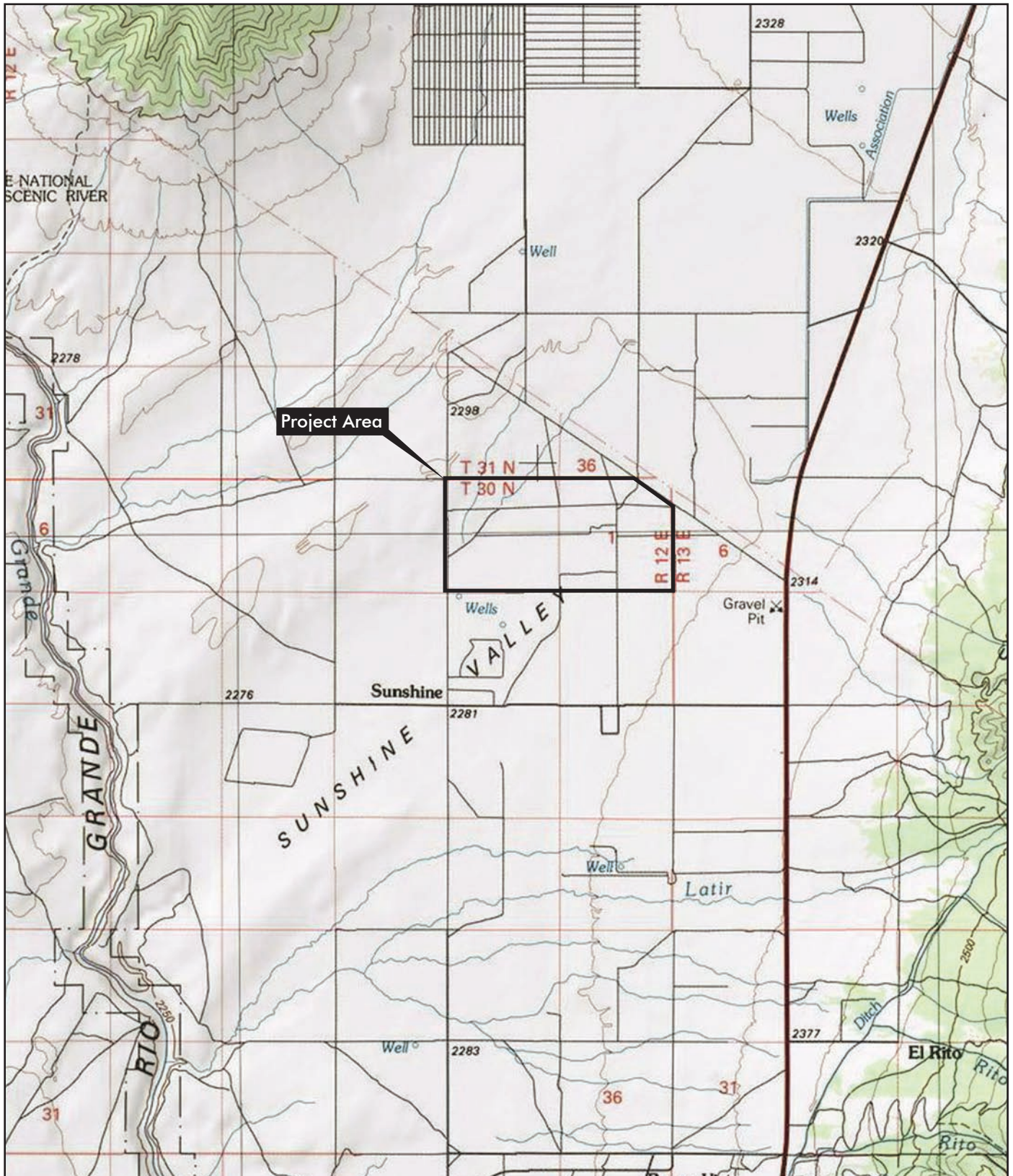
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<sup>1</sup> National Wetland Inventory (NWI) Classification: OBL= Obligate Wetland- occurs with an estimated 99% probability in wetlands, FACW = Facultative Wetland – Estimated 67%-99% probability of occurrence in wetlands, FAC = Facultative – equally likely to occur in wetlands and non-wetlands, FACU= Facultative Upland – 67% to 99% probability in uplands, UPL = Obligate Upland – 99% probability

**References**

Environmental Laboratory. 1987. "Corps of Engineers Wetland Delineation Manual,"  
Technical Report 7-87-1, U.S. Army Engineer Waterways Experiment Station,  
Vicksburg, MS.

NWI. 1988. National List of Plant Species that occur in Wetlands.



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### Sunshine Valley Property

Section 1 & 2, T30N, R12E  
 UTM Coordinates: Zone 13; 499883mE, 4422787mN  
 USGS Cerro, NM Quadrangle  
 Taos County, New Mexico

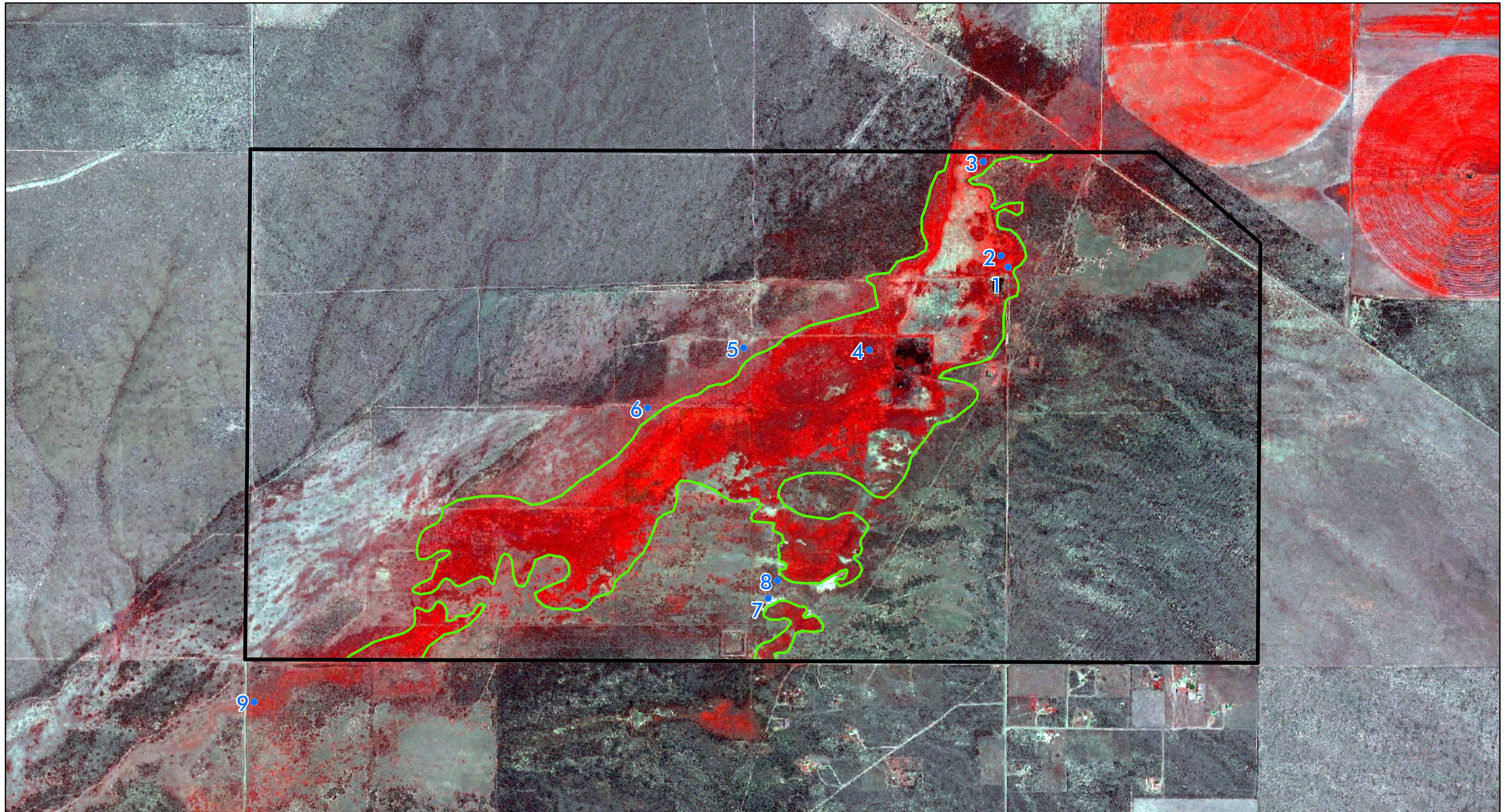


1 Inch = 2,000 Feet



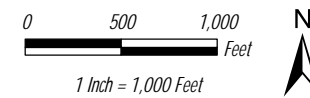
**Figure 1**  
**Property Location**

Prepared for: Chadwick Ecological  
 File: 3372 Figure 1.pdf  
 July 2006



ERO Resources Corp.  
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- Anderson Property (1293.5 Acres)
- Wetlands (231.7 Acres)
- Data Points



**Figure 1**  
 Wetland Mapping  
 Sunshine Valley Project

File: 3372 Wetlands.mxd (JP)  
 June 27, 2006

**PHOTO LOG**  
**SUNSHINE VALLEY PROPERTY - WETLAND DELINEATION**  
**JUNE 6, 2006**



**Photo 1** - Looking west. Data point 1a in foreground and 1b in the background



**Photo 2** - Data Point 2

**PHOTO LOG**  
**SUNSHINE VALLEY PROPERTY - WETLAND DELINEATION**  
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**Photo 3** - Small pond near Data Points 1 and 2



**Photo 4** - Larger pond south of Data Point 3



**PHOTO LOG**  
**SUNSHINE VALLEY PROPERTY - WETLAND DELINEATION**  
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**Photo 5 - Wetlands south of Data Point 5**



**Photo 6 - Uplands at Data Point 7**

**PHOTO LOG**  
**SUNSHINE VALLEY PROPERTY - WETLAND DELINEATION**  
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**Photo 7 - Uplands at Data Point 8**