APPENDIX 2.5-1

Cultural Resources Technical Report

CULTURAL RESOURCES REPORT

Otay Ranch Village 14 and Planning Areas 16/19,
San Diego County, California
PDS2016-GPA-16-008, PDS2016-SP-16-002, PDS2016-REZ-16-006,
PDS2016-TM-5616, PDS2016-STP-16-027, PDS2016-ER-16-19-006

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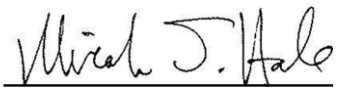

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February 2018

Cultural Resources Report for Otay Ranch Village 14 and Planning Areas 16/19, San Diego County, California

NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION

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Firm: Dudek

Project Proponent: Jackson Pendo Development
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Report Date: February 2018

Report Title: Cultural Resources Report for the Otay Ranch Village 14 and Planning Areas 16/19 Project, San Diego County, California

Type of Study: Phase 1 Archaeological Survey and Phase II Archaeological Evaluation

Updated Sites: CA-SDI-6694; CA-SDI-6695A; CA-SDI-6695B; CA-SDI-6965; CA-SDI-8086A; CA- SDI-8086B; CA-SDI-8086C; CA-SDI-11392; CA-SDI-11394; CA-SDI-11395; CA-SDI-11396; CA-SDI-11397; CA-SDI-11398; CA-SDI-11399; CA-SDI-11400; CA-SDI-11401; CA-SDI-11411; CA-SDI-11416; CA-SDI-11417; CA-SDI-11418; CA-SDI-11421; CA-SDI-11422; CA-SDI-12313; CA-SDI-12314; CA-SDI-12315; CA-SDI-12316; CA-SDI-12317; CA-SDI-12318; CA-SDI-12319; CA-SDI-12320; CA-SDI-12321; CA-SDI-12322; CA-SDI-12323; CA-SDI-12324; CA-SDI-12325; CA-SDI-12326; CA-SDI-12327; CA-SDI-12328; CA-SDI-12329; CA-SDI-12330; CA-SDI-12331; CA-SDI-12332; CA-SDI-12333; CA-SDI-12334; CA-SDI-12335; CA-SDI-12373; CA-SDI-12374; CA-SDI-12375; CA-SDI-12376; CA-SDI-12377; CA-SDI-12378; CA-SDI-12379; CA-SDI-12380; CA-SDI-12381; CA-SDI-12382; CA-SDI-12383; CA-SDI-12384; CA-SDI-12385; CA-SDI-12386; CA-SDI-12387; CA-SDI-12388; CA-SDI-12389; CA-SDI-12390; CA-SDI-12391; CA-SDI-12392; CA-SDI-12393; CA-SDI-12394; CA-SDI-12395; CA-SDI-12396; CA-SDI-12397; CA-SDI-12398; CA-SDI-12635; CA-SDI-12937; P-37-015040 (CA-SDI-21924); P-37-015043 (CA-SDI-21925); P-37-026524 (CA-SDI-8086C)

New Sites: CA-SDI-21624; CA-SDI-21625; CA-SDI-21626; CA-SDI-21627; CA-SDI-21628; CA-SDI-21629; CA-SDI-21630; CA-SDI-21631; CA-SDI-21632; CA-SDI-21633; CA-SDI-21911, CA-SDI-21912, CA-SDI-21913, CA-SDI-21914, CA-SDI-21915, CA-SDI-21916, CA-SDI-21917

Cultural Resources Report for Otay Ranch Village 14 and Planning Areas 16/19, San Diego County, California

Updated Isolates: P-37-014834; P-37-015033; P-37-015035; P-37-015036; P-37-015037; P-37-015039; P-37-015041; P-37-015042; P-37-015053; P-37-015055; P-37-015056; P-37-015057; P-37-015058; P-37-015059; P-37-015060; P-37-026522; P-37-026523; P-37-026524; P-37-026525; P-37-026526; P-37-026532

USGS Quads: Jamul Mountains 7.5′ T17S/R1E/Sections 8, 9, 16, 17, 18, 19, 20, 21, 29 and 30

Acreage: 3,127 acres (survey area)

Permit Numbers: PDS-2016-GPA-16-008, PDS2016-SP-16-002, PDS2016-REZ-16-006, PDS2016-TM-5616, PDS2016-STP-16-027, PDS2016-ER-16-19-006

Keywords: Phase I Inventory; Phase II Evaluation; Jamul Mountains; Prehistoric; Historic; Lithic scatters; quarry sites; debitage; groundstone; cores; drill; historic structure; corral; ranching; isolate; not eligible; not significant; bedrock milling; CRHR; CEQA; RMP; APE; ADI; STP; CSC; SSU; CA-SDI-6694; CA-SDI-6695A; CA-SDI-6695B; CA-SDI-6965; CA-SDI-8086A; CA- SDI-8086B; CA-SDI-8086C; CA-SDI-1392; CA-SDI-11394; CA-SDI-11395; CA-SDI-11396; CA-SDI-11397; CA-SDI-11398; CA-SDI-11399; CA-SDI-11400; CA-SDI-11401; CA-SDI-11411; CA-SDI-11416; CA-SDI-11417; CA-SDI-11418; CA-SDI-11421; CA-SDI-11422; CA-SDI-12313; CA-SDI-12314; CA-SDI-12315; CA-SDI-12316; CA-SDI-12317; CA-SDI-12318; CA-SDI-12319; CA-SDI-12320; CA-SDI-12321; CA-SDI-12322; CA-SDI-12323; CA-SDI-12324; CA-SDI-12325; CA-SDI-12326; CA-SDI-12327; CA-SDI-12328; CA-SDI-12329; CA-SDI-12330; CA-SDI-12331; CA-SDI-12332; CA-SDI-12333; CA-SDI-12334; CA-SDI-123335; CA-SDI-12373; CA-SDI-12374; CA-SDI-12375; CA-SDI-12376; CA-SDI-12377; CA-SDI-12378’ CA-SDI-12379; CA-SDI-12380; CA-SDI-12381; CA-SDI-12382; CA-SDI-12383; CA-SDI-12384; CA-SDI-12385; CA-SDI-12386; CA-SDI-12387; CA-SDI-12388; CA-SDI-12389; CA-SDI-12390; CA-SDI-12391; CA-SDI-12392; CA-SDI-12393; CA-SDI-12394; CA-SDI-12395; CA-SDI-12396; CA-SDI-12397; CA-SDI-12398; CA-SDI-12635; CA-SDI-12937; P-37-015040 (CA-SDI-21924) P-37-015043 (CA-SDI-21925); P-37-026524 (CA-SDI-8086C); CA-SDI-21624; CA-SDI-21625; CA-SDI-21626; CA-SDI-21627; CA-SDI-21628; CA-SDI-21629; CA-SDI-21630; CA-SDI-21631; CA-SDI-21632; CA-SDI-21633; CA-SDI-21911, CA-SDI-21912, CA-SDI-21913, CA-SDI-21914, CA-SDI-21915, CA-SDI-21916, CA-SDI-21917

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LIST OF ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
ACHP	Advisory Council on Historic Preservation
amsl	above mean sea level
ADI	area of direct impact
APE	area of potential effects
APN	Assessor's Parcel Number
BFSA	Brian F. Smith and Associates
CCR	California Code of Regulations
CCS	cryptocrystalline silica
CCT	core/cobble tool
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CRHR	California Register of Historical Resources
cm	centimeters
cmbs	centimeters below surface
County	County of San Diego
CSC	controlled surface collection
CU	control unit
Emax	Energy Maximizing
DG	decomposing granite
DPR	Department of Parks and Recreation
g	grams
GDP	General Development Plan
FFT	formed flake tool
JDAD	Jacumba Discontiguous Archaeological District
JVAD	Jacumba Valley Archaeological District
kg	kilograms
LDA	Limited Development Area
MLD	Most Likely Descendant
mm	millimeters
MSCP	Multiple Species Conservation Program
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
RPA	Register of Professional Archaeologists
RMP	Resource Management Plan
RPO	Resource Protection Ordinance
RTF	retouched flake tool
SCIC	South Coastal Information Center
SFT	simple flake tool
SHPO	State Historic Preservation Officer

Acronym/Abbreviation	Definition
SRP	Subregional Plan
SSU	shovel scrape unit
STP	shovel test pit
TCR	Tribal Cultural Resource
TMD	Table Mountain District
Tmin	Time Minimizing
USC	United States Code
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator

MANAGEMENT SUMMARY

This document presents the results of a Phase I archaeological inventory and a Phase II archaeological evaluation for Otay Ranch Village 14 and Planning Areas 16/19 (Proposed Project). The evaluation covered a 3,127-acre area, although the Proposed Project itself is limited to a 2,348-acre area of potential effects (APE). The area of direct impact (ADI) is limited to 1,283.6 acres within the APE and 85.4 acres in an off-site improvements area. This report evaluates those archaeological sites within the ADI. The Proposed Project is located in Proctor Valley, San Diego County, California, in Sections 8, 9, 16, 17, 18, 19, 20, 21, 29, and 30, Township 17S, Range 1E, on the Jamul Mountains U.S. Geological Survey (USGS) 7.5-minute quadrangle. The County of San Diego is the lead agency for ensuring compliance with the California Environmental Quality Act (CEQA).

Brian F. Smith and Associates Inc. (BFSA) conducted the initial Phase I cultural resources inventory for the Proposed Project, and provided a letter report summarizing that study (BFSA 2015). BFSA's Phase I inventory, which covered a 3,127-acre study area, identified 112 cultural resources (BFSA 2015). Dudek conducted the Phase II archaeological evaluation for resources within the ADI for the Proposed Project. This report documents both the inventory (Phase I) and evaluation (Phase II) for the Proposed Project in compliance with the *County of San Diego Guidelines for Determining Significance, Cultural Resources: Archaeological and Historic Resources* (County of San Diego 2007a); *Report Format and Content Guidelines: Cultural Resources* (County of San Diego 2007b); Otay Ranch Resource Management Plan (RMP) (City of Chula Vista and County of San Diego 2015); Section 21083.2 of the Public Resources Code; the CEQA Guidelines; and the County of San Diego CEQA Guidelines (San Diego County Board of Supervisors 2007).

The Proposed Project boundaries circumscribe 2,348 acres, which is the APE as the term is used herein. The Project Area, or ADI, consists of 1,369 acres (1,283.6 acres is within the APE and 85.4 acres is in the off-site improvement areas). The remaining 979 acres is within the APE but outside the ADI, and would be dedicated open space and not be developed.

During the course of this work effort, sufficient cultural material was found to be able to combine P-37-026524 and Temp-17 into a multi-component prehistoric and historical archaeological site. Additionally, it was determined that the location of Temp-17 was previously recorded as Locus C of site CA-SDI-8086, which was not mapped at the South Coastal Information Center (SCIC). P-37-026524 was updated as part of SDI-8086C, and all three loci of CA-SDI-8086 were treated as a single resource. Sites CA-SDI-11417 and CA-SDI-12378 were merged with each other and treated as one site. Two isolates, P-37-015040 and P-37-015043, were updated with new artifacts and were reclassified as sites (CA-SDI-

21924 and CA-SDI-21925, respectively). Two other sites (CA-SDI-12313 and CA-SDI-12324) were downgraded to isolates (P-37-012313 and P-37-012324, respectively). As a result of these changes, the total number of identified resources was reduced from 112 to 109. Of the 109 resources found within the APE, 57 resources are located within the ADI, consisting of 44 sites, two historic structures, and 11 isolates.

This report evaluates each of the 57 identified resources found within the ADI for significance under CEQA and the Otay Ranch RMP, and for eligibility for listing in the California Register of Historical Resources (CRHR) and the San Diego County Local Register of Historical Resources (local register). However, Dudek was not able to access those portions of the ADI located within state-owned lands (part of the off-site improvement area related to improvements along Proctor Valley Road); therefore, Dudek was not able to directly assess the significance of one site: CA-SDI-12397.

Resource P-37-026526 is also potentially located within state-owned lands within the off-site improvement area. This resource is a historic structure that was recorded based on its presence on 1903 and 1912 USGS topographic maps. However, no structure or any associated features/artifacts were identified during the pedestrian survey. Since this resource was not located or no longer exists, or cannot be documented further, it is therefore not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Based on the results of the evaluation program by Dudek, 55 of the evaluated archaeological sites (or evaluated portions of sites) do not meet the criteria to be considered eligible for listing in the CRHR or the local register, and none of these 55 sites are recommended as significant under the Otay Ranch RMP and/or CEQA. The resources evaluated do not possess substantial archaeological deposits or extensive artifact variability. The lack of substantial artifact densities and variability exemplifies the sites' low potential to yield information important to the prehistory or history of the local area, California, or the nation (Criterion 4). Based on this determination, the Proposed Project's impacts on these evaluated cultural sites would be less than significant.

CA-SDI-12373 is a multicomponent site composed of a prehistoric camp site and a historic refuse scatter and rock feature. Neither the prehistoric component nor the historic component could be associated with events (Criterion 1) or persons (Criterion 2) important to local, state, or national history, and neither embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values (Criterion 3). The historic component was also determined to not be eligible for listing in the CRHR under Criterion 4 (data potential) or the local register, and not be significant under the Otay Ranch RMP and/or CEQA. Locus A, the prehistoric camp site, was determined

to be eligible for listing in the CRHR (under Criterion 4) and local register, and significant under CEQA. The site would be preserved in place, since no construction activities would occur at this location. The locus is within and adjacent to a trail easement, which is expected to increase public access to this location and could result in looting, an indirect impact to the site. Mitigation of this impact would consist of a surface collection at Locus A to collect visible artifacts (e.g., data recovery), thereby limiting the potential for looting to occur, and reducing the impact to less than significant.

CA-SDI-12379, which has not been directly evaluated, is presumed eligible for listing in the CRHR and the local register, and to be significant under CEQA. This resource is an archaeological site that is not associated with events (Criterion 1) or persons (Criterion 2) important to local, state, or national history; does not embody the distinctive characteristics of a type, period, region, or method of construction; does not represent the work of a master; and does not possesses high artistic values (Criterion 3). However, it is presumed eligible under Criterion 4 (potential to contain information important to history or prehistory). Based on surface constituents, this site is not significant under the Otay Ranch RMP since it is not unique, does not contain human remains, is not formally listed on or determined eligible for the National Register of Historic Places, does not have an H designator, and is not associated with religious/ceremonial uses. The eastern portion of this resource is within the Development Footprint and would be impacted by the Proposed Project. None of the statutory preservation-in place options (see CEQA Guidelines Section 15126.4(b)(3)(B)) is feasible for this portion of the site. As a result, the Proposed Project's disturbance of the eastern portion of CA-SDI-12379 represents a significant impact under CEQA and County of San Diego guidelines, which would require mitigation such as data recovery excavation, curation of collected cultural materials, and/or monitoring during construction. Such mitigation would reduce the Proposed Project's impact on the eastern portion of site CA-SDI-12379 to less than significant. The western portion of the site would be avoided and placed in an open space preserve (i.e., the Otay Ranch RMP Preserve).

The County of San Diego is the lead review agency for the Proposed Project. Sites deemed ineligible for federal, state, or local listing, or not significant under CEQA can be considered "important" under the County of San Diego Guidelines. Impacts to such sites can be mitigated to less than significant by documentation and evaluation, curation of recovered artifacts, and/or monitoring during construction. Potential inadvertent impacts to resources outside of, but within 50 feet of, the ADI can be mitigated through the installation of temporary fencing during construction.

Artifacts would be curated at the San Diego Archaeological Center or a culturally affiliated tribal curation facility, or may be repatriated to a culturally affiliated tribe. California Department of

Parks and Recreation forms for each resource documented are provided as a confidential appendix to this report, and have been submitted to the SCIC of the California Historical Resources Information System at San Diego State University.

1 INTRODUCTION

This report provides the results of an archaeological survey and evaluation for Otay Ranch Village 14 and Planning Areas 16/19 (Proposed Project). Dudek prepared this report pursuant to the County of San Diego (County) Guidelines, the Otay Ranch Resource Management Plan (RMP), and the California Environmental Quality Act (CEQA).[1] The applicant intends to develop a residential community located in Proctor Valley, San Diego County, California (Figure 1-1, Regional Map). The Proposed Project is located in Sections 8, 9, 16, 17, 18, 19, 20, 21, 29, and 30, Township 17S, Range 1E, on the Jamul Mountains U.S. Geological Survey (USGS) 7.5-minute quadrangle (Figure 1-2, Vicinity Map).

All cultural resources personnel who participated in the Proposed Project exceeded the Secretary of Interior's standards for their respective roles, and the Principal Investigator, Micah Hale, PhD, is listed as an approved archaeological consultant with the County of San Diego.

1.1 Project Description

1.1.1 Overview and Background

The Proposed Project is part of the overall Otay Ranch, an approximately 23,000-acre master-planned community in southern San Diego County designed as a series of villages and planning areas. The Proposed Project addressed by this technical report is located within Village 14 and Planning Areas 16/19 in the Proctor Valley area of Otay Ranch, as shown in Figure 1-1.

The underlying purpose of the Proposed Project is to implement the adopted Otay Ranch General Development Plan/Otay Subregional Plan, Volume II (Otay GDP/SRP) (City of Chula Vista and County of San Diego 1993a), and complete the planned development within Jackson Pendo Development Company's (the applicant) ownership of Village 14 and Planning Areas 16/19. The Otay GDP/SRP is also a component of the County General Plan (County of San Diego 2011) and allows for 2,123 homes in Village 14 and Planning Areas 16/19. The Proposed Project's 1,119 homes represent a portion of the total 2,123 homes originally authorized in the Otay Ranch GDP/SRP.

[1] The County of San Diego is the lead agency responsible for ensuring that this cultural resources study complies with cultural resources guidelines identified with the County of San Diego Guidelines for Determining Significance (County of San Diego 2007a), the Otay Ranch RMP, and Section 21083.2 of the Public Resources Code (CEQA). This report meets the format and content guidelines established by the County Report Format and Content Guidelines (County of San Diego 2007b), as well as the requirements of the Archaeological Resource Management Report Format and Content Guidelines recommended by the California Office of Historic Preservation (OHP 1995).

The Proposed Project is designed to be consistent with the Otay Ranch GDP/SRP's Village Character Policy "to serve as a transitional area between urban densities to the west and Jamul to the east" (City of Chula Vista and County of San Diego 1993a). The Proposed Project is, therefore, designed to provide a transitional village between the densities and character of eastern Chula Vista and the more rural community of Jamul. The Proposed Project proposes 1,119[2] homes, of which 994 would be in Village 14 and 125 homes would be in Planning Areas 16/19 (see Table 1-1, Site Utilization Plan Summary). The following describes the major components and characteristics of the Proposed Project.

1.1.2 Definitions

County. The "County" is the area within County of San Diego jurisdiction.

Project Area. The "Project Area" reflects the applicant's ownership located within Otay Ranch Village 14 and Planning Areas 16/19, in addition to certain off-site areas for infrastructure, as depicted in Figure 1-3, Proctor Valley Site Utilization Plan. The Project Area covers approximately 1,283.6 acres owned by the applicant and approximately 85.4 acres of off-site improvement areas (described below), for a total of 1,369 acres.

Proposed Project. The "Proposed Project" reflects the applicant's ownership, as depicted in Figure 1-3. The Proposed Project would include a Specific Plan (titled Otay Ranch Village 14 and Planning Areas 16/19 Specific Plan), General Plan amendments, an EIR, a rezone, a Tentative Map, and an Otay Ranch RMP Amendment. The Proposed Project is further defined in Chapter 1, Project Description, Location, and Environmental Setting, of the EIR, which is incorporated herein by reference. Except for the off-site areas described below, the Proposed Project specifically excludes the State of California's ownership in Village 14 and Planning Area 16, which remains approved for development per the County's General Plan and the Otay Ranch GDP/SRP. The underlying County General Plan and Otay Ranch GDP/SRP land uses on state property would remain unchanged. In addition, the "Inverted L" is excluded from the Proposed Project, since it is not owned by the applicant and is located in the City of Chula Vista (the property is owned by the Otay Water District and the United States Fish and Wildlife Service).

Otay Ranch Village 14. "Otay Ranch Village 14" or "Village 14" as referred to herein is a discrete subset of the Proposed Project and reflects approximately 723.7 acres of the applicant's ownership located exclusively within Village 14, as depicted in Figure 1-3. Approximately 994

[2] Includes 97 residential units allocated to a school site at 10 dwelling units per acre, per Otay Ranch GDP/SRP policies in the event that the school is not constructed. This report evaluates the Proposed Project's impact assuming the more conservative land use (i.e., the greater impact).

homes are planned around a Village Core in this area, as indicated in Table 1-2, Village 14 Site Utilization Plan Detail.

Otay Ranch Planning Areas 16/19. "Otay Ranch Planning Areas 16/19" or "Planning Areas 16/19" as referred to herein is a discrete subset of the Proposed Project and reflects approximately 559.8 acres of the applicant's ownership located exclusively within Planning Areas 16/19, as depicted in Figure 1-3. Approximately 125 homes are planned on 1-acre and 3-acre average lots in this area, as indicated in Table 1-3, Planning Areas 16/19 Site Utilization Plan Detail. The 127.1 acres of Limited Development Area (LDA), defined below, is further described in Table 1-4, LDA Detail.

Limited Development Area (LDA). The LDA is a defined land use designation in the Otay Ranch GDP/SRP, as follows: "An open space easement will cover the areas designated as 'Limited Development Area'…These areas will be left as natural open space with the exception that roads and utilities are anticipated to cross or lie within these areas…LDAs may be included within private lots but would have the following set of restrictions. Removal of native vegetation would be prohibited except as necessary for construction of roads and utilities. There would be no buildings or other structures, agriculture, landscaping, livestock, grazing, horses, trash disposal or fences allowed within these areas." Fuel modification is allowed in the LDA as "brushing for fire control zones would conform to the local fire district regulations" (City of Chula Vista and County of San Diego 1993a). A total of 127.1 acres of LDA in Planning Areas 16/19 is listed in Table 1-4. There is no LDA in Village 14.

Otay Ranch RMP and MSCP Preserve. The Otay Ranch Resource Management Plan (RMP) provides for the conservation, funding, and management of the entire 11,375-acre Otay Ranch RMP Preserve (City of Chula Vista and County of San Diego 2015). The Multiple Species Conservation Program (MSCP) County Subarea Plan Implementing Agreement describes the County's required contribution to the MSCP Preserve. The Implementing Agreement states that the required mitigation for Otay Ranch includes "protection of the areas identified as preserved in the boundaries of the Otay Ranch project including approximately 11,375 acres" of the Otay Ranch RMP Preserve (USFWS et al. 1998). Therefore, the Otay Ranch RMP Preserve is a subset of the MSCP Preserve.

Preserve Conveyance Obligation. To satisfy assemblage of the 11,375-acre Otay Ranch RMP Preserve Ranch-wide, a "Preserve Conveyance Obligation" was prescribed in the Otay Ranch RMP. The Preserve Conveyance Obligation is 1.188 acres of Otay Ranch RMP Preserve conveyed per 1 acre of development, as further described in the adopted Otay Ranch RMP (City of Chula Vista and County of San Diego 2015). This obligation, which is the primary basis of Proposed Project's required mitigation, may be achieved through conveyance of either the

applicant's Otay Ranch RMP Preserve ownership or through off-site acquisition within the 11,375-acre Otay Ranch RMP Preserve.

Conserved Open Space. "Conserved Open Space" refers to those areas with an Otay Ranch GDP/SRP land use designation other than Otay Ranch RMP Preserve that would be preserved on site and that would either be added to the Otay Ranch RMP Preserve (through a future RMP Amendment), managed under a separate resource management plan, or used to mitigate impacts to the City of San Diego Cornerstone Lands. The approximately 72.4 acres of Conserved Open Space is composed of 31.9 acres within the 127.1 acres of LDA and 3.6 acres of residential land use designation in Planning Areas 16/19, plus 36.9 acres of residential land use designation within Village 14. The Conserved Open Space areas are located adjacent to the Otay Ranch RMP Preserve and would be conserved by recording a biological open space easement over the land.

Development Footprint. The Development Footprint consists of areas where there would either be permanent or temporary ground disturbance. The Development Footprint would consist of all on-site development; off-site improvement areas; graded LDA; and impacts resulting from infrastructure and other allowable uses within the MSCP Preserve per Section 1.9.3 of the MSCP County Subarea Plan (County of San Diego 1997), as planned since 1994.

Off-site improvement areas. Off-site improvement areas total approximately 85.4 acres of temporary and permanent impacts, as shown in Table 1-5, Off-Site Improvements, and would include the following: Proctor Valley Road, including related wet and dry utilities, drainage facilities, and trails; access roads in Planning Area 16; an off-site sewer pump station in the southern reach of Proctor Valley Road; and off-site sewer facilities to connect to the Salt Creek Interceptor.

Proctor Valley Road improvements would include Proctor Valley Road South (0.25 miles in the City of Chula Vista and 0.2 acres of privately owned land in the County), Proctor Valley Road South and Central (1.5 miles in City of San Diego Cornerstone Land), Proctor Valley Road Central (0.4 miles in California Department of Fish and Wildlife (CDFW) Otay Ranch Village 14 land), and Proctor Valley Road North (0.75 miles in CDFW Otay Ranch land between Village 14 and Planning Areas 16/19).

Proctor Valley Road Central and South are proposed to be improved and classified as a two-lane-with-median light collector with a width ranging from 68 to 74 feet, plus an additional 20-foot-wide fuel modification/construction easement on each side. Proctor Valley Road North is a two-lane interim road with a paved width of 28 feet in a 40-foot-wide right-of-way. Improvements to Proctor Valley Road would include those typically in roadways, including wet and dry utilities, a sewer pump station, drainage, landscaping, and culverts, plus a trail. Proctor Valley Road is an approved County General Plan Mobility Element road and an approved facility in the MSCP County Subarea Plan.

In addition, there would three public off-site roads within Planning Area 16. These roads would be located primarily within CDFW managed lands, and are approved in the Otay Ranch GDP/SRP as facilities within designated development or LDA land use (City of Chula Vista and County of San Diego 1993a), and are also approved facilities per the MSCP County Subarea Plan (County of San Diego 1997, Section 1.9.3.3). Improvements in these off-site roads would include those typically in roadways, including wet and dry utilities, drainage, landscaping, and culverts, plus trails.

1.1.3 Proposed Specific Plan

Summary

The adopted Otay Ranch GDP/SRP requires the preparation of a Specific Plan that includes a Site Utilization Plan to describe the land uses for the Proposed Project (City of Chula Vista and County of San Diego 1993a). Figure 1-3 depicts the proposed site utilization plan, and Figure 1-4, Surrounding Land Uses, shows uses in the surrounding area. Tables 1-1 through 1-5 quantify the proposed land uses.

Table 1-1
Village 14 and Planning Areas 16/19 Site Utilization Plan Summary

Description	Village 14		Planning Areas 16/19		Total Proposed Project	
	Gross	*Target*	*Gross*	*Target*	*Gross*	*Target*
	Acres[a,b]	*Units[c]*	*Acres[d,e]*	*Units*	*Acres*	*Units*
Residential Subtotal	*344.1*	*897.0*	*364.5*	*125*	*707.7*	*1,022*
Residential Use on School Site (9.7 acres)[c]	—	97	—	—	—	97
Non-Residential Uses						
Mixed Use[f]	1.7	—	—	—	1.7	—
Public Parks	13.8	—	1.4	—	15.2	—
Private Parks/Recreation[b]	4.5	—	—	—	4.5	—
Public Safety Site	2.3	—	—	—	2.3	—
Elementary School Site[c]	9.7	—	—	—	9.7	—
Open Space	27.7	—	2.1	—	29.7	—
Conserved Open Space	36.9	—	36.5	—	72.4	—
Otay Ranch RMP/MSCP Preserve	270.2	—	156.5	—	426.7	—
Circulation	12.8	—	0.8	—	13.6	—
Non-Residential Uses Subtotal	*379.6*	—	*195.4*	—	*575.8*	—
Total Proposed Project[g]	**723.7**	**994**	**559.8**	**125**	**1,283.5**	**1,119**

[a] Residential gross acres in Village 14 includes 96 acres of related internal slopes, fuel modification, and/or Preserve edge.
[b] Village 14 has 5 acres of private pocket parks included in the residential acreage; therefore, the subtotal, including private pocket parks, is 9.5 acres.

[c] Units allocated to the school site at 10 dwelling units per acre per the Otay Ranch GDP/SRP policies. Should the school site not be needed, 97 units may be built. Should the school site be needed, the total target units is 897 in Village 14 and 1,022 total.
[d] Residential gross acres in Planning Areas 16/19 includes 14.1 acres of related private lift and pump stations.
[e] Residential gross acres in Planning Areas 16/19 includes 127.1 acres of limited development area (LDA). See Table 1-4 for details.
[f] Village 14 mixed-use acreage includes 10,000 square feet of commercial use.
[g] 85.4 acres of off-site impacts are excluded from the acreage above. See Table 1-5 for details.

Table 1-2
Village 14 Site Utilization Plan Detail

Description		Gross Acres[a,b]	Target Units	Density (dwelling units per acre)
Single-Family Residential				
R-1		18.0	81	4.5
R-2		38.5	82	2.1
R-3		41.1	73	1.8
R-4		13.8	116	8.4
R-5		35.1	103	2.9
R-6		25.7	71	2.8
R-7		40.7	108	2.7
R-8		28.7	75	2.6
R-9		30.0	74	2.5
R-10		25.1	49	1.9
R-11		28.4	61	2.1
R-12		18.9	4	0.2
Single-Family Residential Subtotal		*344.1*	*897*	*2.6*
Residential Use on School Site (9.7 acres)[c]		—	97	—
Non-Residential Uses				
Mixed Use[d]	MU – C	1.7	—	—
Public Parks				
P-1	South Park	2.9	—	—
P-2	Village Green Park	7.2	—	—
P-3	Scenic Park	3.7	—	—
Public Parks Subtotal		*13.8*	—	—
Private Parks & Recreation				
PP-1	South	1.0	—	—
PP-2	Central	1.2	—	—
PP-3	Private Park	0.7	—	—
PP-4	North	1.5	—	—
Private Pocket Parks[b]	Various	0.0	—	—
Private Parks/Recreation Subtotal		*4.5*	—	—
Public Safety Site		2.3	—	—
Elementary School Site[c]		9.7	—	—
Open Space		27.7	—	—
Conserved Open Space		36.9	—	—

Table 1-2
Village 14 Site Utilization Plan Detail

Description	Gross Acres[a,b]	Target Units	Density (dwelling units per acre)
Otay Ranch RMP/MSCP Preserve	270.2	—	—
Circulation – Arterial	12.8	—	—
Non-Residential Uses Subtotal	*379.6*	—	—
Village 14 Total	*723.7*	*994*	*1.4*

[a] Residential gross acres includes 96 acres of related internal slopes, fuel modification, and/or Preserve edge open space lots.
[b] Village 14 would have 5 acres of private pocket parks included in the residential acreage; therefore, the subtotal including private pocket parks is 9.5 acres.
[c] Units allocated to school site at 10 dwelling units per acre per the Otay Ranch GDP/SRP policies. Should the school site not be needed, 97 units may be built. Should the school site be needed, the total target units is 897.
[d] Village 14 mixed-use acreage includes 10,000 square feet of commercial use.

Table 1-3
Planning Areas 16/19 Site Utilization Plan Detail

Description		Gross Acres[a]	Target Units	Density[b]
Residential Uses				
R-13	Estates 1-acre average	14.3	13	0.9
R-14	Ranchettes 2-acre minimum	192.0	71	0.4
R-15	Ranchettes 2-acre minimum	41.9	11	0.3
R-16	Ranchettes 2-acre minimum	116.3	30	0.3
Residential Subtotal		*364.5*	*125*	*0.3*
Non-Residential Uses				
Public Park P-4	Northern Park	1.4	—	—
Open Space		0.2	—	—
Conserved Open Space		36.5	—	—
Otay Ranch RMP/MSCP Preserve		156.5	—	—
Circulation Arterial		0.8	—	—
Non-Residential Uses Subtotal		*195.4*	—	—
Planning Areas 16/19 Total		*559.8*	*125.0*	*0.2*

[a] Residential gross acres includes 96 acres of related internal slopes, fuel modification, and/or Preserve edge open space lots.
[b] Dwelling units per acre.

Table 1-4
Planning Areas 16/19 Limited Development Area (LDA) Detail

Description		Component Acres		Acres
		LDA	*Other*	*Total*
Residential Uses				
R-13	Estates 1-acre average	0.0	13.4	13.4
R-14	Ranchettes 3-acre average	17.3	174.7	192.0

Table 1-4
Planning Areas 16/19 Limited Development Area (LDA) Detail

Description		Component Acres		Acres
		LDA	*Other*	*Total*
R-15	Ranchettes 3-acre average	27.1	14.8	41.9
R-16	Ranchettes 3-acre average	50.9	65.4	116.3
	Residential Subtotal[a]	*95.3*	*268.3*	*363.6*
Non-Residential Uses				
Public Park P-4	Northern Park	—	1.4	1.4
Open Space		—	2.1	2.1
Conserved Open Space		31.9	3.6	35.5
Otay Ranch RMP/MSCP Preserve		—	156.5	156.5
Circulation Arterial		—	0.8	0.8
	Non-Residential Uses Subtotal	*31.9*	*164.4*	*196.3*
	Planning Areas 16/19 Total	*127.1*	*432.7*	*559.8*

[a] Residential gross acres in Planning Areas 16/19 includes 127.1 acres of limited development area (LDA).

Table 1-5
Village 14 and Planning Areas 16/19 Off-Site Infrastructure (Temporary + Permanent)

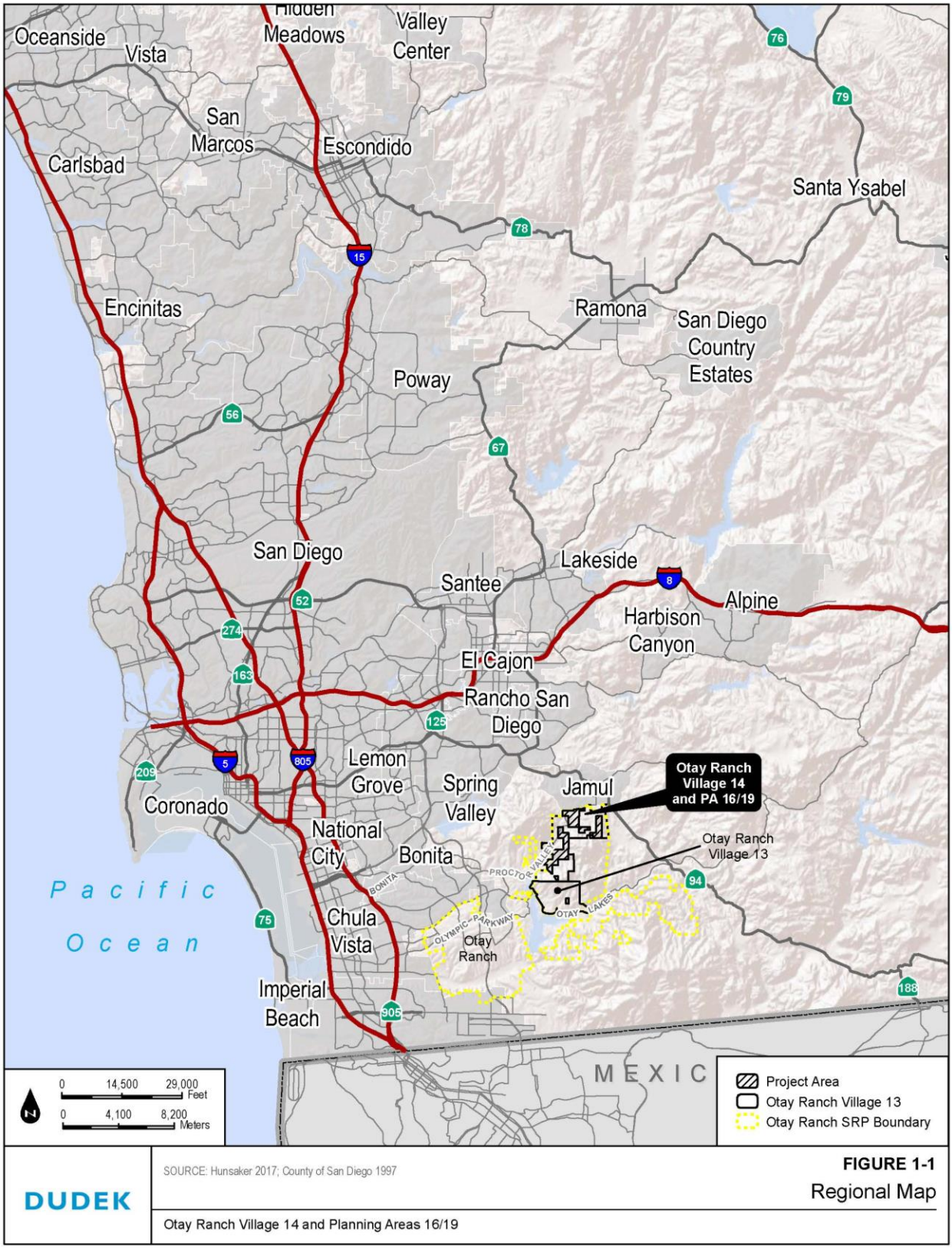
Off-Site Improvement Area[a]	Location	Acres		
		ROW	*Temporary*	*Total*
Proctor Valley Road – MSCP Planned Facility[b]				
South	City of Chula Vista	2.3	2.8	5.1
South	City of San Diego	10.1	17.6	27.7
Central	City of San Diego	2.8	4.3	7.1
Central	State	4.1	8.6	12.7
North	State	3.6	13.2	16.8
North	County of San Diego Easement	0.1	0.2	0.3
Planning Area 16 Access Roads – MSCP Allowed Facility[b]				
R-14 to R-15	State	0.3	1.0	1.3
R-15 to R-16	State	1.6	7.2	8.8
R-16 to Whispering Meadows	State	1.5	4.2	5.7
Sewer Trunk Line to Salt Creek Interceptor[c]	City of Chula Vista	—	—	—
	Total	**26.4**	**59.0**	**85.4**

ROW = right-of-way

[a] Off-site areas include all road improvements, sewer, water, drainage, and related utilities.

[b] See Section 1.9.3 of the MSCP Plan for planned and allowed facilities (MSCP 1998).

[c] In existing improved Proctor Valley Road to approximate tie-in at Hunte Parkway


Oceanside
Vista
Hidden Meadows
Valley Center
San Marcos
Escondido
Carlsbad
Santa Ysabel
Encinitas
Ramona
San Diego Country Estates
Poway
San Diego
Lakeside
Santee
Alpine
Harbison Canyon
El Cajon
Rancho San Diego
Lemon Grove
Spring Valley
Jamul
Otay Ranch Village 14 and PA 16/19
Coronado
National City
Bonita
Otay Ranch Village 13
Pacific Ocean
Chula Vista
Otay Ranch
Imperial Beach
MEXICO
0 14,500 29,000 Feet
0 4,100 8,200 Meters
Project Area
Otay Ranch Village 13
Otay Ranch SRP Boundary
SOURCE: Hunsaker 2017; County of San Diego 1997
FIGURE 1-1
Regional Map
DUDEK
Otay Ranch Village 14 and Planning Areas 16/19

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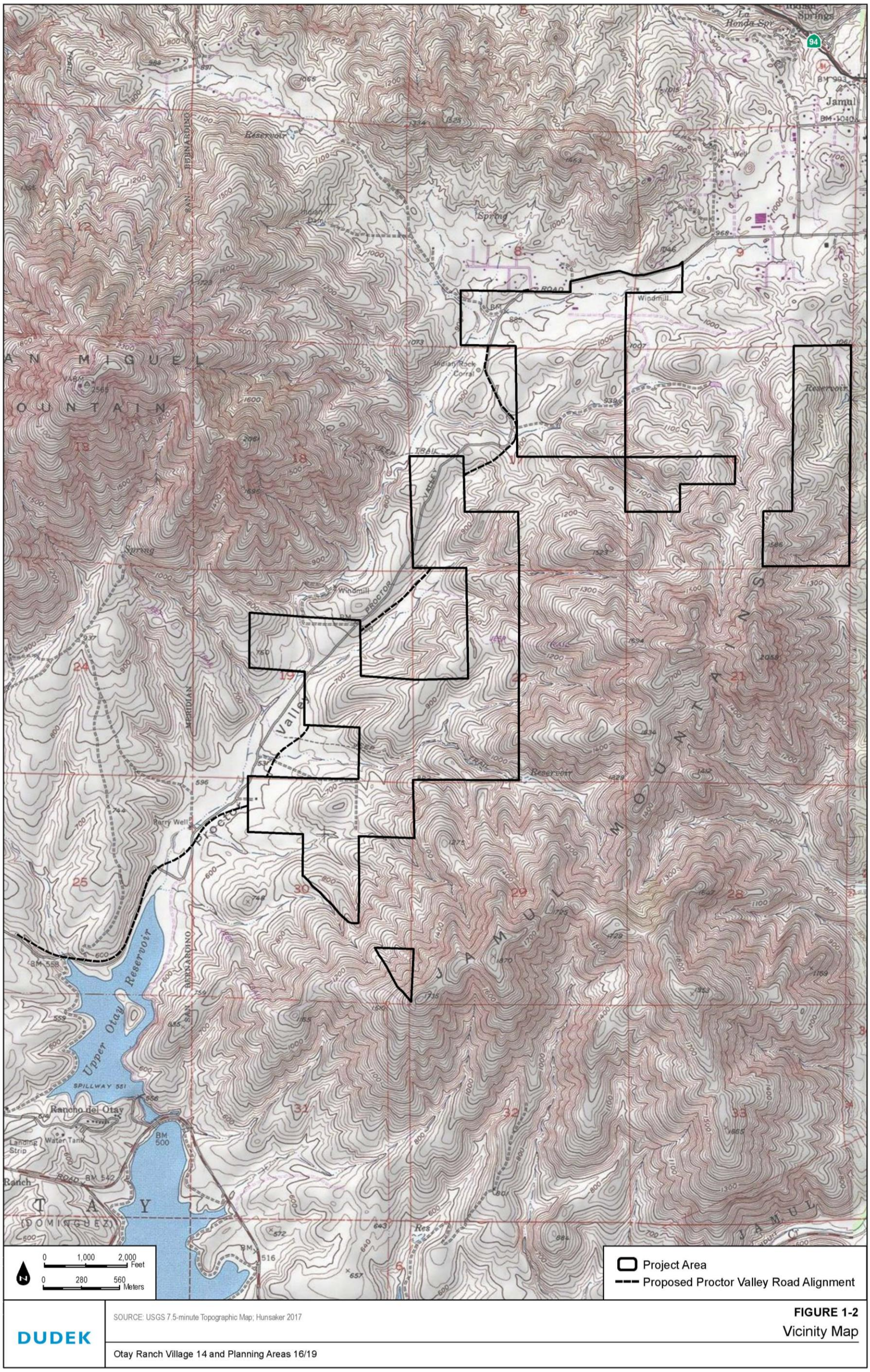

SOURCE: USGS 7.5-minute Topographic Map; Hunsaker 2017

FIGURE 1-2
Vicinity Map

DUDEK

Otay Ranch Village 14 and Planning Areas 16/19

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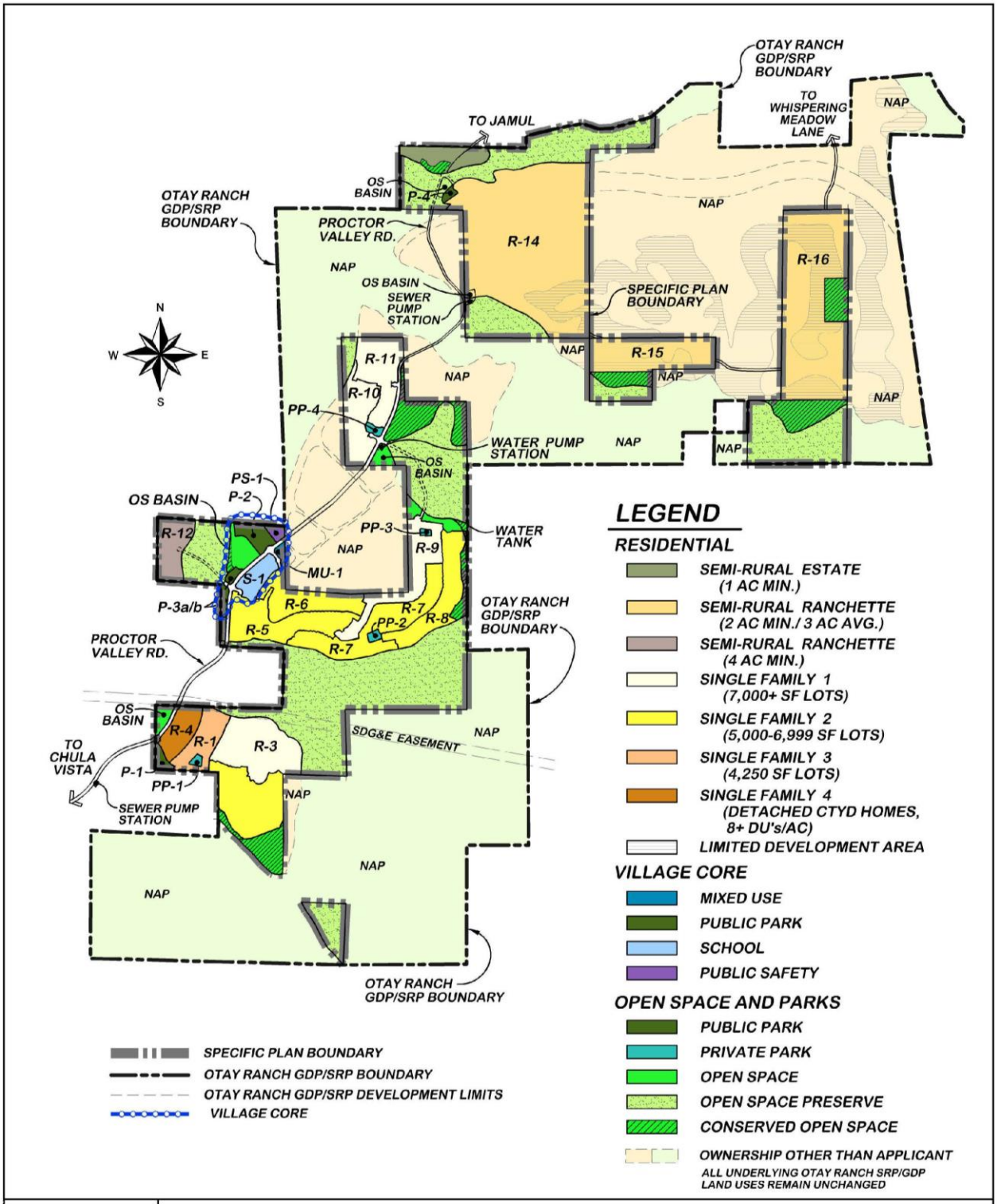

DUDEK

SOURCE: Hunsaker 2017

FIGURE 1-3

Proctor Valley Site Utilization Plan

Otay Ranch Village 14 and Planning Areas 16/19

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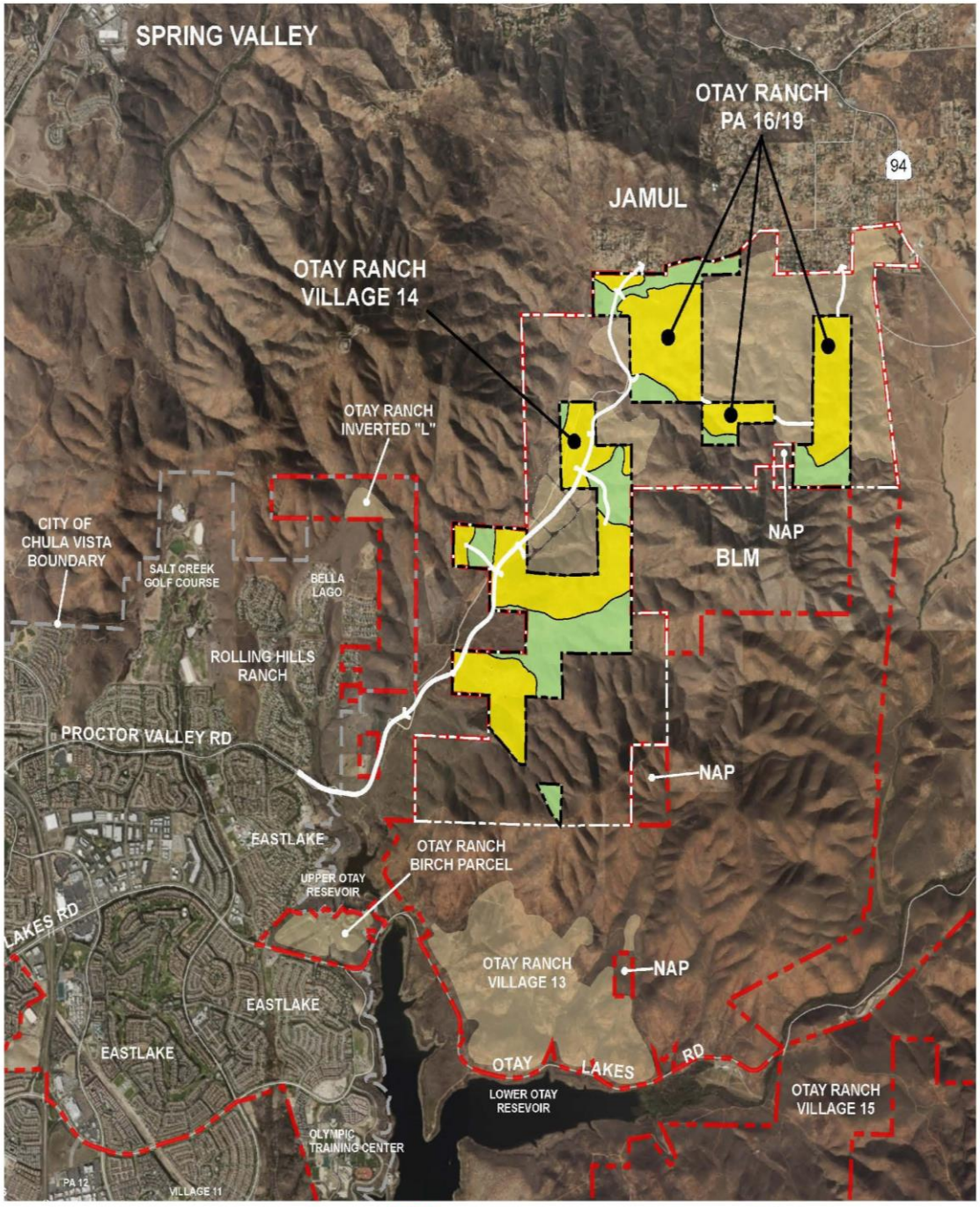

DUDEK

SOURCE: Hunsaker 2017

FIGURE 1-4
Surrounding Land Uses

Otay Ranch Village 14 and Planning Areas 16/19

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Approximately 994 homes would be located in Village 14 set in three distinct areas (referred to herein as South Village 14, Central Village 14, and North Village 14). Of these homes, 878 would be single-family homes located in gated enclaves and 116 would be detached courtyard homes. A total of 12 neighborhoods are planned, with approximate densities ranging from 0.2 to 10.0 dwelling units per acre. Otay Ranch Village 14 is planned around a centrally located Village Core. The Village Core would be composed of a 9.7-acre elementary school, a 7.2-acre Village Green (public park), a 1.7-acre mixed-use site with up to 10,000 square feet of commercial/retail uses, and a 2.3-acre public safety site for a fire station and satellite sheriff's facility. Additional public and private parks, swim clubs, trails, and recreational facilities would be situated throughout South, Central, and North Village 14.

In addition to the homes in Village 14, there would be 13 one-acre average-sized estate lots in Planning Area 19 and 112 three-acre average sized ranchettes in Planning Area 16. Planning Areas 16/19 neighborhoods would not be gated. The LDA may include public infrastructure and/or be conserved within private lots with a conservation easement. See Tables 1-3 and 1-4 for detailed land uses in Planning Areas 16/19.

The Proposed Project is designed around an active lifestyle and wellness recreation theme and would include a park and recreation system with four public parks totaling approximately 15.2 acres. The remaining private recreation facilities would include three private swim clubs and numerous pocket parks totaling approximately 9.5 acres. An approximately 4.5-mile, 10-foot-wide decomposing granite Community Pathway is proposed along Proctor Valley Road from Chula Vista to Jamul. The Proposed Project would include approximately 27.6 acres of open space (exclusive of the 110.1 acres of open space included in the residential gross acres), 127.1 acres of LDA, and 426.7 acres of Otay Ranch RMP Preserve within the applicant's ownership. Of note, there is approximately 72.4 acres of Conserved Open Space within the Proposed Project that would be conserved by recording a biological open space easement.

Circulation and Access

Regional access to Otay Ranch Village 14 would be provided by State Route 125, located approximately 3 miles to the west. Interstate 805, approximately 8 miles to the west, would provide secondary north/south access. State Route 54, located approximately 6 miles to the northwest, connects to State Route 125 and Interstate 805, and provides regional east/west access. State Route 94, located approximately 3 miles to the northeast, would provide access from the east through the Jamul community.

Proctor Valley Road would provide the main access to the Proposed Project. Four roundabouts in Village 14 and one roundabout in Planning Areas 16/19 would identify the entrance into each

residential area and provide traffic calming at key internal intersections. The internal circulation plan also includes a series of collectors and residential streets to provide access to the residential neighborhoods, with Planning Areas 16/19 designed to County Rural Road standards. A secondary access to the easternmost portion of Planning Area 16 is the planned extension of existing Whispering Meadows Lane.

Proctor Valley Road is planned as a two-lane Mobility Element road and is designated as a scenic corridor. The northern connection of Otay Ranch Village 14 to the community of Jamul would remain substantially in the alignment of the existing partially improved Proctor Valley Road and would be paved to provide public access and secondary emergency access for the Proposed Project and for the community of Jamul.

Public Services

A recap of public services is provided below.

Sewer: Capacity would be provided by the County through annexation into the County Sanitation District. Sewer transportation would be provided by conveying flows to the Salt Creek Interceptor located in the City of Chula Vista, pursuant to agreements between the City of Chula Vista and the County. Sewer would be provided to Village 14 and Planning Areas 16/19 per the Otay Ranch GDP/SRP and the adopted agreements. The Proposed Project would include sewer trunk line extensions and pump or lift stations.

Water: The Proposed Project is located within the Otay Water District boundary and is already accommodated for in the Otay Water District Water Resources Master Plan. A 980-pressure zone water tank adjacent to Central Village 14 is planned for the site. The Proposed Project would include water transmission lines, a 980 reservoir, and pump stations.

Law Enforcement: The County Sheriff's office would provide law enforcement services and would have a storefront facility co-located with the fire station at the public safety site in the Village Core.

Fire: Fire service would be provided by the San Diego County Fire Authority from a fire station built in the Proposed Project's public safety site in the Village Core.

Stormwater/Drainage: Biofiltration basins are planned.

Schools: Village 14 is planned to be served by the Chula Vista Elementary School District and Sweetwater Union High School District. Planning Areas 16/19 is planned to be served by the Jamul/Dulzura Union School District and Grossmont High School District, as prescribed in the

adopted Otay Ranch GDP/SRP Facility Implementation Plan (City of Chula Vista and County of San Diego 1993b) and consistent with County Board of Supervisors Policy I-109, Policy II.

Options

The Proposed Project includes three options for internal circulation: the Proctor Valley Road North Option, the Preserve Trails Option, and the Perimeter Trail Option. The Proposed Project's EIR assesses each of these options and its respective impacts. This will allow the County to select the option (or combination of options) it considers best for the Proposed Project and the environment. Each of the options is summarized below. For detailed descriptions with exhibits, see the Proposed Project's Specific Plan (RH Consulting 2018, Section VIII, Internal Circulation Options).

Proctor Valley Road North Option. The Proctor Valley Road North Option applies to the portion of Proctor Valley Road from Street AA in North Village 14 to Echo Valley Road, and includes two dedicated bike lanes (one on each side of the road) instead of the "sharrows" proposed (i.e., road markings that guide bicyclists to bike routes between neighborhoods and alert motorists to the presence of bicyclists within the shared travel lane) in Street Section 10 of the Proposed Project. Generally, the Proctor Valley Road North Option would increase the right-of-way width from 40 feet to 64 feet starting from the intersection of Street AA northward to the applicant's Village 14 ownership boundary; from 40 feet to 48 feet within the off-site improvement area owned by the state; and from 40 feet to 64 feet on site within the applicant's ownership north of the state's property to Echo Valley Road.

Preserve Trails Option. The Preserve Trails Option would consist of two segments of existing, disturbed trails approximately 1 mile in length within the Project Area, east of the Development Footprint. These segments would be located within the Otay Ranch RMP Preserve. The Preserve Trails Option would include segments "A" and "B" as identified in the Otay Ranch GDP/SRP, which are also identified as segments 52 and 49 in the County of San Diego's Community Trails Master Plan (County of San Diego 2005). Segment "A"/"52" is 2,350 lineal feet, located at the northern terminus of the Proctor Valley Community Pathway and extending east through the on-site Otay Ranch RMP Preserve to the eastern edge of the Echo Valley loop (Community Trails Master Plan Trail 53). Segment "B"/"49" is 2,328 lineal feet and is located between South and Central Village 14 along an existing, historic ranch road. This trail is located within the on-site Otay Ranch RMP Preserve and bisects regional wildlife corridor R1. The Preserve Trails Option would retain these portions of trails in their existing conditions, which meet the County's Community Trails Master Plan Primitive Trail standard. No improvements to these Preserve Trails are anticipated.

Perimeter Trail Option. The Perimeter Trail Option would be an approximately 3.6-mile-long perimeter trail located within the Development Footprint of South and Central Village 14. The Perimeter Trail Option is situated primarily within the Otay Ranch RMP 100-foot Preserve edge. The Perimeter Trail Option is designed to Community Trails Master Plan Primitive Trail standards, and the trail tread varies from 2 to 6 feet wide. Due to topography, trail grades range from 2% to the maximum grade allowed of 30%. The Perimeter Trail Option would require construction of approximately 19,000 lineal feet (0.7 miles) of 5- to-7-foot-high retaining walls due to steep topography and drainage constraints. The Perimeter Trail Option would be graded as part of overall Proposed Project grading, and would not encroach into the Otay Ranch RMP Preserve. The perimeter trail would be accessed at public parks and trailheads, and would be maintained by the County of San Diego.

Dudek has evaluated these options and they are discussed herein.

The area of potential effects (APE) consists of the entire Proposed Project, as defined above, and is approximately 2,348 acres. Of the 2,348 acres, approximately 1,003 acres is within Village 14, and approximately 1,345 acres is within Planning Areas 16/19. Within the APE, Proposed Project construction activities would be limited to the 1,369-acre Project Area (also referred to as the area of direct impact, or ADI), consisting of 1,283.6 acres owned by the applicant and approximately 385.4 acres of off-site improvement area. The remaining 979 acres within the APE, but outside the ADI, would be dedicated open space and would not be developed.

1.2 Existing Conditions

1.2.1 Environmental Setting

The predominant natural vegetation communities of the region are chaparral and coastal sage scrub, non-native grassland, and limited amounts of wetlands (Dudek 2018). Typical species within the coastal sage scrub community are California sagebrush (*Artemisia californica*), buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.) with laurel sumac (*Malosma laurina*). The chaparral community is typically dominated by chamise (*Adenostoma fasiculatum*), with lesser amounts of manzanita (*Arctostaphylos* spp.), white fairy-lantern (*Calochortus albus*), ceanothus (*Ceanothus* spp.), and small shrubs (Dudek 2018). Non-native grasses are generally present in greater quantities in disturbed areas, especially near Proctor Valley Road.

Mammals, birds, and reptiles within these communities provided potential food resources to prehistoric inhabitants. In the general region, much of the natural vegetation in low-lying areas has been displaced by modern land uses for grazing and orchards. However, the steep mountain

slopes harbor relatively intact, dense desert scrub and juniper woodland communities. These vegetation communities have been in place since the early Holocene when the climate became somewhat warmer and drier (Axelrod 1978).

Common animals within this area may include coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), cottontail (*Sylvilagus audubonit*), black-tailed jackrabbit (*Lepus californicus bennettii*), and brush rabbit (*Sylvilagus bachmani*), as well as a number of other species of birds, mammals, reptiles, and amphibians (Dudek 2018).

Cultural Setting

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad timeframe have led to the development of several cultural chronologies. Some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. This research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769).

Paleoindian (pre-5500 BC)

Evidence for Paleoindian occupation in Southern California is tenuous, especially considering that the oldest dated archaeological assemblages look nothing like the Paleoindian artifacts from the Great Basin. One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) derives from CA-SDI-4669/W-12, in La Jolla. A human burial from CA-SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4% probability) (Hector 2006). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of groundstone, battered cobbles, and expedient flake tools). Given the coastal bluff setting of this site, it is not surprising that its inhabitants made use of fish and shellfish taken through passive means (i.e., bone gorge and sinker fishing, shellfish gathering). There is no evidence at this site for economically significant exploitation of large game; rather, the assemblage is wholly consistent with what early researcher's termed the "Millingstone Horizon" (Wallace 1955), or "La Jolla" culture (Warren 1964, 1968).

In the Jacumba region, San Diego Gas & Electric's (SDG&E) East County Substation project uncovered more than 100 roasting pits within loosely consolidated alluvium from the surface to

more than 20 feet below the surface. Several such features had calibrated radiocarbon dates on charcoal that were older than 6,000 BC; one of these dated as old as 7,590–7,750 BC—squarely within the Paleoindian period, even by Great Basin standards (Williams et al. 2014a). These early roasting pits rarely include artifacts other than burned rocks and the occasional piece of debitage and a recycled piece of groundstone. Noticeably absent from the East County assemblage are those artifacts considered typical of Paleoindian toolkits, such as large projectile points or knives, and formed flake tools. Interestingly, the landform on which the old roasting pits were identified contained hundreds of roasting pits that spanned the Holocene in age, with radiocarbon dates reaching to just prior to Ethnohistoric times (Williams et al. 2013). However, there is no significant variability in roasting pit structure, content, or associated artifactual assemblage throughout the deposit. Together with data from specialized ethnobotanical studies that identified fragments of cactus seed, juniper seed, and yucca, the overall archaeological assemblage indicates that the area was occupied for millennia to exploit locally and seasonally abundant plants, including yucca and agave.

Aside from a few discoveries of Lake Mojave or Silver Lake projectile points, typical Paleoindian assemblages that include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of groundstone tools are not discernable in Southern California. For comparison, prime examples of "typical" pattern are sites that were studied by Emma Lou Davis (1978) on China Lake Naval Air Weapons Station near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (CA-MNO-679), which is a multicomponent fluted point site, and CA-MNO-680, which is a single component Great Basined Stemmed point site (Basgall et al. 2002). At CA-MNO-679 and CA-MNO-680, groundstone tools were rare and finely made projectile points were common.

Turning back to Southern California, the fact that some of the earliest dated assemblages are dominated by processing tools runs counter to traditional notions of mobile hunter–gatherers traversing the landscape for highly valued prey. Evidence for the latter—that is, typical Paleoindian assemblages—may have been located along the coastal margin at one time, prior to glacial desiccation and a rapid rise in sea level during the early Holocene (pre-7500 BP) that submerged as much as 1.8 kilometers of the San Diego coastline. If this were true, however, one would expect such sites to be located on older landforms near the current coastline. Some sites, such as CA-SDI-210 along Agua Hedionda Lagoon, contained stemmed points similar in form to Silver Lake and Lake Mojave projectile points (pre-8000 BP) that are commonly found at sites in California's high desert (Basgall and Hall 1990). CA-SDI-210 yielded one corrected radiocarbon date of 6520–7520 BC (8520–9520 BP) (Warren et al. 2004). However, sites of this nature are

extremely rare and cannot be separated from large numbers of milling tools that intermingle with old projectile point forms.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (CA-SDI-149) is representative of typical Paleoindian occupation in the San Diego region that possibly dates to 8,365–6,200 BC (Warren et al. 2004, p. 26). Termed San Dieguito (Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in the San Diego region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (Warren 1964, 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos' interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the San Diego region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents an economic strategy distinct from non-San Dieguito assemblages.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but less economically successful than the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, wherein hunting-related tools were replaced by processing tools during the early Holocene (Basgall and Hall 1990).

Notwithstanding sample bias in trying to refine Southern California Paleoindian sequences, the early dates associated with strikingly Archaic-looking toolkits implies that little technological variability actually existed in the last 10,000 years (Hale 2010).

Archaic (8000 BC–AD 500)

The more than 1,500-year overlap between the presumed age of Paleoindian occupations and the Archaic period (Warren et al. 2004) highlights the difficulty in defining a cultural chronology in the Southern California desert region. If San Dieguito is the only recognized Paleoindian component, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong connections between San Dieguito and the Lake Mojave complex of the Great Basin. Thus, the Archaic pattern is the earliest local socioeconomic adaptation to Southern California coastal and desert/peninsular environments (Hale 2001, 2009).

The Archaic pattern is relatively easy to define, with assemblages that consist primarily of processing tools: millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across San Diego County, from the coast past the Peninsular Range, with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurs until the bow and arrow is adopted after AD 500, and ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remains low. After the bow is adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decrease in proportion relative to expedient, unshaped groundstone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as difficult to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complemented only by the addition of the bow and ceramics.

Reasons for the rapid and early development of a generalized processing economy could have been environmental deterioration or population growth. Environmental deterioration cannot account for this occurrence, since Southern California environments have had established plant communities for much of the last 15,000 years (Axelrod 1978; Hale 2001) that varied mostly in vertical distribution. Indeed, the Pinto period seems to have thrived during the Archaic period, even if specific local manifestations are less obvious than others (Basgall et al. 2002). Population growth itself also presents a weak case as a primary agent of change because the archaeological record is either too incomplete to support such an analysis or because it implies a shift in mobility rather than population density. Archaic period sites reflect serial site occupation rather than either high residential mobility or sedentism (Basgall and True 1985; Hale 2001). The best explanation for the appearance and persistence of the Archaic pattern is that it represents a

strongly stable socioeconomic strategy tailor-made for Southern California with its rich crops of roots and tubers, seeds and nuts, and small animals.

Late Prehistoric (AD 500–1769)

The period between the Archaic period and Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2004). However, several other subdivisions continue to be used to describe various shifts in assemblage composition, including the addition of ceramics and cremation practices. In northern San Diego County, the post-AD 1450 period is called the San Luis Rey Complex (True 1980), while the same period in southern San Diego County is called the Cuyamaca Complex and is thought to extend from AD 500 until Ethnohistoric times (Meighan 1959). Rogers (1929) also subdivided the last 1,000 years into the Yuman II and III cultures, based on the distribution of ceramics and the presumed spread of Yuman-speaking groups into the Colorado Desert (Moriarty 1966, 1967). There, the Patayan pattern was defined to characterize the appearance of paddle and anvil pottery from Arizona sometime after the first-century AD (Rogers 1945; Waters 1992).

Despite these regional complexes, each is defined by the addition of arrow points and ceramics, and the widespread use of bedrock mortars. Vagaries in the appearance of the bow and arrow and ceramics make the temporal resolution of late complexes difficult, including the local Cuyamaca complex manifestation. For this reason, the term Late Prehistoric is well-suited to describe the last 1,500 years of prehistory in the San Diego region.

Temporal trends in socioeconomic adaptations during the Late Prehistoric period are poorly understood. This is partly because the fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces; bowl mortars are actually rare in the San Diego region. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred prior to AD 1400 in the San Diego region. True (1980) argued that acorn processing and ceramic use in the northern San Diego region did not occur until the San Luis Rey pattern emerged after approximately AD 1450. For southern San Diego County, the picture is less clear. The Cuyamaca Complex is most recognizable after AD 1450 (Hector 1984). Similar to True (1980), Hale (2009) argued that an acorn economy did not appear in the southern San Diego region until just prior to Ethnohistoric times, and that when it did occur, a major shift in social organization followed.

Considering eastern influences from the Colorado Desert, early agricultural practices never gained traction in California, and western Colorado Desert evidence for aboriginal agriculture is virtually non-existent, absent early ethnohistoric accounts of Fort Mojave Indians (Kroeber 1925). It is likely that the stable Archaic economy persisted into the Late Prehistoric era and absorbed the efficiencies of certain technological innovations, including the bow and arrow and ceramics. Locally, however, Tizon Brownware ceramic vessels dominate archaeological assemblages; Colorado buffware fragments are relatively rare, and could have been obtained simply through trade. Aboriginal agriculture probably hit a socioeconomic brick wall in Southern California where a stable economy focused on generalized but regular exploitation of locally abundant plant foods was simply too efficient and socially reinforced to allow a labor intensive practice of agriculture take root (Bettinger 1999; Hale 2010).

Ethnohistoric (post-AD 1769)

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the San Diego region come predominantly from European merchants, missionaries, military personnel, and explorers. These brief, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims, and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the San Diego region brought more extensive documentation of Native American communities, although these groups did not become the focus of formal, in-depth ethnographic study until the early 20th century (Bean and Shipek 1978; Boscana 1846; Fages 1937; Geiger and Meighan 1976; Harrington 1934; Kroeber 1925; Laylander 2000; Sparkman 1908; White 1963). The principal intent of these researchers was to record the precontact, culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as "salvage ethnography," was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his "memory culture" approach (Lightfoot 2005, p. 32) by recording languages and oral histories from within the San Diego region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early 20th century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities. These accounts supported, and were supported by, governmental decisions that have made San Diego County the county with the most federally recognized tribes in the United States: 18 tribes on 18 reservations that cover more than 116,000 acres (CSP 2009).

Even though there were many informants for these early ethnographies who were able to provide information from personal experiences about native life before the Europeans, a significantly large proportion of these informants were born after 1850 (Heizer and Nissen 1973); therefore, the documentation of pre-contact, aboriginal culture was being increasingly supplied by individuals born in California after considerable contact with Europeans. As Robert F. Heizer (1978) stated, this is an important issue to note when examining these ethnographies, since considerable culture change had undoubtedly occurred by 1850 among the Native American survivors of what is now California.

The traditional cultural boundaries between the Luiseño and Kumeyaay Native American tribal groups have been well defined by anthropologist Florence C. Shipek (1993; as summarized in San Diego County Board of Supervisors 2007, p. 6):

> In 1769, the Kumeyaay national territory started at the coast about 100 miles south of the Mexican border (below Santo Tomas), thence north to the coast at the drainage divide south of the San Luis Rey River including its tributaries. Using the U.S. Geological Survey topographic maps, the boundary with the Luiseño then follows that divide inland. The boundary continues on the divide separating Valley Center from Escondido and then up along Bear Ridge to the 2240 contour line and then north across the divide between Valley Center and Woods Valley up to the 1880-foot peak, then curving around east along the divide above Woods Valley.

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007). Because the Project Area is located south of the San Diego River, the Native American inhabitants of the region would have used the Tipai language subgroup of the Yuman language group. Ipai and Tipai, spoken respectively by the northern and southern Kumeyaay communities, are mutually intelligible. For this reason, these two are often treated as dialects of a larger Kumeyaay tribal group rather than as distinctive languages, although this has been debated (Laylander 2010; Luomala 1978).

Victor Golla suggests that there are two language families associated with Native American groups that traditionally lived throughout the San Diego County region. The northern San Diego tribes have traditionally spoken Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007:74). These groups include the Luiseño, Cupeño, and Cahuilla. Golla has interpreted the amount of internal diversity within these communities to reflect a “time depth” of

approximately 2,000 years. Other researchers have contended that Takic may have diverged from Uto–Aztecan ca. 2600 BC–AD 1, which was then followed by diversification within the Takic-speaking San Diego tribes, occurring at approximately 1500 BC–AD 1000 (Laylander 2010). The majority of Native American tribal groups in the southern San Diego region have traditionally spoken Yuman languages, a subgroup of the Hokan Phylum.

Golla has suggested that the time depth of Hokan is approximately 8,000 years (Golla 2007). The Kumeyaay tribal communities share a common language group with the Cocopa, Quechan, Maricopa, Mojave, and others to east, and the Kiliwa to the south. The time depth for both the Ipai (north of the San Diego River, from Escondido to Lake Henshaw) and the Tipai (south of the San Diego River, the Laguna Mountains through Ensenada) is approximated to be 2,000 years at the most. Laylander has contended that previous research indicates a divergence between Ipai and Tipai to have occurred at approximately AD 600–1200 (Laylander 1985). Despite the distinct linguistic differences between the Takic-speaking tribes to the north, the Ipai-speaking communities in central San Diego, and the Tipai-speaking southern Kumeyaay, attempts to illustrate the distinctions between these groups based solely on cultural material have had only limited success (Pigniolo 2004; True 1966).

The Kumeyaay generally lived in smaller family subgroups that inhabited two or more locations over the course of the year. Although less common, there is sufficient evidence that there were also permanently occupied villages, and that some members may have remained at these locations throughout the year (Owen 1965; Shipek 1982, 1985; Spier 1923). Each autonomous tribelet was internally socially stratified, commonly including higher-status individuals such as a tribal head (*Kwaaypay*), shaman (*Kuseyaay*), and general members with various responsibilities and skills (Shipek 1982). Higher-status individuals tended to have greater rights to land resources, and owned more goods, such as shell money and beads, decorative items, and clothing. To some degree, titles were passed along family lines; however, tangible goods were generally ceremonially burned or destroyed following the deaths of their owners (Luomala 1978). Remains were cremated over a pyre and then relocated to a cremation ceramic vessel that was placed in a removed or hidden location. A broken metate was commonly placed at the location of the cremated remains, with the intent of providing aid and further use after death. Often, at reaching adulthood, tribal members left to other bands to find a partner. Families formed networks of communication and exchange around such partnerships.

Areas or regions identified by known physical landmarks could be recognized as band-specific territories that might be violently defended against use by other members of the Kumeyaay. Water sources and other locations that were rich in natural resources were generally understood to be communal land to be shared among all the Kumeyaay (Loumala 1978). The coastal Kumeyaay exchanged a number of local goods, such as seafood, coastal plants, and various types

of shell, for items including acorns, agave, mesquite beans, gourds, and other more inland plants (Luomala 1978). Although evidence for limited marine resource use exists in inland areas, terrestrial animals and other resources would have provided a much larger portion of sustenance. Game animals consisted of rabbits, hares (*Leporidae*), birds, ground squirrels, woodrats (*Neotoma*), deer, bears, mountain lions (*Puma concolor*), bobcats (*Lynx rufus)*, coyotes (*Canis latrans*), and others. In lesser numbers, reptiles and amphibians may have been consumed.

A number of local plants were used for food and medicine. These were exploited seasonally, and were both traded between regional groups and gathered as a single tribelet moved between habitation areas. Some of the more common of these that might have been procured locally or at higher elevations would have included buckwheat, *Agave*, *Yucca*, lemonade berry (*Rhus integrifolia*), sugar brush (*Rhus ovata*), sage scrub (*Artemisia californica*), yerba santa (*Eriodictyon*), sage (*Salvia*), *Ephedra*, prickly pear (*Opuntia*), mulefat (*Baccharis salicifolia*), chamise (*Adenostoma fasciculatum*), elderberry (*Sambucus nigra*), oak (*Quercus*), willow (Salix), and *Juncus* grass, among many others (Wilken 2012).

The Historic Period (post-AD 1542)

European activity in the region began as early as AD 1542, when Juan Rodríguez Cabrillo landed in San Diego Bay. Sebastián Vizcaíno returned in 1602, and it is possible that there were subsequent contacts that went unrecorded. These brief encounters made the local native people aware of the existence of other cultures that were technologically more complex than their own. Epidemic diseases may also have been introduced into the region at this early date, either by direct contact with the infrequent European visitors or through waves of diffusion emanating from native peoples farther to the east or south (Preston 2002). It is possible, but as yet unproven, that the precipitous demographic decline of native peoples had already begun prior to the arrival of Gaspar de Portolá and Junípero Serra in 1769.

Spanish colonial settlement was initiated in 1769, when multiple expeditions arrived in what is now San Diego by land and sea, and then continued northward through the coastal plain toward what is now Monterey. A military presidio and a mission to deal with the local Kumeyaay and Ipai were soon firmly established in present-day San Diego, despite violent resistance to them from a coalition of native communities in 1776. Private ranchos subsequently established by Spanish and Mexican soldiers, as well as other non-natives, appropriated much of the remaining coastal or near-coastal locations (Pourade 1960–1967). Numerous land grants were established in what would become southern San Diego County. These included Janal and Otay, located just south of Proctor Valley, as well as Jamul to the east and Jamacha to the northwest.

Mexico's separation from the Spanish empire in 1821 and the secularization of the California missions in the 1830s caused further disruptions to native populations in the western San Diego County area. Some former mission neophytes were absorbed into the work forces on the ranchos, while others drifted toward the urban centers in the areas of San Diego and Los Angeles, or moved to the eastern portions of the county where they were able to join still largely autonomous native communities. United States conquest and annexation of parts of California that once belonged to Mexico, together with the gold rush in Northern California, brought many additional outsiders into the region. Development during the following decades was fitful, undergoing cycles of boom and bust.

Proctor Valley has remained relatively uninhabited through to the present day. The lower elevations of the valley have served primarily as grazing land for nearby cattle ranchers, with little permanent occupation.

1.2.2 Records Search Results

An initial records search was conducted by staff at the South Coastal Information Center (SCIC) at San Diego State University in advance of the intensive pedestrian survey for the Proposed Project. Dudek staff performed an in-house records search of SCIC records in November 2016 for the APE and a 1-mile radius around the APE. The second records search was used to ensure that no new resources had been identified after the pedestrian survey performed by Brian F. Smith and Associates (BFSA) (Confidential Appendix A). Records search documents can be found in Confidential Appendix B.

Nine previous reports have addressed areas within a 1-mile radius of the APE. All nine of the previous cultural reports address all or a portion of the APE (Table 1-6).

The records searches indicate 94 cultural resources were previously recorded within the records search area. Of these, eight are located outside the APE, 33 are within the APE (but outside of the ADI), and 53 are located within the ADI. These previously recorded resources consist of 73 archaeological sites, 15 isolates, and six historic structures (Table 1-7).

Table 1-6
Previous Cultural Resource Investigations Performed Within 1 Mile of the APE

Author	Year	NADB #	Title
May, Ron	1991	1122251	*Otay Survey*
Ogden Environmental and Energy Services Co. Inc.	1992	1124657	*Draft Program Environmental Impact Report, Otay Ranch*

Table 1-6
Previous Cultural Resource Investigations Performed Within 1 Mile of the APE

Author	Year	NADB #	Title
Carrico, Richard	1993	1122690	*Final Cultural Resources Evaluation of the 23,088 Acre Otay Ranch, San Diego County*
Chace, Paul G.	1980	1120496	*The Archaeology of Rancho San Miguel Estates, San Diego County*
Bein, Robert	1986	1122040	*Supplemental Environmental Impact Report for The Rancho San Miguel Estates Specific Plan SCH #85112030*
Graves Engineering Inc.	1990	1124856	*Draft Supplemental Environmental Impact Report for the Hidden Valley Estates Specific Plan*
Graves Engineering Inc.	1990	1124866	*Draft Specific Plan for the Hidden Valley Estates*
Townsend, Jan	1984	1123836	*Southwest Powerlink Cultural Resources Management Plan*
Wirth Associates Inc.	1981	1121588	*Miguel to Mountain Springs Grade (Jade) Archaeological Survey Report*

NADB = National Archeological Database

Table 1-7
Previously Recorded Cultural Resources Located Within the Records Search Area

Resource Number	Period	Type	Dimensions (meters)	Location
CA-SDI-6694	Prehistoric	Lithic Scatter	20 x 20	Outside APE
CA-SDI-6695A/B	Multi-component	Lithic Scatter; Historic Rock Feature and Habitation	600 x 500	Within ADI
CA-SDI-6965	Historic	Historic Habitation	300 x 250	Within APE
CA-SDI-8086A/B/C	Prehistoric	Bedrock Milling; Lithic Scatter	7 x 7 / 60 x 40	A: Within APE B: Within APE C: Within ADI
CA-SDI-11392	Multi-component	Lithic Scatter; Adobe Structure	30 x 30	Outside APE
CA-SDI-11394	Prehistoric	Bedrock Milling; Quarry	100 x 100	Within ADI
CA-SDI-11395	Prehistoric	Lithic Scatter	50 x 50	Within APE
CA-SDI-11396	Multi-component	Lithic Scatter; Historic Ranch Complex	200 x 200	Within ADI
CA-SDI-11397	Prehistoric	Lithic Scatter	100 x 300	Within ADI
CA-SDI-11398	Multi-component	Lithic Scatter; Historic Foundation and Features	5 x 5	Within APE
CA-SDI-11399	Multi-component	Lithic Scatter; Historic Foundation and Features	175 x 150	Within ADI
CA-SDI-11400	Prehistoric	Lithic Scatter	5 x 5	Outside APE
CA-SDI-11401	Prehistoric	Lithic Scatter	10 x 10	Within ADI
CA-SDI-11411	Multi-component	Bedrock Milling; Historic Refuse	20 x 20	Within APE

Table 1-7
Previously Recorded Cultural Resources Located Within the Records Search Area

Resource Number	Period	Type	Dimensions (meters)	Location
CA-SDI-11416	Historic	Stone Wall	2 x 2	Outside APE
CA-SDI-11417	Multi-component	Bedrock Milling; Lithic Scatter; Historic Structure	200 x 75	Within ADI
CA-SDI-11418	Historic	Historic Camp	75 x 70	Within APE
CA-SDI-11421	Historic	Historic Foundations	20 x 20	Within ADI
CA-SDI-11422	Historic	Historic Structure and Refuse	85 x 80	Within APE
CA-SDI-12313	Prehistoric	Lithic Scatter	10 x 5	Within ADI
CA-SDI-12314	Prehistoric	Sparse Quarry	50 x 50	Within ADI
CA-SDI-12315	Prehistoric	Sparse Lithic Scatter	60 x 30	Within ADI
CA-SDI-12316	Prehistoric	Lithic Scatter	15 x 5	Within ADI
CA-SDI-12317	Prehistoric	Sparse Quarry	300 x 50	Within ADI
CA-SDI-12318	Historic	Historic Rock Foundation	5 x 5	Within ADI
CA-SDI-12319	Prehistoric	Lithic Scatter	15 x 10	Within ADI
CA-SDI-12320	Prehistoric	Sparse Quarry	300 x 150	Within ADI
CA-SDI-12321	Prehistoric	Sparse Lithic Scatter	45 x 20	Within APE
CA-SDI-12322	Prehistoric	Lithic Scatter	8 x 5	Within ADI
CA-SDI-12323	Historic	Historic Rock Feature	20 x 10	Within APE
CA-SDI-12324	Prehistoric	Sparse Lithic Scatter	25 x 25	Within ADI
CA-SDI-12325	Prehistoric	Habitation Site	250 x 150	Outside APE
CA-SDI-12326	Prehistoric	Lithic Scatter	20 x 20	Within APE
CA-SDI-12327	Prehistoric	N/A	30 x 20	Outside APE
CA-SDI-12328	Multi-component	Rock Feature; Lithic Scatter	100 x 100	Within ADI
CA-SDI-12329	Prehistoric	Lithic Scatter	30 x 20	Within ADI
CA-SDI-12330	Prehistoric	Lithic Scatter	10 x 10	Within ADI
CA-SDI-12331	Prehistoric	Bedrock Milling; Lithic Scatter	250 x 75	Within APE
CA-SDI-12332	Prehistoric	Lithic Scatter	120 x 100	Within ADI
CA-SDI-12333	Prehistoric	Lithic Scatter	10 x 10	Within ADI
CA-SDI-12334	Prehistoric	Habitation Site	75 x 40	Within APE
CA-SDI-12335	Prehistoric	Lithic Scatter	10 x 10	Within ADI
CA-SDI-12373	Prehistoric	Lithic Scatter; Bedrock Milling	75 x 200	Within ADI
CA-SDI-12374	Prehistoric	Quarry	20 x 20	Within APE
CA-SDI-12375	Prehistoric	Lithic Scatter	120 x 40	Within APE
CA-SDI-12376	Historic	Historic Cairn	1 x 1	Within APE

Table 1-7
Previously Recorded Cultural Resources Located Within the Records Search Area

Resource Number	Period	Type	Dimensions (meters)	Location
CA-SDI-12377	Prehistoric	Quarry	150 x 600	Within ADI
CA-SDI-12378	Prehistoric	Lithic Scatter; Quarry	125 x 100	Within ADI
CA-SDI-12379	Prehistoric	Lithic Scatter	80 x 40	Within ADI
CA-SDI-12380	Multi-component	Lithic Scatter; Historic Rock Feature	100 x 60	Within ADI
CA-SDI-12381	Prehistoric	Bedrock Milling	15 x 5	Within ADI
CA-SDI-12382	Multi-component	Lithic Scatter; Historic Rock Feature	150 x 40	Within ADI
CA-SDI-12383	Prehistoric	Lithic Scatter	120 x 20	Within ADI
CA-SDI-12384	Prehistoric	Bedrock Milling	100 x 70	Within ADI
CA-SDI-12385	Prehistoric	Bedrock Milling	50 x 30	Within ADI
CA-SDI-12386	Prehistoric	Lithic Scatter	100 x 75	Within APE
CA-SDI-12387	Prehistoric	Lithic Scatter	20 x 20	Within APE
CA-SDI-12388	Prehistoric	Lithic Scatter	20 x 10	Within APE
CA-SDI-12389	Prehistoric	Bedrock Milling	150 x 50	Within APE
CA-SDI-12390	Prehistoric	Lithic Scatter	120 x 50	Within APE
CA-SDI-12391	Prehistoric	Bedrock Milling	40 x 20	Within ADI
CA-SDI-12392	Prehistoric	Lithic Scatter; Bedrock Milling	40 x 40	Within ADI
CA-SDI-12393	Multi-component	Lithic Scatter; Historic Rock Feature	40 x 40	Within APE
CA-SDI-12394	Prehistoric	Bedrock Milling	5 x 5	Within APE
CA-SDI-12395	Historic	Historic Refuse and Rock Feature	50 x 30	Within APE
CA-SDI-12396	Historic	Historic Rock Feature	300 x 20	Within ADI
CA-SDI-12397	Prehistoric	Lithic Scatter; Milling; Quarry	150 x 150	Within APE
CA-SDI-12398	Prehistoric	Lithic Scatter; Milling; Quarry	300 x 150	Within APE
CA-SDI-12635	Prehistoric	Lithic Scatter	40 x 30	Within APE
CA-SDI-12937	Prehistoric	Habitation Site; Milling; Artifacts	150 x 130	Within APE
P-37-014834	Prehistoric	Isolate	N/A	Within ADI
P-37-015033	Prehistoric	Isolate	N/A	Within ADI
P-37-015035	Prehistoric	Isolate	N/A	Within ADI
P-37-015036	Prehistoric	Isolate	N/A	Within ADI
P-37-015037	Prehistoric	Isolate	N/A	Within APE
P-37-015038	Prehistoric	Isolate	N/A	Within ADI
P-37-015039	Prehistoric	Isolate	N/A	Within APE
P-37-015040 (CA-SDI-21924)	Prehistoric	Isolate	N/A	Within ADI

Table 1-7
Previously Recorded Cultural Resources Located Within the Records Search Area

Resource Number	Period	Type	Dimensions (meters)	Location
P-37-015041	Prehistoric	Isolate	N/A	Within ADI
P-37-015042	Prehistoric	Isolate	N/A	Within ADI
P-37-015043 (CA-SDI-21925)	Prehistoric	Isolate	N/A	Within ADI
P-37-015053	Prehistoric	Isolate	N/A	Within APE
P-37-015055	Prehistoric	Isolate	N/A	Within APE
P-37-015056	Prehistoric	Isolate	N/A	Within APE
P-37-015057	Prehistoric	Isolate	N/A	Within APE
P-37-015058	Prehistoric	Isolate	N/A	Within APE
P-37-015059	Prehistoric	Isolate	N/A	Within ADI
P-37-015060	Prehistoric	Isolate	N/A	Within ADI
P-37-026522	Historic	Historic Structure	65 x 60	Within ADI
P-37-026523	Historic	Historic Structure	50 x 50	Outside APE
P-37-026524	Historic	Historic Structure	100 x 90	Within ADI
P-37-026525	Historic	Historic Structure	40 x 30	Within APE
P-37-026526	Historic	Historic Structure	45 x 40	Within APE
P-37-026532	Historic	Historic Structure	25 x 20	Outside APE

1.3 Applicable Regulations

Cultural resource regulations that apply to the Project Area are the Otay Ranch RMP, the local register, CEQA, and provisions for the California Register of Historical Resources (CRHR). Within this framework, historic and archaeological districts, sites, buildings, structures, and objects are assigned significance based on their exceptional value or quality in illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance.

1.3.1 State Level Regulations

CEQA

CEQA requires that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. The act defines historical resources as "any object, building, structure, site, area, or place that is historically significant in the architectural, engineering, scientific, economic, agricultural, educational,

social, political, military, or cultural annals of California" (Division I, Public Resources Code, Section 5021.1[b]).

Lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a Proposed Project's impacts to historical resources. Mitigation of adverse impacts is required if the Proposed Project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) is considered to materially impair the resource's significance. The CRHR is used in the consideration of historical resources relative to significance for purposes of CEQA. The CRHR includes resources listed in, or formally determined eligible for listing in, the National Register of Historic Places (NRHP) and some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory, may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise. CEQA significance criteria are modeled after those identified in Section 106.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (Public Resources Code Section 5024.1, Title 14 CCR, Section 4852), which consist of the following:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; or
- Is associated with the lives of persons important in our past; or
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

In the event that Native American human remains or related cultural material are encountered, Section 15064.5(e) of the State CEQA Guidelines (as incorporated from Public Resources Code Section 5097.98) and Health and Safety Code Section 7050.5 define the subsequent protocol. In the event of the accidental discovery or recognition of any human remains, no further

disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. If the remains are determined to be of Native American origin, the Coroner shall contact the Native American Heritage Commission (NAHC) who would identify the Most Likely Descendant (MLD). The property owner or their representative is required to consult with the MLD to determine the proper treatment and disposition of the human remains. The MLD may make recommendations to the property owner or their representative, or the person responsible for the excavation work, for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98 (California Code of Regulations, Title 14; Chapter 3; Article 5; Section 15064.5(e)).

Native American Consultation (Senate Bill 18, Assembly Bill 52)

California Assembly Bill (AB) 52, which took effect July 1, 2015, establishes a consultation process between California Native American Tribes and lead agencies to address tribal concerns regarding project impacts to "tribal cultural resources" (TCR) and mitigation for such impacts. Public Resources Code section 21074(a) defines TCR and states that a project that has the potential to cause a substantial adverse change to a TCR is a project that may have an adverse effect on the environment. A TCR is defined as a site, feature, place, cultural landscape, sacred place, and object with cultural value to a California Native American tribe that is either:

- Listed or eligible for listing in the CRHR or a local register of historical resources, or
- Determined by a lead agency to be a TCR.

The Local and Tribal Intergovernmental Consultation process, embodied in Senate Bill (SB) 18, was signed into law in September of 2004 and took effect on March 1, 2005. SB 18 establishes responsibilities for local governments to contact, provide notice to, refer plans to, and consult with California Native American Tribes. The purpose of this consultation process is to protect the identity of the cultural place and to develop appropriate and dignified treatment of the cultural place in any subsequent project. The consultation is required whenever a general plan, specific plan, or open space designation is proposed for adoption or to be amended. As part of the application process, California Native American Tribes must be given the opportunity to consult with the lead agency for the purpose of preserving, mitigating impacts to, and identifying cultural places.

The County is in the process of conducting formal consultation with Native American tribes under both SB 18 and AB 52 for this project. The results of those consultation efforts will be included in subsequent drafts of this report.

1.3.2 San Diego County Local Register of Historical Resources

The County maintains a local register that was modeled after the CRHR. Significance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, or culture. Any resource that is significant at the national or state level is by definition also significant at the local level. The criteria for eligibility for the local register are comparable to the criteria for eligibility for the CRHR and NRHP, but significance is evaluated at the local level. Local register criteria include the following:

- Resources associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;
- Resources associated with the lives of persons important to our past, including the history of San Diego and its communities;
- Resources that embody the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represent the work of an important creative individual, or possesses high artistic values; or
- Resources that have yielded or may be likely to yield, information important in prehistory or history.

Districts are significant resources if they are composed of integral parts of the environment that collectively (but not necessarily as individual elements) are exceptional or outstanding examples of prehistory or history.

The County also treats human remains as "highly sensitive." They are considered significant if interred outside a formal cemetery. Avoidance is the preferred treatment.

Under County guidelines for determining significance of cultural and historical resources, any site that yields information or has the potential to yield information is considered a significant site (County of San Diego 2007a: 16). Unless a resource is determined to be "not significant" based on the criteria for eligibility described above, it would be considered a significant resource. If it is agreed to forego significance testing on cultural sites, the sites will be treated as significant resources and must be preserved through Proposed Project design (County of San Diego 2007a:19).

1.3.3 Otay Ranch RMP

The County and the City of Chula Vista adopted the Otay Ranch RMP (City of Chula Vista and County of San Diego 2015) for the entirety of the approximately 23,000-acre Otay Ranch to function as the equivalent protective measure to the County's Resource Protection Ordinance (RPO) (County of San Diego 2007c). Although the RPO is implemented on a project-by-project basis, the Otay Ranch RMP provides a guiding document for the long-term, phased construction of Otay Ranch and is implemented on a continual basis. Otay Ranch projects are specifically exempted from the County RPO (County of San Diego 2007c, Article V, Section 9) if they are consistent with the Otay Ranch RMP.

Phase I of the Otay Ranch RMP requires the identification of sensitive biological, cultural, paleontological, and scenic resources within Otay Ranch and the identification of a preserve to protect the most sensitive resources, as well as establishes objective, policies, and guidelines for the preservation of said resources. Phase II of the Otay Ranch RMP is more directed, requiring resource specific studies to implement the policies of Otay Ranch RMP Phase I.

Policies 1.3 and 2.12 refer specifically to cultural resources. Policy 1.3(A/B/C) requires cultural resource surveys under the following guidelines (City of Chula Vista and County of San Diego 2015):

- Survey of the remaining unsurveyed area within each parcel shall be completed at the site of the first SPA approval.
- Following completion of the systematic survey, sites recommended for testing within SPAs shall be tested on a SPA-by-SPA basis for their importance pursuant to CEQA.
- The testing program shall be conducted in accordance with County of San Diego Guidelines on a SPA-by-SPA basis.

Policy 2.12 requires preservation of significant cultural resources (City of Chula Vista and County of San Diego 2015). Potential impacts to sites that meet the significance definition under the RPO must be assessed and mitigation measures will be implemented. Avoidance is the preferred mitigation, however, capping, landscaping, or other measures may be used, as appropriate. For sites that do not meet the RPO significance threshold, but are significant under CEQA, data recovery and salvage may be appropriate.

2 GUIDELINES FOR DETERMINING IMPACT SIGNIFICANCE UNDER CEQA

2.1 CEQA Guidelines

According to CEQA Guidelines (Section 15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA defines a substantial adverse change:

- Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- The significance of an historical resource is materially impaired when a project:
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Demolishes or materially alters in an adverse manner those physical characteristics of a tribal cultural resource that convey its cultural significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of CEQA applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

- When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).

- If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
- If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) and (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

- The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5); and
- The requirements of CEQA and the Coastal Act.

Section 21074 applies to effects to tribal cultural resources. AB 52 creates a new category of environmental resources that must be considered under CEQA: "tribal cultural resources." AB 52 is applicable to a project for which a Notice of Preparation is filed on or after July 2015. AB 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. "Tribal cultural resources" are defined as either (1) "sites, features, places cultural landscapes, sacred places and objects with cultural value to a California Native American tribe" that are included in the state

register of historical resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the state register.

2.2 County CEQA Guidelines

According to the County's Guidelines (County of San Diego 2007a: 21–22), any of the following will be considered a potentially significant impact to cultural resources:

1. The project causes a substantial adverse change in the significance of a historic resource as defined in Section 15064.5 of the State CEQA Guidelines. This shall include the destruction, disturbance or any alteration of characteristics or elements of a resource that cause it to be significant, in a manner not consistent with the Secretary of Interior Standards.
2. The project causes a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.
3. The project disturbs any human remains, including those interred outside of formal cemeteries.
4. The project proposes activities or uses damaging to significant causes a substantial adverse change in the significance of a tribal cultural resources as defined under CEQA Section 21074.

Guidelines 1 and 2 are derived directly from CEQA. Sections 21083.2 of CEQA and 15064.5 of the State CEQA Guidelines recommend evaluating historical and archaeological resources to determine whether or not a proposed action would have a significant effect on unique historical or archaeological resources. Guideline 3 is included because human remains must be treated with dignity and respect and CEQA requires consultation with the "Most Likely Descendant" as identified by the Native American Heritage Commission (NAHC) for any project in which human remains have been identified. Guideline 4 is included because Tribal Cultural Resources are important to local Native American communities and may include sacred sites and traditional use areas that have been used over multiple generations.

All discretionary projects are required to conform to applicable County standards related to cultural resources. These include the Otay Ranch (SRP), as well as requirements listed in the Zoning Ordinance, General Plan, and the Grading, Clearing and Watercourses Ordinance

(Section 87.429). Non-compliance would result in a project that is inconsistent with County standards, which is itself a significant impact under CEQA.

3 RESEARCH DESIGN

The objective of the evaluation portion of this Proposed Project was to obtain archaeological assemblage data that could be used to evaluate historical significance under CEQA and County guidelines. The following discussion identifies potential questions and appropriate archaeological evidence within a series of broad research themes that derive from theory about human behavior and ecology. General issues pertinent to the assessment of the sites include determination of the extent and integrity of cultural deposits, age, cultural affiliation, site function, and subsistence. Given the extensive research completed at archaeological sites in the local area, this research design has been developed to address the kinds of resources identified during the inventory completed for this Proposed Project, and to build on the extensive research completed at archaeological sites in the local area. Notably, this research design considers only the most basic historic themes since no historic refuse dumps or artifact scatters were identified in the ADI, and it is unlikely that they would be found inadvertently during excavations at prehistoric sites.

3.1 Integrity and Structure of Archaeological Deposits

To assess the research potential of an archaeological site, its horizontal distribution and vertical depth must be delineated. Of particular importance is the integrity of the deposits: whether or not features or surfaces are preserved and whether the potential exists for identifying horizontal and vertical spatial patterning in the evidence for prehistoric behavior.

A variety of post-depositional disturbances can greatly alter the original character of prehistoric sites (Gross and Robbins-Wade 2008; Schiffer 1987; Waters 1992). Formation processes such as alluvial deposition, erosion, bioturbation, and modern disturbance can considerably affect the integrity of archaeological sites. Here, attempts are made to identify and interpret the processes that formed the site, with particular attention given to the character of post- depositional processes and the extent to which they have affected the integrity of the archaeological deposits.

The testing program applied to archaeological deposits within the Project Area has been used to address the following issues:

- Does the horizontal and vertical extent of the archaeological record represent continuous or discrete occupation?
- Is it possible to discern depositional versus post-depositional processes that have contributed to the present condition of the archaeological record? In other words, what are the factors, both natural and anthropogenic, that have altered the position and condition of artifacts?

- What kinds of features have been preserved (e.g., hearths, earth ovens)? Are there features that are highly disrupted by postdepositional processes but still recognizable? Can these features be associated with particular functions?
- By examining spatial patterns in the horizontal distribution of artifacts, is it possible to discern areas that were associated with specific functions? Do patterns in the vertical distribution of artifacts tell us anything about changes in the function, materials exploited, or human activities through time?
- At historical archaeological sites, is there evidence of overlapping dump episodes, such as multiple points of concentration or concentration of artifacts of a certain age?

Investigating the integrity of archaeological deposits has at its core investigation of the structure of these deposits. Human occupation can sometimes result in the development of discrete occupation areas that take advantage of particularly convenient landforms, or patches of useful resources. Indeed, such a "mapping-on" strategy is common to residentially mobile hunter-gatherers who are thought to have inhabited the region for the entire Holocene, and oftentimes produced occupational loci of concentrated habitation debris. If loci can be defined, several questions arise as to their interrelatedness:

- Is there any discernable spatial patterning within and between loci that can be used to interpret overall human occupation of the landscape?
- How can identified loci be managed considering site boundary requirements of the local California Historical Resource Information System (CHRIS) information center, and thus facilitate agency management of the resources?

3.2 Chronological Placement

Chronological issues are basic to any archaeological research design, as they provide the primary framework of prehistory. Previous research in the southern San Diego region has documented a range of prehistoric sites dating to both the Archaic (6000 BC to AD 500) and Late Prehistoric periods (post-AD 500), and more recently, even to the Paleoindian period (pre-6000 BC) with a series of roasting pits identified at SDG&E's East County Substation radiocarbon dated as early as 9,700 years BP. Data recovery and monitoring efforts at site SDI-7074 for the East County Substation project, located in southeastern San Diego County, documented more than 100 "thermal features" (e.g., earth ovens, roasting pits, hearths) having radiocarbon dates spanning much of the last 10,000 years of prehistory. The East County Subsection project documented assemblages with large numbers of crude flake and cobble tools with smaller frequencies of late Holocene markers such as arrow points and ceramics. Groundstone at that site is also somewhat common, represented by millingstones and handstones (rather than mortars and pestles). The

distribution of such artifacts was found to be widespread, but also occurred in recognizable clusters. Aside from arrow points and ceramics, the same basic toolkit of crude flake and cobble tools and groundstone characterized deposits identified more than 20 feet (7 meters) deep. To be sure, thermal features were one of the most common site constituents identified on that project—these consisting mostly of a scatter of burned rock and ash-infused sediments with low frequencies of associate artifacts and virtually no faunal bone.

Potential research issues derived from this basic problem include:

- How did the transition from the Archaic period to the Late Prehistoric period occur? This transition is characterized by shifts in (i) food storage and cooking technology with the inception of ceramics, and (ii) hunting technology with the addition of the bow and arrow. These shifts did not occur simultaneously (cf. McDonald et al. 1993), and their implications for local population expansion in the Late Prehistoric period are unknown.
- Was there a shift in emphasis of acorn use during the Late Prehistoric period? The mortar and pestle appear to have been added to the repertoire of food processing tools during the Late Prehistoric period, but in limited quantities compared to handstones (Hale 2001, 2009; Hale et al. 2010). Is there evidence for earlier use of bedrock mortars? Is the addition of the mortar and pestle correlated to the inception of ceramics in the region and/or intensified use of a particular resource?

Chronological controls are essential to any archaeological investigation to develop an understanding of temporal trends in toolkits, artifact styles, and other material patterning that can inform on human behavior. When evaluating the significance of an archaeological resource, chronological control is provides the ability to place a resource in time and assess its value for contributing to local and regional patterns in prehistory. For this reason, several other basic questions concerning the temporal data potential of evaluated sites pertain to the current study, including:

- Can the chronological placement of project sites be determined?
- What kinds of chronometric data can project sites provide? How well do they correlate in terms of the age estimates they provide (e.g., projectile point types vs. obsidian hydration dates; cans vs. bottles).
- Are there data indicating the presence of multiple occupation episodes at project sites?
- Do diagnostic artifacts appear to fit with temporal patterns recognized in the surrounding region? Are there any unique diagnostic items present?
- Can chronometric data from project sites help to refine dating schemes in the local region?

Potential chronometric evidence from the Project Area includes radiocarbon dates, obsidian hydration measurements, and diagnostic artifact forms. Radiocarbon dates are generally the most precise and reliable form of chronometric evidence, and they provide the foundation for the region's prehistoric chronology. However, obsidian hydration measurements may have a more direct cultural interpretation as they are individually less expensive to run, and they can address very late prehistoric to protohistoric time periods that cannot be distinguished through radiocarbon dating. Chronologically diagnostic artifacts include various projectile point forms and pottery, although these only define very broad time periods. Specific types or attributes of buffware ceramics may have a potential to define somewhat more precise time ranges, but that potential is not yet well established.

For historic sites, time sensitive artifacts are usually limited to items with maker's marks, specific manufacture styles, or coins. However, it is common for particular artifact to have manufacture dates that are much broader than those for another artifact class. This makes, determining the age of consumption for any given class difficult, if not impossible. For this reason, the date of refuse disposal is more pertinent for refuse deposits that are not located at homesites; and this is usually determined by the early manufacture date on the youngest artifact for each dump event. Hale et al. (2010) document a widespread pattern of dumping items of mixed manufacture and consumption age as the result of homesite cleanup and off-site dumping. If refuse deposits are located at a homesite, assessing the age of consumption for historic artifacts is an approximation based on overlapping manufacture dates, taking into account the earliest and latest possible dates. Assemblages that cannot be securely placed chronologically would be less likely to possess a significant research potential. Of course, archival research can provide direct information on the date of construction and occupancy for historic homesites and lands used for agricultural, ranching, or mining.

3.3 Settlement and Site Function

Interpretation of the study sites depends upon an assessment of their places within the larger settlement-subsistence system of their occupants. Sites belonging to functional types that are relatively ubiquitous within the region would be less likely to be considered significant than unusual site types. Sites with evidence of multiple functions may possess richer information content than relatively simple sites; on the other hand, single-function sites may have a greater research potential than multiple-function sites if the residues from the various activities at the latter cannot be effectively differentiated.

Evidence for the functional uses represented by the site come from surface observations made during both the survey and testing phases, as well as through the results of subsurface

excavations. Interpretations of functions rest upon both the range and the relative and absolute frequencies of various classes of features, artifacts, and ecofacts.

Widespread and substantial occupation during the Late Prehistoric period has been documented in the vicinity of the APE and within the greater Peninsular Ranges (Cook 1985; Hale et al. 2010; Hector 1984; McDonald et al. 1993; Meighan 1959; Williams et al. 2014b), particularly during the last 1,000 years, based on large numbers of ceramic sherds. The Late Prehistoric is a time when significant shifts in settlement and subsistence may have occurred.

While several important prehistoric sites and ethnohistoric villages have been extensively studied in the area, particularly in Otay Mesa and near San Diego Bay, the character of settlement and subsistence shifts have not been fully explored. A key variable in understanding social organization during this time is the kind of socioeconomic shifts that occurred after adoption of the bow and arrow and the subsequent widespread use of ceramics. Specific data requirements include information on arrow point manufacture, general patterns of lithic reduction, and raw material use, including the use of exotic stone. Questions to be considered include the following:

- Was arrow point production occurring at sites in the Project Area, or were points being discarded in exhausted condition?
- What does the debitage assemblage imply about the production and/or maintenance of stone tools at project sites?

Information on ceramic vessel forms and functions, and their diversity, is also critical for determining whether residential occupation was brief or prolonged. For example, data regarding the function of a vessel may help to explain whether and to what extent plant foods were exploited (Eerkens 2001). Also, evidence of clay residues and other manufacturing residues, may indicate that clay vessels were being manufactured at sites in the Project Area. Finally, the manufacture and use of groundstone implements in conjunction with the ubiquitous milling elements within the Project Area can help clarify the nature of site occupation and settlement duration. Shaped handstones and pestles can be an indication that populations are somewhat mobile, implying use in off-site contexts; the idea being that shaping can reduce mass, thereby reducing transport costs (Hale 2001).

The single most common identifying element of archaeological sites in the Project Area and surrounding region is lithic quarrying for stone tool manufacture. Therefore, data from the current Proposed Project investigation can be used to clarify local settlement. Boulders and cobbles derived from the nearby Santiago Peak Formation were quarried/collected from sites within and surrounding the Project Area. What was left behind can be as valuable for understanding prehistoric mobility as the lithic materials that were discarded at nearby non-

quarry sites. A detailed lithic analysis of all quarry and non-quarry archaeological deposits within the Project Area will help clarify local hunter-gatherer mobility. These analyses can also benefit from comparison to extensive quarry studies completed for the Otay Mesa area (McDonald et al. 1993) as well as to the east near Jacumba (Comeau and Hale 2015), or for desert pavement quarries located in the southeastern Mojave near Twentynine Palms (Giambastiani et al. 2008).

Considering historical resources, the kinds of artifacts present, the activities they represent, and their overall proportions can give some indication of where refuse originated, and why it was abandoned at its place of discard. The main question for historical archaeological sites is:

- What is the nature of refuse at historic sites? Are proportions of consumptive, household, industrial, and other artifacts substantial enough to derive context of origin(s)?
- Are any maker's marks on historic artifacts indicative of specific places of manufacture?
- Do they provide any information about where particular goods might have been purchased or otherwise obtained?

These kinds of questions are relevant for understanding the nature of historical occupation, including at homesites or agricultural facilities (i.e., field worker residential areas). Archival research helps bolster field data by documenting past historical landowners, lease holders, or residents, and by documenting historical changes in the local landscape. While it is virtually impossible to tie historic refuse deposits to residential or agricultural sites, it is possible to identify potential sources of refuse and make informed assumptions about its origin.

3.4 Subsistence

The issues related to subsistence are interwoven with the previously discussed settlement, and this section complements the issues discussed previously. Unfortunately, animal remains and invertebrate remains were noticeably lacking in the ADI. However, plant and animal remains may be recovered for sites which have not been evaluated yet. Some questions that can be addressed with these materials include:

- Are floral and faunal remains present in archaeological deposits?
- Which specific resources were exploited?
- Can changes in the emphasis on specific resources be detected and are these changes related to changes in procurement?
- Do recovered resources provide indications of seasonal harvesting or occupation of the area?

To address these issues, floral remains could be recovered from flotation of feature or midden soils, should they be encountered. Subsistence is often assessed indirectly through technology. Groundstone tools are a good indicator that plant processing occurred, while projectile points generally indicate animal exploitation. With such tools noticeably absent in the ADI, subsistence must be indirectly inferred from flake-based implements. Such inferences have been the norm in greater San Diego County since the earliest archaeological work was completed, and especially during the 1960s emphasis on investigating "Millingstone Horizon" assemblages with their abundant scraping tools (Kaldenberg 1982; Warren 1967). The robust archaeological literature compiled for the region in the decades since has helped refine assumptions about the purpose of cobble tools, making inferences about subsistence less tenuous (Buonasera 2013; Hale 2001; Kowta 1969).

As with prehistoric sites, the issues related to subsistence at historic sites are also interwoven with the previously discussed settlement organization, and this section complements the issues discussed previously.

The primary question to address at historic sites is:

- Are artifacts present that provide information on the kinds of foods consumed (i.e., food cans, glass bottles, etc.)?

The data necessary to address this issue is generally limited to the kinds of food containers and food processing items found at historical archaeological sites as well as potential food remains, such as butchered animal remains.

3.5 Prehistoric Quarrying

The Proposed Project is situated in a gently sloping valley, between two mountains formed by the Santiago Peak Volcanic Formation. The lower elevations and hillocks throughout the valley are formed by alluvial sediments which contain an abundance of cobbles derived from that formation, many of which were exploited for the production of stone tools. The commonality of cobbles deriving from the Santiago Peak geologic formation throughout the San Diego region was a draw to prehistoric hunter-gatherers seeking suitable stone for the production of stone tools. Flenniken et al. (2004), McDonald et al. (1993), and Byrd et al. (1993) completed excavations in and around the Otay Mesa region, identifying common patterns of lithic raw material exploitation and tool stone reduction. The common theme of lithic quarry research has been the identification of a cobble-core based reduction strategy that focused on splitting raw cobbles and using natural edges as platforms for driving additional raw material. This is a much more expedient strategy to the one common in lithic-poor environments or across the Great Basin in general where lithic raw materials were reduced to a certain degree at the quarry

through prepared-core reduction and transported off-site where tools were refined for specific uses (Hale 2009).

The current study may make a modest contribution to understanding lithic quarrying in general because it contains an abundance of cobbles and boulders suitable for stone tool production. While some quarry locations can be delineated by distinct geologic formations of materials, Proctor Valley appears to consist of secondary (alluvial) deposits which contain natural transported raw materials. Comparisons between these quarry types may provide information on differing procurement strategies.

Additionally, analyses of lithic quarrying within a site can help address issues of mobility and technological investment. If stone was being reduced to prepare tools or tool blanks for transport off site, the debitage assemblage should reflect that. Given the abundance of lithic raw material in Proctor Valley and the surrounding area, it is unlikely that bulky, unprepared flakes or cobbles would be transported very far if it is just as easy to opportunistically procure another cobble in transit to another location for resource procurement or processing (Bleed 1987; Hale 2001; Horsefall 1987). An analysis of remaining debitage and tested cobbles from within the Project Area would go far toward formally addressing these questions. The analysis of local prehistoric quarrying will be augmented by studies completed in adjacent regions to broaden the local perspective on hunter-gatherer settlement and resource extraction.

4 ANALYSIS OF PROJECT EFFECTS

4.1 Methods

This section describes the techniques employed to identify and evaluate archaeological resources within the Project Area. All methods exceed the Secretary of Interior's guidelines, as do all Proposed Project personnel for their respective roles.

As described in Chapter 1, prior to initiating fieldwork, pre-field research was completed consisting of a records search at the SCIC to obtain records for previously recorded cultural resources and any other relevant documentation including, but not limited to, previous cultural resources investigation reports and GIS data.

Minimally, all identified resources were recorded with a real-time corrected Trimble GeoXT GPS receiver with sub-meter accuracy. An Apple iPad equipped with the ESRI ArcGIS application was also used for mapping and navigation. Standard Department of Parks and Recreation (DPR) 523 series resource forms were used to document all resources, including updating previously recorded sites. Overall, documentation of cultural resources complied with the Office of Historic Preservation and Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 CFR 44716–44740) and the California Office of Historic Preservation Planning Bulletin Number 4(a).

4.1.1 Field Methods

Phase I Inventory

BFSA conducted an initial Phase I cultural resources inventory for this Proposed Project as documented in a letter report dated February 11, 2015 (BFSA 2015). The results of that study were documented in a letter report submitted to the Proposed Project proponent February 11, 2015, and are presented in a subsequent chapter in this report per the County's report formatting guidelines. At the time, BFSA's initial Phase I inventory addressed the initial 3,128-acre study area; the Proposed Project has since been reduced in size to the 2,354-acre APE. The BFSA letter report is included in this report as Confidential Appendix A.

For the pedestrian survey, archaeological sites were generally defined as consisting of three or more artifacts in a 25-square-meter area, or the presence of at least one feature, with sites delineated from each other by an absence of cultural materials over a distance of 30 meters (m) or so.

The pedestrian survey was conducted in less than 20 m intervals with variations in actual survey transect spacing dependent on ground visibility. Areas with dense vegetation required shorter, 10

m transect spacing and areas with excellent ground visibility at times allowed for a maximum transect width of 20 m. Transect spacing was assisted by the use of a Trimble GeoXT GPS device. The crew moved together as a team to ensure accurate transect spacing and to facilitate resource identification. Upon discovery of an artifact or feature, the entire crew stopped while the person who made the find determined what it was. Artifact concentrations and features were recorded during transect sweeps.

When recording a site, visible artifacts were marked with pin flags to delineate the approximate size and boundaries of its surface deposit. Once artifacts and features were identified, crew members recorded field notes; recorded an approximate surface artifact inventory; identified features; took site photographs; and recorded UTM coordinates of site components. Each new site was assigned a temporary resource identifier for tracking during post field data processing. No artifact collections were made during the inventory.

Phase II Archaeological Evaluation

The Phase II evaluation conducted by Dudek was directed at sites located wholly or partially in the ADI, which comprises an area of approximately 1,314 acres (Figures 4-1a and 4-1b, Cultural Resource Results Map, provided in Confidential Appendix C). Evaluation efforts were focused on the 57 cultural resources that fall within this area because none of the cultural resources located outside of the ADI would be directly or indirectly impacted by the Proposed Project as they would be preserved in open space. The 57 evaluated resources include 11 isolates, two historic structures, and 44 sites (two isolates identified in the survey were upgraded to sites, based on identification of additional artifacts during the evaluation). One of the resources, CA-SDI-12397, was not evaluated, as access to the portions of the site on CDFW-owned lands was not possible at this time. Despite the lack of access to state-owned lands, the County presumes that this site, CA-SDI-12397, is significant under Criterion 4, and mitigation measures to address this resource are presented. No information has been obtained through Native American consultation that indicates CA-SDI-12397 is significant under criteria 1, 2, or 3. Furthermore, testing efforts within each resource were conducted only within those portions of the site that fall within the ADI. Portions of cultural resources that fall outside of the ADI were not evaluated as a part of the current investigation as they would be preserved in open space.[3]

Figure 4-1a Evaluation Map (Confidential Appendix C)

[3] The ADI of the Proposed Project overlaps with the ADI of the Proctor Valley Village 14 and Preserve Project. Some sites, such as CA-SDI-12377, are partially in one ADI and partially in the other ADI. For consistency and clarity, the full extent of the evaluations performed at sites that differentially overlap the ADIs of the two projects is described herein.

Figure 4-1b Evaluation Map (Confidential Appendix C)

The methods used during this archaeological evaluation have been designed according to methods and procedures developed by Dudek and others over many years of archaeological study in Southern California, and they comply with federal and state guidelines regarding cultural resource evaluations and eligibility recommendations (Giambastiani and Basgall 2000; Hale and Becker 2006; Hale and Comeau 2010; Schaefer 1994, 2000a). Field methods and techniques are intended to maximize artifact recovery from sparse archaeological deposits, while at the same time allowing for the careful documentation, exposure, and removal of surface and subsurface features and affording a practical level of provenience control. Because many known cultural deposits consist primarily of surface manifestations, having only limited quantities of artifacts buried at shallow depths, recovery efforts must emphasize surface collection as much as subsurface testing to obtain artifact samples large enough for meaningful technological and statistical analyses. Artifact treatments focused on examining aspects of morphology, condition, technology, and function. Analytical interpretations are approached largely from a functional-materialist perspective, with patterns of artifact production, use, and discard being viewed within a framework of a socioeconomic adaptation with a utilitarian technological system.

Evaluation methods are essentially sampling methods geared toward recovering a reasonable-sized assemblage to estimate the density and diversity of the cultural deposit, and to expose enough of the site deposit to determine integrity. A general approach is described below, from surface inspection and collection to the various kinds of subsurface investigation. Considerations of site-specific methods are described next, with particular attention paid to excavation unit distribution relative to proposed areas of impact.

The first step in each site evaluation was to re-locate artifact concentrations, features, and landforms as described in the original site forms and inventory letter report. Each site was then subjected to an intensive surface survey with regular-interval sweeps of the site surface, and pin-flagging of artifacts, concentrations, and features to confirm the originally mapped items and site boundaries. This phase was made more efficient with the use of color-coded pin flags representing diagnostic artifacts, features, etc. After the site was defined with pin-flags, the artifacts were collected and their positions were recorded with a decimeter-accurate Trimble GPS unit and an iPad equipped with georeferenced Proposed Project maps.

Concentrations or areas where artifact density was relatively higher than other portions of the site were mapped and collected separately from any artifacts and materials collected at a non-specific site. Non-specific, site-wide surface collection was the minimal collection method conducted at every site where artifacts were still present. Some resources encountered in the ADI were previously collected and no additional cultural materials were noted, thus no surface collections were made.

Three types of units were used for field evaluations for the Proposed Project. All units were excavated with square corners to enable their expansion to more thoroughly explore deposits. Shovel test pits (STPs) are small; 0.5 x 0.25 m exploratory units excavated in 20-centimeter (cm) increments to depths of no more than 80 cm, and typically spaced at 10 to 20 m intervals or subjectively placed. It is Dudek's experience that excavation below 80 cm in an STP increases the probability of error in determining the depth of artifact recovery because of the extensive sidewall scraping that occurs to remove matrix at lower depths. STPs are typically used to explore the edges of cultural deposits, providing a positive-negative indication with little reliability in terms of estimating depth of cultural deposits or integrity. The second type of excavation unit—controlled surface collection (CSC)—measures 5 x 5 m and was divided into four individual 2.5 m quadrants (quadrants A to D) where all cultural materials noted on the ground surface were mapped and then collected by quadrant, with close attention paid to any specific spatial distributions found within the CSC. CSCs were placed in areas identified through both re-survey and STP excavation as having higher concentrations of artifacts, and when possible at least one CSC is placed in such concentrations. In cases where surface artifacts were present but the STPs and other units excavated strongly suggested minimal sub-surface cultural deposits, a third unit type—surface scrape units (SSU)—typically measuring 2 x 2 m to 3 x 3 m, excavated in one 10-cm level in an effort to collected the maximum artifact deposit with only minimal excavation locations where the potential for sediment accumulation was limited (e.g., areas of near-surface bedrock, or erosional surfaces). SSUs can provide plan views of shallow features not seen from the surface, as well as help determine whether surface materials are in fact a significant subsurface deposit. If substantial quantities of artifacts are uncovered and identified during STP or SSU excavation, a 1 x 1 m control unit (CU) would be used to explore the feature. CUs would typically be excavated in standard 10-cm levels. No CUs were excavated as no substantial subsurface deposits were identified.

All excavated matrix, regardless of unit type, was screened through 1/8-inch (3-mm) mesh. Typically, most of the excavation at prehistoric sites terminated between 20 and 40 cm below the surface, when either subcultural compact sediments or bedrock was typically encountered. Sediment profiles from STPs were recorded and photographed where appropriate, with small sediment samples taken for Munsell color and constituent classification. Should CUs be used at any sites not yet excavated, then sediment profiles will be drawn and photographed, as these will provide a better understanding of site formation processes and disturbances.

The sites were mapped using a Trimble Pathfinder GPS receiver with real-time correction capabilities and down to 10-cm accuracy to plot all surface artifacts, excavation units (STPs, CSCs, and SSUs), and the boundaries of any defined loci, concentrations, and features. The GPS was also used to record site boundaries, landform edges, drainages, roads, and other relevant

surface information. In addition to the mapping, a series of overview photographs were taken to show the site landscape situation and condition. Photographs were also taken of features or other site attributes when appropriate.

Table 4-1 presents levels of field effort expended at each site during the evaluation within the ADI. The variation in the numbers and kinds of excavation units per site was based on the differences in size and composition of each site.

Table 4-1
Level of Effort for Evaluated Resources within the ADI

Primary	Trinomial	Period	Dimensions (meters)	STP	CSC	SSU	CU
P-37-006695	CA-SDI-6695A[a]	Multi-component	600 x 500	3	3	0	0
	CA-SDI-6695B East[a,b]	Prehistoric	200 x 75	5	3	1	0
P-37-008086	CA-SDI-8086C (East; previously P-37-026524)[c]	Multicomponent	N/A	5	3	1	0
	CA-SDI-8086C (West; previously Temp-17)[c,d]	Multi-component	100 x 90	Avoided; not evaluated for the Proposed Project.			
P-37-011394	CA-SDI-11394	Prehistoric	100 x 100	4	0	0	0
P-37-011396	CA-SDI-11396	Multi-component	200 x 200	0	0	0	0
P-37-011397	CA-SDI-11397 East	Prehistoric	30 x 30	3	1	0	0
P-37-011399	CA-SDI-11399	Multi-component	175 x 150	3	3	0	0
P-37-011401	CA-SDI-11401	Prehistoric	10 x 10	5	0	0	0
P-37-011417	CA-SDI-11417/CA-SDI12378	Multi-component	75 x 200	10	0	0	0
P-37-011421	CA-SDI-11421	Historic	20 x 20	1	0	0	0
P-37-012313	CA-SDI-12313	P. Isolate	10 x 5	1	0	0	0
P-37-012314	CA-SDI-12314	Prehistoric	50 x 50	3	0	0	0
P-37-012315	CA-SDI-12315	Prehistoric	60 x 30	3	0	0	0
P-37-012316	CA-SDI-12316	Prehistoric	15 x 5	1	0	0	0
P-37-012317	CA-SDI-12317	Prehistoric	300 x 50	4	0	0	0
P-37-012318	CA-SDI-12318	Historic	5 x 5	1	0	0	0
P-37-012319	CA-SDI-12319	Prehistoric	15 x 10	1	0	0	0
P-37-012320	CA-SDI-12320	Prehistoric	300 x 150	3	0	0	0
P-37-012322	CA-SDI-12322	Prehistoric	8 x 5	1	0	0	0
P-37-012324	CA-SDI-12324	P. Isolate	25 x 25	1	0	0	0

Table 4-1
Level of Effort for Evaluated Resources within the ADI

Primary	Trinomial	Period	Dimensions (meters)	STP	CSC	SSU	CU
P-37-012328	CA-SDI-12328	Multi-component	100 x 100	1	0	0	0
P-37-012329	CA-SDI-12329	Prehistoric	30 x 20	1	0	0	0
P-37-012330	CA-SDI-12330	Prehistoric	10 x 10	3	0	0	0
[4]P-37-012332	CA-SDI-12332	Prehistoric	120 x 100	5	0	0	0
P-37-012333	CA-SDI-12333	Prehistoric	10 x 10	3	0	0	0
P-37-012335	CA-SDI-12335	Prehistoric	10 x 10	2	0	0	0
P-37-012373	CA-SDI-12373	Multi-component	75 x 200	7	0	0	2
[4]P-37-012377	CA-SDI-12377 East	Prehistoric	150 x 600	17	0	0	0
P-37-012379	CA-SDI-12379	Prehistoric	40 x 80	4	0	0	0
P-37-012380	CA-SDI-12380	Prehistoric	100 x 60	3	0	0	0
P-37-012381	CA-SDI-12381	Prehistoric	15 x 5	3	0	0	0
P-37-012382	CA-SDI-12382	Multi-component	40 x 150	3	0	0	0
P-37-012383	CA-SDI-12383	Prehistoric	20 x 120	4	0	0	0
P-37-012384	CA-SDI-12384	Prehistoric	70 x 100	3	0	0	0
P-37-012385	CA-SDI-12385	Prehistoric	30 x 50	1	0	0	0
P-37-012391	CA-SDI-12391	Prehistoric	40 x 20	3	0	0	0
[4]P-37-012392	CA-SDI-12392	Prehistoric	40 x 40	1	0	0	0
[4]P-37-012396	CA-SDI-12396	Historic	300 x 20	0	0	0	0
[4]P-37-012397	CA-SDI-12397 East	Prehistoric	150 x 150	Not directly evaluated; this portion of site presumed and treated as significant			
P-37-014834	N/A	P. Isolate	N/A	1	0	0	0
P-37-015033	N/A	P. Isolate	N/A	1	0	0	0
P-37-015035	N/A	P. Isolate	N/A	1	0	0	0
P-37-015036	N/A	P. Isolate	N/A	1	0	0	0
P-37-015038	N/A	P. Isolate	N/A	0	0	0	0
P-37-015040	CA-SDI-21924	Prehistoric	N/A	1	0	0	0
P-37-015041	N/A	P. Isolate	N/A	2	0	0	0
P-37-015042	N/A	P. Isolate	N/A	2	0	0	0
P-37-015043	CA-SDI-21925	Prehistoric	N/A	3	0	0	0
P-36-015059	N/A	P. Isolate	N/A	1	0	0	0
P-37-015060	N/A	P. Isolate	N/A	0	0	0	0
P-37-026522	N/A	Historic	N/A	0	0	0	0
P-37-026526	N/A	Historic	N/A	0	0	0	0
P-37-034768 (Temp-7)	CA-SDI-21630	Prehistoric	10 x 10	1	0	0	0

Table 4-1
Level of Effort for Evaluated Resources within the ADI

Primary	Trinomial	Period	Dimensions (meters)	STP	CSC	SSU	CU
P-37-034770 (Temp 12)	CA-SDI-21632	Prehistoric	15 x 15	3	0	0	0
P-37-034771 (Temp 18)	CA-SDI-21633	Prehistoric	5 x 5	3	0	0	0
P-37-035970 (Temp 9)	CA-SDI-21911	Prehistoric	23 x 21	2	0	0	0
P-37-035971 (Temp 10)	CA-SDI-21912	Prehistoric	32 x 20	1	0	0	0
P-37-035975 (Temp-15)	CA-SDI-21916	Prehistoric	65 x 45	9	0	0	0

STP = shovel test pit; CSC = controlled surface collection; SSU = shovel scrape unit; CU = control unit; N/A = not applicable
[a] The loci of CA-SDI-6695 are listed separately, and are discussed separately, but they are constituents of the same resource.
[b] Resource partially overlaps the ADI of the Proposed Project.
[c] CA-SDI-8086A/B/C are listed and discussed in the same manner as CA-SDI-6695.
[d] Temp-17 from the inventory phase has been combined with P-37-026524 as CA-SDI-8086C.

4.1.2 Laboratory and Cataloging Procedures

Initial lab procedures included cleaning (as appropriate), sorting, and cataloging of all items. Each item was individually examined and cataloged according to class, subclass, and material; counted (except for bulk invertebrate and vertebrate remains); and weighed on a digital scale. All coded data were entered into a Microsoft Access database. Data manipulation of a coded master catalog combining all sites was performed in Microsoft Excel.

The cultural material was sorted during cataloging into the following potential categories: 13 classes of prehistoric artifacts; two classes of ecofacts; ethnohistoric items, historic and modern items; and organic samples. The prehistoric artifact classes potentially included debitage, cores, core tools, simple flake tools, formal flake tools, retouched flakes, bifaces, percussing tools, groundstone, ceramics, bone artifacts, shell artifacts, and miscellaneous items.

When possible, cores were to be separated by platform variability into subclasses such as multidirectional, unidirectional, and bifacial types. Debitage, including both flakes and debris, were sorted by material type and cortical variation (primary, secondary, and interior) during cataloging. Length, width, and thickness measurements were to be taken for all tools and cores using a sliding caliper.

Percussing tools, potentially including hammers and abraders, were defined based on their morphology and the type of macroscopic use-wear they exhibit. Groundstone artifacts were

classified by type, including millingstones and handstones. Length, width, and thickness measurements were taken on complete groundstone items.

No historic artifacts were recovered and therefore were not subject to laboratory procedures. After preliminary cataloging of the material was completed, more detailed attribute analysis was performed. Stone artifacts (both flaked and ground) were individually analyzed for selected morphological and technological attributes, as well as material and condition, in an attempt to gain insight into the period of occupation and the range of activities undertaken. Specific analytical methods and tables are included Appendix D. All artifacts, ecofacts, and samples were subject to appropriate conservation in the field and laboratory, including proper packaging and handling. Artifact catalogs can be found in Appendix D.

Curation

Materials recovered by Dudek from this Proposed Project were placed in 4 mm bags, along with artifact tags providing catalog number, artifact description, and provenience information. All artifacts were then placed in archival-quality boxes. At the completion of the Proposed Project, all materials will be turned over for permanent curation to the San Diego Archaeological Center or a culturally affiliated tribal curation facility or may be repatriated to a culturally affiliated tribe. All DPR forms and updates created by Dudek will be submitted to the SCIC at the completion of the Proposed Project, along with this report.

4.1.3 Native American Correspondence and Participation

In June 2015, Dudek requested that the Native American Historical Commission (NAHC) conduct a search of its Sacred Lands File for (i) data relating to the Proctor Valley Village 14 and Preserve project and (ii) a list of persons and tribes that may have a significant cultural or religious connection to resources in the Project Area (Confidential Appendix E). The request was resubmitted to the NAHC via email on May 9, 2016. The NAHC responded May 16, 2016, stating that no resources are listed in the Sacred Lands File in this area, but did provide contact information for Native American tribes which may have additional information. Dudek sent letters to the tribes requesting any information or concerns they may have related to the Proposed Project on July 21, 2016.

Although the current Proposed Project is located within the same APE as requested in those previous searches, an additional request was submitted for the current Proposed Project in November 2016. The NAHC responded on December 2, 2016, stating that Native American sites recorded with the NAHC are located in the APE. The NAHC specifically recommended contacting the Campo Band of Diegueño Indians and provided a list of other tribal contacts

which should be contacted regarding the project. Letters were sent to each of the contacts the same day. To date, only the Jamul Indian Village has responded. In a letter dated December 12, 2016, the Tribe requested that it be informed of any resources discovered, and requested copies of reports, records searches, site records, and SLF search results. The Tribe also requested to participate in formal government-to-government consultation for the Proposed Project.

Government-to-government consultation pursuant to AB 52 and SB 18 was initiated on June 1, 2017, and June 2, 2017, respectively. Five tribes (Barona, Campo, Jamul, Santa Ysabel, and Viejas) requested consultation. County staff met with all five tribes to discuss Proposed Project components, impacts, and mitigation requirements. In addition, on September 12, 2017, a field visit was conducted with all five tribes, County staff, applicant, and consultants. During consultation meetings and the field visit, it was requested that the tribes provide County staff with any issues or concerns. In addition, it was requested that they identify any tribal cultural resources that may be present within the APE. To date, no issues have been raised and no information has been provided regarding tribal cultural resources. Tribal correspondence documents can be found in Confidential Appendix E.

Red Tail Monitoring and Research provided Native American monitors during the inventory and evaluation phases of the Proposed Project. Gabe Kitchen and Justin Linton participated in the inventory. Mr. Kitchen, Mr. Linton, and Phillip Pena participated in the evaluation efforts. A specific concern was expressed to the Dudek about the Proposed Project regarding the potential loss of data during the transfer of the responsibilities between the two consulting companies. Dudek has worked with the Proposed Project proponent to obtain all available information from the survey to ensure no data is lost.

4.2 Results

This section describes the results of the overall cultural resources study completed for the Proposed Project. The inventory results are presented first, focusing on resources identified in the APE, but outside the ADI, as well as sites identified during the inventory that are outside the APE, as these sites have been avoided by Proposed Project design. The subsequent section presents the combined inventory and evaluation results of all sites wholly or partially in the ADI.

4.2.1 Inventory Results of Cultural Sites Outside the ADI

During the Phase I inventory for the Proposed Project, BFSA identified 112 cultural resources within the 3,128 acre survey area; of these 94 were previously recorded and 18 were newly discovered sites (BFSA 2015). During the evaluation of one previously recorded historic structure, P-037-026524, historic era foundations were identified along with a prehistoric artifact

scatter that overlap a site identified during the survey as Temp-17. Following SCIC site recordation guidelines, P-37-026524 was merged with Temp-17 into one multicomponent resource. In addition, review of site records determined that the location of Temp-17 was previously recorded as Locus C of site CA-SDI-8086 (but was not mapped in the SCIC GIS database). Also during the evaluation, CA-SDI-11417 and CA-SDI-12378 were found to have overlapping features and artifact scatters and were merged into one resource. As a result, the total number of resources was reduced to 109 (see Section 4.2.2 for details). A total of 57 resources are located in or intersect the ADI, including 44 archaeological sites, two historic structures, and 11 isolates (each will be discussed in detail in the following section). During the evaluation no artifacts or resources were identified at seven of the previously recorded sites or at the two historic structures; these nine resources no longer qualify as sites, leaving 37 extant sites in the ADI.

Outside the ADI, but within the APE, 34 resources were previously recorded and six resources were newly identified, totaling 40 resources. Of these, 17 resources could not be re-located. An additional 13 resources (eight previously recorded, five newly recorded) have been recorded outside the APE, three of which were not re-located on the survey, leaving 33 resources that would be avoided and placed in an open space preserve. Table 4-2 summarizes the results of the inventory study for resources located outside the ADI but within the APE. Table 4-3 summarizes the resources located outside the APE. All of these resources can be seen in Figures 4-1a and 4.1b in Confidential Appendix C.

Table 4-2
Cultural Resources Identified in the APE but Outside the ADI

Primary	Trinomial	Period	Type	Dimensions (meters)	Relocated?
Previously Recorded Resources					
P-37-06965	CA-SDI-6965	Historic	Historic Habitation	300 x 250	Yes
P-37-08086[a]	CA-SDI-8086A	Prehistoric	Lithic Scatter	7 x 7	Yes
	CA-SDI-8086B	Prehistoric	Temporary Camp	60 x 40	Yes
P-37-11395	CA-SDI-11395	Prehistoric	Lithic Scatter	N/A	Yes
P-37-11398	CA-SDI-11398	Multi-component	Lithic Scatter; Historic Foundation and Features	5 x 5	Yes
P-37-11411	CA-SDI-11411	Multi-component	Bedrock Milling; Historic Refuse	20 x 20	No
P-37-11418	CA-SDI-11418	Historic	Historic Camp	N/A	Yes
P-37-11422	CA-SDI-11422	Historic	Historic Structure and Refuse	N/A	Yes
P-37-12321	CA-SDI-12321	Prehistoric	Sparse Lithic Scatter	45 x 20	Yes
P-37-12323	CA-SDI-12323	Historic	Historic Rock Feature	20 x 10	Yes

Table 4-2
Cultural Resources Identified in the APE but Outside the ADI

Primary	Trinomial	Period	Type	Dimensions (meters)	Relocated?
P-37-12326	CA-SDI-12326	Prehistoric	Lithic Scatter	20 x 20	Yes
P-37-12331	CA-SDI-12331	Prehistoric	Bedrock Milling; Lithic Scatter	250 x 75	Yes
P-37-12334	CA-SDI-12334	Prehistoric	Habitation Site	75 x 40	Yes
P-37-12374	CA-SDI-12374	Prehistoric	Quarry	20 x 20	No
P-37-12375	CA-SDI-12375	Prehistoric	Lithic Scatter	120 x 40	Yes
P-37-12376	CA-SDI-12376	Historic	Historic Cairn	1x1	Yes
P-37-12386	CA-SDI-12386	Prehistoric	Lithic Scatter	100 x 75	No
P-37-12387	CA-SDI-12387	Prehistoric	Lithic Scatter	20 x 20	No
P-37-12388	CA-SDI-12388	Prehistoric	Lithic Scatter	20 x 10	No
P-37-12389	CA-SDI-12389	Prehistoric	Bedrock Milling	150 x 50	Yes
P-37-12390	CA-SDI-12390	Prehistoric	Lithic Scatter	120 x 50	No
P-37-12393	CA-SDI-12393	Multi-component	Lithic Scatter; Historic Rock Feature	N/A	Yes
P-37-12394	CA-SDI-12394	Prehistoric	Bedrock Milling	N/A	No
P-37-12395	CA-SDI-12395	Historic	Historic Refuse and Rock Feature	N/A	No
P-37-12398	CA-SDI-12398	Prehistoric	Lithic Scatter; Milling; Quarry	N/A	Yes
P-37-12635	CA-SDI-12635	Prehistoric	Lithic Scatter	N/A	No
P-37-12937	CA-SDI-12937	Prehistoric	Habitation Site; Milling; Artifacts	N/A	Yes
P-37-015037	None	Prehistoric	Isolate	N/A	No
P-37-015039	None	Prehistoric	Isolate	N/A	No
P-37-015053	None	Prehistoric	Isolate	N/A	No
P-37-015055	None	Prehistoric	Isolate	N/A	No
P-37-015056	None	Prehistoric	Isolate	N/A	No
P-37-015057	None	Prehistoric	Isolate	N/A	No
P-37-015058	None	Prehistoric	Isolate	N/A	No
P-37-026525	None	Historic	Historic Structure	N/A	No
Newly Recorded Resources					
P-37-0347767	CA-SDI-21628	Prehistoric	Lithic Scatter	20 x 15	N/A
P-37-0347769	CA-SDI-21631	Prehistoric	Lithic Scatter	15 x 15	N/A
P-37-035972	CA-SDI-21913	Historic	Foundation; Trough; Pipe	20 x 10	N/A
P-37-035973	CA-SDI-21914	Prehistoric	Bedrock Milling	20 x 15	N/A
P-37-035974	CA-SDI-21915	Multi-component	Foundation; Trough; Temporary Camp	60 x 40	N/A
P-37-035976	CA-SDI-21917	Prehistoric	Lithic Scatter	33 x 20	N/A

[a] Loci A and B of CA-SDI-8086 are listed here as outside the ADI, however since Locus C is partially in the ADI, overall the site is considered as being located in the ADI

Table 4-3
Cultural Resources Recorded Outside the APE

Primary	Trinomial	Period	Type	Dimensions (meters)	Relocated?
Previously Recorded Resources					
P-37-6694	CA-SDI-6694	Prehistoric	Lithic Scatter	20 x 20	Yes
P-37-11392	CA-SDI-11392	Multi-component	Adobe Structure; Rock Features; Water Tank; Lithic Scatter	30 x 30	Yes
P-37-11400	CA-SDI-11400	Prehistoric	Lithic Scatter	5 x 5	Yes
P-37-11416	CA-SDI-11416	Historic	Stone Wall	2 x 2	Yes
P-37-12325	CA-SDI-12325	Prehistoric	Habitation	250 x 150	Yes
P-37-12327	CA-SDI-12327	Prehistoric	N/A	N/A	No
P-37-026523	None	Historic	Historic Structure	50 x 50	No
P-37-026532	None	Historic	Historic Structure	25 x 20	No
Newly Recorded Resources					
P-37-034762	CA-SDI-21624	Prehistoric	Quarry/Lithic Scatter	25 x 15	N/A
P-37-034763	CA-SDI-21625	Prehistoric	Quarry/Lithic Scatter	65 x 30	N/A
P-37-034764	CA-SDI-21626	Prehistoric	Lithic Scatter	20 x 20	N/A
P-37-034765	CA-SDI-21627	Prehistoric	Lithic Scatter	20 x 20	N/A
P-37-034767	CA-SDI-21629	Historic	Rock Feature and Refuse Scatter	10 x 10	N/A

4.2.2 Evaluation Results of the APE Inside the ADI

A total of 57 cultural resources are located within the ADI (Table 4-1; Figure 4-1a and 4-1b, Confidential Appendix C). Due to the inability to access state-owned lands, 56 out of the 57 resources have been evaluated (in full or in part) during the current investigation. The remaining site (CA-SDI-12397) was not directly evaluated and is presumed significant under CEQA. The evaluated resources include 43 archaeological sites (CA-SDI-6695A/CA-SDI-6695B; CA-SDI-8086C [formerly P-37-026524]; CA-SDI-11394; CA-SDI-11396; CA-SDI-11397; CA-SDI-11399; CA-SDI-11401; CA-SDI-11417/CA-SDI-12378; CA-SDI-11421; CA-SDI-12314; CA-SDI-12315; CA-SDI-12316; CA-SDI-12317; CA-SDI-12318; CA-SDI-12319; CA-SDI-12320; CA-SDI-12322; CA-SDI-12328; CA-SDI-12329; CA-SDI-12330; CA-SDI-12332; CA-SDI-12333; CA-SDI-12335; CA-SDI-12373; CA-SDI-12377; CA-SDI-12379; CA-SDI-12380; CA-SDI-12381; CA-SDI-12382; CA-SDI-12383; CA-SDI-12384; CA-SDI-12385; CA-SDI-12391; CA-SDI-12392; CA-SDI-12396; CA-SDI-21630; CA-SDI-21632; CA-SDI-21633; CA-SDI-21911; CA-SDI-21912; CA-SDI-21916; CA-SDI-21924 [P-37-015040]; and CA-SDI-21925 [P-37-015043], two historic structures (P-37-026522 and P-37-026526) and 11 isolates (CA-SDI-12313 [downgraded to P-37-012313]; CA-SDI-12324 [downgraded to P-37-12324]; P-37-

014834; P-37-015033; P-37-015035; P-37-015036; P-37-015038; P-37-015041; P-37-015042; P-37-015059; and P-37-015060).

Since CA-SDI-12397 is located on state-owned lands and could not be evaluated at this time, it is presumed to be eligible for listing in the CRHR (Criterion 4), and the local register and as significant under CEQA. The County has used its discretion to determine that CA-SDI-12397 is significant under Criterion 4 because it has archaeological material that can contribute to a broader understanding of prehistory. Based on surface characteristics, the portion of this site located within the ADI is not significant under the Otay Ranch RMP (it is not unique, does not contain human remains, is not formally listed on or determined eligible for the NRHP, does not have an H designator, and is not associated with religious/ceremonial uses). No forms of preservation in place for the portion of the site within the ADI are feasible because the ADI consists of improvements to Proctor Valley road, which is a key transportation element for the project. As this resource cannot be avoided, mitigation measures will have to be incorporated to mitigate impacts to the resource.

The two loci of CA-SDI-6695, A and B, are discussed separately and are listed in tables separately; however they are considered a single site. As with CA-SDI-6695A/B, the three loci of CA-SDI-8086, A B, and C, are discussed separately and listed in tables separately, but are nevertheless considered a single site. As a result of the evaluation fieldwork, previously unrecognized cultural materials and features (prehistoric and historic) were found in the vicinity of P-37-026524 that was originally recorded as a historic structure based on historic maps; these new artifacts connect P-37-026524 to a prehistoric site recorded by BFSA as Temp-17 on state-owned lands. According to SCIC site recordation guidelines the overlapping prehistoric and historic era deposits are treated as a single multi-component site (with both historic and prehistoric materials). Further review of site records identified the location of Temp-17 as a previously recorded locus of site CA-SDI-8086 (Locus C); therefore both the constituents of Temp-17 and P-37-026524 were re-designated as CA-SDI-8086C. During the evaluation of P-37-015040 and P-37-015043, previously unrecorded artifacts were identified in sufficient quantities to qualify those resources as sites. These two were updated with the SCIC to establish Trinomial numbers for the sites (CA-SDI-21924 and CA-SDI-21925, respectively). Also during the evaluation, sites CA-SDI-12313 and CA-SDI-12324 were downgraded from sites to isolates as insufficient artifacts were identified for them to retain their status as sites. Sites CA-SDI-11417 and CA-SDI-12378 were also merged into a single site during the evaluation, as the artifact and features of each were found to overlap each other.

P-37-026522 and P-37-026526 were originally recorded based on the identification of single structures at these locations on the 1903 and 1912 topographic maps; no site visits were made at the time to confirm whether or not any structures, artifacts, or features were present. During the

inventory phase of this project, no evidence of these resources was identified. As these resources no longer exist, they were evaluated as not significant/not eligible.

For the 57 resources within the ADI, each resource is treated separately, with a discussion of the kinds and numbers of analytical units employed during fieldwork. The separate loci of CA-SDI-6695 are discussed individually, as they are discontiguously mapped. Only locus C of CA-SDI-8086 is discussed in detail below, as it is the only locus within the ADI. Site assemblage compositions and distributions are detailed and used to assess the function and significance for each site. Sketch maps for each site showing excavation units, surface artifacts, and features, is included in Confidential Appendix C.

CA-SDI-6695

CA-SDI-6695 was originally recorded with two separate, large loci, A, and B, each located on different landforms (May 1979). Each is discussed separately below.

CA-SDI-6695A (Locus A)

CA-SDI-6695A was initially recorded as consisting of a prehistoric artifact scatter, and various rock features and rock alignments. Prehistoric artifacts recorded at Locus A included flakes, cores, shatter, scrapers, millingstones, and millingstone fragments. SDI-6695A was later re-visited in 1991 by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental Inc. During the 1991 site visit, the archaeologists determined the various rock alignments and features were most likely of historic and not prehistoric origins as the rock alignments formed lines and fencing materials not normally associated with prehistoric sites.

Site Structure, Artifact Recovery, and Assemblage Composition

During the present site visit, Dudek was able to locate the rock alignments previously identified in 1991. Dudek also found that sparse surface lithics were within the site boundaries. Few artifacts were observed on the ground surface, and the dense lithic scatter/concentrations noted on the site map could not be located. Three CSCs were placed within the site boundaries: CSC 1 produced one volcanic flake, CSC 2 produced six volcanic flakes and one volcanic chopper, and CSC 3 produced only one volcanic flake. Dudek then performed a general surface collection over the entire site, resulting in the recovery of three chalcedony shatter fragments, five volcanic flakes, and one volcanic simple flake tool.

The larger rock alignments generally appeared to be machine push piles possibly from historic ranching activities. Some of the disturbances noted across the site appear to be associated with modern firefighting activity, such as firebreaks/ grading of a new dirt road

alignment through the area in 2006/2007, based on aerial imagery. Nine rock features were recorded as individual features; two features were "U"-shaped (Figure 4-2), two were round or circular in shape, and the other five rock features were amorphous in shape. Some metal and wire fencing fragments were associated with several of the rock features; however, no specific historic function or obvious purpose could be determined for the features. All rock piles and alignments were mapped and photo-documented. No dateable materials were observed associated with the rock features.

Three shovel test pits (STPs) were excavated within the site boundaries to determine if there is a subsurface component to the site and investigate the site's integrity. The STPs were placed along the east/west axis of the site and all three STPs were excavated to a minimum depth of 40 centimeters below surface (cmbs). The sediments across the site consist of dry, strong brown (Munsell: 7.5YR 4/6), semi-compact silty-clay loam with bioturbation and a heavily volume of rocks and gravels. The size and volume of rocks and gravels increased with the depth until the STP could not be excavated further. All STPs were void of archaeological material.

Discussion and Site Summary

The extremely sparse nature of artifacts associated with CA-SDI-6695A and the lack of subsurface deposits indicate the site does not possess any significant research potential. The prehistoric component of the site is similar to many other sites in the area, in that it contains a sparse scatter of lithic debitage that are confined to the surface. This site is characteristic of a short-term stop, likely related to procurement of raw material for stone tool production. The lack of cultural deposits and datable material makes it difficult to place the prehistoric occupation of this site in time or in association with other similar sites.

Figure 4-2 Feature 1: previously recorded "U"-shaped rock feature at SDI-6695A, view to the west

The historic rock features recorded with this site are likewise difficult to identify and place within the regional history. The absence of dateable materials means that it is not possible to determine when they were made, and there is no available evidence to determine why they were made.

The site lacks subsurface deposits and only consists of a sparse distribution of surface artifacts. This site is not eligible for listing in the CRHR or the local register; nor is it eligible for protection under Otay Ranch RMP guidelines. It is not significant under CEQA.

In addition, the lack of datable material makes it difficult to place this site in a chronology of regional historic occupation. Further work at the site is not likely to yield substantially different or unique information that would contribute to the current understanding of the local prehistory.

Thus, this site is not eligible for listing in the CRHR under Criterion 4, as it does not have additional substantial research potential.

Under the County of San Diego's Guidelines for Determining Significance (2007a), SDI-6695A is an important resource; but impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Proposed Project-related ground disturbance.

CA-SDI-6695B (Locus B)

Site SDI-6695B was first recorded by 1979 by R. May. May identified it as a lithic scatter with flakes, cores, shatter, handstones, scrapers, and a broken millingstone fragment. In 1991, A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. returned to the site but could only find a light lithic scatter. The ERC survey identified 20 metavolcanic flakes and fragments of angular waste, but was unable to relocate the groundstone tools.

Site Structure, Artifact Recovery, and Assemblage Composition

Only the eastern portion of the site was evaluated at this time as the remainder of the site is outside the ADI. The western portion of the site was only revisited during the survey, and was found to contain a light density scatter of debitage, similar to previous documentation. In the eastern portion of the site, numerous surface lithics were observed and two general artifact concentrations were identified; one of which (Concentration 2) contained prehistoric ceramic fragments. A total of 12 quartzite and two volcanic flakes were collected at Concentration 1. CSC 1 was placed at Concentration 2. CSC 1 yielded a total 53 quartzite flakes, nine volcanic flakes, one quartzite simple flake tool, and 10 Tizon Brownware ceramic body fragments (Figure 4-3). None of the groundstone tools reported in the original site record was observed.

SSU 1 was then excavated within the CSC at the densest part of the scatter to a depth of 10 cmbs. The SSU yielded 74 quartzite flakes, 22 volcanic flakes, and 23 Tizon Brownware ceramic body fragments. A general surface collection over the remainder of the eastern portion of the site produced 77 volcanic debitage, three quartzite debitage, one cryptocrystalline flake, one quartzite multidirectional core, and one volcanic retouched flake. Numerous pieces of debitage were identified and collected to the northeast of the mapped site boundary, so the boundary was extended to incorporate those materials in the site.

Figure 4-3 Overview photo of Concentration 2, view to the southeast.

Eleven STPs were excavated within the site to determine if there is any subsurface component to the site and investigate the site's integrity. The STPs were generally excavated to a minimal depth of 40 cmbs; however STPs 3 and 5 were terminated at shallower depths due to cobbles and/or bedrock. The sediment profiles across the site were near identical. From the surface to terminal depth in all STPs the sediment consisted of a brown (Munsell: 7.5YR 4/4), dry, semi-compact sandy loam with bioturbation. All STPs excavated at this site were sterile.

Discussion and Site Summary

SDI-6695B is one of the few sites in the API that contains evidence of activities beyond general lithic procurement and reduction. The presence of groundstone tools noted in the original site record, coupled with the presence of ceramic fragments recovered during the evaluation, suggests that some degree of food processing occurred here, in addition to flakedstone tool production.

The overall density of artifacts identified in the evaluated portion of SDI-6695B is relatively low. The depth and distribution of cultural materials encountered during subsurface testing reveal that all of material is located on or near the surface, with no subsurface deposits identified deeper than 10 cmbs. While the SSU produced a rather dense concentration of shallow subsurface materials located in the corner of the site, all of the STPs were negative, suggesting that the subsurface distribution of cultural materials is not consistently dispersed across the area. The higher density of artifacts, identified in Concentration 2, may result from more intensive activities at that location or from artifacts from higher elevation portions of the site that may have been transported through natural process to this location.

While the presence of prehistoric pottery provides evidence the site is associated with a Late Prehistoric or ethnohistoric occupation, there is an absence of other materials or features that could provide additional information regarding the length of and continuity of occupation. The low density of artifacts and absence of substantial subsurface deposits in the evaluated portion of the site do not provide substantial information regarding the prehistory of the region. Therefore, based on the limited data potential, the evaluated portion of SDI-6695B is not significant under CEQA or the Otay Ranch RMP, nor is the site eligible for listing in the CRHR or local register. Under County guidelines all sites are considered important; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Proposed Project-related ground disturbance.

The western portion of the site was not tested at this time, as it is located outside the ADI. Therefore, it is considered significant under County guidelines and CEQA. Temporary fencing during Proposed Project construction is recommended during construction to protect the western portion of the site from construction related impacts.

CA-SDI-8086

This site was originally recorded by R. Carrico as one bedrock milling feature, one scraper, and one flake in 1978. The site was revisited and updated by RECON, at which time 3 separate loci (including the original) were recorded, each containing a lithic scatter. No features were noted at the site at that time. Locus A and Locus B are located outside the ADI and would not be impacted by this project. The eastern half of Locus C located in the ADI, and was evaluated; the western half is located in outside the ADI and would be avoided. Locus C was not included in the SCIC's GIS or paper maps in the original records search, and as a result, during the pedestrian survey, BFSA identified the original location as a new site, Temp-17. Locus C also incorporates P-37-025524, an historic structure identified on historic topographic maps. Only Locus C is discussed in detail below, as it is the only portion of the site in the ADI.

CA-SDI-8086C (including P-37-026524/Temp-17)

CA-SDI-8086C was originally recorded by RECON in 1989 as a lithic scatter containing 30+ flakes. This locus was not included in the SCIC records search maps, and was subsequently identified by BFSA as a new site, designated Temp-17. BFSA identified the site as a temporary camp and quarry with milling stations; however, details regarding artifact types and quantity/location of milling features were not included in their letter report.

P-37-026524 is an historic structure appearing on the 1943 USGS map recorded by RECON in 1989. The structure does not appear in the 1903/1912 USGS map or a 1929 aerial photo. It is also not present on the 1955 USGS map. RECON could not locate any signs of the structure in the field during their 1989 Otay Ranch Survey. BFSA revisited the location during the survey for this project, and also failed to identify any remains of the structure.

During the current evaluation, newly observed historic features and prehistoric artifacts were identified at P-37-026524. These newly discovered constituents expanded the site boundary to the north and southwest of the originally mapped location, such that P-37-026524 was united into a single site with CA-SDI-8086C. P-37-026524 will be subsumed into CA-SDI-8086C, per SCIC standards, and Temp-17 will be discarded, as it is only a temporary identifier. CA-SDI-8086C was subdivided into three subloci (A, B, and C). Sub-locus A corresponds to the original location of the site (also called Temp-17). Sub-locus B corresponds to the lithic scatter in the middle of the site, and Sub-locus C corresponds to the eastern portion of the site previously identified as P-37-026524.

Site Structure, Artifact Recovery, and Assemblage Composition

No structure or structural remains could be found at the originally mapped location of P-37-026524. This location has been subject to extensive disturbances including grading/blading for dirt roads, dumping, and possibly cutting/filling of pits. It appears that if a structure was here in the mid-1900s, it has been destroyed. However, the remains of a probable concrete cistern/basin could be seen to the west, and is visible in recent aerial photographs. This feature was observed during the inventory survey, but was not documented in detail during the evaluation as it is located in state-owned lands. While reviewing the site location on aerial photographs, additional features were observed north of the mapped site location. These features were revisited and documented during the current evaluation; these new features constitute Sub-locus C.

In total, 10 foundations were documented at the in Sub-locus C during the evaluation including two troughs, a possible chicken coop foundation (two footings), and other features of indeterminate origin (five basins and two small pads). It is possible these additional features may

be the remains of the original structure marked on the 1943 USGS map. None retain the intact structures which would have been associated with them.

Review of aerial photographs available at www.historicaerials.com show what appeared to be four long, narrow foundations where these newly identified foundations were recorded. The earliest photo, 1953, shows the foundations, but structures are not apparent. The topographic map from 1956, as well as subsequent maps, does not show a structure at this location. Earlier topographic maps from 1909 to 1942 also do not show a structure at this location. Therefore, it appears that whatever structures were here, they was constructed sometime in 1942 or 1943 and was demolished or destroyed by 1953. The size and shape of the foundations, particularly the two which are close together and parallel, are generally consistent with chicken coops, which often only utilize simple superstructures over basic concrete foundations.

During the site evaluation, a previously unrecorded prehistoric lithic scatter was observed to the east of the historic foundations and were recorded a Sub-locus B. Portions of the Sub-locus outside state-owned lands were recorded and mapped. However, additional materials could be observed on the ground surface within state lands; that portion of the Sub-locus has not been documented at this time.

The lithic scatter was found to be generally sparse, with one small concentration on the east side of the scatter. A total of 54 pieces of debitage (chert, volcanic, chalcedony, and quartz) and one chert retouched flake were recovered from the ground surface. Five STPs were excavated in the lithic scatter within the ADI. These STPs produced a total of two chert and two volcanic flakes in the upper 20 cmbs, which were collected, but did not identify substantial subsurface deposits. Sediments in all five STPs contained moderately compact brown (Munsell: 7.5YR 4/4) sandy clay loam with gravel and cobble inclusions increasing with depth. All STPs terminated between 20 and 40 cmbs due to cobble inclusions.

The western portion of the site, which is comprised of the originally recorded location of CA-SDI-8086C, and temporarily identified as Temp-17, is now termed Sub-locus A. This Sub-locus consists of a temporary prehistoric camp with milling stations, a light density artifacts scatter of flakes, cores, and retouched flakes, and small area which may contain midden soils. This portion of the site is located on state-owned lands and is outside the ADI; it was not evaluated as it would not be impacted.

Discussion and Site Summary

The historic component of CA-SDI-8086C (Sub-Locus C) consists of the remnants of a mid-twentieth century ranching facility. This part of the locus does not contain any historic artifacts

or deposits (dumps/privies) and therefore does not have the potential to provide information to the history of the region. The Sub-locus does not contain any intact structures associated with the concrete foundations, thereby preventing an accurate identification of sites function. As only foundations are present, the Sub-locus does not contain any components which maintain sufficient integrity of the original resource. Therefore, Sub-locus C is not significant under CEQA and the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

The prehistoric component of the locus which was evaluated at this time (Sub-locus B) contains a total of 58 pieces of debitage and one retouched chert flake. All of the artifacts were recovered from on or near the ground surface; no subsurface deposits were identified in this portion of the site. Additional artifacts were observed on the ground surface extending west onto state-owned land, suggesting that the lithic scatter observed to date extends farther south and west and connects to site the original location of CA-SDI-8086C (Sub-locus A). Sub-locus B lacks subsurface deposits and artifact density and diversity which could contain the necessary data potential to make it significant. Therefore, Sub-locus B is not significant under CEQA and the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Both the Sub-locus B and C are considered important under County Guidelines; however impacts to the importance of the sub-loci can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance.

Sub-locus A (the western portion of the site) is located on state-owned land outside the ADI and was not tested at this time. It is therefore considered significant under County guidelines and CEQA. Temporary fencing during Proposed Project construction is recommended during construction to protect the eastern portion of the site from construction related impacts.

CA-SDI-11394

Site SDI-11394 was first recorded by R. Collett with RECON in 1989 as a lithic scatter. In 1991, A Pigniolo, S. Campbell, and K. Collins with ERC Environmental, Inc. revisited the site and updated it to include one milling station in addition to the lithic scatter. Artifacts encountered during this survey are listed as more than 100 metavolcanic flakes, one handstone, and two cores.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current Proposed Project the feature was relocated, mapped, and photo documented. Resurvey of the site relocated one handstone, the single bedrock milling feature, and some debitage. The site is moderately impacted by cattle ranching and firefighting.

The single bedrock milling feature recorded at this site consists of a small angular flat-surfaced bedrock boulder, measuring 44 x 52 cm with an approximate height of 10 cm above the ground surface. The single milling element consists of a 20 x 25 x 01 cm oval-shaped shallow slick located on the flat dorsal surface of the bedrock boulder, which is in relatively good condition and shows little to no exfoliation on the rock surface. Immediately adjacent to the small milling feature, a bifacial milling handstone was identified, recorded and collected.

Surface collections at SDI-11394 included a total of 16 pieces of volcanic debitage which includes two primary flakes, two secondary flakes, six interior flakes, four fragments of shatter, one retouched simple flake tool, and one retouched flake tool. One bifacial handstone was also collected immediately adjacent to the small milling feature.

Four STPs were excavated within the site boundaries to determine if there is any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 40 cmbs. The stratigraphy of STP 1 consisted of a 15 cm deep layer of fine grain sandy loam (Munsell: 10YR 5/2) followed by medium compacted loam with volcanic clasts excavated to a depth of 40 cmbs. STP 2 was excavated to a depth of 30 cmbs. The stratigraphy of STP 2 consisted of silty alluvium interspersed with angular rocks followed by very densely compacted clay that hampered further excavation. STP 3 was excavated to a depth of 20 cmbs, yielding only very dense clay and large bedrock cobbles. STP 4 was excavated to a depth of 20 cmbs. STP 4, excavated adjacent to the single milling feature, consisted of moderately compacted reddish brown (Munsell: 5YR 5/4) sandy clay loam with a high volume of volcanic rock and small angular gravel that transitioned into the beginning of decomposing granite bedrock. No cultural materials were recovered from the STP excavations at SDI-11394.

Discussion and Site Summary

SDI-11394 was reported as a flake scatter in the original site form and later updated with the discovery of a bedrock milling feature. While the small bedrock milling feature was relocated and a sparse volume of artifacts were recovered from the surface of the site, the four STPs were excavated recovering no evidence of subsurface deposits. The lack of subsurface deposits and generally sparse nature of the surface distribution of artifacts in the site do not provide substantial significant information regarding the prehistory of the region. Thus, this site is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

All sites are considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts

described herein, as well as through curation or repatriation of artifacts and monitoring of ground disturbing activities.

CA-SDI-11396

Site SDI-11396 was first recorded by R. Collett with RECON in 1989 as a multicomponent site containing a ranch complex and lithic scatter. In 1991, A Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. revisited the site and described the ranch complex as four foundations, numerous fences and trees, a cistern, a well, a trough, several rock clearance piles, and the prehistoric lithic scatter. Artifacts encountered during this survey are listed as more than 30 fragments of ceramic, glass, and metal, and five metavolcanic flakes.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current Proposed Project the ranch features were relocated, mapped, and photo documented. Resurvey of the site did not identify any surface artifacts, although that may be a result of overgrown grass and other vegetation. As a result, no artifacts were collected.

Multiple features associated with the ranch were recorded during this evaluation which included, a circular driveway, heavy/industrial cattle pen fencing corrals, gates, a truck-loading ramp, multiple concrete cistern/foundations, landscape vegetation (trees), concrete foundation debris, a small 1 x 1 m rock ring feature, and multiple rock/cobble features. The driveway feature consists of old asphalt and gravel surface that is currently overgrown with grasses and weeds that is approximately 8 to 10 ft. wide. The driveway forms an oval on the property that loops from the entrance, around to the cattle-loading ramp at the head of the main cattle pen, and then around to the entrance/exit. The cattle loading ramp consists of a metal frame and wooden walk planks that was utilized for loading cattle onto the trucks for off-site transportation (Figure 4-4).

The main cattle pen, which is flanked by two smaller "holding pens" to the south, appears to be the central location for the final processing of cattle before loading them onto the trucks. The pen is a post and beam construction made from what appears to be reused railroad ties and/or telephone poles with large metal irrigation piping (approximately 10 to 12 in. diameter) used as the corral fence. It appears that the majority of the materials used to build this corral were re-used industrial materials. All the hardware used to secure the fencing appears to be of relatively modern construction, indicating repair of the corral over time. Barbwire fencing and smaller wooden posts were used to separate the smaller holding pens and corral sections. Two late twentieth century concrete foundation/cisterns were recorded, one in each of the secondary holding corrals. Both are rectangular in shape, constructed from poured concrete set into the ground surface and contain some volume of trash and debris.

Figure 4-4 Main pen and ramp feature at SDI-11396, view to the west.

Also associated with this site were a number of rock features. One of these large cobble/rock pile features (Feature 1) was recorded immediately adjacent to the main corral and extends outward away from the corral to the northeast. This feature was identified in the site record as a stone foundation in the site form, and is likely related to an indeterminate structure which is visible on aerial photos in 1953 and 1964 (available at www.historicaerials.com). Those aerials also show a second structure just north of the corrals, in what now is the path of the oval driveway. USGS topographic maps from 1903 (Cuyamaca 1:125,000 scale) to 1998 (Jamul, CA 1:24,000 scale), also available at www.historicaerials.com, show a structure in the vicinity, which, based on a road/driveway depicted on the topographic maps, appears to correspond to the northern structure in the photos. Neither of the structures currently exists, and neither appears on aerial photos from 1968 or later. A third, smaller structure/outbuilding is also visible in the 1953 photo, but is not present in the 1964 or later photos. This structure is located east of the northern structure on a small hill just inside the remains of the barbed wire fence.

The other rock features were recorded in the general area east of the fenced in corrals, outside of the currently recorded site boundaries, but were noted on the site form within the site boundary. The two rock features furthest to the southeast (Features 2 and 3) are constructed of 3 to 5 courses of dry-laid cobbles. These rock features are situated within a wide, shallow drainage above the corral, and appear to be placed as small dams/rain flow diversions. The features may have additional subsurface courses, but that could not be determined at this time.

The other two outlying rock features (Features 4 and 5) appear to be amorphous piles of cobbles that have 2" diameter metal pipes protruding vertically out from the ground adjacent to each feature (Figure 4-5). The pipe strongly suggests water piping, but this could not be confirmed during this evaluation. Judging by the appearance of the rocks noted in the feature, it seems that a trench may have been excavated, and then rocks were pushed into the trench. It is unclear what purpose the metal pipes serve. These rock features do not appear to be dams/water diversion, based on their topographic locations. Features 2, 3, 4, and 5 appear on earliest aerial photo in 1953.

Figure 4-5 Rock feature with 2" located east of the main cattle pen area, view to the south.

Discussion and Site Summary

From the current evaluation of this site, it has been determined that this site represents an early-to-late twentieth century cattle industry site. If any of the structures visible on the aerial photos and topographic maps was a residence, then the site could be considered to be a "ranch." However, at this time there is no evidence of human occupation, and the minimal historic refuse reported in the site records are more indicative of ranchers/cattle handlers discarding occasional trash, rather than homestead or long term residential deposition. This site appears to be an industrial work site related to the introduction and exportation of cattle to and from the Proctor Valley area.

The historic component of the site is comprised of the historic-period cattle industrial processing location. Site features are typical of cattle/livestock pens and processing facilities. The site does not sufficiently represent a particular property type, period, or method of construction, nor does it represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. The site also does not retain integrity, as the three structures associated with the site are no longer extant. The site is not a one-of-a-kind, locally unique, or regionally unique cultural resource that contains a significant volume and range of data or materials.

Based on the evaluation and documentation efforts described herein, this site is not significant under CEQA or the Otay Ranch RMP; nor is the site eligible for listing in the CRHR or the local register.

The prehistoric component of the site could not be relocated at this time and no subsurface excavation was performed to probe for subsurface deposits, as the location of the debitage was not specifically mapped in the site record. Should the five pieces of lithic debitage still exist, they would have limited to no data potential, other than the fact they were at one time present here. Therefore, the prehistoric component of the site is not significant under CEQA or the Otay Ranch RMP; nor is the prehistoric component eligible for listing in the CRHR or local register.

The site (both the historic and prehistoric components) is considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as monitoring of Proposed Project-related ground disturbing activities, and curation or repatriation of any artifacts collected during monitoring (if discovered).

SDI-11397

The site was originally recorded by RECON in 1989. The ERC survey in 1991 included a site record with both SDI-11392 and SDI-6965 on the form, as if the two sites were united. This is clearly a mistake, as the two sites are not near one another.

Examination of the location maps provided in site records from the ERC survey indicate the location marked as SDI-11392 in the SCIC records was originally recorded as OR-S-3, which corresponds to site SDI-11397. Resurvey of this location during the current Proposed Project, along with comparisons of the SDI-11397 site map and physical description of that site, confirm that this location is in fact SDI-11397. Most likely, the site numbering mistake is just a typo, and not the result of data contamination or mismapping. SDI-11397 was originally recorded as a sparse lithic debitage and tool scatter. Disturbances noted in the site form included road grading and possibly disking. Site CA-SDI-11392 is located outside the APE and was not examined during the evaluation.

Site Structure, Artifact Recovery, and Assemblage Composition

During this evaluation, only the eastern half of the site was evaluated, as the remainder is outside the ADI. Lithics were noticed on the surface and two distinct concentrations were identified. Concentration 1 consisted of 36 volcanic debitage and one volcanic retouched flake, all of which were collected as a grab sample. CSC 1 was placed to encompass the entirety of Concentration 2. CSC 1 yielded 39 volcanic debitage. A general surface collection was then conducted over the remainder of the site that fell within the ADI. This surface collection resulted in the recovery of 28 volcanic debitage (collected as a grab sample) as well as two volcanic multidirectional cores, and two volcanic retouched flake tools. The site boundary was revised to a smaller area, as no artifacts were identified at the far western edge of the site.

Three STPs were excavated within the site boundaries to determine if there is any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 20 cmbs, STP 2 to 20 cmbs, and STP 3 to 25 cmbs. All STPs were terminated at bedrock after excavating through a single sediment consisting of a dry, strong brown (Munsell: 7.5YR 4/6), semi-compact silty-clay loam with bioturbation. No STPs contained any cultural material.

Discussion and Site Summary

The evaluation of the eastern portion of the site produced a limited volume of lithic debitage, cores, and three retouched flake tools, which correlates closely to the original description of SDI-11397. Subsurface testing demonstrates that this site consists of a surface scatter lacking an associated subsurface deposit. The sparse volume of surface materials suggests a limited level of utilization and occupation. The quantity and variety of artifacts recovered from the site suggests that the area was likely used as a brief seasonal stopover for lithic reduction, and tool manufacture. There does not appear to have been a long-term occupation, as no midden sediments or wide-variety of artifacts were encountered.

The portion of the site that intersects the ADI did not yield any significant information regarding the prehistory of the region; rather, the recovered assemblage is typical of other evaluated sites. The portion of SDI-11397 evaluated during the current investigation is not significant under CEQA or the Otay Ranch RMP. The site is not eligible for listing in the CRHR, or the local register.

Under the County guidelines, all sites are considered important; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Proposed Project-related ground disturbance. The western half of the site has not been formally evaluated and is therefore treated as significant under County guidelines. Therefore, it is presumed significant; the site would be placed in open space and would be protected with temporary fencing during Proposed Project construction.

SDI-11399

Site SDI-11399, also recorded as OR-108, was first recorded by R. Collett with RECON in 1989 as a concrete foundation. In 1991, A Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. returned to the site and expanded the site to include several nearby rock alignments and rock piles as well as a historic trash scatter and a lithic scatter. Artifacts encountered during this survey are listed as more than 30 fragments of ceramic, purple glass, and metal; 30 volcanic flakes; and three cores.

Site Structure, Artifact Recovery, and Assemblage Composition

The concrete foundation was relocated on this site visit, mapped, and photo-documented. It is a 2 inch thick poured concrete foundation measuring 2.5 x 3 m, with metal bolts set in it. The foundation was most likely part of a tower structure, similar to a weather tower/station. The historic trash scatter noted in the site form is extremely suggestive of refuse from sport/recreational shooting, plinking, or unorganized target shooting. The entire southern portion of the site is covered with various bullet casings and fragments of fired slug projectiles. The shell casings noted on the surface throughout the site include, but were not limited to, .22 caliber rim-fire, .38 caliber, 9 mm, .45 caliber, .223 centerfire rifle, .308 caliber, and 7.62 mm centerfire bullet casings.

The prehistoric component of the site is comprised of a light scatter of lithic debitage and tools scattered throughout the southern half of the mapped site boundary. Two CSCs were performed, one small lithic concentration was identified and collected separately (grab sample), and then a general surface collection was performed. CSC 1 was located in the southwest portion of the site and produced 26 volcanic flakes and one cryptocrystalline flake. CSC 2 was located in the northwest portion of the site and produced 11 volcanic flakes and 13 cryptocrystalline flakes.

Concentration 1 contained 19 volcanic flakes and one volcanic simple flake tool. The general surface collection yielded 81 volcanic flakes and shatter, two cryptocrystalline flakes, three volcanic cores (two unidirectional, one multidirectional), two volcanic scrapers, one volcanic chopper, and one black chert drill (Figure 4-6). The drill is an Elko-eared projectile point with distinctive notching, which was repurposed through pressure flaking into a drill. While Elko series points are generally dated from 2000 B.C. to A.D. 1100, the subsequent modification and use of the artifact as a drill could have occurred anytime within or after that time period, thereby reducing the ability to date the site based on this item alone.

Three STPs were excavated within the site boundaries to determine if there is any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 40 cmbs. The sediment in the STP from 0 to 20 cmbs consisted of a dry, strong brown (Munsell: 7.5YR 4/6), semi-compact silty-clay loam with bioturbation. From 20 to 40 cmbs the sediment became dry, very pale brown (Munsell: 10 YR 7/4), compact silty-clay loam. Two volcanic flakes were recovered from 0 to 20 cmbs. The unit was sterile from 20 to 40 cmbs so it was terminated on reaching 40 cmbs. STPs 2 and 3 displayed similar sediment profiles. STP 2 was excavated to a depth of 20 cmbs and STP 3 to a depth of 10 cmbs. Both contained a dry, strong brown (Munsell: 7.5YR 4/6), compact silt loam from 0 cmbs to terminal depth, which was at bedrock. Neither STP 2 nor 3 contained any cultural material. As a result of the survey and evaluation, the site boundary was reduced by approximately one-half, as no cultural materials were identified in the northern half of the mapped site boundary, but was also extended southeast to encompass artifacts that were identified outside the mapped boundary.

Figure 4-6 Chert drill recovered from the surface of SDI-11399.

Discussion and Site Summary

SDI-11399 consists of a historic foundation/concrete pad and a small, low-density lithic scatter. Historic refuse items all appear to be associated with recent target shooting, and do not represent historic period refuse dumping or deposition. Beyond the evidence of recreational shooting, there is a rather high level of ground surface disturbance, such as large grading cuts and embedded heavy

machine (bulldozer) tracks noted throughout the site area. The lack of associated material collections, diagnostic artifacts or feature elements reinforce that this site does not sufficiently represent a particular property type, period, or method of construction, nor does it represent the work of a master; it does not possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. The absence of the structure is related to mean that the foundation lacks sufficient integrity to maintain any potential significance.

The presence of prehistoric flakedstone tools provides evidence for the processing of food or other materials, and temporary, possibly seasonal occupation. While the dominance of interior flakes in the artifact assemblage and the presence of several lithic tools demonstrate the area was used for tool production/maintenance, there is an absence of datable materials or subsurface deposits that would provide additional information regarding the length and continuity of occupation. The lack of subsurface deposits and generally sparse nature of the surface distribution of artifacts in the site do not provide substantial significant information regarding the prehistory of the region. Thus, this site is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

All sites are considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Proposed Project-related ground disturbance.

SDI-11401

Site SDI-11401 was first recorded by R. Collett with RECON in 1989 as a flake scatter of more than 20 fine grained metavolcanic flakes. The site was noted to be most likely associated with the larger site SDI-6695A, located to the southwest of this site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current study the site was resurveyed and the general surface condition was photo-documented. No surface artifacts were observed during the survey within or adjacent to the mapped site boundary. Five STPs were excavated to determine if there is a subsurface component to the site. All STPs contained similar sediment profiles except STP 2. STP 2 was excavated to a depth of 25 cmbs. The test pit contained from 0 to 25 cmbs a dry, semi-compact, very pale brown (Munsell: 10 YR 7/4) silt loam lying on top a very compact pale pink (Munsell: 7.5 R 8/2) silt loam and caliche. The STP was terminated at this culturally sterile level.

STPs 1, 3, 4, and 5 possessed similar sediment profiles and were excavated to depths from 20 to 40 cmbs. From the surface to their terminal depths, these STPs contained damp, semi-compact

grayish brown (Munsell: 2.5Y 5/2) silt loam with 20% small subangular gravel increasing with depth. No artifacts were recovered from any of the STPs. As a result, during the current investigation, no surface or subsurface artifacts were collected.

Discussion and Site Summary

SDI-11401 was reported as a light density lithic scatter in the original site form. As a result of the inventory and evaluation performed at this time, this resource no longer qualifies as a site due to the absence of features or artifacts. Based on the results of the current evaluation, the site is not likely to yield any additional information regarding the prehistory of the region. Thus, the site is not significant under CEQA or the Otay Ranch RMP guidelines, and is not eligible for listing in the CRHR or local register. As no cultural materials are present in this location, it does not qualify as an archaeological site and is therefore not considered important under County Guidelines. However, since artifacts were reported at this location at one time, monitoring of project-related ground disturbance is recommended as part of the overall monitoring program during Proposed Project construction in case cultural materials are identified to reduce any potential impacts to less than significant.

SDI-11417/SDI-12378

Sites SDI-11417 and SDI-12378 during previous cultural studies had been recorded as separate, individual sites; SDI-11417 was recorded as a historic site and SDI-12378 was recorded as a prehistoric lithic quarry and reduction site. While both of these sites were initially recorded relatively close to each other, the two site boundaries were identified as chronologically and culturally separated activities and uses of the area. During later cultural studies done in the early 1990's, these two sites expanded in size, lessening the physical distance between the two site boundaries. Furthermore, the cultural identification of the sites became somewhat blurred as prehistoric features and artifacts were identified within the boundaries of the historic site SDI-11417, and historic rock features have been identified within the boundaries of the prehistoric quarry site SDI-12378. With the artifacts, features and boundaries overlapping for the two sites, it was decided that the best management practice for the Proposed Project is to combine the two sites into one. The historic and prehistoric components of the site are discussed separately, but are summarized together.

Historic Component (predominantly SDI-11417)

Site SDI-11417 was first recorded by W. Manley with RECON in 1989 as a historic stacked and mortared rock foundation and walls of a small structure with an associated historic trash scatter. In 1991, A Pigniolo, S. Campbell, and D. James with ERC Environmental, Inc. revisited the site

and updated it to include additional ground depression features, more than five rock piles, one prehistoric bedrock milling slick, an additional possible milling feature and the presence of historic bone fragments. Despite the identification of new prehistoric milling features, no further information was recorded concerning these features.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current field efforts most of the previously recorded features were relocated, mapped, and photo documented. Twenty rock features were identified and recorded scattered across the hillside. The previously recorded depression features were not relocated at this time. It is unknown if they were filled in with sediment in the intervening years or obscured by vegetation. Bedrock milling features are discussed with the prehistoric component of the site below, even though they were originally recorded in association with the historic features.

A total of historic 20 features were recorded during the testing program; these features include 19 various rock pile features, and one feature which consists of the remains of a small historic rock/cobble structure. Features 2 through 20 are various sized and shaped rock features. Despite various differences recorded with these features, all of the features consist of rocks that appear to be from the immediate vicinity and none of these features has other cultural materials or artifacts directly associated with them. Some of these features are clearly stacked, some appear to have once been stacked but are now diffuse or scattered, while some appear to have been mechanically pushed into the piles as currently recorded. Because of the differences recorded in the rock features, two classifications have been made concerning the feature identification: relatively smaller features that can be stacked manually by hand were called "rock pile" features; while the larger rock features with higher volumes or much larger sized boulders that appear to have been moved not by hand but rather moved mechanically or by heavy machinery were identified as rock "push pile" features. Although none of these features can be dated, it appears they are all related to clearing the field to promote grass growth for cattle ranching.

Of these 19 rock features, a total of 13 features were designated as "rock pile" features (Features 2-7, 11, 13-14, 16-17, 19 and 20); while 6 of the total 18 features were designated as rock "push piles" (Features 8-10, 12, 15, and 18). Descriptions of the rock features are presented in Table 4-4.

Table 4-4
Historic Rock Features Recorded at Site SDI-11417/12378

Feature No.	Type	Description	Dimensions (cm)		
			L (N/S)	*W (E/W)*	*H*
2	Rock Pile	Approx. 50 angular to sub-angular rock pile with heavy exfoliation	120	100	30

Table 4-4
Historic Rock Features Recorded at Site SDI-11417/12378

Feature No.	Type	Description	Dimensions (cm)		
			L (N/S)	*W (E/W)*	*H*
3	Rock Pile	Approx. 30-40 angular stacked rocks with heavy exfoliation some partially embedded	200	120	20
4	Rock Pile	Approx. 15-20 angular to sub-round stacked rocks	80	80	30
5	Rock Pile	Approx. 30-40 angular scattered rocks with heavy exfoliation some partially embedded	140	120	15
6	Rock Pile	Approx. 40-50 angular to sub-round stacked rocks with heavy exfoliation some partially embedded	120	120	15
7	Rock Pile	Approx. 15-20 angular scattered rocks some partially embedded	70	50	15
8	Push Pile	Angular stacked rocks few partially embedded	230	180	50
9	Push Pile	Approx. 400+ angular to sub-rounded unsorted rocks	570	250	50
10	Push Pile	Approx. 300 + angular to round rocks and cobbles some partially embedded	400	200	40
11	Rock Pile	Approx. 15-20 angular scattered rocks some partially embedded	80	120	15
12	Push Pile	Approx. 50 large to small sized round to sub-rounded cobbles many partially embedded	160	120	25
13	Rock Pile	Approx. 40-50 angular to sub-round scattered rocks with heavy exfoliation some partially embedded	160	170	40
14	Rock Pile	Approx. 50-80 angular to sub-round stacked rocks with heavy exfoliation some partially embedded	140	100	30
15	Push Pile	Approx. 300 + angular to sub-round rocks and cobbles some partially embedded	280	400	50
16	Rock Pile	Approx. 100 + angular to sub-round stacked rocks with heavy exfoliation some partially embedded	120	200	40
17	Rock Pile	Approx. 200 + angular to sub-round stacked rocks with heavy exfoliation some partially embedded	170	180	40
18	Push Pile	Approx. 100 + angular to sub-round stacked rocks with heavy exfoliation some partially embedded	260	350	40
19	Rock Pile	Approx. 80-100 angular to sub-round stacked rocks with heavy exfoliation some partially embedded	170	150	25
20	Rock Pile	Approx. 80-100 angular to sub-round stacked rocks with heavy exfoliation some partially embedded	190	130	40
21	Structure Foundation	Approx. 500+/- angular cobbles partially stacked and embedded forming a rectangle with a possible entrance to the West.	450	320	50

cm = centimeters; L = length; W = width; H = height (above ground surface); N/S = north/south dimension; E/W = east/west dimension

Feature 21 is a rock feature that appears to represent the foundation of a small structure. The foundation feature is rectangular shaped, measures approximately 450 cm (N/S) x 320 cm (E/W) and has an approximate height of 50 cm above the ground surface. While most of this feature is obscured by dense grass and other vegetation, the feature appears to be at least partially

embedded into the ground surface. While much of the rocks and cobbles making up this feature appear to be loose and are being slowly slumping and rolling out of place, it appears that the lower tiers of the cobbles have straight edges and hard 90 degree angled corners and possibly has an opening, or break in the wall along the western side of the feature. While there is a diffuse scatter of historic refuse surrounding the general vicinity of Feature 21, no milled wood, hardware or other structural materials were identified in association with this feature. Based on the size of the foundation, it likely represents the remains of a small outbuilding/storage shed. Aerial photographs of this location dating from 1953-present and topographic maps dating from 1903-present do not show any evidence of a structure at this location (historicaerials.com). A tree, located adjacent to the feature, is present in all of the photographs; this tree is likely obscuring the feature in all of the photos, and if the structure were extant post-1952, is also obscuring the structure.

A general surface collection was conducted for the historic portion of this site and a total of 17 historic artifacts were recovered which include three historic ceramic fragments, 10 fragments of historic glass (nine bottle fragments and one unidentified melted glass fragment), three metal artifacts (one iron hinge, one wrought-iron nail, and one tin spoon). One small unspeciated fragment of historic cut bone was also recovered from the ground surface.

Five STPs were excavated judgmentally within this portion of the site to determine if there is any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 40 cmbs. The stratigraphy of STP 1 consisted of a single stratum of moderately compact strong brown sandy loam (Munsell: 7.5YR 4/6) with a high volume of angular rocks and gravels increasing with depth, excavated down to a depth of 40 cmbs. STP 1 was sterile. STP 2 was excavated to a depth of 30 cmbs. The stratigraphy of STP 2 consisted of a light brown (Munsell: 7.5YR4/3) very compact silty alluvium interspersed with angular rocks down to approximately 30 cmbs where the light brown loam become increasingly compact immediately above decomposing bedrock. STP 2 was positive: two volcanic interior flakes, two fragments of shatter, and three historic glass bottle body fragments were recovered from 0 to 20 cmbs. No material was recovered from 20 to 40 cmbs in STP 2.

STP 3 was excavated to a depth of 40 cmbs, yielding only a strong brown (Munsell: 7.5YR4/6) moderately compact silty clay loam that becomes very compact decomposing granite at approximately 40 cmbs. STP 3 was sterile. STP 4 was excavated to a depth of 30 cmbs. Sediments encountered in STP 4 consisted of moderately compacted reddish brown (Munsell: 5YR 5/4) silty clay loam with a high volume of volcanic rock and small angular gravel that transitioned into the beginning of decomposing granite bedrock. No cultural materials were recovered from STP 4. STP 5 was excavated to a depth of 40. The stratigraphy of STP 5 consisted of a single stratum of moderately compact strong brown sandy loam (Munsell: 7.5YR

4/6) with a high volume of angular rocks and gravels increasing with depth, excavated down to a depth of 40 cmbs. STP 5 was sterile.

Prehistoric Component (predominantly SDI-12378)

SDI-12378 was initially recorded by A. Pigniolo, S. Campbell, and D. James of ERC Environmental, Inc. in 1991 as a black porphyritic metavolcanic quarry and a lithic reduction site, with evidence of quarrying activities present on several bedrock outcrops. The site was recorded being located on the slope of a ridge around and below a rock outcrop and in a saddle near the high point of the ridge. Artifacts recorded in 1991 included more than 100 flakes and angular waste (shatter) fragments of both black porphyritic materials as well as fine-grained green material, apparently not from this site, and at least three cores. The bedrock milling feature originally recorded within SDI-11471 is discussed herein.

Site Structure, Artifact Recovery, and Assemblage Composition

As a result of evaluation fieldwork efforts, the prehistoric component of the site was determined to contain one concentration of lithic debitage, one bedrock milling feature (Feature 1), and a general scatter of lithic material surrounding the concentration. The lithic scatter and concentration are situated around the numerous rock outcrops as originally described in the site record. Many of the outcrops are comprised of the low-quality volcanic source material used for stone tool production in the area.

Feature 1 consists of a single shallow oval-shaped bedrock milling slick, measuring 35 x 25 cm, located on a bedrock outcrop measuring approximately 55 x 57 cm with an approximate height just under 10 cm above the ground surface. The bedrock surface shows moderate to heavy signs of exfoliation and there is evidence of considerable heat-spalling on the bedrock outcrop. The second possible milling feature was not relocated during the current visit. The second possible slick is either heavily exfoliated and/or weathered to the point it is unrecognizable or it simple was not a real slick to begin with.

Concentration 1 is comprised of the densest, central part of the prehistoric component of the site situated between two prominent bedrock outcrops. All debitage in Concentration 1, which covers a 38 x 20 m area, were collected as a single grab sample, including: one volcanic primary flake, five volcanic secondary flakes, 22 volcanic interior flakes, and 73 pieces of volcanic shatter. One volcanic assayed cobble was collected as a point plot from within Concentration 1 as well.

General surface collections made throughout the remainder of the site yielded a total of 83 pieces of debitage and one volcanic retouched flake. The debitage recovered includes three secondary volcanic flakes, 17 interior volcanic flakes, 62 pieces of volcanic shatter, and one piece of

cryptocrystalline silicate shatter. One multidirectional volcanic core was also collected as a point plot outside the concentration.

Five STPs (numbers 6-10) were excavated within the prehistoric component of the site to determine if there is any subsurface component to the site and investigate the site's integrity. STPs were subjectively placed across the site targeting denser areas of surface artifacts where sediments may have accumulated, while also attempting to avoid encountering near-surface bedrock, which is abundant throughout the site. STP 6 was excavated to a depth of 40cmbs. The stratigraphy of STP 6 consisted of one stratum of light brown fine grain sandy loam (Munsell: 7.5YR 5/4) with volcanic clasts excavated to a depth of 40 cmbs. STP 7 was excavated to a depth of 20 cmbs. The stratigraphy of STP 7 consisted of compact reddish brown silty loam (Munsell: 5YR5/4) excavated to a depth of 20 cmbs, exposing a bedrock boulder below. STP 8 had the same stratigraphy as STP 7, also hitting bedrock at approximately 20 cmbs. STP 9 was placed within the area identified as Concentration 1; one flake was noted on the ground surface at this spot, which was collected as part of STP 9. A total of four pieces of debitage were recovered from 0 to 20 cmbs; the debitage includes one volcanic secondary flake, two volcanic interior flakes, and one piece of volcanic shatter. No material was collected from 20 to 30 cmbs and the STP was terminated at approximately 30 cmbs after encountering bedrock. STP 10, excavated along the slope south of the largest bedrock outcrop, consisted of compact light brown (Munsell: 7.5YR 4/4) silty clay loam with a high volume of volcanic rock and small angular gravel that transitioned into the beginning of decomposing granite bedrock at approximately 40 cmbs.

STPs 6, 7, 8, and 10 were negative, containing no artifacts or cultural materials; STP 9 was the only positive excavation yielding one flake from the surface and four pieces of debitage from 0 to 20 cmbs.

Discussion and Combined Site Summary

SDI-11417/12378 is a large multi-component site containing prehistoric and historic elements, which almost exclusively confined to the ground surface. The historic component is most likely is associated with the cattle ranching industry of Proctor Valley, while the prehistoric component is a limited quarry and lithic reduction site. These sites were combined due to the overlapping of the various prehistoric and historic artifacts and features recorded in this area. The prehistoric component of the site is characteristic of a multiple short-term stops related to procurement of raw material for stone tool production. The limited number of flake tools and assayed cobbles/cores indicate that desired materials were collected and transported off-site for tool production. The presence of the bedrock milling indicates that addition to quarrying activities, some food production or processing also occurred. The lack of significant cultural deposits and datable material makes it difficult to place the prehistoric occupation of this site in time or in

association with other similar sites. As all surface artifacts were collected and only minimal subsurface artifacts were identified, the data potential of the prehistoric component has been exhausted through the evaluation efforts documented herein.

From the historic artifacts collected from SDI-11417/12378, the only temporally diagnostic materials are the various glass artifacts recovered from the site surface collection. Of the nine glass diagnostic artifacts collected, two are bottle finishes that can only be estimated to having a broad manufacture range from the late nineteenth century to middle of the twentieth century. The other seven diagnostic glass artifacts are bottle bases or bottle base fragments which have manufacturer's marks. The manufacturers identified from the artifacts include Owens-Illinois Co., Maywood Glass Co., Consumers Glass Co., and two unknown manufacturers. The earliest date comes glass produced from the Consumers Glass Co.; however, this artifact also has the latest manufacture date as the Consumer Glass Co. has the widest range of manufacture of all the glass artifacts collected (1917-1962). Most of the date ranges identified from the glass artifacts are not specific dates but appear as much generalized periods of time representing when these items were most likely available. While there are earlier and later dates provided in the estimated manufacture date ranges, the majority of the material suggests a manufacture date during the 1940s. Table 4-5 presents a summary of the diagnostic glass artifacts collected from SDI-11417/12378.

Table 4-5
Diagnostic Artifacts Collected During 2016 Archaeological Testing at SDI-11417/12378

Cat. #	Artifact	Mark	Manufacturer	Estimated Date Range*
251	Round brown glass bottle base fragment	Partial "PUREX" logo	Owens-Illinois Co.	Post-1923 manufacture (twentieth century)
252	Round green glass bottle base	O.-I. Circle, Diamond, & I logo; "7 Up – Star Beverage Co. San Diego"	Owens-Illinois Co.	1940-1947 manufacture range (mid-to-late twentieth century)
253	Round brown glass bottle base	CC in a Circle logo; "08-21 F-8 7"	Unknown	Most likely twentieth century from unknown mark
254	Oval colorless glass bottle base	"D-9-37 85 MG 40"	Maywood Glass Co.	1930-1958 (mid-to-late twentieth century)
255	Round brown glass bottle base	"CG 4 – C19 – 89"	Unknown	Most likely twentieth century from unknown mark
256	Oval colorless glass bottle base fragment	O.-I. Circle, Diamond, & I logo; "D I 60 - 40"	Owens-Illinois Co.	1940s manufacture date (mid-to-late twentieth century)
257	Green glass bottle base fragment	Partial "C" in upside-down triangle	Consumers Glass Co.	1917-1962 manufacture range (early-to-mid twentieth century)
258	Double-bead/ring colorless glass bottle neck and finish	N/A	N/A	late-nineteenth century to mid-twentieth Century

Table 4-5
Diagnostic Artifacts Collected During 2016 Archaeological Testing at SDI-11417/12378

Cat. #	Artifact	Mark	Manufacturer	Estimated Date Range*
259	Square ring colorless glass bottle neck and finish	N/A	N/A	Late-nineteenth century to mid-twentieth century

* **Sources:** Historic Glass Bottle Identification & Information 2017; Toulouse 1971; Whitten 2016

The historic rock features recorded with historic portion of this site are more difficult to identify and place within the regional history than the glass artifacts. While the rock features are suggestive of the cattle ranching industry (likely clearing the field prior to disking), there are no clear activities delineated by the features and artifacts recovered across the site. The absence of dateable materials in direct association with the features means that it is not possible to determine when the rock features were made. The rock foundation indicates that a structure of some kind was present, but no evidence of the structure above the foundation is extant at the site, and therefore the type, function, and age of the former structure cannot be determined. The presence of the various rock features and the artifacts, which are largely mid-twentieth century consumer goods, strongly suggest association with the cattle ranching industry but do not definitively demonstrate any important historic activity or land use. The limited amount of historic artifacts and lack of discrete deposits, privies, or dumps means that the data potential of the historic component has been exhausted through the current evaluation efforts.

Neither the prehistoric quarry or historic ranching portions of this combined site are eligible for listing in the CRHR or the local register; nor are they eligible for protection under Otay Ranch RMP guidelines. The combined site is not significant under CEQA. Under County guidelines, the entire combined site, is an important resource; however, pursuant to County guidance, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance.

CA-SDI-11421

Site SDI-114 was first recorded by R. Collett with RECON in 1989 as an historic poured concrete slab foundation, measuring 2.5 x 3 m, with inset metal bolts. A. Pigniolo, J. Blum, and B. Glover with ERC Environmental Inc., returned in 1991 but could not relocate the foundation. They observed a cluster of concrete slab fragments recent in origin, suggesting the foundation had been destroyed in the intervening years.

Site Structure, Artifact Recovery, and Assemblage Composition

No concrete slab foundation or cluster of concrete fragments could be found during the current field efforts, and no artifacts were observed on the ground surface. One STP was excavated to a depth of 40 cmbs where it terminated at bedrock. The sediment in the STP from the surface to 40 cmbs consisted of a dry, strong brown (Munsell: 7.5YR 4/6), semi-compact to very compact silty-clay loam with heavy rocks, gravels and some evidence of bioturbation. STP 1 was sterile and did not contain any cultural materials. As a result, during the current investigation, no surface or subsurface artifacts were collected.

Discussion and Site Summary

The description of the concrete slab on the original 1989 site form matches the foundation at SDI-11399, located some 50 to 75 m to the east. Considering the lack of any cultural materials or artifacts noted during the current evaluation, it is likely that the concrete rubble reported in the ERC site update has been removed from the site. It is also possible, yet less likely, that the site was somehow mapped in error, whereby the concrete foundation located at the nearby site of SDI-11399 was recorded a second time under the identification of SDI-11421. This seems unlikely though, since the mapped location of SDI-11421 was previously visited twice, and the second visit by ERC did not notice a mapping error. In either case, it is clear based on the current inventory and evaluation that no artifacts or features are present in or near the mapped location of SDI-11421 and therefore it does not qualify as an archaeological site.

As this site does not exist, it is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or local register. SDI-11421 is also not considered important under County Guidelines, as it is not a site. However, based on the previously reported cultural materials at this location, monitoring of construction-related ground disturbing activities as part of the overall monitoring efforts should be performed to reduce potential impacts to unknown cultural resources to less than significant.

SDI-12313

Site SDI-12313 was first recorded by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. in 1991 as a small lithic procurement and testing area. The scatter included a core and three porphyritic volcanic flakes in a 5 x 10 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current site visit two prehistoric artifacts, one volcanic flake and one cryptocrystalline flake, were identified and collected on the ground surface. One STP was

placed between the artifacts to see if there was a subsurface component to the site. STP 1 was excavated to a depth of 40 cmbs where it terminated at bedrock. The sediment from the ground surface to 40 cmbs consisted of a strong brown (Munsell: 7.5YR 4/6), damp, semi- compact silt loam (Figure 4-7). No artifacts were recovered from the STP. The site's current condition was then photo-documented.

Figure 4-7 STP 1 excavated to 40 cmbs at site SDI-12313, view to the east.

Discussion and Site Summary

SDI-12313 consists of a low density lithic scatter which does not contain any features or other constituents. While this site was initially recorded as a lithic procurement site, no specific quarry or procurement areas were noted during the survey or evaluation of the site. Bedrock outcrops or lithic material source nodules typically found at traditionally recognized quarry sites across San Diego County are not present at this site. In fact, since this resource contains only two artifacts recovered from the surface and there is no evidence of subsurface deposits, it no longer qualifies as a site and should be considered an isolate.

The lack of subsurface cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites, thereby limiting its data potential. Therefore it is not likely to yield any additional information regarding the prehistory of the region. SDI-12313 is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or local register.

As this resource no longer qualifies as a site, it is not considered important under County Guidelines. However, based on the previous reported artifacts at this location, monitoring of project-related ground disturbance as part of the overall monitoring program is recommended to reduce any potential impacts to undiscovered resources to a less than significant level.

SDI-12314

Site SDI-12314 was first recorded by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. in 1991 as a small lithic procurement and testing area. The scatter included one core and over ten flakes/angular waste made of porphyritic and aphanitic volcanic material in a 50 x 50 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

For the current Proposed Project, the site was resurveyed, a general surface collection was performed, and three STPs were placed within the site boundaries to determine if there was a subsurface component to the site. The surface collection produced eight volcanic flakes, but the core could not be relocated. All STPs displayed similar sediment profiles and all were excavated to a depth of 20 cmbs. The sediments from 0 cmbs to 20 cmbs consisted of a pale brown (Munsell: 10YR 6/3), damp, semi-compact silty-clay loam. STP excavation was terminated upon impacting bedrock. No artifacts were recovered from the STPs. No quarrying locations, outcrops, or distinct cobble exposures could be found within the site boundaries. The site's current conditions were photo-documented.

Discussion and Site Summary

SDI-12314, similar to many other prehistoric sites in the valley, consists only of a low density lithic scatter. No features or subsurface artifacts were recorded during the current investigation. Initially recorded as a lithic procurement site, SDI-12314 has no evidence of specific lithic quarry or procurement locations. Bedrock outcrops or lithic material source nodules typically found at traditionally recognized quarry sites across San Diego County are not present. The site likely represents opportunistic testing of a single cobble or possibly limited tool manufacture. The limited quantity and variety of surface artifacts combined with the absence of subsurface cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. Based on the results of the current evaluation, the site is not likely to yield any additional information regarding the prehistory of the region. Thus, the site is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

The site is considered important under County Guidelines; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance.

SDI-12315

Site SDI-12315 was first recorded by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc., in 1991 as a sparse lithic scatter procurement area. The scatter included over five metavolcanic flakes and a unifacially retouched flake-based tool in a 60 x 30 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation the site was resurveyed and photo-documented, a general surface collection was performed, and three STPs were excavated within the site boundaries to determine if there was a subsurface component to the site (Figure 4-8). The surface collection produced seven volcanic flakes, but the retouched flake was not relocated. STP 1 was excavated to a depth of 20 cmbs, STP 2 to 30 cmbs, and STP 3 to 20 cmbs. All STPs displayed similar sediment profile. Sediments in all STPs from the surface to terminal depth consisted of strong brown (Munsell: 7.5YR 4/6), damp, compact silty-clay loam. All STPs were terminated due to the presence of bedrock. No artifacts were recovered from the STPs.

Discussion and Site Summary

SDI-12315 consists of only a few pieces of debitage that are confined to the surface. This site is characteristic of a short-term stop, likely related to expedient tool manufacture or cobble testing. The lack of substantial subsurface cultural deposits and datable material makes it difficult to place this site in time or in association with other sites in the region, and therefore the data potential of the site has been exhausted. Thus, the site is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or the local register.

The site is considered important under County Guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recordation and evaluation efforts described herein, as well as curation or repatriation of artifacts and monitoring of project-related ground disturbing activities.

Figure 4-8 Site SDI-12315 site overview, with pin flags marking artifacts, view to the south.

SDI-12316

Site SDI-12316 was first recorded by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. in 1991 as a small, sparse lithic scatter/procurement area. The scatter included one clear quartz flake of non-local origin, a tested core with two flake scars, and a flake in 5 x 15 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation the site was resurveyed, a general surface collection was performed and one STP was excavated to determine if subsurface deposits were associated with the surface scatter. The collection produced three volcanic flakes but was unable to relocate the core or quartz flake. One STP was placed at the center of the site boundaries to see if there was a subsurface component to the site. STP 1 was excavated to a depth of 30 cmbs where it terminated at bedrock. The sediment throughout the STP consisted of a brown (Munsell: 7.5YR 4/4), dry, loose silt loam. No artifacts were recovered from the STPs. The site's current conditions were photo-documented.

Discussion and Site Summary

SDI-12316 similar to many other sites in the area consists only of a low density lithic scatter. No features or subsurface artifacts were recorded during current field efforts. While this site was recorded as a lithic procurement site, no specific procurement lithic source locations were recorded. The minimal amount of surface artifacts and absence of subsurface cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. Based on the results of the current evaluation, the site is not likely to yield any additional information regarding the prehistory of the region. Thus, the site is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or local register.

The site is considered important under County Guidelines; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance.

SDI-12317

Site SDI-12317 was first recorded by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. in 1991 as a small, sparse lithic scatter/procurement area. The scatter included more than 20 flakes/angular waste and one core over a 50 x 300 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current field efforts the site was resurveyed and photo-documented, a general surface collection was performed, and four STPs were excavated. The survey and collection produced three volcanic flakes, one volcanic retouched flake, and one volcanic simple flake tool. Four STPs were placed within the site boundaries to determine if a subsurface deposit is present. STP 1 was excavated to a depth of 20 cmbs; STP 2 to 30 cmbs; STP 3 to 20 cmbs; and STP 4 to 20 cmbs. All STPs displayed similar sediment profiles. The sediment from the surface to terminal depth consisted of a strong brown (Munsell: 7.5YR 4/6), dry, compact silty-clay loam. All STPs were terminated due to the presence of bedrock. No artifacts were recovered from the STPs.

Discussion and Site Summary

SDI-12317 consists of a sparse lithic scatter which is confined to the surface. This site is characteristic of a short-term stop, possibly related to expedient tool manufacture. The lack of substantial subsurface cultural deposits and datable material makes it difficult to place this site in time or in association with other sites in the region. Thus, the site is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or the local register. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation or recordation of artifacts and monitoring of project-related ground disturbing activities.

SDI-12318

Site SDI-12318 was first recorded by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. in 1991 as a historic rock alignment. The alignment was speculated to be a foundation, and was reported to measure 5 x 5 m.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current field efforts a general surface survey was performed but no artifacts were observed on the surface. The reported foundation (Figure 4-9) was found and photo-documented. While the sketch map in the site record indicated a square/rectangular shape, during the current investigation no shape could be identified for the feature. Instead, only an amorphous pile of rocks was identified. A small section of the rock pile was investigated and dismantled to examine its structure. The cobbles displayed no specific arrangement indicative of intentional placement, nor were any identifiable courses (stacking) discernable, as would be expected if it was a structure foundation. Rather, the rocks were rather randomly jumbled in a pile.

A dirt road of some kind is noted in the site record, although no evidence of a road is visible in aerial photographs from 1994-2006. Assuming the mapped road is a two track, which probably would not be visible on lower resolution photos, the obviously graded existing road which appears in 2006 goes straight through the feature location. This disturbance, in conjunction with the amorphous nature of the pile, indicates that the existing pile is not an actual structure foundation, but is more likely a machine push pile, which is probably the disturbed remains of the originally reported feature. One STP was excavated adjacent to the rock pile to examine the potential for artifacts at the site, although none were recovered.

Figure 4-9 Rock pile encountered at SDI-12318, view to the north

Discussion and Site Summary

Based on the fieldwork efforts describe herein, and review of the original site record, the rock alignment feature at site SDI-12318 appears to be the disturbed remains of a historic structure. Recent road grading likely disturbed the feature, resulting in the random rock pile visible at this

time. Given the limited historic period activities in Proctor Valley, the feature was likely related to cattle ranching activities; however the lack of physical integrity means that the purpose and origin of the feature cannot be determined.

Based on the results of the current evaluation, SDI-12318 is no longer the foundation that was originally recorded, and therefore retains no integrity. As such, it cannot yield any significant additional information regarding the history of the region and cannot be related to any known important persons or events in local, state, or national history. Thus, the site is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or local register.

The site is considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through monitoring of project-related ground disturbance and the curation of any artifacts which may be identified during monitoring.

SDI-12319

Site SDI-12319 was first recorded by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. in 1991 as a small sparse lithic scatter/procurement area. The scatter included one green metavolcanic porphyritic unifacial core and two flakes in a 15 x 10 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current field efforts the site was resurveyed and photo-documented. No artifacts were found or collected on the ground surface. The site record indicates the artifacts were all observed in a dirt road, which, based on aerial photographs, has been graded recently. Such grading likely moved and/or buried the artifacts, which would explain why they were not observed at this time. One STP was placed along the south side of the graded road to determine if additional materials may be present. STP 1 was excavated to a depth of 20 cmbs where it was terminated due to bedrock. The sediment from 0 cmbs to 20 cmbs consisted of a brown (Munsell: 7.5YR 4/4), dry, compact silt loam. The sediment contained 30% to 70% small angular rocks, with rock percentages increasing with depth. No artifacts were recovered from the STPs.

Discussion and Site Summary

Site SDI-12319 was reported to consist of a sparse lithic scatter containing three surface artifacts. Survey and evaluation efforts at this time could not relocate any of the previously recorded artifacts and found no evidence for subsurface deposits. Therefore SDI-12319 no longer qualifies as a site. Site SDI-12319 is not significant under CEQA or the Otay Ranch RMP and it is not eligible for listing in the CRHR or local register. As SDI-12319 is not considered a site, it is not

considered important under County Guidelines. Monitoring of project-related ground disturbances in this area as part of the overall monitoring program, and collection and curation or repatriation of any artifacts which may be discovered would reduce potential impacts unknown cultural resources to less than significant.

SDI-12320

A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. first recorded SDI-12320 in 1991 as a sparse lithic scatter/procurement area with two general areas of concentration – one in the north and one in the south. The scatter included more than 15 metavolcanic cores and 150 flakes/angular waste in a 300 x 150 m area (Figure 4-10).

Site Structure, Artifact Recovery, and Assemblage Composition

During the current field efforts, the site was resurveyed and documented, a general surface collection was performed, and three STPs were excavated. Two concentrations as noted in the site record were relocated and potential quarry locations were identified. Concentration A, located in the southern portion of the site, contained four flakes, three multidirectional cores, and one unidirectional core. All artifacts in Concentration A are volcanic material. Concentration B, located in the northern portion of the site, contained 58 volcanic flakes and shatter, three chert flakes, and two volcanic multidirectional cores. The presence of potential quarry and procurement areas were recorded along the southern edge of the site; lithic raw source bedrock boulders were exposed along the drainage route. No other artifacts were identified outside the two concentrations. It is unknown why so few artifacts, particularly debitage, were recovered at this time, as compared to the original site record. It may be that vegetation was denser during the current field efforts, or possibly artifact quantities were overestimated during the original documentation.

Three STPs were placed within the site boundaries to investigate the potential for subsurface deposits; however, no artifacts were recovered from the STPs. The sediments in all STPs from the ground surface to terminal depth consisted of strong brown (Munsell: 7.5YR 4/6), damp, compact silty-clay loam. All STPs were terminated due to the presence of bedrock.

Discussion and Site Summary

This site appears to provide documentable locations for potential lithic quarry and procurement activities. Small to medium sized boulders and low-lying raw material outcrops are exposed in various dispersed locations along the drainage bordering the north-northwest end of the site. Although not all of the originally reported cores were relocated at this time, it is clear that naturally occurring cobbles and boulders were exploited at this location to procure material for flakedstone tools.

Figure 4-10 The southeastern end of SDI-12320, view to the north-northwest.

The lack of identified cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. Because the site lacks subsurface deposits and only consisted of a sparse distribution of surface artifacts that was collected in its entirety, the data potential of the site has been exhausted. Therefore, the site is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or the local register.

The site is considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance.

SDI-12322

Site SDI-12322 was first recorded by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. in 1991 as a sparse lithic scatter/procurement area. The scatter included one core tool and two volcanic flakes in an 8 x 5 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation the site was resurveyed, but no artifacts were found or collected. One STP was placed in the center of the site boundaries to identify any potential subsurface component. STP 1 was excavated to a depth of 20 cmbs when it was terminated due to bedrock. The sediment from the surface to 20 cmbs consisted of a dark brown (Munsell: 7.5YR 3/4), dry, compact silt loam with 30% small gravel throughout the unit. No artifacts were recovered from the STP. No surface or subsurface artifacts were collected during the current investigation of this site.

Discussion and Site Summary

SDI-12322 was reported to consist of a very low density lithic scatter, however, during the current investigation none of the three previously reported artifacts were relocated and no subsurface deposit was identified. As no cultural materials were identified at this time, SDI-12322 no longer qualifies as a site and is unlikely to yield any additional information regarding the prehistory of the region. Therefore, SDI-12322 is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or local register. SDI-12322 is not considered important under County Guidelines. Archaeological monitoring at this location, performed as part of the monitoring program for project-related ground disturbances, would reduce potential impacts to unknown resources to less than significant.

SDI-12324

Site SDI-12324 was first recorded by A. Pigniolo, J. Blum, and B. Glover with ERC Environmental, Inc. in 1991 as a sparse lithic scatter/procurement area. The scatter included more than 15 flakes/angular waste of green metavolcanic material in a 25 x 25 m area. Most of the flakes are secondary or interior.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation the site was resurveyed and documented, a general surface collection was performed, and one STP was excavated. The survey and surface collection produced two volcanic flakes. STP 1 was excavated near the center of the mapped site boundary to determine if a subsurface component to the site exists. The test pit was excavated to a depth of 20 cmbs and then terminated due to sterile sediment and impassable bedrock. The sediment from 0 cmbs to 20 cmbs consisted of a brown (Munsell: 7.5YR 4/4), damp, semi-compact silty-clay loam. No artifacts were recovered from the STP.

Discussion and Site Summary

Site SDI-12324 was originally recorded as a light lithic surface scatter, however the minimal quantity of artifacts identified and recovered at this time means that the resource does not meet the minimum requirements to be considered a site. SDI-12324 should therefore be considered an isolate, and it is unlikely to produce any additional information that would be significant to the overall understanding of the prehistory of the region. Thus, SDI-12324 is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or local register. As an isolate, this resource is not considered important under County Guidelines. Monitoring of project-related ground-disturbing activities in this location as part of the overall monitoring program for the Proposed Project would reduce potential impacts to unknown resources to less than significant.

SDI-12328

Site SDI-12328, also recorded as OR-S-17H, was first recorded by A. Pigniolo, J. Blum, and M. Mealey with ERC Environmental, Inc., in 1991 as two loci of historic rock retaining walls and a small prehistoric lithic scatter. The site covers a 100 x 300 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation the site was resurveyed and documented. The resurvey did not identify any artifacts but did relocate the historic features. The lithic scatter was reported as three flakes located in the drainage. Since it is likely that they represent secondary deposition in the drainage, and were not marked on the site sketch map, a single STP was placed in the center of the site boundaries at the edge of the drainage. STP 1 was excavated to a depth of 40 cmbs and then terminated due to sterile sediment. The sediment from 0 cmbs to 40 cmbs consisted of a dark brown (Munsell: 7.5YR 3/4), dry, compact silt loam with 40% small gravel throughout the unit. The STP was sterile and no artifacts were identified at the site.

The two rock features consist of non-fitted, loose yet well consolidated angular to sub-angular rock and cobbles that apparently have been plowed or bulldozed into their current locations along a northeast by southwest alignment. These features do not appear embedded into the surrounding sediments outside of what would naturally occur with alluvial erosion. No artifacts were noted in association with these features.

Discussion and Site Summary

The minimal nature of the described lithic scatter and absence of prehistoric materials indicate that the reported flakes eroded into the drainage from upslope, probably from the adjacent site

SDI-6695A. The prehistoric component of the site is unlikely to produce any additional information that would be significant to the overall understanding of the prehistory of the region.

The two previously recorded rock features appear to be similar to the many other rock and cobble features encountered across the valley. While many of these features are clearly representing non-specific piles with amorphous or non-linear shapes, there are many rock features that demonstrate morphology that implies purpose, whether or not that said purpose could be understood currently. Considering the location of the rock features at SDI-12328 within the drainage, it would appear that these features could have some hydro-erosion prevention function, or possibly even water retention. Even though these features have no diagnostic elements which could provide dates of construction or relate them to specific persons or ranching activities, the occurrence and similarity to other rock features in the valley suggests that these features are also associated with the local cattle industry. Rock features that appear to have had a water collection/retention function have been noted at sites such as SDI-11396, the main cattle processing locale, and possibly the rock features noted at SDI-6695A.

However, despite the possible yet unproven association with the overall cattle industry utilization, the lack of associated material collections, diagnostic artifacts or feature elements reinforce that this site does not sufficiently represent an established property type, period, or method of construction, nor does it represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. As such, the site is not likely to produce any additional information that would be significant to the overall understanding of the history of the region. Thus, the site is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

The site is considered important under County guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, and monitoring of project-related ground disturbing activities.

SDI-12329

Site SDI-12329 was first recorded by A. Pigniolo, J. Blum, and M. Mealey with ERC Environmental, Inc. in 1991 as a small, low density prehistoric lithic scatter/procurement area covering an estimated 30 x 20 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation the mapped site location was resurveyed, however no cultural resources were identified at that location. Further review of the site record indicates that the site

is actually located to the east, closer to site SDI-6695A. The location identified as the site in the site records was resurveyed, and a light lithic scatter was identified at that location. The survey and surface collection identified five volcanic shatter fragments and one volcanic multidirectional core. STP 1, excavated in the center of the site did not produce any artifacts. The sediment from 0 cmbs to 40 cmbs consisted of a dark brown (Munsell: 7.5YR 3/4), dry, compact silt loam with 40% small gravel throughout the unit. The updated site location was remapped and photo-documented.

Discussion and Site Summary

This site is a light lithic scatter that is confined to the surface. The site likely represents short-term activities associated with lithic tool manufacture and resharpening. The site is not likely to produce any additional information that would be significant to the overall understanding of the prehistory of the region. The site is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

The site is considered important under County guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation or repatriation of artifacts and monitoring of project-related ground disturbing activities.

SDI-12330

Site SDI-12330 was first recorded by A. Pigniolo, J. Blum, and M. Mealey with ERC Environmental, Inc. in 1991 as a small, low density prehistoric lithic scatter/procurement area. Artifacts in the scatter consist of two metavolcanic flakes and two metavolcanic pieces of shatter in a 10 x 10 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation the site was resurveyed and a general surface collection was performed. This resulted in the collection of four volcanic flakes. Three STPs were placed within the site boundaries to see if there was a subsurface component to the site. STP 1 was excavated to a depth of 30 cmbs, STP 2 to 20 cmbs, and STP 3 to 50 cmbs all were terminated due to sterile sediment and increasing rock content/bedrock. The sediments encountered in all of the STPs consisted of a pale brown (Munsell: 10YR 6/3), damp, semi-compact silt loam with 20% to 50% small gravel increasing with depth. No artifacts were recovered from the STPs. The site's current conditions including recent disturbances, such as the geo-technical bore/auger excavation noted along the southern edge of the site, were photo-documented (Figure 4-11).

Figure 4-11 Disturbances from geo-technical bore/auger location, view to the northeast.

Discussion and Site Summary

This site, like many of the other prehistoric sites in the valley, is a light lithic scatter that is confined to the surface. The site likely represents short-term activities associated with lithic tool manufacture and retouch. All cultural materials at the site were collected. The site is not likely to produce any additional information that would be significant to the overall understanding of the prehistory of the region. The site is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

The site is considered important under County guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation or repatriation of artifacts and monitoring of project-related ground disturbing activities.

SDI-12332

Site SDI-12332 was first recorded in 1991 by A. Pigniolo, S. Campbell, and K. Collins with ERC Environmental, Inc. as a low density prehistoric lithic scatter with a biface and a core tool. Other artifacts in the scatter consist of five metavolcanic flakes and two metavolcanic pieces of shatter covering a 120 x 100 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

SDI-12332 was resurveyed during the inventory; however only the eastern half of the site is in the ADI, so only that portion of the site was evaluated. A light lithic scatter was found throughout the site boundary, but in a greater quantity than originally reported. A surface collection was performed in the western portion of the site, which resulted in the collection of 30 volcanic debitage, five chert flakes, one cryptocrystalline flake, three volcanic multidirectional cores, two volcanic retouched flake tools, one chert simple flake tool, and one volcanic percussing tool. Five STPs were excavated within the site boundaries (within the ADI) to see if there was a subsurface component to the site. All STPs were excavated to a depth of 40 cmbs and then terminated due to 20 cmbs of sterile sediment. The sediments encountered were the same in all STPs. The sediments from 0 cmbs to 40 cmbs consisted of a strong brown (Munsell: 7.5YR 4/6), dry, semi-compact silty-clay loam with 20% small sub-angular gravel increasing with depth. STP 1 contained one volcanic flake from 0 to 20 cmbs and STP 3 contained two volcanic flakes from 0-20 cmbs.

During the documentation of this site a moderate to high volume of ground surface disturbances were noted; the disturbances documented include trash dumping, recreational shooting, various deep rutted heavy machinery tracks, and grade cuts (Figure 4-12). While some of these machine tracks may be related to firebreaks, the exact nature of all of the disturbances could not be ascertained. The general site condition at the time of the evaluation was photo-documented.

Figure 4-12 Example of heavy machinery/vehicle ground-disturbance recorded at SDI-12332.

Discussion and Site Summary

The overall density of artifacts associated with SDI-12332 is low. The depth and distribution of cultural materials encountered during subsurface testing reveal the majority of material was located on or near the surface, with minimal subsurface deposits. The lack of datable materials and subsurface deposits at this site hinders identifying the specific utilization of this area, specifically regarding the length of and continuity of occupation. The paucity of artifacts recovered from the STPs, lack of a subsurface deposit, and generally sparse nature of the surface distribution of artifacts in the evaluated portion of the site do not provide significant information regarding the prehistory of the region. The evaluation efforts documented here have exhausted the data potential of the evaluated part of the site. Thus, this portion of SDI-12332 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Under County guidelines, SDI-12332, including the tested portion, is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance. The western portion of the site was not tested at this time and is therefore presumed significant under County guidelines and CEQA. The western portion of the site would be placed in open space and would be avoided by Proposed Project design. Temporary fencing during Proposed Project construction is recommended during construction to protect the eastern portion of the site from construction related impacts.

CA-SDI-12333

This site was originally recorded by A. Pigniolo, S. Campbell, and K. Collins of ERC Environmental, Inc. in 1991 as a small lithic scatter. The lithic scatter was reported to contain more than 10 flakes in a 10 x 10 m area on the slope of a ridge above a drainage.

Site Structure, Artifact Recovery, and Assemblage Composition

The western portion of the site is outside the ADI and would not be impacted; all evaluation efforts were performed in the eastern portion of the site. Surface collections conducted at this site recovered a total of six pieces of lithic debitage, one volcanic simple flake tool, one volcanic multidirectional core, and one biface fragment on the ground surface, both within and just outside the mapped site boundary to the east. As a result, the site boundary was modified to fully encompass the surface scatter. All of the material identified during the resurvey was collected. The debitage fragments recovered include two volcanic secondary flakes, three volcanic interior flakes, and one cryptocrystalline silicate interior flake. The biface is a mid-stage fine-grain green volcanic biface base fragment.

Three STPs were excavated at the site within the lithic scatter to determine if there was any subsurface component to the site and investigate the site's integrity. Each STP was excavated to a depth of 40 cmbs. The stratigraphy of STP 1 consisted of loose, silty sandy loam (Munsell: 10YR 2/2) from 0-20 cm, overlaying reddish grey (Munsell: 2.5YR 5/4) silty sandy loam. STPs 2 and 3 contained compact and moderately compact dark brown (Munsell 7.5 YR 3/4) silty clay loam from 0-40 cm. No cultural materials were recovered from the STPs.

Discussion and Site Summary

SDI-12333 is a light density lithic scatter which is confined to the ground surface. No subsurface artifacts or deposit are present at the site. The lack of datable materials and subsurface deposits at this site hinders identifying the specific utilization of this area, specifically regarding the length

of and continuity of occupation. The generally sparse nature of the surface distribution of artifacts at the site does not provide substantial significant information regarding the prehistory of the region. Thus, the evaluated eastern portion of SDI-12333 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Under County guidelines, SDI-12333 is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance. The western portion of the site was not tested at this time and is therefore presumed significant under County guidelines and CEQA. The western portion of the site would be placed in open space and would be avoided by Proposed Project design. Temporary fencing during Proposed Project construction is recommended during construction to protect the eastern portion of the site from construction related impacts.

CA-SDI-12335

This site was originally recorded by A. Pigniolo, S. Campbell, and K. Collins of ERC Environmental, Inc. in 1991 as a small lithic testing area. There were some slight discrepancies in the original DPR form; the artifact description lists two metavolcanic cores and one flake with an indeterminate amount of possible fire–affected rock, while the map lists a hammerstone and two flakes.

Site Structure, Artifact Recovery, and Assemblage Composition

Resurvey of the site and surrounding location did not identify any artifacts on the ground surface. It is unknown if the previously recorded artifacts were displaced (through disturbances or collection) since their original recordation, if they were incorrectly identified at that time, or if they were incorrectly mapped. Regardless, no cultural material was found at this location during the evaluation. Two STPs were excavated within the site boundaries to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 40 cmbs. The stratigraphy of STP 1 consisted of a 35 cm deep layer of yellowish grey silt (Munsell: 2.5YR 5/1) with 30-40% angular cobble followed by a sterile level of bedrock. STP 2 was excavated to a depth of 25 cmbs, through loosely compacted silt terminating at bedrock. No cultural materials were recovered from either STP.

Discussion and Site Summary

Site SDI-12335 was reported to consist of a lithic scatter containing three surface artifacts. Survey and evaluation efforts at this time could not relocate any of the previously recorded artifacts and found no evidence for subsurface deposits. Therefore SDI-12335 no longer qualifies

as a site. Site SDI-12335 is not significant under CEQA or the Otay Ranch RMP and it is not eligible for listing in the CRHR or local register. As SDI-12335 is not considered a site, it is not considered important under County Guidelines. Monitoring of project-related ground disturbances in this area as part of the overall monitoring program, and collection and curation or repatriation of any artifacts which may be discovered would reduce potential impacts unidentified cultural resources to less than significant.

CA-SDI-12373

CA-SDI-12737H was recorded by A. Pigniolo, S. Campbell, M. Caldwell, and K. Vander Veen of ERC Environmental, Inc. in 1991 as a multicomponent site with two loci (A and B) consisting of a Late Prehistoric habitation site and a historic rock alignment (see Table 4-6, CA-SDI-12373 Excavation Summary). The prehistoric component of this site was recorded to consist of multiple milling features, a surface scatter of flakes, and a possible midden deposit. The historic component consists of a roughly triangular-shaped angular rock alignment and a single fragment of historic whiteware ceramic located adjacent to the rock alignment. The site is located along a dirt trail and within a seasonal drainage with moderate to steep slopes on both the northern and southern sides.

Site Structure, Artifact Recovery, and Assemblage Composition

During the evaluation, site CA-SDI-12373 was heavily overgrown with tall grasses on either side of the dirt trail, limiting the ground surface visibility to less than 25%. A light scatter of volcanic flakes was identified near the western portion of this site during this site visit where Locus A was recorded. A sparse scatter of historic refuse was also observed, including six food-related cans and the remains of a water-heater tank were noted observed at Locus A. At Locus B, located at the eastern end of the site, only the historic rock alignment (Feature 1) was identified – no artifacts were observed at this time. Four bedrock milling features were also recorded at the site, stretching between the two loci on the north side of the dirt trail.

Seven STP and two CU were excavated within a 10 m wide corridor centered along the existing trail to determine if a subsurface component is present at the site and to investigate the site's integrity. Due to the dense grass at the site, a surface collection was not performed during the evaluation.

STP 1 and 7 were excavated in Locus B. STP 1 was excavated immediately adjacent to the Feature 1 and did not produce any artifacts or other cultural materials. Large fragments of charcoal were recovered from the STP, but these appeared to be of natural origin (i.e., wildfire)

as opposed to cultural in origin. (The rocks in Feature 1 are not burned, indicting the feature is not a campfire/hearth.)

STPs 2 and 3 were excavated in the center of the site near Features 2 and 3. Each was excavated to 40 cmbs s and were terminated due to encountering underlying decomposing granite. STPs 2 and three produced three flakes and one ceramic, respectively, as well as a small amount of charcoal.

STP 4, located in the middle of Locus A, was only excavated to a depth of 8 cmbs before encountering granite bedrock, however, the recovery from this level was substantial: 30 flakes, one retouched flake tool, four Tizon Brownware ceramics sherds, and three bone fragments. Although sediment accumulation here is shallow, the results of STP 4 strongly suggest that the Locus A may contain a significant deposit.

STP 5 and 6, both of which were sterile, were excavated east of Locus A to confirm that the site did not extend east of the mapped site boundary.

Table 4-6
CA-SDI-12373 Excavation Summary

Unit	Depth (cm)	Recovery	Sediments	Munsell	Termination
STP 1	0-25	Charcoal (not collected)	Compact silty loam	7.5YR 3/2 – dark brown	Decomposing granite (DG)
STP 2	0-20	2 debitage	Compact silty loam	7.5YR 3/2 – dark brown	DG
	20-40	Charcoal (not collected), 1 debitage			
STP 3	0-20	Charcoal	Compact silty loam	7.5YR 3/2 – dark brown	DG
	20-40	1 ceramic, charcoal			
STP 4	0-8	30 debitage, 1 retouched flake tool, 4 ceramic sherds, 3 bone	Compact silty loam	7.5YR 3/2 – dark brown	DG
STP 5	0-40	No recovery	Compact sandy silty loam	7.5YR 3/4 – brown	No recovery
STP 6	0-35	No Recovery	Compact silty clayey loam	7.5YR 3/4 - brown	DG / No recovery
STP 7	0-28	No recovery	Compact silty clayey loam	7.5YR 3/2 – dark brown	DG / No recovery
CU 1	0-18	143 flakes, 1 retouched flake tool, 1 millingstone, 1 indeterminate groundstone, 17 ceramic body sherds, 17 bone fragments (2.1 g), 2 invertebrate fragments (1.2 g), and 1 bullet shell	Loose silty loam	7.5YR 2/3 – very dark brown	Bedrock

Table 4-6
CA-SDI-12373 Excavation Summary

Unit	Depth (cm)	Recovery	Sediments	Munsell	Termination
CU 2	0-40	180 flakes, 1 retouched flake tool, 1 core, 20 ceramic sherds, 1 charcoal sample, 4 shell remains (0.8 g), 27 vertebrate remains (12.0 g), 1 glass fragment	Loose silty loam	7.5YR 2/3 – very dark brown	Bedrock

Due to the substantial artifact recovery in STP 4, CU 1 and 2 were excavated on either side of the STP to determine if an intact subsurface deposit was present or if the artifacts in STP 4 were the result of alluvial deposition. CU 1 (1 x 1 m) was excavated 50 cm west of STP 4 to a maximum depth of 18 cmbs as a single level as it encountered one homogenous level of very dark brown (Munsell 7.5YR2/3), loosely compacted, silty loam before coming down on angular granitic bedrock. CU 1 yielded a total of 143 flakes (including volcanic, basalt, and chert material types), one volcanic retouched flake tool, two groundstone milling tool fragments, 17 Tizon Brownware ceramic body sherds, two fragments of marine invertebrate bivalve remains (*Chione* sp. and *Argopecten* sp.; 1.2 g), 17 faunal fragments (2.1 g). Faunal remains include two bird bones, one reptile bone, and 14 unidentifiable bones.

CU 2 (0.50 x 2 m) was excavated 50 cm east of STP 4. The trench unit was excavated to a maximum depth of 40 cmbs as a single level as it encountered one homogenous level of very dark brown (Munsell 7.5YR2/3) loosely compacted, silt loam. CU 2 yielded 180 flakes (including volcanic, basalt and chert material types), one volcanic unidirectional core, one chert retouched flake tool, 20 Tizon Brownware ceramic body fragments, one charcoal sample, four marine invertebrate remains (0.8 g), 27 vertebrate remains (12.0 g), and one glass fragment. Vertebrate remains include one ungulate tooth, three *Rodentia* bones, one *Scuridae* scapula, one *Serpentes* vertebra, and 21 unidentifiable bones. Invertebrate remains include one *Chione* sp., one *Argopecten* sp. and two unidentifiable fragments.

Lithic debitage recovered from the site is comprised predominately of interior flakes (n=101), biface thinning flakes (n=26), pressure flakes (n=44), and interior pieces of shatter (n=134). Of these, only 13 are larger than 4 cm in length. This assemblage suggest that later-stage tool production and resharpening/repair was the primary activity at the site. Limited core/cobble reduction evidence by also likely occurred, as evidenced the 31 primary and secondary flakes and 20 pieces of shatter with cortex. Volcanic material dominates the assemblage (n=312) and shows the largest variability of flake types and sizes. Significantly fewer chert (n=19) and basalt (n=25) debitage are present, only five of which retain cortex.

Tizon Brownware ceramic sherds indicate that the site dates to post-AD 500, although the lack of diagnostic elements inhibit the ability to determine the types of vessels present.

The four bedrock milling features are all located on generally small volcanic boulders on the north slope of the drainage. All of the boulders in the site are heavily exfoliated with considerable heat spalling evidenced on each boulder. Feature 2, consists of a single bedrock milling slick, measuring 10 x 10 cm, located on a bedrock outcrop measuring 2 x 2 m with an height just under 2 m above the ground surface. Feature 3 consists of a single shallow round saucer mortar, measuring 30 x 30 cm, located on a bedrock outcrop measuring 2 x 2 x 0.40 m. Feature 4 contains eight milling surfaces, including four shallow slicks, three oval saucer mortars, and one oval mortar combined with a shallow slick, located on a bedrock outcrop measuring 5 x 2.5 x 1.5 m. Feature 5 consists of a single shallow oval saucer mortar, measuring 15 x 30 cm, located on a bedrock outcrop measuring 1.6 x 2.5 x 1.5 m.

Feature 1, located in Locus B, is a two-to-three course, triangular shaped alignment comprised of local angular boulders and cobbles. The feature is situated on the south side of the drainage, approximately 5 meters south of the trail. No clear function can be determined for the feature, although it is similar to the other rock alignments recorded throughout the Project Area. None of the rocks is fire-affected, indicating it is not hearth or campfire.

Discussion and Site Summary

Based on the extant of the cultural remains at the site, the prehistoric component of site CA-SDI-12373 is a temporary camp site and is therefore one of only a handful of prehistoric sites in the Project Area that are indicative of occupation, as opposed to most sites which are opportunistic lithic extraction sites. The artifact recovery from the current test excavations at CA-SDI-12373 include a total of 356 pieces of debitage, 42 fragments of Tizon Brownware ceramics, two groundstone tool fragments, one core, three retouched flake tools, a total of six marine invertebrate shell fragments (2.0 g), 47 vertebrate fragments (15.5 g), and trace amounts of small historic metal and glass fragments. Despite the apparent small dimensions, Locus A demonstrates a potential to provide information regarding prehistoric occupation of Proctor Valley. Subsistence activities in the valley may be discerned through analysis of faunal remains and ceramic sherds, should larger assemblages be collected and analyzed. The lithic assemblage at this site is more diverse and demonstrates different lithic reduction strategies than other sites in the valley. Settlement and site function patterns could also be addressed through the analysis of lithic assemblage and faunal material.

Based on the evaluation efforts described above, Locus A of CA-SDI-12373 is eligible for listing in the CRHR under Criterion 4 and the local register due to its ability to contribute to our

understanding of prehistory and is therefore significant under CEQA. Neither Locus A nor the remainder of the site are significant under the Otay Ranch RMP.

The historic component of site CA-SDI-12373 consists of evidence of general cattle ranching and possibly a temporary ranching camp location. The rock feature identified has a construction style, location pattern, and construction elements consistent with the numerous and varied rock features attributed to historic ranching identified throughout Proctor Valley. Due to the sparse artifact assemblage and lack of identifiable characteristics of the rock feature, the historic component of the site is not significant under CEQA or the Otay Ranch RMP and it is not eligible for listing in the CRHR or local register.

No construction activities are planned within or near CA-DI-12373, therefore the site would not be directly impacted. However, the establishment of an easement for a hiking/horse trail through the site could cause an indirect impact to the site, as increased use of the area by the public may result in looting of the site. Implementation of a data recovery plan, comprised of a surface collection and curation/repatriation) of all diagnostic tools and a sample of debitage and tools, would reduce the potential impacts from looting to a less than significant level. The details of the surface collection are included in the Data Recovery Plan I (Confidential Appendix F).

All sites are considered important under County guidelines; however, the monitoring, curation or repatriation, data recovery, documentation, and mitigation of the resource described herein would reduce the impacts to the importance of the site to a less than significant level.

CA-SDI-12377

This site was originally recorded by A. Pigniolo, S. Campbell, and D. James of ERC Environmental, Inc. in 1991 as a quarry site based around a natural chert outcrop. The site was reported to contain over 200 pieces of debitage, hammerstones, a core tool, 10 cores, and one biface covering a 600 x 150 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigations the site was resurveyed and found to be in the same general condition as previously reported. The western end of the mapped site boundary was found to not contain any artifacts or features, and, therefore, the site boundary was reduced. The eastern approximately two-thirds of the site are located in the ADI of the current Proposed Project and was evaluated. The western third is outside the ADI and was not directly evaluated; this portion is therefore is presumed to be significant under CEQA, and eligible for listing in the CRHR and local register.

The entire mapped site boundary was resurveyed, 17 STPs were excavated, and a surface collection consisting of a general grab sample, individual point plots, and delineation of one concentration were executed. During the resurvey of the site, no artifacts or features were identified in the western end of the site, and, therefore, the site boundary was reduced to encompass only the extant artifact scatter. Overall, far fewer artifacts were identified during the evaluation than originally reported in the site record.

During the survey one concentration of lithic debitage (Concentration 1) was noted, which corresponds roughly with an area marked by cross-hatching and the note, "main chert outcrop" on the 1991 ERC DPR site sketch map. This area appears to have a slightly higher volume of lithic debitage and several bedrock outcrops with evidence of intentional reduction.

Surface collections at this site included a single grab sample of all materials in Concentration 1, and then a general surface collection that targeted all the artifacts located within the site boundary (within the ADI) but outside of Concentration 1. Artifacts recovered from of Concentration 1 include 26 pieces of debitage, one volcanic hammerstone, and one chert multidirectional core, and one quartzite assayed cobble. The debitage recovered from Concentration 1 includes five secondary chert flakes, three chert interior flakes, one quartzite interior flake, two volcanic interior flakes, 12 pieces of chert shatter, and three pieces of volcanic shatter. Surface collections outside of Concentration 1 yielded a total of 45 pieces of debitage and one bifacial millingstone fragment. The debitage collected from the general surface collection includes two primary chert flakes, one secondary chert flake, 11 chert interior flakes, 24 chert shatter, one quartzite shatter, and six volcanic shatter.

A total of 17 STPs were excavated at the site. The stratigraphy noted across the site varied to some degree between light brown to strong brown compact silt loams, but overall there is very poor sediment deposition. Large quantities of angular cobbles and gravel were present throughout each STP. The heavy erosion from wind, sporadic and infrequent rains, and the large quantity of near surface bedrock very close to the ground surface suggests that subsurface cultural deposits are very unlikely. All STPs were excavated to depths of 30 cmbs or 40 cmbs except STPs 11, 16, and 17, which were terminated at 15 cmbs, 20 cmbs, and 20 cmbs, respectively, due to encountering bedrock.

All excavated STPs were negative except for STP 7, which produced a total of six pieces of debitage from 20 to 40 cmbs. The debitage recovered from STP 7 include two secondary chert flakes and four chert interior flakes. The sediments encountered in STP 7 consisted of one stratum of brown densely compacted silt loam alluvium from the ground surface down to approximately 40 cmbs. At 40 cmbs sediments in STP 7 transition into reddish brown compact decomposing granite.

Discussion and Site Summary

SDI-12377 is a light density quarry situated on a long ridge with cobbles and boulders outcropping at the ground surface. Chert cobbles appear to have been the primary material exploited here, with volcanic cobbles and outcrops also selected. The relative paucity of cores assayed cobbles compared to other quarry sites may be due to the specific quality of the material present (which is fairly low), or that the majority of core preparation and tool production occurred off-site. The presence of the millingstone indicates that addition to quarrying activities, food production also occurred, as millingstones are predominantly used to process plant foods. The relatively minimal artifact recovery of subsurface and surface materials greatly limits the data potential of this of the site, and the absence of dateable material prevents placement of the site chronologically. The current evaluation efforts have exhausted the data potential of the site evaluated at this time. Therefore, the evaluated portion of the site (all but the western end) is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Under County guidelines, the entire site, including the tested portion, is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance. The western portion of the site, located within state-owned lands outside the ADI, was not tested at this time and is therefore considered significant under County guidelines and CEQA. Temporary fencing during Proposed Project construction is recommended during construction to protect this portion of the site from construction related impacts.

CA-SDI-12379

SDI-12379 was recorded by A. Pigniolo, S. Campbell, and D. James of ERC Environmental, Inc. in 1991 as a single flaking station and associated lithic scatter of 30+ metavolcanic flakes, two metavolcanic cores, and a core tool. The site is located around a metavolcanic outcrop southwest of a ridge.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current testing project, site SDI-12379 was heavily overgrown with tall grasses and the ground surface visibility was less than 5%. A surface collection was conducted at this site and recovered a total of 17 pieces of debitage, one multidirectional volcanic core, and one volcanic assayed cobble fragment. The debitage recovered from surface collections includes two volcanic primary flakes, five secondary volcanic flakes, six volcanic interior flakes, and four

pieces of volcanic shatter. The majority of surface artifacts were recovered from the western half of the site, roughly where the flaking station was identified in the site record, but were not considered dense enough to delineate as a concentration. The density of vegetation present at the site which limited visibility likely explains why fewer artifacts were identified at this time, compared to the original recordation.

Three STPs were excavated within the site boundaries to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated 40 cmbs through moderately compact light brown (Munsell: 7.5 YR, 4/3) silty loam, with 30-40% rock fill until reaching dense clay. STP 2 was excavated 60 cmbs through moderately compact medium brown (Munsell: 7.5 YR, 5/4) silty sandy loam until the STP 2 was terminated at a layer of dense clay. STP 3 was excavated in the highest density of surface artifacts and descended 40 cmbs through moderately compact medium brown (Munsell: 7.5 YR, 5/4) silty sandy loam until reaching a layer of dense clay that hampered excavation efforts without yielding any artifacts.

Discussion and Site Summary

Site SDI-12379 contains a light scatter of volcanic debitage and cores which is confined to the ground surface. The site likely represents short-term activities associated with opportunistic lithic procurement. All cultural materials identified at the site were collected; should additional flakes be present at the site, but obscured by vegetation, they would be unlikely to alter the significance of the site, as, based on the original description and current observations, the site is limited in both quantity and diversity of artifact types. The site is not likely to produce any additional information that would be significant to the overall understanding of the prehistory of the region. The site is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

The site is considered important under County guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation or repatriation of artifacts and monitoring of project-related ground disturbing activities.

CA-SDI-12380

SDI-12380 was recorded by A. Pigniolo, S. Campbell, and D. James of ERC Environmental, Inc. in 1991 as a multicomponent site that includes prehistoric lithic reduction flake scatter as well as a historic component consisting of a rock pile created by historic plowing or disking. The site is located along the saddle of a small ridge.

Site Structure, Artifact Recovery, and Assemblage Composition

The historic component previously recorded on the 1991 DPR form was relocated; however the identification of these scattered rocks as a cultural feature identifying a specific activity is dubious at best. The approximate 12 x 12 meter diffuse scatter of rocks does not have any specific form or shape, nor is it associated directly with any artifacts or materials that could add additional data as to any specific cultural identification, activity or use. Given its lack of form or apparent function, it is likely a push pile of rocks related to field clearing.

Resurvey of the site and surrounding area identified a small number of artifacts on the ground surface. A general surface collection conducted at SDI-12380 produced a total of 13 pieces of debitage and one granitic bifacial handstone fragment. The debitage recovered include two volcanic secondary flakes, one quartzite secondary flake, five volcanic interior flakes, and five pieces of volcanic shatter. The handstone displays battering on one end, indicating use as a hammerstone, as well as it likely primary use as a grinding implement.

Two STPs were excavated within the site boundaries to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 40 cmbs. The stratigraphy of STP 1 consisted of a 40 cm deep layer of brown silt loam (Munsell: 10YR 5/4) with 40-60% angular cobble followed by a sterile level of bedrock. No artifacts or cultural materials were recovered from STP 1. STP 2 was excavated to a depth of 60 cmbs, through loosely compacted brown silt loam terminating at bedrock. STP 2 was positive; two pieces of debitage were recovered from 0 to 20 cm, while no additional artifacts were recovered from levels 20 to 40 cm and 40 to 60 cm. The debitage recovered from STP 2 include one volcanic secondary flake and one piece of volcanic shatter.

Discussion and Site Summary

SDI-12380 is a light density lithic scatter which is predominantly confined to the ground surface. The site represents limited tool production, or opportunistic reduction of naturally broken cobbles. The handstone indicates some food processing may have occurred here as well, unless it was simply repurposed as a hammerstone by the time it discarded at this location. The overall density of artifacts associated with SDI-12380 is low. The lack of datable materials and subsurface deposits at this site hinders identifying the specific utilization of this area, specifically regarding the length of and continuity of occupation for both the prehistoric and historic occupations. The lack of a subsurface deposit and generally sparse nature of the surface distribution of artifacts in the site do not provide substantial significant information regarding the prehistory, nor the historic ranching era of the region. Thus, SDI-12380 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Under County guidelines, SDI-12380 is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance.

CA-SDI-12381

Site SDI-12381 was first recorded by in 1991, by A. Pigniolo, S. Campbell, and K. Collins with ERC Environmental, Inc. The site was recorded as one positively identified milling feature and a second obscured, possible milling feature. No artifacts were previously recorded associated with this site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current testing project, the site was resurveyed and only one of the previously recorded milling features was positively identified. Feature 1 is a bedrock milling slick that has a small 10 x 10 cm round slick element on extremely exfoliated bedrock surfaces, located on a low-lying outcrop measuring 66 x 99 x 06 cm. No surface artifacts were noted associated with Feature 1.

A total of three STPs were excavated within the site boundary to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated 40 cmbs through moderately compact light reddish brown (Munsell: 2.5 YR, 4/6) silty sandy loam, with 30-40% rock fill. STP 2 was also excavated to a depth of 40 cmbs through moderately compact light reddish brown (Munsell: 2.5 YR, 4/6) silty-sandy loam, with 40-50% rock fill. STP 3 was excavated to a depth of 40 cmbs through moderately compact light reddish brown (Munsell: 7.5 YR, 4/4) silty-clay loam. All three STPs were sterile and contained no artifacts or cultural materials.

Discussion and Site Summary

The lack of datable materials and subsurface deposits at SDI-12381 hinders interpretation and data potential of the site, specifically regarding the length of and continuity of the occupation of the site. While it is clear food processing occurred here, it is not possible to date the milling feature or connect it directly to other sites or activities in the area. Evaluation efforts at this time have exhausted the data potential of the site. Thus, SDI-12381 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Under County guidelines, SDI-12381 is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance.

CA-SDI-12382

Site SDI-12382 was first recorded by in 1991, by A. Pigniolo, S. Campbell, and D. James with ERC Environmental, Inc. The site was recorded as a multicomponent site that includes one fine-grained metavolcanic interior flake as the prehistoric component and over 30 small rock piles which comprise the historic component.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current testing project, the site was resurveyed and only one of the previously mentioned rock features was positively identified. Feature 1 is a small rock pile that consists of approximately 40 to 50 angular rocks and cobbles measures approximately 100 x 80 x40 cm. Only a few of the rocks are embedded into the ground surface. No additional artifacts were noted in association with Feature 1. The rock pile does not suggest it was constructed in a specific form to serve a specific purpose; rather it appears to be simple pile collected from the surrounding area. As with other similar rock piles in Proctor Valley, it is likely the result of clearing fields of cobbles to promote grass growth for cattle ranching. No artifacts were observed on the ground surface.

A total of three STPs were excavated within the site boundary to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated 40 cmbs through moderately compact light brown silt loam. STP 2 was also excavated to a depth of 40 cmbs through moderately compact light brown silt loam. STP 3 was excavated to a depth of 40 cmbs through moderately compact reddish brown (Munsell: 5 YR, 4/3) silt loam. All three STPs were sterile and contained no artifacts or cultural materials.

Discussion and Site Summary

SDI-12382 is presented on the 1991 ERC DPR forms, this site clearly demonstrates a total lack of potential provide substantial significant information regarding the prehistory, nor the historic ranching era of the region. It is slightly more plausible to suggest that the features located at SDI-11417 were miss-recorded on the SDI-12382 DPR form rather than suggest that the DPR forms were correct and approximately 18 rock features have been destroyed or otherwise have been completely removed from the surrounding landscape.

Site SDI-12382 was reported to consist of a single flake and multiple historic rock features. Survey and evaluation efforts at this time could not relocate the previously recorded artifact and only relocated one rock pile feature. It is unknown at this time if the previously reported rock piles which were not identified at this time were destroyed subsequent to their original recordation, or if there is a mapping error and that this site should be in another location. There does not appear to be any other collection of rock piles similar to those described in the site

record, other than the piles recorded as SDI-11417. Although only one historic rock pile is extant, SDI-12382 still qualifies as a site. While the feature is likely related to clearing the nearby field for disking related to the cattle industry, it cannot be dated and has no data potential. Therefore, it is not significant under CEQA or the Otay Ranch RMP and it is not eligible for listing in the CRHR or local register.

Under County guidelines, SDI-12382 is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance.

CA-SDI-12383

SDI-12383 was recorded by A. Pigniolo, S. Campbell, and D. James of ERC Environmental, Inc. in 1991 as a small low density lithic scatter of four flakes. The site is located along a dirt road and seasonal drainage.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current testing project, Site SDI-12383 was heavily overgrown with tall grasses and the ground surface visibility was less than 5%. No artifacts were identified during the resurvey of this site. Five STPs were excavated within the site boundaries to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1, 2, 3, and 4 were excavated to a depth of 40cmbs before reaching bedrock. STP 5 was excavated to a depth of 30 cmbs before reaching bedrock. The stratigraphy for all five STPs consisted of moderately compacted light brown sandy loam (Munsell: 7.5 YR, 4/4). STP excavation revealed no cultural materials.

Discussion and Site Summary

Site SDI-12383 was reported to consist of a lithic scatter containing four surface artifacts. Survey and evaluation efforts at this time could not relocate any of the previously recorded artifacts and found no evidence for subsurface deposits. Therefore, SDI-12383 no longer qualifies as a site. Site SDI-12383 is not significant under CEQA or the Otay Ranch RMP and it is not eligible for listing in the CRHR or local register. As SDI-12383 is not considered a site, it is not considered important under County Guidelines. Monitoring of project-related ground disturbances in this area as part of the overall monitoring program, and collection and curation or repatriation of any artifacts which may be discovered would reduce potential impacts unknown cultural resources to less than significant.

CA-SDI-12384

Site SDI-12384 was first recorded by in 1991, by A. Pigniolo, S. Campbell, and D. James with ERC Environmental, Inc. The site was recorded as a bedrock milling site consisting of five bedrock milling features, a possible hearth feature, and a small lithic scatter of more than five metavolcanic flakes and one fragment of angular chert waste.

Site Structure, Artifact Recovery, and Assemblage Composition

Only a small portion of the western end of the site is located within the ADI, and only this portion of the site was revisited during the evaluation. This part of the site contains three of the original five milling stations, while the other two milling features and the possible hearth feature are located outside of the ADI. Each of the three bedrock milling features that were relocated contains a single milling slick element. No artifacts were identified on the ground surface within the ADI.

Feature 1 consists of an oval bedrock milling slick, measuring 10 x 5 cm, located on a heavily exfoliating bedrock outcrop measuring 225 x 167 x 46 cm. Feature 2 is a large shallow milling slick, measuring 62 x 53 cm, located on a heavily exfoliated bedrock outcrop measuring 240 x 270 x 146 cm. Feature 3 consists of an oval bedrock milling slick, measuring 38 x 60 cm, located on a heavily exfoliating bedrock outcrop measuring 292 x 340 x 70 cm.

A total of three STPs were excavated around the milling features to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 40 cmbs through moderately compact brown silt loam transitioning into decomposing granites below (Munsell: 7.5YR 5/4). STP 2 was excavated to a depth of 40 cmbs through moderately compact light brown (Munsell: 7.5 YR 5/4) silt loam. STP 3 was excavated to a depth of 40 cmbs through moderately compact reddish brown (Munsell: 5 YR 4/3) silt loam. All three STPs were sterile and contained no artifacts or cultural materials.

Discussion and Site Summary

Based on the extant cultural remains at the site, SDI-12384 is a food processing site which lacks substantial artifactual remains. The overall density of artifacts associated with SDI-12384 is low, and no artifacts were identified within the evaluated portion of the site. The distribution of cultural features encountered and the lack of datable materials and subsurface deposits at this site hinders identifying the specific utilization of this area in regards to the length of and continuity of occupation. The sparse nature of the distribution of features and lack of surface artifacts or deposits in the evaluated portion of the site do not provide substantial significant information regarding the prehistory of the region. Thus, this portion of SDI-12384 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Under County guidelines, SDI-12384, including the tested portion, is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance. The eastern portion of the site was not tested at this time as it would be avoided by Proposed Project design and placed in open space. That portion of the site is therefore considered significant under County guidelines and CEQA. Temporary fencing during Proposed Project construction is recommended during construction to protect the eastern portion of the site from construction related impacts.

CA-SDI-12385

Site SDI-12385 was first recorded by in 1991, by A. Pigniolo, S. Campbell, and D. James with ERC Environmental, Inc. The site was recorded as a bedrock milling site consisting of a single bedrock milling feature, one portable milling artifact, and an associated small lithic scatter consisting of more than five metavolcanic flakes and one quartzite flake.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current testing project, the site was resurveyed and the previously recorded bedrock milling feature was possibly identified. Additionally, one fine-grain green volcanic secondary flake was recovered during the surface collection conducted at the site. Both the possible milling feature and the flake were identified approximately 20 m northeast of the mapped site boundary. The site sketch map correctly identifies the location of the bedrock relative to natural features, hillslope's, and the drainage in the area, so it is likely the site location was simply mistranslated from paper maps to digital. The site boundary was revised to reflect the change. The portable milling artifact reported in the site record was not relocated.

Feature 1 was recorded as the heavily exfoliated remains of a possible bedrock milling slick that has a small 10 x 10 cm round slick element on extremely exfoliated/heat spalled, low-lying small bedrock outcrop measuring 90 x 80 x 20 cm. The heavily exfoliated surface of the bedrock makes discerning the milling slick element difficult; the possible slick surface is likely to deteriorate beyond identification with continued exposure.

One STP was excavated at this site in an attempt to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 40 cmbs through moderately compact reddish brown (Munsell: 5 YR, 5/4) silty-sandy loam. STP 1 was sterile, containing no artifacts or cultural materials, and was terminated at 40 cmbs.

Discussion and Site Summary

SDI-12385 was reported as a bedrock milling site with an associated artifact scatter. The small bedrock milling feature may have been relocated and a single artifact was collected from the ground surface. No evidence of a subsurface deposit was identified. The site likely represents very limited food processing and tool production/repair. The lack of subsurface deposits and near absence of artifacts at the site does not provide substantial significant information regarding the prehistory of the region. Thus, SDI-12385 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

All sites are considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Proposed Project- related ground disturbance.

CA-SDI-12391

Site SDI-12391 was first recorded by in 1991, by A. Pigniolo, S. Campbell, D. James, and K. Vander Veen with ERC Environmental, Inc. The site was reported to contain one bedrock milling feature with one slick and a small lithic scatter consisting of several fragments of chert angular waste.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current project, the site was resurveyed and the bedrock milling feature was identified. No artifacts or other cultural materials were identified on the ground surface at the site or in the immediate vicinity. A modern rock ring noted in the site record was also relocated nearby. Feature 1 is a bedrock milling feature that has an oval 46 x 38 cm slick element, located on a small blue-gray granitic bedrock outcrop measuring 250 x 270 x 80 cm.

A total of three STPs were excavated around the feature to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 40 cmbs through moderately compact light brown silt loam with angular rocks and gravels (Munsell: 7.5YR 5/4). STP 2 was excavated to a depth of 40 cmbs through moderately compact light brown silty-clay loam (Munsell: 7.5YR 5/4). STP 3 was excavated to a depth of 40 cmbs through moderately compact strong brown (Munsell: 7.5 YR 4/6) silt loam transitioning into reddish brown decomposing granite. All three STPs were sterile, containing no artifacts or cultural materials.

Discussion and Site Summary

SDI-12391 was reported as a bedrock milling site with a limited artifact scatter. While the small bedrock milling feature was relocated, no artifacts were identified on the surface of the site, and the STPs recovered no evidence of subsurface deposits. The site appears to be a limited food processing site. The lack of surface and subsurface artifacts at the site do not provide substantial significant information regarding the prehistory of the region. Thus, SDI-12391 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

All sites are considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Proposed Project- related ground disturbance.

CA-SDI-12392

SDI-12392 was recorded by ERC Environmental, Inc. in 1991 as a lithic scatter with a bedrock milling station. The site is situated with several low bedrock outcrops covering an approximately 40 x 40 m area. The milling station was reported to contain a single slick and the lithic scatter was reported to consist of more than 10 metavolcanic flakes.

Site Structure, Artifact Recovery, and Assemblage Composition

During both the survey and evaluation, the site was not relocated. No evidence of the milling station or any surface artifacts was found. It is unknown if the artifact and milling station were miss-identified during the original recordation, if the site constituents were moved or destroyed in the intervening years, or if there was a mapping error. Although no artifacts or features were identified in this location, one STP was excavated to a depth of 40 cmbs. The sediment encountered in the STP from 0 to 40 cmbs consisted of a wet compact light yellow brown (Munsell: 2.5YR 6/3) silt-clay loam with approximately 20% gravel. STP 1 was sterile, containing no cultural materials or artifacts.

Discussion and Site Summary

Site SDI-12392 was reported as a lithic scatter with one bedrock milling station. During the current study, no evidence of the site was identified. Therefore, this resource no longer qualifies as an archaeological site; it is not significant under CEQA or the Otay Ranch RMP and it is not eligible for listing in the CRHR or local register. As SDI-12392 is not considered a site, it is not considered important under County Guidelines. Monitoring of project-related ground

disturbances in this area as part of the overall monitoring program, and collection and curation or repatriation of any artifacts which may be discovered would reduce potential impacts unknown cultural resources to less than significant.

CA-SDI-12396

SDI-12396 was recorded by ERC Environmental, Inc. in 1991 as a historic barbed wire fence and associated rock piles. The site is presumably used as a part of the larger cattle ranching industry. The fence is comprised of wooden posts connected with multiple lines of barbed wire.

Site Structure, Artifact Recovery, and Assemblage Composition

During the survey it was found to be in the same general condition and location as previously reported. The major elements of this site consist of a barbed-wire fence with metal fence posts (not wood) and a large diffuse scatter of rocks and cobbles. The rocks and cobbles have been dispersed along the east-west axis of the remains of the fence line. If the cobbles had been stacked in formal piles, they have since been impacted and scattered across the ridge. Broken fence posts and bundled barbed-wire were identified along the general alignment. It appears that this fence once marked either a property boundary or the original USGS section boundary. No historic refuse or any other artifacts of any type was found in association with the fence or rock piles, and no dateable markers were identified.

Discussion and Site Summary

Site CA-SDI-12396 consists of a historic fence and associated rock piles. As the site consists of indistinguishable historic features ubiquitous in the area, it is not possible to identify any association of the site with events that have made a significant contribution to the broad patterns of California's history or cultural heritage, (Criterion 1), nor is it associated with or persons important in our past (Criterion 2). The features at the site do not embody the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values (Criterion 3) and have not, nor are they likely to yield information important in prehistory or history (Criteria 4). The site is therefore is not eligible for listing in the CRHR or local register, and not significant under CEQA and the Otay Ranch RMP.

Under County guidelines, the site is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through monitoring of project-related ground disturbance and curation of any artifacts discovered during monitoring.

CA-SDI-12397

This site was originally recorded as a quarry with one milling station in 1991 by ERC Environmental. The site was reported to contain over 100 flakes, a core, and a scraper in a 150 x 150 m area. The site was relocated by BFSA during the survey for this project, although details of site constituents observed at that time were not noted.

The eastern portion of this site, measuring 100 x 75 m, is located within the ADI along the sides of Proctor Valley Road, while the majority of the site is located outside the ADI. The site is located entirely within state-owned lands, and therefore could not be directly evaluated at this time. Therefore, the County has used its discretion to determine that the site is significant under CEQA Criterion 4 due to its ability to contribute to prehistory, and eligible for listing in the CRHR and local register.

No forms of preservation in place, as described under CEQA Guidelines Section 15126.4(b)(3)(B), are feasible for the portion of CA-SDI-12397 located within the ADI because the ADI consists of improvements to Proctor Valley Road, a major traffic circulation element. To reduce impacts to the site to a less than significant level, prior to construction a data recovery program would be implemented, to recover a statistically significant sample from the site to characterize the site. A research plan should be prepared prior to data recovery efforts to identify research questions that could be answered by the data recovery. All collected materials would need to be curated or repatriated, and documented in a data recovery report that meets County guidelines, including any necessary analyses and special studies. Following data recovery efforts, construction monitoring should be implemented to identify site constituents not identified during the data recovery efforts. Temporary fencing would be installed around the site until all data recovery efforts are complete to prevent inadvertent impacts. As only the eastern portion of the site is in the ADI, the western portion of the site would be preserved in place through the use of temporary fencing throughout construction. All sites are considered important under County guidelines; however, the monitoring, curation or repatriation, data recovery, and documentation of the resource described herein would reduce the impacts to the importance of the site to a less than significant level.

CA-SDI-21630

SDI-21630 was recorded by BFSA in 2014 as a small lithic scatter consisting of approximately five pieces of metavolcanic debitage within an approximately 10 m x 10 m area. The site is situated on an east-facing slope, just south of a dirt access trail within the Jamul Mountains.

Site Structure, Artifact Recovery, and Assemblage Composition

Resurvey of the site during the evaluation identified a small amount of surface artifacts, which were recovered. A total of two fine-grain volcanic secondary flakes and one piece of volcanic shatter were recovered from the ground surface. No additional artifacts or features were recovered from this site.

One STP was excavated to a depth of 40 cmbs. The sediment encountered in STP 1 from 0 to 40 cmbs consisted of a compact dark brown (Munsell: 7.5YR 3/3) silt-clay loam with approximately 30-40% gravel. STP 1 was sterile, containing no cultural materials or artifacts.

Discussion and Site Summary

SDI-21630 is a small, sparse lithic scatter. Minimal artifacts were recovered from the surface of the site, and none were recovered from the STP. The lack of subsurface deposits and generally sparse nature of the surface distribution of artifacts in the site do not provide substantial significant information regarding the prehistory of the region. As such, SDI-21630 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

All sites are considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Proposed Project- related ground disturbance.

CA-SDI-21632

SDI-21632 was recorded by BFSA in 2014 as a small bedrock milling station consisting of one milling feature within an approximately 15 x 15 m area. The site is situated on small bedrock outcrop that tops a small hill.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current testing phase, the site was resurveyed; two bedrock milling features were identified and a light scatter of lithic debitage was identified on the ground surface. The debitage recovered from the surface collections include two cryptocrystalline silicate interior flakes and one volcanic interior flake.

Feature 1 is a small oval bedrock milling slick measuring 20 x 12 cm, located on a granitic bedrock outcrop measuring 170 x 140 x 70 cm.

Feature 2 is a bedrock milling slick measuring 25 cm x 15 cm, located on a granitic bedrock outcrop measuring 190 x 80 x 55 cm.

A total of three STPs were excavated across this site's previously recorded boundaries to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated to a depth of 20 cmbs through moderately compact light brown (Munsell: 7.5YR 4/3) silt loam with angular rocks and gravels. STP 1 encountered bedrock at 20 cmbs and was terminated. STP 2 was excavated to a depth of 30 cmbs through moderately compact light brown (Munsell: 7.5YR 4/3) silty-clay loam. STP 3 was excavated to a depth of 40 cmbs through moderately compact strong brown (Munsell: 7.5 YR 4/6) silt loam transitioning into reddish brown decomposing granite. All three STPs were sterile, containing no artifacts or cultural materials.

Discussion and Site Summary

SDI-21632 was reported as a small bedrock milling station. While an additional milling feature and minimal artifacts were recovered from the surface of the site, the STP excavated recovered no evidence of subsurface deposits. The lack of subsurface deposits and generally sparse nature of the surface distribution of artifacts in the site do not provide substantial significant information regarding the prehistory of the region. As such, SDI-21632 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

All sites are considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Proposed Project-related ground disturbance.

CA-SDI-21633

SDI-21633 was recorded by BFSA in 2014 as a small bedrock milling station consisting of one milling feature with two milling slick elements, within an approximately 5 m x 5 m area. The site is situated on small bedrock outcrop that overlooks a seasonal drainage to the immediate east of the outcrop.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current testing project, the site was resurveyed, and the two previously recorded bedrock milling features, as well as an additional milling features and elements were identified. No artifacts or other cultural materials were identified on the surface during the resurvey of the vicinity.

Feature 1 is a large granitic bedrock outcrop measuring approximately 600 x 250 x approximately 200 cm that has three individual milling slick elements, A, B, and C. Milling surface A consists of a well-defined oval slick measuring 26 cm x 16 and has an approximate depth of 01 cm. Milling surface B consists of an irregularly-shaped shallow 15 x 20 slick surface, located approximately 2 cm to the left of milling surface A. Milling surface C is a slick measuring approximately 20 x 30 cm and has long striations noted along the slick surface.

Feature 2 is a round bedrock milling slick measuring 20 cm x 25 cm, located on a small low-lying granitic bedrock outcrop measuring 60 x 50 x 05 cm.

A total of three STPs were excavated in the site to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated 30 cmbs through moderately compact yellowish-red silt loam (Munsell: 5YR 5/6). STP 1 encountered bedrock at 30 cmbs and was terminated. STP 2 was excavated to a depth of 30 cmbs through moderately compact yellowish-red (Munsell: 5YR 5/6) silty-clay loam. STP 3 was excavated to a depth of 40 cmbs through moderately compact strong brown (Munsell: 7.5 YR 4/6) silt loam transitioning into reddish brown decomposing granite. All three STPs were sterile, containing no artifacts or cultural materials.

Discussion and Site Summary

SDI-21633 was reported as a small bedrock milling station. While an additional milling feature and milling surfaces were identified at the site, the STPs excavated recovered no evidence of subsurface deposits. The lack of surface and subsurface artifacts in the site do not provide substantial significant information regarding the prehistory of the region. As such, SDI-21633 is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

All sites are considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Proposed Project- related ground disturbance.

CA-SDI-21911

SDI-21911 was recorded by BFSA in 2014 as a small bedrock milling station consisting of an undefined number of milling features within an approximate 23 x 21 m area. The site is situated on small bedrock outcrop that is just south of Proctor Valley Road.

Site Structure, Artifact Recovery, and Assemblage Composition

During the evaluation it was determined that only the southern end of the site is located within the ADI. A total of four milling features were recorded; however none of these milling features are located within the ADI. Resurvey of the portion of the site in the ADI resulted in the identification and collection of one chert flake.

Feature 1 consists of an oval bedrock milling slick, measuring approximately 25 x 15 cm, located on a heavily exfoliating bedrock outcrop measuring 200 x 150 x 35 cm. Feature 2 is an oval milling slick measuring 40 x 25 cm, located on an exfoliated bedrock outcrop measuring 270 x 350 x 80 cm. Feature 3 consists of a round bedrock milling slick, measuring 20 x 20 cm, located on a bedrock outcrop measuring 310 x 450 x 100 cm. Feature 4 consists of a slightly oval bedrock milling slick, measuring 30 x 20 cm, located on a bedrock outcrop measuring 200 cm x 330 x 35 cm.

Considering that only an extremely small portion of this site is within the ADI (an approximately 2 m x 5 m area), only one STP within the portion of this site that is actually in the ADI. STP 1 was excavated 25 to a depth of cmbs through moderately compact brown silt loam (Munsell: 7.5YR 4/3). STP 1 was positive, with one fragment of chert was recovered from 0 to 20 cmbs. STP 1 encountered bedrock at 25 cmbs and was terminated.

Discussion and Site Summary

SDI-21911 is a small food processing site, where some amount of tools production occurred. Given the limited quantity of artifacts within the ADI little can be said about the overall use of the site. The distribution of cultural features encountered and the lack of datable materials and subsurface deposits at this site hinders identifying the specific utilization of this area, specifically regarding the length of and continuity of occupation. The sparse nature of the distribution of features and lack of surface artifacts or deposits in the evaluated portion of the site do not provide substantial significant information regarding the prehistory of the region. Thus, this very small portion of SDI-21911 that is located within the ADI is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Under County guidelines, all of SDI-21911, including the small tested portion, is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance. The northern portion of the site was not tested at this time and is therefore considered as significant under County guidelines and CEQA. This portion of the site would be avoided and placed in open

space. Temporary fencing during Proposed Project construction is recommended during construction to protect the northern portion of the site from construction related impacts.

CA-SDI-21912

SDI-21912 was recorded by BFSA in 2014 as a small bedrock milling station consisting of an undefined number of milling features within an approximate 20 m x 23 m area. The site is situated on small bedrock outcrop.

Site Structure, Artifact Recovery, and Assemblage Composition

During the evaluation, it was determined that only the southern portion of the site is within the ADI; the northern portion, including one milling feature, is outside the ADI and would not be impacted. Resurvey of the site and surrounding area identified a total of three milling features and one chert secondary flake.

Feature 1 consists of a round bedrock milling slick, measuring approximately 40 x 35 cm, located on a heavily exfoliating bedrock outcrop measuring 160 x 180 x 25 cm. Feature 2 is a bedrock outcrop measuring 140 x 75 x 40 cm with two milling slick surfaces: surface 1 is a round slick measuring 16 x 18 cm, and surface 2 is round slick measuring 16 x 17 cm. Feature 3 consists of two small slicks on a small bedrock outcrop measuring 50 x 105 cm. Surface 1 is a slick measuring 14 x 6 cm and surface 2 is a slick measuring 5 x 10 cm.

Two STPs were excavated in the southern portion of the site within the ADI to determine if there was any subsurface component to the site and investigate the site's integrity. STP 1 was excavated 25 cmbs through moderately compact brown silt loam (Munsell: 7.5YR 4/3). STP 1 encountered bedrock at 25 cmbs and was terminated. STP 2 was excavated to a depth of 40 cmbs through moderately compact brown (Munsell: 7.5YR 4/3) silty-clay loam with a heavy volume of angular rocks and gravels. STP 1 produced one piece of chert shatter from 0 to 20 cm while STP 2 was sterile, containing no artifacts or other cultural materials.

Discussion and Site Summary

SDI-21912 is a short term food processing site. Given the limited number of milling elements, the site was likely used sporadically from a nearby base camp or while traveling through the valley. As evidenced by the limited number of debitage identified at the site, some core reduction occurred here as well. The site lacks dateable material that can place the site chronologically in prehistory. The sparse nature of the distribution of features and surface artifacts and absence of subsurface deposits in the evaluated portion of the site do not provide substantial significant information regarding the prehistory of the region. Thus, the southern half of SDI-21912 that is

located within the ADI is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Under County guidelines, SDI-21912 is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of project-related ground disturbance. The northern portion of the site was not tested at this time and is therefore considered as significant under County guidelines and CEQA. Temporary fencing during Proposed Project construction is recommended during construction to protect the northern portion of the site from construction related impacts.

CA-SDI-21916

SDI-21916 was recorded by BFSA in 2015 as a bedrock milling site consisting of an undefined number of milling features and an associated artifact scatter within an approximate 65 m x 45 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

Evaluation of CA-SDI-21916 was limited to a 10 m wide centered along the trail easement. Resurvey of this area did not identify any artifacts on the surface, however artifacts were noted within the site boundary but outside the easement corridor. Nine STPs were excavated on a 10 m interval to determine if a subsurface component is present at the site and investigate the site's integrity. STPs 1-7 were located within the mapped site boundary, and STPs 8 and 9 were excavated immediately outside the boundary.

Sediments encountered throughout the site were generally consistent in each STP, consisting predominantly of brown (Munsell: 7.5YR 4/4) compact silty and sandy loam, with some clay. All STPs were terminated at 40 cm or shallower based on at least one sterile level or the exposure of decomposing granite with the exception of STP 2, which was excavated to 60 cm.

Artifacts recovered from the six positive STPs include 16 volcanic flakes, five chert flakes, four basalt flakes, one quartz flake, one Salton Brownware ceramic, three unidentifiable bone fragments (0.3 g total), and one historic cut nail. The majority of artifact were recovered from within 20 cm of the ground surface, with only one flake recovered from below 40 cm. Artifact recovery and sediment descriptions are summarized in Table 4-7.

All of the debitage are interior flakes and shatter, except two volcanic secondary flakes. Eight of the interior flakes are pressure flakes (four chert, tow volcanic, two basalt). All debitage recovered from the site is small (less than 4 cm in diameter), indicating late-stage production and/or re-sharpening/repair of flakedstone tools.

Table 4-7
CA-SDI-21916 Excavation Summary

Unit	Depth (cm)	Recovery	Sediments	Munsell	Termination
STP 1	0-20	8 flakes, 1 ceramic, 1 bone	Compact silty loam	7.5YR 3/2 – dark brown	Decomposing granite (DG)
	20-40	5 flakes			
STP 2	0-20	1 flake	Compact silty loam	7.5YR 4/4 – brown	DG
	20-40	3 flakes			
	40-60	1 flake			
STP 3	0-20	No recovery	Compact silty loam	7.5YR 4/4 – brown	DG
	20-40	2 flakes			
	40-46	No recovery			
STP 4	0-40	No recovery	Compact silty clayey loam	7.5YR 3/4 - brown	No recovery
STP 5	0-20	5 flakes, 2 bones, 1 nail	Compact silty loam	7.5YR 4/4 – brown	Sterile level
	20-40	No recovery			
STP 6	0-20	1 flake	Compact sandy silty loam	7.5YR 4/3 - brown	Sterile level
	20-40	No recovery	Compact sandy clayey loam		
STP 7	0-20	1 flakes	Compact sandy silty loam	7.5YR 3/2 – dark brown	DG
	20-30	2 flakes	Compact sandy clayey loam		
STP 8	0-15	No recovery	Compact silty clayey loam	7.5YR 4/4 – brown	No recovery
	15-30	No recovery	Very compact clay		
STP 9	0-40	No recovery	Very compact clayey loam	7.5YR 4/4 - brown	DG

Discussion and Site Summary

CA-SDI-21916 is a temporary campsite. Given the limited number of milling elements (all of which are located outside the trail easement), the site was likely used sporadically from a nearby base camp or while traveling through the valley. As evidenced by the predominantly small, interior flakes and shatter, flakedstone tool production likely consisted of late-stage production and or resharpening/repair. Given the size of the two secondary flakes, these are likely also associated with later-stage tool production, as opposed to the typical core-reduction observed at most sites in the valley. The presence of the Salton Brownware ceramic sherd indicates the site dates to sometime post-AD 500, however further refinement of the site's occupation period was

not determined; radiocarbon samples were not submitted for analysis from the bone fragments, as these cannot be conclusively determined to be cultural in origin.

The absence of surface artifacts, midden deposits, or features, combined with the limited quantity and variety of subsurface artifacts in the evaluated portion of the site do not provide substantial information regarding the prehistory of the region. The evaluation efforts documented herein have exhausted the data potential of this portion of the site. Thus, the portion of CA-SDI-21916 that is located within the ADI is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

Under County guidelines, CA-SDI-21916 is an important resource; however impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation or repatriation of artifacts and monitoring of Project-related ground disturbance. The portion of the site outside the trail easement was not tested at this time and is therefore considered as significant under County guidelines and CEQA. This portion of the site would be placed within the open space easement and would not be impacted by construction.

CA-SDI-21924 (P-37-015040)

P-37-015040 was originally recorded as one prehistoric metavolcanic core and one large flake from that core by A. Pigniolo, J. Blum, and M. Mealey with ERC Environmental and Energy Services Company in 1991. Both of these artifacts were collected during the initial discovery.

Site Structure, Artifact Recovery, and Assemblage Composition

Resurvey of the isolate's location produced three newly identified prehistoric artifacts: one volcanic secondary flake, one volcanic interior flake, and one volcanic shatter fragment. All three were mapped and collected. One STP was excavated in an effort to determine if there is any subsurface component. The surroundings' current conditions were photo-documented. STP 1 was excavated near the approximate center of the isolate boundary and was excavated to a depth of 20 cmbs. The sediment encountered in the STP from 0 to 20 cmbs consisted of a dry compact reddish-brown (Munsell: 7.5YR 3/4) silt loam with approximately 30% to 70% mixed small, angular gravels and rocks, increasing with depth. The STP was terminated when excavators encountered increasingly larger cobbles and compact sterile sub-sediment. STP 1 was sterile, containing no cultural materials or artifacts.

Discussion and Site Summary

With the recovery of three additional artifacts during the current investigation, this resource qualifies as a site rather than an isolate. An updated DPR form has been submitted to the SCIC and was assigned the Trinomial number CA-SDI-21924. The total artifact assemblage consists of one core, three flakes and one shatter fragment, although the core and one flake were previously collected and are not included with the current assemblage. This site, like many of the other prehistoric sites in the valley, is a light lithic scatter that is confined to the surface. The resource likely represents short-term activities associated with lithic tool manufacture.

The resource is not likely to produce any additional information that would be significant to the overall understanding of the prehistory of the region. This site is not significant under CEQA or the Otay Ranch RMP, and it is not eligible for listing in the CRHR or local register.

This site (CA-SDI-21924) is considered important under County Guidelines; however, impacts to this resource can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation or repatriation of artifacts and monitoring of project-related ground disturbing activities.

CA-SDI-21925 (P-37-015043)

P-37-015043 is one metavolcanic flake initially discovered and recorded by A. Pigniolo, J. Blum, and M. Mealey with ERC Environmental and Energy Services Company in 1991. This artifact was collected during the initial discovery.

Site Structure, Artifact Recovery, and Assemblage Composition

No other surface artifacts were observed at the mapped isolate location. Since this isolate was mapped to include such a generous surrounding area, three STPs were placed within the confines of the boundary. These STPs were excavated in an effort to determine if there is any subsurface component. The excavation of the initial STP (STP 1) was positive; therefore additional STPs were excavated to the south (STP 2) and west (STP 3) within the mapped boundary. The surroundings' current conditions were photo-documented.

All STPs displayed similar sediment profiles and sediments encountered from 0 cmbs to terminal depth consisted of a dry, strong brown (Munsell: 7.5 YR 5/6) silt-clay loam with approximately 25% small subangular rocks increasing with depth. All STPs were terminated due to sterile sediment and increasingly high rock content. Three volcanic flakes were recovered from 0 to 20 cmbs in STP 1. No cultural materials or artifacts were recovered from STPs 2 and 3. No surface artifacts were identified.

Discussion and Site Summary

As a result of the excavation, P-37-015043 meets the minimum definition of a site. An updated DPR form was submitted to the SCIC and has been assigned the Trinomial number CA-SDI-21925. Based on the evaluation, this site is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

The site is considered important under County guidelines; however, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as curation or repatriation of artifacts and through monitoring of project-related ground disturbance.

P-37-026522

This resource was originally recorded by RECON in 1989 as historic structure, as identified on USGS topographic maps from 1903 and 1912. The site record indicates that the structure is not present on a 1928 aerial photograph or the 1943 topographic map. During RECON's 1989 survey of Proctor Valley, no evidence of the structure was found. BFSA's survey in 2014 also failed to identify an artifacts, features, or structural remains at this location. Dudek revisited the site in 2017 and did not identify any artifacts or features within the trail easement. As no evidence of the structure or associated cultural remains has been positively identified at this location, it is no longer considered a cultural resource. P-37-026522 is therefore not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register. It is also not important under County guidelines, as it is not a resource. Monitoring of project-related ground disturbances in this area as part of the overall monitoring program, and collection and curation or repatriation of any artifacts which may be discovered would reduce potential impacts unknown cultural resources to less than significant.

P-37-026526

This resource was originally recorded by RECON in 1989 as historic structure, as identified on USGS topographic maps from 1902 and 1912. The site record indicates that the structure is not present on a 1928 aerial photograph or the 1943 topographic map. During RECON's 1989 survey of Proctor Valley, no evidence of the structure was found. BFSA's survey in 2014 also failed to identify an artifacts, features, or structural remains at this location. As no evidence of the structure or associated cultural remains has been positively identified at this location, it is no longer considered a cultural resource. P-37-026526 is therefore not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register. It is also not important under County guidelines, as it is not a resource. Monitoring of project-related ground

disturbances in this area as part of the overall monitoring program, and collection and curation or repatriation of any artifacts which may be discovered would reduce potential impacts unknown cultural resources to less than significant.

4.2.3 Evaluation Results of Isolates within the ADI

The Proposed Project would not result in significant effects on isolated cultural resources. These isolated resources were evaluated to determine whether they are associated with additional cultural materials that might alter their "isolate" status. The isolates were evaluated with the same methodology as were the archaeological sites and are discussed in more detail below. While STPs are not generally excavated for isolated cultural resources, the previously recorded locations of many of these isolates showed atypically larger boundaries than a normal point; therefore, one STP was excavated near the center of each isolate area. These STPs were excavated in an effort to determine if additional artifacts may be in the area, as such large areas at the isolate implies more material may be present.

Eleven isolates identified within the ADI have been evaluated (P-37-12313 [downgraded from site CA-SDI-12313]; P-37-12324 [downgraded from CA-SDI-12324]; P-37-014834; P-37-015033; P-37-015035; P-37-015036; P-37-015038; P-37-015041; P-37-015042; P-37-015059; and P-37-015060). These do not meet the County of San Diego guidelines for significance (County of San Diego 2007a), nor are they eligible for listing in the CRHR or the local register. None is significant under CEQA or the Otay Ranch RMP.

The previously recorded isolates P-37-015040 and P-37-015043 are now considered sites (CA-SDI-21924 and CA-SDI-21925, respectively) as a result of the current investigation (see description above). However, these resources are not eligible for listing in the CRHR or local register, not eligible for protection under Otay Ranch RMP guidelines, and not significant under CEQA. As sites, resources CA-SDI-21024 and CA-SDI-21925 are considered important under County Guidelines; however, impacts to those two sites can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities. Updated site forms have been submitted to the SCIC for these resources. Two sites discussed above (CA-SDI-12313 and CA-SDI-12324) were downgraded to isolates as they do not contain sufficient artifact quantities to qualify as sites. Updated DPR forms reflecting this change have been submitted to the SCIC.

4.2.4 Summary of Cultural Resources Investigations in the Otay Ranch Village 14 and Planning Areas 16 / 19 Project Area

The survey and evaluation program for this Proposed Project has not identified any significant archaeological resources that lie completely within the ADI. Within the ADI, 44 sites, two historic structures, and 11 isolates were subject to evaluation excavations and only one significant archaeological deposit was identified (Locus A at CA-SDI-12373). Direct significant impacts to this site would be avoided, as no ground disturbing activities would occur here. A potential indirect impact via looting can be mitigated to a level of less than significant through a surface collection of artifacts. One site (CA-SDI-12397) is partially in the ADI but is located entirely within state-owned lands. Due to access restrictions associated with its location, this site has not been directly evaluated. The County has used its discretion to determine that CA-SDI-12397 is a significant resource under CEQA as it is eligible for listing in the CRHR under Criterion 4 for its scientific data potential. Significant impacts to the site within the ADI cannot be avoided because the ADI consists of improvement to Proctor Valley Road, a major traffic circulation element. For this reason, no forms of preservation in place are suitable within the ADI.

Seven of the 44 evaluated archaeological sites within the ADI do not contain any artifacts or features. As these sites no longer contain any cultural materials, they no longer constitute cultural resources. Therefore the total number of extant sites was reduced to 37. The two historic structures were originally recorded based on one structures marked at each location on historic topographic maps. During the survey, no evidence of the structures or other potentially historic features or artifacts was observed. Due to the lack of cultural materials at these locations, these resources are no longer considered cultural resources.

Of the remaining 52 resources outside the ADI, 19 were not relocated and 33 were relocated; these resources would be avoided through a formal Open Space Preserve (see Table 4-2).

5 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

This section summarizes the results and interpretation of the inventory and evaluation of cultural resources for the Proposed Project, provides eligibility recommendations for evaluated sites, and discusses potential impacts.

5.1 Resource Importance and Management Concerns

The primary goals of this study were to identify cultural resources that have the potential to be significantly impacted by future development plans within the APE, to provide an evaluation of the resources to identify their historical significance, and to identify impacts to those resources. The current investigation identified and evaluated 57 cultural resources in the ADI under CEQA and San Diego County guidelines pertaining to cultural resources, as well as the Otay Ranch RMP. These include 44 archaeological sites, two historic structures, and 11 isolates. Of the 57 cultural resources located within the ADI, only 56 were tested during this evaluation phase; one resource is located on CDFW-owned lands that could not be accessed during the current fieldwork phase. Eleven of the resources were partially evaluated, as only portions of those sites are located within the ADI. Seven (7) of the 46 evaluated archaeological sites and the two historic structures were found to not contain any cultural materials, and no longer qualify as cultural resources. An additional 52 resources were identified during the inventory which are outside the ADI and would not be impacted (19 of which were identified in the records search but not relocated during the survey).

All cultural resources within the ADI (excluding the resource on state lands) have been evaluated for eligibility for listing in the CRHR and local register, as well as for significance under CEQA and the Otay Ranch RMP. While sites may be recommended as eligible or not eligible for listing on the CRHR, under the County Guidelines, all sites are considered "important." Although all sites are considered important under the County Guidelines, the "importance" of sites recommended as "not eligible" for listing on the CRHR can be exhausted through recordation, testing, the disposition of artifacts (curation or repatriation, if recovered), and archaeological monitoring.

Evaluation of significance requires the development of an understanding of each identified resource in such a way that its historical significance can be assessed. CEQA requires lead agencies to consider the historical significance of a resource so as to gauge whether it has the potential to be listed on the CRHR. Criteria 1–4 of CEQA are a set of standards for determining whether a particular resource is eligible for listing on the CRHR. These criteria were discussed in Chapters 1 and 2.

The following eligibility determinations are based primarily on Criterion 4 of CEQA for archaeological values, since the data generated during the evaluation program can be used to judge whether a particular cultural resource has yielded or may be likely to yield information important in prehistory or history. Data potential is represented by general archaeological characteristics such as assemblage integrity, size, diversity, defined chronology, and the potential for buried deposits. The majority of the historic period sites do not contain any features, structures, or other constituents that could be used identify them through archival research in such a way that information could have been used to evaluate the sites under CEQA criteria 1-3; instead these historic period sites could be evaluated only under Criterion 4.

Based on the results of the current investigation, all but one of the evaluated archaeological sites are recommended as not significant under CEQA and the Otay Ranch RMP, and as not eligible for listing in the CRHR or the local register.

CA-SDI-12373 was determined to be significant under CEQA and eligible for listing in the CRHR and local register for its data potential. Locus A contains a variety and quantity of cultural material which have the potential to answer research questions regarding prehistoric occupation in the area. The site was determined not significant under the Otay Ranch RMP. The site is located within the trail easement, but would not be impacted by grading or other construction activities. As such, it would be preserved in place. Potential indirect impacts to the site from looting may occur. This impact can be mitigated through the implementation of a data recovery plan comprised of a surface collection and curation/repatriation of artifacts. Details of the surface collection effort are included in the Data Recovery Plan in Confidential Appendix F. Implementation of the surface collection would reduce the potential for looting and, therefore, potential indirect impacts to the site would be reduced to less than significant.

One site, CA-SDI-12397, is located on state-owned lands. This site (the portion of which situated in the ADI) could not be directly evaluated due to access issues. Therefore, the County has used its discretion to determine this resource as significant under CEQA Criterion 4 for its scientific data potential, and eligible for listing in the CRHR and local register. Preservation in place is not feasible within the ADI because the ADI consists of improvements to Proctor Valley Road, a major traffic circulation element. Mitigation in the form of data recovery would be required to reduce impacts to this site to a less than significant level. As only the eastern portion of the site is in the ADI, the western portion of the site would be preserved in place through the use of temporary fencing throughout construction. All sites are considered important under County guidelines; however, the monitoring, curation or repatriation, data recovery, and documentation of the resource described herein would reduce the impacts to the importance of the site to a less than significant level.

Proctor Valley connects Jamul Valley to the northeast and Otay Mesa to the southwest and likely would have provided an easy corridor to travel from the coast to the mountains. Large villages and numerous camps have been identified in Jamul, and even more in Rancho San Miguel, along the Otay River, and along San Diego Bay. The prehistoric sites within Proctor Valley consist of a numerous raw material procurement locations, and appear to represent a fairly dense concentration of extraction/processing areas, and could therefore be considered a quarrying district. However, the vast majority of sites in the valley consists of expedient or opportunistic cobble testing, and do not suggest that native inhabitants specifically selected this area for its raw material potential. More likely, travelers passing through the valley stopped at a variety of locations where known toolstone material was present on the ground surface, collected the materials they desired, and continued on their way. The near absence of habitation/camp sites (with CA-SDI-8086C, CA-SDI-12373, and possibly CA-SDI-21915, as exceptions) in the valley attests to the limited occupation.

The County Guidelines for determining significance states that (2007a):

> "[d]istricts are united geographic entities that contain a concentration of historic buildings, structures, objects, and/or sites united historically, culturally, or architecturally. Districts are defined by precise geographic boundaries; therefore, districts with unusual boundaries require a description of what lies immediately outside the area, in order to define the edge of the district and to explain the exclusion of adjoining areas."

The prehistoric use of Proctor Valley is tied directly to two specific areas (given the severity of the slope of the Jamul Mountains and San Miguel Mountain, travel likely was limited to the northeast-southwest alignment of the valley itself). As such, although Proctor Valley can be geographically defined, this area does not fully encapsulate the totality of prehistoric activity in this part of San Diego County. To understand and fully account for the prehistoric use and occupation of the area, the entirety of Jamul, Rancho San Miguel, and Otay must be considered. If one were to treat Proctor Valley as a district, the surrounding areas would have to be included as well, as the sites within Proctor Valley exist only as satellites to the surround areas.

Defining Proctor Valley as a quarry district would also be an exaggeration of the extraction/procurement activities, particularly when compared to even a single site along the Otay River (CA-SDI-12809) which contains far more quarrying/cobble testing/procurement than all of Proctor Valley combined. Therefore, Proctor Valley is not considered an archaeological district, and as a whole is not significant under CEQA or the Otay Ranch RMP, and is not eligible for listing in the CRHR or local register.

5.1.1 Integrity

Integrity is an important factor in the evaluation of historical resources. Integrity fundamentally affects associations that are critical for understanding behavioral relationships in site formation and design for prehistoric and historical archaeological sites. For the most part, evaluated prehistoric archaeological sites maintain good integrity, as the distribution of artifacts on the surface was generally good, with some areas more impacted by post depositional disturbance than others. Much of the Project Area and surrounding region appears to have been exploited for raw materials for flakedstone tools—the ample volcanic raw material erodes from the rolling hills in cobble form with very little soil obscuring their presence. Impacts are generally minimal, consisting of dirt road travel, animal burrowing, and various other minimal modern activities. As these disturbances were constrained to small areas, wide swaths of the rolling hills were left relatively untouched. Moreover, the deflated character of the hills and slopes precluded development of buried cultural deposits in most areas and ensured that flaked lithic material deposited on the surface was relatively unaffected by slope wash and other natural processes. Soil deflation appears to be an old phenomenon here as lithic scatters in particular appear to be the result of incipient quarrying from the existing substrate, evidenced by still visible voids from which specific cobbles were removed. There are some exceptions, to be sure, as a few archaeological sites that remain to be evaluated appear to have 10-20 cm of cultural deposits overlying the cobble substrate (i.e., part of CA-SDI-6695B). Overall, however, cultural resources were demonstrated to be surficial deposits that retain horizontal integrity but lacking any subsurface deposits.

Notably lacking from the majority of current evaluated sites (or portions thereof) are other forms of cultural deposits such as midden soils or features (such as house pits, hearths, roasting pits, etc.). Potential midden deposits are present at a few sites in Proctor Valley indicating some habitation did occur, however these are mostly located outside the ADI and were not investigated in detail. Of the evaluated sites, only site CA-SDI-12373 contained a sedimentary deposit with subsurface artifacts. Although midden soils are not present, the 20-40 cm thick deposit of sediment indicates that the inhabitants occupied this area repeatedly over a sufficiently long time to allow sediments to erode from locations upslope and be deposited here.

Studies of other quarry habitation areas, such as to the east in Jacumba, identified thermal features that were either used to cook local vegetal materials or temper local stone raw materials, or both (i.e., CA-SDI-7074 and CA-SDI-21492 from the East County Substation and Jacumba Solar projects; Comeau and Hale 2015). These East County projects identified clusters of roasting pits with radiocarbon dates spanning most of the last 10,000 years. Very little flaked lithic material or other artifacts were identified in association with the thermal features, indicating that their sole purpose was roasting plant materials.

A number of bedrock milling features are scattered throughout Proctor Valley. These features predominantly contain a limited number (1-3) of slicks per feature, most of which are fairly small, and do not indicate extensive use (highly polished) or re-sharpening over time (i.e., pecking). These features indicate seeds of locally available plants were most likely exploited while traversing the valley and procuring/quarrying lithic materials. The presence of multiple mortars at CA-SDI-12373 indicates that acorn processing occurred there in addition to locally available seeds.

Overall, the lack of buried deposits at most of the prehistoric archaeological sites in the current Project Area reduces the opportunity for drawing more meaningful or data-laden associations between assemblage constituents, despite relatively strong integrity overall of surface manifestations. Thus, integrity alone is not a determining factor when deciding historical significance of an archaeological resource.

Turning to historic period resources, these sites consisted of vague linear or clustered rock features, a corral, and a single fence segment. In terms of structural integrity, most retained enough integrity to discern original shape whether or not the intent or function of each resource could be determined. That is, the corral was obviously used for livestock retention, but the linear and clustered cobble features could not be ascribed to any particular function given the lack of identifying elements (other than the presumption they resulted from clearing fields for disking. The near absence of historic period artifacts or archival information makes it even more difficult to identify either function or age of any of the historic period sites. Only one site, CA-SDI-11417/12378 contained dateable materials, but even these provided wide date ranges of 20 to 50 years, or more. Considering the lack of information on historic period resources, they were all considered not significant and not eligible under any of the CEQA or County criteria.

5.1.2 Chronology

With strong integrity of archaeological deposits, chronological associations can add much value to archaeological interpretation. For this reason, archaeological sites that yield chronological information are typically deemed to hold higher scientific value. It is not uncommon for topical evaluations of prehistoric sites to conclude that a particular deposit could be considered significant because of the presence of time-sensitive artifacts or the presence of archaeological deposits that carry the promise of producing radiocarbon dates. The rarity of intact, datable archaeological deposits has somewhat inflated the importance of chronological data when evaluating the historical significance of an archaeological site. Such deposits are critical to evaluation efforts; however, the ability to place a resource in time should not itself qualify the resource as significant.

Chronological information at the evaluated prehistoric sites for the Proposed Project was also somewhat rare, limited only to a few time-sensitive artifacts. Only one Elko Eared Dart (atlatl) point made from black chert was recovered from CA-SDI-11399. This dart point was identified on the surface and tends to date between 4000 and 1000 B.P., though it is primarily dated in the Great Basin (Hale 2009). The atlatl spanned the introduction of the bow and arrow, which was locally available at about 1,500 years ago. Very few solid radiocarbon dates have been obtained in the region to refine the local chronology of any arrow point forms. However, radical increases in their assemblage frequency suggest that they became economically significant after about AD 900 (Hale 2009). Such a date is consistent with the availability of Obsidian Buttes source after 940 BC (Schmitt et al. 2013). The point was modified into a drill, indicating reuse from its original manufacture; without any other chronological data points at the site, it is not possible to determine if the point was modified during the same period of its original manufacture, or if it was found and modified at a later date.

Tizon Brownware is the predominant aboriginal ceramic type in coastal and inland/mountain areas of San Diego County, with insignificant frequencies of buffware from Imperial Valley. These types of ceramics are generally thought to be Late Prehistoric period time markers, although the wide time span marking the availability of these artifacts in the southern California and Baja Mexico regions reduces their ability to refine site-specific chronology. Tizon brownware sherds were collected from the surface at CA-SDI-6695B (n=33) and CA-SDI-12373 (n=42), indicating some occupation of the Project Area after about AD 500. The low frequency of pottery sherds overall, however, is difficult to interpret in terms of the chronology of aboriginal occupation. It may mean that late Prehistoric occupation was limited, or that occupation was task-specific, focusing on quarrying of local lithic raw material, or both.

Overall, age estimates for Proposed Project sites based on time-sensitive artifacts (projectile point and ceramic sherds) generally fit within established chronological schemes for the region; none are capable of refining local prehistoric patterns.

Consisting predominantly of rock alignments and clusters, a recently modified wood post corral, and a wooden fence, chronological information for historic period archaeological sites is almost non-existent. It is assumed that these resources date to the mid-twentieth century, but only a few time-sensitive artifacts (all recovered from CA-SDI-11417/12378) or other types of information were identified to reinforce this assumption. All of the dateable items (glass bottle fragments) have maker's marks with wide date ranges (late-eighteenth to mid-twentieth century), limiting the accuracy of the date range of the site. The minimal quantity of such items at the evaluated sites is probably not due to cleanup efforts because modern refuse is present. Thus, the paucity of common historic period artifacts likely indicates that many of these sites may only be marginally historic in age (i.e., just greater than 50 years in age).

5.1.3 Settlement and Site Function: Lithic Quarrying

As with any archaeological evaluation, research issues postulated in advance of fieldwork have mixed success in their applicability to the recovered assemblage, particularly in terms of the kinds of data that could be generated and attendant questions that can be addressed. There is no departure from this pattern with current Proposed Project sites that yielded only a few handfuls of artifacts that can be leveraged to speak to major settlement and subsistence questions.

Lithic Quarrying

With respect to lithic quarrying, the prehistoric assemblage from the current Proposed Project sites is dominated by lithic reduction debris (i.e., debitage and cores) with modest amounts of crude flakedstone tools (i.e., chopping/pounding core and flake tools). Within the Proposed Project ADI, prehistoric stone quarrying is identifiable primarily across the deflated surfaces of low hills and slopes.

Evaluation efforts were flexible, aimed at collecting a representative sample of flaked lithic debris. As it turned out, the amount of flaked lithic debris encountered was very low, consisting only of several hundred pieces of debitage, and as a result, generating a large enough sample to speak to research issues was made difficult. The evaluation program resulted in the conclusion that the Project Area was targeted for an unknown period of time by aboriginal occupants who opportunistically took basalt (generically termed volcanic in site descriptions) and chert cobbles from the deflated surface, split them to assay quality, and sometimes further reduced cobbles and flakes into cobble or flake-based tools, though not to any great degree. The analysis of debitage for this Proposed Project confirms this assertion, with large amounts of cortical and early interior debitage, and only trace amounts of debitage that could have resulted from tool edge finishing, including late interior, biface thinning, and pressure flakes.

The stone tool analysis indicates that discernable stone tools include unmodified flakes (simple flake tools) and minimally retouched flakes with essentially no formed flake tools, other than the singular modified Elko Eared drill and one mid-stage biface. Cobble based chopping and hammering tools were used to reduce cobbles and small outcrops completing a picture of a lithic toolkit intended for the production of flakes either for immediate local use or for transport of smaller, more suitable raw material blanks to other locations.

Expedient lithic tool production and use defines the San Diego region for the entire Holocene (Hale 2009; McDonald et al. 1993). The same pattern is mimicked at other, more distant quarries, including in the Jacumba Valley Archaeological District (JVAD), where recent research identified a very similar pattern of lithic reduction, including more expansive exposures of

naturally occurring basalt (Williams et al. 2014b). Cobble exposures in the northern part of San Diego County are virtually identical in reduction sequence, exhibiting a debitage profile dominated by minimally modified early interior flakes (Hale and Becker 2006). Locally, extensive research on Otay Mesa essentially formalized the common conception of cobble-core reduction (Flenniken et al. 2004; Byrd et al. 1993; McDonald et al. 1993). Otay Mesa has long been known to harbor a "green-gray" fine grained basalt that was extensively used during the first half of the Holocene (i.e., 10,000–5,000 years ago), but was also expediently used in more recent prehistoric times (Warren et al. 2004). Comeau et al. (2015) identified deposits at the mouth of the Otay River floodplain that are associated with the ethnohistoric Village of La Punta mapped by the Spanish in 1782. The green-gray basalt that outcrops in the Project Area hills was also found at the La Punta sites, indicating that late aboriginal occupants either visited the local region or scavenged older lithic raw material. Although chert is typically a fine-grained material more suitable to more refined manufacture (e.g., bifaces and projectile points), the chert collected contains large inclusions, which reduces the predictability of flaking breakages and therefore, limits its potential use for finely worked tools. The lithic production sequence of chert cobble selection and reduction from the outcrop at CA-SDI-12377 mirrors that of the basalt pattern in the area.

In context of immediately local archaeological studies, the Proctor Valley prehistoric site evaluations did not result in the identification of any new archaeological patterns, but confirmed an existing understanding of local lithic reduction. That more variety is seen in adjacent areas is probably due to more regular aboriginal occupation of those areas, which is itself explained by the greater availability of both stone and vegetal resources in those locations.

5.2 Resource Importance and Evaluation of Tested Sites

Fifty-five (55) of the 57 evaluated sites are considered not significant under CEQA or the County Significance Guidelines, and are not recommended as eligible for listing in the CRHR or local register based on CEQA Criterion 4. None of the 57 sites is recommended as eligible for listing in the CRHR based on Criteria 1-3, either, as no site constituents are present which could connect the site through archival research to historically important persons or events; nor do the sites embody distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important individual nor it possess high artistic value.

Two sites, CA-SDI-12373 and CA-SDI-12397, have been determined to be significant under CEQA and eligible for listing in the CRHR and local register under Criterion due to their potential to answer scientific research questions. Neither of these sites is significant under the Otay Ranch RMP as they are not unique, do not contain human remains, are not formally listed

on or determined eligible for the NRHP, do not have an H designator, and are not associated with religious/ceremonial uses.

Under the County guidelines all sites are considered "important." Although all sites are considered important under the County Guidelines the "importance" of the sites recommended as not eligible for listing in the CRHR would be considered mitigated through testing, documentation, disposition of archaeological materials (curation/repatriation), and archaeological monitoring of ground disturbance for the entire Project Area. Impacts to the two significant sites would also be mitigated through the implementation of the Data Recovery Plan for each site, as described in Confidential Appendix F.

Evaluated prehistoric sites are predominantly defined as diffuse lithic scatters/quarries characterized by low densities of flaked lithic debris deriving from locally available stone (i.e., debitage, cores, simple flake tools, and cobble tools), and small amounts of groundstone and ceramic sherds. A few sites consist of bedrock milling features with minimal to no artifactual remains. Historic resources are predominantly defined by simple rock piles, with limited concrete features and artifactual constituents also present.

No additional information can be gleaned from the evaluated archaeological sites because of their limited diversity and low density of artifacts. For these reasons, these sites are not considered historically significant, they are not eligible for listing in the CRHR or local register, and they do not possess attributes that would make them significant under the Otay Ranch RMP. Under the County's guidelines for determining significance, the sites are considered important. Significant impacts to the sites are considered mitigated through the current evaluation effort, curation or repatriation of collected materials, documentation, and archaeological monitoring of ground disturbance during construction for the entire Project Area to control for unanticipated discoveries.

5.3 Impact Identification

The Proposed Project would conduct mass grading of the ground surface. Proposed Project implementation would directly impact 37 of the 57 resources in the ADI. Two resources are located in the trail easements and would not be directly impacted; the remaining 18 resources (nine isolates, two historic structures, and seven sites) no longer qualify as resources due to the absence of cultural materials identified at this time. All but one (CA-SDI-12397) of the affected archaeological resources were evaluated (in whole or in part). One resource, CA-SDI-12373, was determined to be eligible for listing in the CRHR and local register and significant under CEQA. The remaining 55 resources are not eligible for listing in the CRHR or local register, nor are any of them considered a significant resource under CEQA or under the Otay Ranch RMP. As such,

impacts to each of these 55 evaluated sites as a result of Proposed Project implementation would not be considered significant.

However, all cultural resources are considered important under County of San Diego Guidelines for Determining Significance (County of San Diego 2007a). Together with the evaluations documented in this report, disposition of archaeological assemblages and documentation, and monitoring of earth-disturbing activities in the area of each evaluated site would reduce the impacts to these resources to less than significant under County Guidelines.

Eleven of the evaluated sites would only be partially impacted. The non-impacted portions of these sites were not evaluated, and are therefore presumed and treated as significant. The unevaluated portions of these sites would be avoided by Proposed Project design and placed in an open space preserve. Temporary fencing would be placed around these sites to protect them from inadvertent impacts during construction.

One archaeological site was not directly evaluated because it is located on state-owned lands that were not accessible at the time of these evaluations. The County has used its discretion to determine this site, CA-SDI-12397, to be a significant resource under CEQA Criterion 4 for its scientific data potential, and eligible for listing in the CRHR and local register. Based on the surface constituents the portion of this site located within the ADI is not significant under the Otay Ranch RMP. No forms of preservation in place, as described in CEQA, are feasible because the ADI consists of improvements to Proctor Valley Road, a major traffic circulation element. Data recovery is required within the ADI to reduce the impacts to a less that significant level.

Prior to construction a data recovery program would be implemented, to recover a statistically significant sample from the site to characterize the site. A research plan has been prepared to identify research questions that could be answered by the data recovery. The plan is included as Confidential Appendix F. All collected materials would need to be curated or repatriated, and documented in a data recovery report that meets County guidelines, including any necessary analyses and special studies. Following data recovery efforts, construction monitoring should be implemented to identify site constituents not identified during the data recovery efforts. Temporary fencing would be installed around the site until all data recovery efforts are complete to prevent inadvertent impacts. As only the eastern portion of the site is in the ADI, the western portion of the site would be protected by temporary fencing throughout construction.

Site CA-SDI-12373, which was determined to be significant, is located in the trail easement; no ground disturbance or other construction activities would occur at this location, therefore there would be no direct impacts to the site. Increased pedestrian/public access to the site may increase the potential for looting at the site, which would be a potential indirect impact to the site. If the

trail easement is selected, a data recovery program consisting a surface collection of artifacts would be implemented prior to construction. The surface collection would reduce the potential for looting at the site, and therefore, the potential for impacts to the site are less than significant.

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6 MANAGEMENT CONSIDERATIONS—MITIGATION MEASURES AND DESIGN CONSIDERATIONS

6.1 Unavoidable Impacts

6.1.1 Mitigation Measures and Design Considerations

Based on the foregoing analysis, the Proposed Project may cause an unavoidable significant effect to one cultural resource, CA-SDI-12397, as those terms are defined by CEQA. The County has used its discretion to determine that site CA-SDI-12397 is a significant resource under CEQA Criterion 4 for its scientific data potential. The site is located entirely within state-owned lands. The ADI for the Proposed Project consists of improvements to Proctor Valley Road, a major traffic circulation element, and therefore, no forms of preservation in place within the ADI are feasible. All portions of the site outside of the ADI would be preserved in place without modification.

Mitigation of impacts to this resource can be achieved through a phased data recovery program to be implemented prior to construction of the road, as well as installation of temporary fencing around the non-impacted portions of the site, monitoring of ground disturbing activities within and near the site during construction, and curation or documentation of recovered materials and documentation. The phased data recovery (prepared as a separate document) would involve excavation of a series of STPs to identify subsurface deposits, then excavation of CUs with those areas where subsurface deposits are identified. The number of CUs to be excavated would depend upon the quantity and variety of artifacts and features identified and the presence/absence of a midden deposit, as the data potential of the site is contained within those components of the site. If no subsurface deposits are identified through excavation of the STPs, then excavation of CUs may not be warranted.

To the extent the evaluated cultural resources on site are considered "important" by the County, impacts to these resources can be mitigated through standard data collection processes and monitoring during construction. Thus, there are no significant unavoidable impacts to these resources associated with the Proposed Project. Note also that human remains have not been identified in the APE.

No known TCRs were identified in the Sacred Lands File by the NAHC. To date, formal consultation between the County and Kumeyaay tribes has not identified any TCRs in the Proposed Project APE or ADI. Thus, there are no significant unavoidable impacts to TCRs associated with the Proposed Project.

6.2 Mitigatable Impacts

6.2.1 Mitigation Measures and Design Considerations

Fifty-five of the evaluated archaeological resources (42 sites, 11 isolates, two historic structures; including portions of sites) evaluated during the current investigation within the Proposed Project ADI were determined to be not significant under CEQA or the Otay Ranch RMP, and not eligible for listing in the CRHR or the local register (County of San Diego 2007a) (Table 6-1). However, under County guidelines, all archaeological sites are considered important. Impacts to the importance of the sites is mitigated through application of measures that include curation or repatriation of all collected artifacts and documentation; construction monitoring; erection of temporary fencing around non-impacted portions of the 13 sites (CA-SDI-6695B; CA-SDI-8086C; CA-SDI-11397; CA-SDI-12332; CA-SDI-12333; CA-SDI-12373; CA-SDI-12377; CA-SDI-12384; CA-SDI-12397; CA-SDI-21911; and CA-SDI-21912; CA-SDI-21916), which are partially located in the open space preserve to prevent direct and indirect impacts during Proposed Project construction; and temporary fencing along the ADI limits where sites are within 50 feet of the ADI (CA-SDI-12323; CA-SDI-12326; CA-SDI-12393; CA-SDI-12394, and CA-SDI-12395). The artifacts collected during the current testing program would be curated at the San Diego Archaeological Center or a culturally affiliated tribal curation facility or alternatively may be repatriated to a culturally affiliated tribe. Implementation of mitigation measures would reduce impacts to these sites to a less than significant level.

One site, CA-SDI-12373, was determined significant under CEQA and eligible for listing in the CRHR (Criterion 4) and local register. This site is located within the trail easement; no construction work is proposed here. The site would be avoided by Proposed Project design by placing it in open space and would not be impacted. Potential indirect impacts from looting by the public could occur as a result of increased access to the site. This potential impact can be mitigated through implementation of a surface collection and curation/repatriation (data recovery) of artifacts to prevent looting. With implementation of the mitigation, impacts to the site would be reduced to less than significant.

As discussed above, the County has used its discretion to determine that site CA-SDI-12397 is significant under CEQA and eligible for listing in the CRHR (Criterion 4) and local register, and is "important" under county guidelines. However, it is not significant under the Otay Ranch RMP. Impacts to the site, which would arise from grading improvements to Proctor Valley Road, cannot be avoided through any form of preservation in place. Therefore, impacts to the resource within the ADI would be significant and can be mitigated. Significant impacts to the importance and significance of the site can be mitigated through the available options identified in CEQA and County guidelines, including monitoring, temporary fencing, curation,

and documentation measures listed above for the non-significant resources, as well as data recovery of significant portions of the site within the ADI. The western portion of the site would not be impacted; it would be placed in open space, and would be protected with temporary fencing during construction.

Due to the absence of TCRs in the ADI or APE, there are no impacts to TCR and therefore no mitigation is required concerning TCR. Should a TCR be identified during tribal consultation, then this report would be revised to address potential impacts and mitigation of such impacts.

6.3 Effects Found Not to be Significant

A total of 52 resources have been recorded outside of the ADI, but 19 sites were not relocated during the current Proposed Project (no attempt was made to relocate the seven isolates outside of the ADI), leaving 33 extant resources outside the ADI. This includes 17 resources that are outside of the APE and 16 that are within the APE, but outside of the ADI (see Table 6-1). None of the 33 resources would be impacted by Proposed Project implementation and would be placed in an open space preserve. Avoided resources within 50 feet of the ADI would be protected by establishment of an ESA boundary and exclusionary fencing. Therefore, no significant impacts would occur to avoided sites.

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
Resources Completely or Partially Intersecting Area of Direct Impact (ADI)					
CA-SDI-6695A	Multi-component	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or Repatriation, Monitoring	Less Than Significant
CA-SDI-6695B East	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or Repatriation, Monitoring	Less Than Significant
CA-SDI-6695B West	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation or Repatriation, Monitoring, Temporary Fencing	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-8086A	Prehistoric	County: Important; CEQA: Significant; CRHR: Eligible; Otay Ranch RMP; Significant; Local Register: Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation or Repatriation, Monitoring	Less Than Significant
CA-SDI-8086B	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation or Repatriation, Monitoring	Less Than Significant
CA-SDI-8086C East (including P-37-026524)	Multi-component	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-8086C West (Including Temp-17)	Multi-component	County: Important; CEQA: Significant; CRHR: Eligible; Otay Ranch RMP: Significant; Local Register: Significant	Avoided/Not Significant	Avoidance; Evaluation; Research, Data Recovery, Collection, Curation or repatriation, Monitoring, Temporary Fencing	Less Than Significant
CA-SDI-11394	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-11396	Multi-component	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-11397 East	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-11397 West	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring, Temporary Fencing	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-11399	Multi-component	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection or repatriation, Curation, Monitoring	Less Than Significant
CA-SDI-11401	Prehistoric	Not Relocated	Not Significant	N/A	Not Significant
CA-SDI-11417/12378	Multi-component	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-11421	Historic	Not Relocated	Not Significant	N/A	Not Significant
CA-SDI-12313 / P-37-012313	Prehistoric Isolate	County: Not Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Not Significant	N/A	Not Significant
CA-SDI-12314	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12315	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12316	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12317	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-12318	Historic	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12319	Prehistoric	Not Relocated	Not Significant	N/A	Not Significant
CA-SDI-12320	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12322	Prehistoric	Not Relocated	Not Significant	N/A	Not Significant
CA-SDI-12324 / P-37-012324	Prehistoric Isolate	County: Not Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Not Significant	N/A	Not Significant
CA-SDI-12328	Multi-component	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12329	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12330	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12332 East	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-12332 West	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring, Temporary Fencing	Less Than Significant
CA-SDI-12333 East	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12333 West	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring, Temporary Fencing	Less Than Significant
CA-SDI-12335	Prehistoric	Not Relocated	Not Significant	N/A	Not Significant
CA-SDI-12373 (Locus A)	Prehistoric	County: Important; CEQA: Significant; CRHR: Eligible; Otay Ranch RMP: Not Significant; Local Register: Eligible	Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation or Repatriation, Monitoring, Data Recovery	Less Than Significant
CA-SDI-12373 (Locus B)	Historic	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Not Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12377 East	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12377 West	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation or Repatriation, Monitoring, Temporary Fencing	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-12379	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12380	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12381	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12382	Multi-component	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12383	Prehistoric	Not Relocated	Not Significant	N/A	Not Significant
CA-SDI-12384 West	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring,	Less Than Significant
CA-SDI-12384 East	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring, Temporary Fencing	Less Than Significant
CA-SDI-12385	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-12391	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-12392	Prehistoric	Not Relocated	Not Significant	N/A	Not Significant
CA-SDI-12396	Historic	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12397 East	Prehistoric	County: Important; CEQA: Significant; CRHR: Eligible; Otay Ranch RMP: Not Significant; Local Register: Eligible; County: Important	Significant	Evaluation, Research, Data Recovery; Collection, Curation or repatriation, Monitoring,	Less Than Significant
CA-SDI-12397 West	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Not Evaluated; Otay Ranch RMP: Not Evaluated; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring, Temporary Fencing	Less Than Significant
CA-SDI-21630	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-21632	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-21633	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-21911 South	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-21911 North	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring, Temporary Fencing	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-21912 South	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
CA-SDI-21912 North	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring, Temporary Fencing	Less Than Significant
CA-SDI-21916 (Trail)	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Not Significant	Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-21916 (Outside Trail)	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
P-37-014834	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant
P-37-015033	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant
P-37-015035	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant
P-37-015036	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant
P-37-015038	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant
P-37-015040 (CA-SDI-21924)	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
P-37-015041	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant
P-37-015042	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
P-37-015043 (CA-SDI-21925)	Prehistoric	County: Important; CEQA: Not Significant; CRHR: Not Eligible; Otay Ranch RMP: Not Significant; Local Register: Not Eligible	Significant	Evaluation, Research, Collection, Curation or repatriation, Monitoring	Less Than Significant
P-37-015059	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant
P-37-015060	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant
P-37-026522	Historic	Not Relocated	Not Significant	N/A	Not Significant
P-37-026526	Historic	Not Relocated	Not Significant	N/A	Not Significant
Resources Outside of Area of Direct Impact (ADI)					
CA-SDI-6694	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-6965	Historic	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-11392	Multi-component	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-11395	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-11398	Multi-component	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-11400	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-11411	Multi-component	Not Relocated	Avoided/ Not Significant	N/A	Not Significant
CA-SDI-11416	Historic	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-11418	Historic	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-11422	Historic	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12321	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring, Temporary Fencing	Less Than Significant
CA-SDI-12323	Historic	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring, Temporary Fencing	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-12325	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12326	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12327	Prehistoric	Not Relocated	Avoided/ Not Significant	N/A	Not Significant
CA-SDI-12331	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12334	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12374	Prehistoric	Not Relocated	Avoided/ Not Significant	N/A	Not Significant
CA-SDI-12375	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12376	Historic	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12386	Prehistoric	Not Relocated	Avoided/ Not Significant	N/A	Not Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-12387	Prehistoric	Not Relocated	Avoided/ Not Significant	N/A	Not Significant
CA-SDI-12388	Prehistoric	Not Relocated	Avoided/ Not Significant	N/A	Not Significant
CA-SDI-12389	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12390	Prehistoric	Not Relocated	Avoided/ Not Significant	N/A	Not Significant
CA-SDI-12393	Multi-component	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12394	Prehistoric	Not Relocated	Avoided/ Not Significant	N/A	Not Significant
CA-SDI-12395	Historic	Not Relocated	Avoided/ Not Significant	N/A	Not Significant
CA-SDI-12398	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-12635	Prehistoric	Not Relocated	Avoided/ Not Significant	N/A	Not Significant
CA-SDI-12937	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
P-37-015037	Prehistoric	Isolate	Not Significant	N/A	Not Significant
P-37-015039	Prehistoric	Isolate	Not Significant	N/A	Not Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
P-37-015053	Prehistoric	Isolate	Not Significant	N/A	Not Significant
P-37-015055	Prehistoric	Isolate	Not Significant	N/A	Not Significant
P-37-015056	Prehistoric	Isolate	Not Significant	N/A	Not Significant
P-37-015057	Prehistoric	Isolate	Not Significant	N/A	Not Significant
P-37-015058	Prehistoric Isolate	Isolate	Not Significant	N/A	Not Significant
P-37-026523	Historic	Not Relocated	Not Significant	N/A	Not Significant
P-37-026525	Historic	Not Relocated	Not Significant	N/A	Not Significant
P-37-026532	Historic	Not Relocated	Not Significant	N/A	Not Significant
CA-SDI-21624	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-21625	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-21626	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-21627	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant

Table 6-1
Management Recommendations

Site Number	Period	Significance / Eligibility Status	Impact	Recommendations / Mitigation Measures	Impact Significance After Mitigation
CA-SDI-21628	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring,	Less Than Significant
CA-SDI-21629	Historic	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-21631	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-21913	Historic	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-21914	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-21915	Multi-component	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant
CA-SDI-21917	Prehistoric	County: Important; CEQA: Not Evaluated; CRHR: Potentially Eligible; Otay Ranch RMP: Potentially Significant; Local Register: Potentially Eligible	Avoided/ Not Significant	Avoidance – Open Space, Evaluation, Research, Collection, Curation, Monitoring	Less Than Significant

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8 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

Micah Hale (Dudek): Acted as Project Manager and approved the technical report.

Brad Comeau (Dudek): Acted as Principal Investigator, directed and performed laboratory analysis, and authored the technical report.

Scott Wolf and **William Burns** (Dudek): Acted as Field Directors and authored the technical report. Mr. Wolf also performed artifact analysis.

Angela Pham (Dudek**):** Performed artifact analysis and acted as lab crew.

Patrick Hadel, William Burns, Melissa Jenkins, Zachary Lefevre, Thomas Stanley, Javier Hernandez, David Faith, Jessica Colston, Andrew Stolzer, Kellie Kandybowicz, and **Juliette Meling** (Dudek): Acted as field and laboratory crew.

Gabe Kitchen, Phillip Pena, and **Justin Linton** (Red Tail): Acted as Native American monitors during fieldwork.

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9 RESOURCE MITIGATION MEASURES

Impacted Resources (Includes Portions of Sites Intersecting ADI)	
Site Numbers	*Mitigation Measures*
CA-SDI-12397 East	Data Recovery including Temporary Fencing
CA-SDI-12373 (Locus A)	Data Recovery
CA-SDI-6695B West, CA-SDI-8086A, CA-SDI-8086B, CA-SDI-8086C West (State Lands), CA-SDI-11397 West, CA-SDI-12332 West, CA-SDI-12333 West, CA-SDI-12373 (Locus A), CA-SDI-12377 West, CA-SDI-12384 East, CA-SDI-12397 West, CA-SDI-21911 North, CA-SDI-21912 North, CA-SDI-21916 (Trail)	Avoidance - Open Space
CA-SDI-6695B West, CA-SDI-11397 West, CA-SDI-12332 West, CA-SDI-12333 West, CA-SDI-12377 West, CA-SDI-12384 East, CA-SDI-12397 West, CA-SDI-21911 North, CA-SDI-21912 North	Temporary Fencing
CA-SDI-6695A, CA-SDI-6695B East, CA-SDI-6695B West, CA-SDI-8086A, CA-SDI-8086B, CA-SDI-8086C East, CA-SDI-8086C West, CA-SDI-11394, CA-SDI-11396, CA-SDI-11397 East, CA-SDI-11397 West, CA-SDI-11399, CA-SDI-11417/CA-SDI-12378, CA-SDI-12314, CA-SDI-12315, CA-SDI-12316, CA-SDI-12317, CA-SDI-12318, CA-SDI-12320, CA-SDI-12328, CA-SDI-12329, CA-SDI-12330, CA-SDI-12332 East, CA-SDI-12332 West, CA-SDI-12333 East, CA-SDI-12333 West, CA-SDI-12377 East, CA-SDI-12377 West, CA-SDI-12379, CA-SDI-12380, CA-SDI-12381, CA-SDI-12382, CA-SDI-12384 East, CA-SDI-12384 West, CA-SDI-12385, CA-SDI-12391, CA-SDI-12396, CA-SDI-12397 East, CA-SDI-12397 West, CA-SDI-21630, CA-SDI-21632, CA-SDI-21633, CA-SDI-21911 North, CA-SDI-21911 South, CA-SDI-21912 North, CA-SDI-21912 South, CA-SDI-21916 (Trail); CA-SDI-21924, CA-SDI-21925	Monitoring
CA-SDI-6695A, CA-SDI-6695B East, CA-SDI-6695B West, CA-SDI-8086A, CA-SDI-8086B, CA-SDI-8086C East, CA-SDI-8086C West, CA-SDI-11394, CA-SDI-11396, CA-SDI-11397 East, CA-SDI-11397 West, CA-SDI-11399, CA-SDI-11417/CA-SDI-12378, CA-SDI-12314, CA-SDI-12315, CA-SDI-12316, CA-SDI-12317, CA-SDI-12318, CA-SDI-12320, CA-SDI-12328, CA-SDI-12329, CA-SDI-12330, CA-SDI-12332 East, CA-SDI-12332 West, CA-SDI-12333 East, CA-SDI-12333 West, CA-SDI-12373, CA-SDI-12377 East, CA-SDI-12377 West, CA-SDI-12379, CA-SDI-12380, CA-SDI-12381, CA-SDI-12382, CA-SDI-12384 East, CA-SDI-12384 West, CA-SDI-12385, CA-SDI-12391, CA-SDI-12396, CA-SDI-12397 East, CA-SDI-12397 West, CA-SDI-21630, CA-SDI-21632, CA-SDI-21633, CA-SDI-21911 North, CA-SDI-21911 South, CA-SDI-21912 North, CA-SDI-21912 South, CA-SDI-21916 (Trail), CA-SDI-21924, CA-SDI-21925	Curation or Repatriation

Impacted Resources (Includes Portions of Sites Intersecting ADI)	
CA-SDI-6695A, CA-SDI-6695B East, CA-SDI-6695B West, CA-SDI-8086A, CA-SDI-8086B, CA-SDI-8086C East, CA-SDI-8086C West, CA-SDI-11394, CA-SDI-11396, CA-SDI-11397 East, CA-SDI-11397 West, CA-SDI-11399, CA-SDI-11417/CA-SDI-12378, CA-SDI-12314, CA-SDI-12315, CA-SDI-12316, CA-SDI-12317, CA-SDI-12318, CA-SDI-12320, CA-SDI-12328, CA-SDI-12329, CA-SDI-12330, CA-SDI-12332 East, CA-SDI-12332 West, CA-SDI-12333 East, CA-SDI-12333 West, CA-SDI-12373, CA-SDI-12377 East, CA-SDI-12377 West, CA-SDI-12379, CA-SDI-12380, CA-SDI-12381, CA-SDI-12382, CA-SDI-12384 East, CA-SDI-12384 West, CA-SDI-12385, CA-SDI-12391, CA-SDI-12396, CA-SDI-12397 East, CA-SDI-12397 West, CA-SDI-21630, CA-SDI-21632, CA-SDI-21633, CA-SDI-21911 North, CA-SDI-21911 South, CA-SDI-21912 North, CA-SDI-21912 South, CA-SDI-21916 (Trail), CA-SDI-21924, CA-SDI-21925	Evaluation
CA-SDI-6695A, CA-SDI-6695B East, CA-SDI-6695B West, CA-SDI-8086A, CA-SDI-8086B, CA-SDI-8086C East, CA-SDI-8086C West, CA-SDI-11394, CA-SDI-11396, CA-SDI-11397 East, CA-SDI-11397 West, CA-SDI-11399, CA-SDI-11417/CA-SDI-12378, CA-SDI-12314, CA-SDI-12315, CA-SDI-12316, CA-SDI-12317, CA-SDI-12318, CA-SDI-12320, CA-SDI-12328, CA-SDI-12329, CA-SDI-12330, CA-SDI-12332 East, CA-SDI-12332 West, CA-SDI-12333 East, CA-SDI-12333 West, CA-SDI-12373, CA-SDI-12377 East, CA-SDI-12377 West, CA-SDI-12379, CA-SDI-12380, CA-SDI-12381, CA-SDI-12382, CA-SDI-12384 East, CA-SDI-12384 West, CA-SDI-12385, CA-SDI-12391, CA-SDI-12396, CA-SDI-12397 East, CA-SDI-12397 West, CA-SDI-21630, CA-SDI-21632, CA-SDI-21633, CA-SDI-21911 North, CA-SDI-21911 South, CA-SDI-21912 North, CA-SDI-21912 South, CA-SDI-21916 (Trail), CA-SDI-21924, CA-SDI-21925	Research
CA-SDI-11401; CA-SDI-11421; CA-SDI-12319; CA-SDI-12322; CA-SDI-12335; CA-SDI-12383; CA-SDI-12392; P-37-014834; P-37-015033; P-37-015035; P-37-015036; P-37-015038; P-37-015041; P-37-015042; P-37-015059; P-37-015060; P-37-026522; P-37-026526	None – Isolate or Resource Does Not Exist
Avoided Resources	
Site Numbers	*Mitigation Measures*
CA-SDI-6694, CA-SDI-6965, CA-SDI-11392, CA-SDI-11395, CA-SDI-11398,CA-SDI-11400, CA-SDI-11416, CA-SDI-11418, CA-SDI-11422, CA-SDI-12321, CA-SDI-12323, CA-SDI-12325, CA-SDI-12326, CA-SDI-12331, CA-SDI-12334, CA-SDI-12373 Locus B, CA-SDI-12375, CA-SDI-12376, CA-SDI-12389, CA-SDI-12393, CA-SDI-12398, CA-SDI-12937,CA-SDI-21,624, CA-SDI-21625, CA-SDI-21626, CA-SDI-21627, CA-SDI-21628, CA-SDI-21629, CA-SDI-21631, CA-SDI-21913, CA-SDI-21914, CA-SDI-21915. CA-SDI-21916 (Balance), CA-SDI-21917	Open Space
CA-SDI-12321, CA-SDI-12323	Temporary Fencing

Avoided Resources	
CA-SDI-6694, CA-SDI-6965, CA-SDI-11392, CA-SDI-11395, CA-SDI-11398,CA-SDI-11400, CA-SDI-11416, CA-SDI-11418, CA-SDI-11422, CA-SDI-12321, CA-SDI-12323, CA-SDI-12325, CA-SDI-12326, CA-SDI-12331, CA-SDI-12334, CA-SDI-12373 Locus B, CA-SDI-12375, CA-SDI-12376, CA-SDI-12389, CA-SDI-12393, CA-SDI-12398, CA-SDI-12937,CA-SDI-21,624, CA-SDI-21625, CA-SDI-21626, CA-SDI-21627, CA-SDI-21628, CA-SDI-21629, CA-SDI-21631, CA-SDI-21913, CA-SDI-21914, CA-SDI-21915. CA-SDI-21916 (Balance), CA-SDI-21917	Monitoring
CA-SDI-6694, CA-SDI-6965, CA-SDI-11392, CA-SDI-11395, CA-SDI-11398,CA-SDI-11400, CA-SDI-11416, CA-SDI-11418, CA-SDI-11422, CA-SDI-12321, CA-SDI-12323, CA-SDI-12325, CA-SDI-12326, CA-SDI-12331, CA-SDI-12334, CA-SDI-12373 Locus B, CA-SDI-12375, CA-SDI-12376, CA-SDI-12389, CA-SDI-12393, CA-SDI-12398, CA-SDI-12937,CA-SDI-21,624, CA-SDI-21625, CA-SDI-21626, CA-SDI-21627, CA-SDI-21628, CA-SDI-21629, CA-SDI-21631, CA-SDI-21913, CA-SDI-21914, CA-SDI-21915. CA-SDI-21916 (Balance), CA-SDI-21917	Curation or Repatriation
CA-SDI-6694, CA-SDI-6965, CA-SDI-11392, CA-SDI-11395, CA-SDI-11398,CA-SDI-11400, CA-SDI-11416, CA-SDI-11418, CA-SDI-11422, CA-SDI-12321, CA-SDI-12323, CA-SDI-12325, CA-SDI-12326, CA-SDI-12331, CA-SDI-12334, CA-SDI-12373 Locus B, CA-SDI-12375, CA-SDI-12376, CA-SDI-12389, CA-SDI-12393, CA-SDI-12398, CA-SDI-12937,CA-SDI-21,624, CA-SDI-21625, CA-SDI-21626, CA-SDI-21627, CA-SDI-21628, CA-SDI-21629, CA-SDI-21631, CA-SDI-21913, CA-SDI-21914, CA-SDI-21915. CA-SDI-21916 (Balance), CA-SDI-21917	Evaluation
CA-SDI-6694, CA-SDI-6965, CA-SDI-11392, CA-SDI-11395, CA-SDI-11398,CA-SDI-11400, CA-SDI-11416, CA-SDI-11418, CA-SDI-11422, CA-SDI-12321, CA-SDI-12323, CA-SDI-12325, CA-SDI-12326, CA-SDI-12331, CA-SDI-12334, CA-SDI-12373 Locus B, CA-SDI-12375, CA-SDI-12376, CA-SDI-12389, CA-SDI-12393, CA-SDI-12398, CA-SDI-12937,CA-SDI-21,624, CA-SDI-21625, CA-SDI-21626, CA-SDI-21627, CA-SDI-21628, CA-SDI-21629, CA-SDI-21631, CA-SDI-21913, CA-SDI-21914, CA-SDI-21915. CA-SDI-21916 (Balance), CA-SDI-21917	Research
CA-SDI-11401; CA-SDI-11421; CA-SDI-12319; CA-SDI-12322; CA-SDI-12335; CA-SDI-12383; CA-SDI-12392; P-37-014834; P-37-015033; P-37-015035; P-37-015036; P-37-015038; P-37-015041; P-37-015042; P-37-015059; P-37-015060; P-37-026526	None – Isolate or Resource Does Not Exist

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APPENDIX A

Phase I Inventory Report (Confidential)

APPENDIX B

Records Search Results (Confidential)

APPENDIX C

Maps and DPR Forms (Confidential)

APPENDIX D

Artifact Catalog

CAT	SITE	RTYPE	UNO	ID	UNIT SIZE	TOPLEV	BOTLEV	CLASS	OBJECT	MATERIAL	Condition	CT	WT	DISCARDED?	COMMENTS
1	SDI-8086	Surface - General		8	None	0	0	Retouched Flake	Other Edge-Modified Tool	Basalt	Proximal	1	5.4		
2	SDI-8086	Surface - General		8	None	0	0	Debitage	Shatter	Cryptocrystalline Silicate	NA	1	18.6		
3	SDI-8086	Surface - General		8	None	0	0	Debitage	Interior	Quartz	NA	1	4		
4	SDI-8086	Surface - General		8	None	0	0	Debitage	Shatter	Chalcedony	NA	3	12.3		
5	SDI-8086	Surface - General		8	None	0	0	Debitage	Interior	Chalcedony	NA	1	0.6		
6	SDI-8086	Surface - General		8	None	0	0	Debitage	Interior	Chert	NA	13	18.1		
7	SDI-8086	Surface - General		8	None	0	0	Debitage	Shatter	Chert	NA	2	12.1		
8	SDI-8086	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	24.6		
9	SDI-8086	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	27	165.8		
10	SDI-8086	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	6	182.5		
11	SDI-8086	Surface - Point Plot	A1	8	None	0	0	Retouched Flake	Scraper	Volcanic	Complete	1	24.7		
12	SDI-8086	Surface - Point Plot	A2	8	None	0	0	Misc.	Other	Volcanic	NA	1	1080	Yes	Not an artifact
15	SDI-8086	STP	1	3	.5m-x-.25m	0	20	Debitage	Interior	Chert	NA	1	0.3		
16	SDI-8086	STP	2	3	.5m-x-.25m	0	20	Debitage	Interior	Chert	NA	1	1.5		
17	SDI-8086	STP	2	3	.5m-x-.25m	0	20	Debitage	Interior	Volcanic	NA	2	10.6		
18	SDI-12332	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	7	112.5		
19	SDI-12332	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	16	111.6		
20	SDI-12332	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	4	100.5		
21	SDI-12332	Surface - General		8	None	0	0	Debitage	Interior	Chert	NA	1	9		
22	SDI-12332	Surface - General		8	None	0	0	Debitage	Secondary	Chert	NA	1	47.1		
23	SDI-12332	Surface - General		8	None	0	0	Debitage	Interior	Chert	NA	2	3.7		
24	SDI-12332	Surface - General		8	None	0	0	Debitage	Shatter	Chert	NA	1	12.3		
25	SDI-12332	Surface - Point Plot	A1	8	None	0	0	Core	Multidirectional	Volcanic	NA	1	3320		
26	SDI-12332	Surface - Point Plot	A2	8	None	0	0	Debitage	Interior	Volcanic	Almost Complete	1	18.4		
27	SDI-12332	Surface - Point Plot	A3	8	None	0	0	Debitage	Interior	Cryptocrystalline Silicate	Complete	1	4.5		
28	SDI-12332	Surface - Point Plot	A4	8	None	0	0	Retouched Flake	Scraper	Volcanic	Almost Complete	1	32.4		
29	SDI-12332	Surface - Point Plot	A5	8	None	0	0	Core	Core Tool	Volcanic	Almost Complete	1	45.8		
30	SDI-12332	Surface - Point Plot	A6	8	None	0	0	Core	Multidirectional	Volcanic	NA	1	1690		
31	SDI-12332	Surface - Point Plot	A7	8	None	0	0	Core	Multidirectional	Volcanic	NA	1	890		
32	SDI-12332	Surface - Point Plot	A8	8	None	0	0	Core	Multidirectional	Volcanic	NA	1	39.4		
33	SDI-12332	STP	1	3	.5m-x-.25m	0	20	Debitage	Interior	Volcanic	NA	1	2.8		
34	SDI-12332	STP	3	3	.5m-x-.25m	0	20	Debitage	Interior	Volcanic	NA	2	10.4		
35	SDI-12316	Surface - Point Plot	A1	8	None	0	0	Misc.	Other	Volcanic	NA	1	0	Yes	NOT AN ARTIFACT - DISCARDED
36	SDI-12316	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	NA	1	29.9		
37	SDI-12316	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	2	11		
38	SDI-12330	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	3	12.6		
39	SDI-12324	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	45.8		
41	SDI-21924	Surface - Point Plot	A1	8	None	0	0	Misc.	Other	Volcanic	NA	1	0	Yes	NOT AN ARTIFACT - DISCARDED
42	SDI-21924	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	NA	1	50.5		
43	SDI-21924	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	1	16.7		
44	SDI-21924	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	1	78.7		
45	SDI-12317	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	6	174.2		

CAT	SITE	RTYPE	UNO	ID	UNIT SIZE	TOPLEV	BOTLEV	CLASS	OBJECT	MATERIAL	Condition	CT	WT	DISCARDED?	COMMENTS
46	SDI-12317	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	1	44.4		
47	SDI-12317	Surface - General		8	None	0	0	Retouched Flake	Other Edge-Modified Tool	Volcanic	Fragment	1	13.7		
48	SDI-12317	Surface - General		8	None	0	0	Retouched Flake	Scraper	Volcanic	Almost Complete	1	54.5		
49	SDI-12329	Surface - Point Plot	A1	8	None	0	0	Core	Multidirectional	Volcanic	NA	1	195.3		
50	SDI-12329	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	5	127.5		
51	SDI-6695A	Surface - General		8	None	0	0	Debitage	Shatter	Chalcedony	NA	3	90.3		
52	SDI-6695A	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	1	31.2		
53	SDI-6695A	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	3	24.9		
54	SDI-6695A	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	1	28.2		
56	SDI-6695A	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	Almost Complete	1	171		
57	SDI-6695A	CSC	1	5	5m-x-5m	0	0	Debitage	Secondary	Volcanic	NA	1	9.8		
58	SDI-6695A	CSC	2	5	5m-x-5m	0	0	Debitage	Interior	Volcanic	NA	5	15		
59	SDI-6695A	CSC	2	5	5m-x-5m	0	0	Debitage	Secondary	Volcanic	NA	1	11.7		
60	SDI-6695A	CSC	2	5	5m-x-5m	0	0	Debitage	Interior	Volcanic	Almost Complete	1	142		
61	SDI-6695A	CSC	3	5	5m-x-5m	0	0	Debitage	Secondary	Volcanic	NA	2	6.9		
62	SDI-12313	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	1	15		
63	SDI-12313	Surface - General		8	None	0	0	Debitage	Interior	Cryptocrystalline Silicate	NA	1	15.2		
64	SDI-12314	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	46.1		
65	SDI-12314	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	4	19.1		
66	SDI-12314	Surface - General		8	None	0	0	Debitage	Secondary	Metavolcanic	NA	1	21.1		
67	SDI-12314	Surface - General		8	None	0	0	Debitage	Secondary	Cryptocrystalline Silicate	NA	1	3.5		
68	SDI-12315	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	3	77.7		
69	SDI-12315	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	3	18.6		
70	SDI-12320	Surface - Point Plot	A1	8	None	0	0	Core	Core Tool	Volcanic	NA	1	1130		
71	SDI-12320	Surface - Point Plot	A2	8	None	0	0	Core	Unidirectional	Volcanic	NA	1	32		
72	SDI-12320	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	6	237		
73	SDI-12320	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	NA	1	150.7		
74	SDI-12320	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	5	136.4		
75	SDI-12320	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	21	282		
76	SDI-12320	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	6	126.9		
77	SDI-12320	Surface - General		8	None	0	0	Debitage	Interior	Chert	NA	3	19		
78	SDI-12320	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	2	72.5		
79	SDI-12320	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	1	11		
80	SDI-12320	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	NA	1	24.1		
81	SDI-12320	Surface - General		8	None	0	0	Core	Multidirectional	Volcanic	NA	3	1160	Yes	not artifacts - discarded
82	SDI-12320	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	1	103.4		
83	SDI-11399	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	13	979.4		
84	SDI-11399	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	62	513.9		
85	SDI-11399	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	3	98.5		
86	SDI-11399	Surface - General		8	None	0	0	Debitage	Secondary	Chert	NA	2	1.7		
89	SDI-11399	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	6.5		
90	SDI-11399	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	17	112.7		

CAT	SITE	RTYPE	UNO	ID	UNIT SIZE	TOPLEV	BOTLEV	CLASS	OBJECT	MATERIAL	Condition	CT	WT	DISCARDED?	COMMENTS
92	SDI-11399	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	1	70.8		
93	SDI-11399	Surface - General		8	None	0	0	Retouched Flake	Other Edge-Modified Tool	Volcanic	Distal	1	11.3		
94	SDI-11399	CSC	1	5	5m-x-5m	0	0	Debitage	Secondary	Volcanic	NA	2	51.3		
95	SDI-11399	CSC	1	5	5m-x-5m	0	0	Debitage	Interior	Volcanic	NA	19	76.4		
96	SDI-11399	CSC	1	5	5m-x-5m	0	0	Debitage	Interior	Quartzite	NA	5	26.6		
97	SDI-11399	CSC	1	5	5m-x-5m	0	0	Debitage	Secondary	Chert	NA	1	8.3		
98	SDI-11399	CSC	2	5	5m-x-5m	0	0	Debitage	Interior	Volcanic	NA	8	34.6		
99	SDI-11399	CSC	2	5	5m-x-5m	0	0	Debitage	Secondary	Chert	NA	4	32.3		
100	SDI-11399	CSC	2	5	5m-x-5m	0	0	Debitage	Interior	Chert	NA	9	16.2		
101	SDI-11399	Surface - Point Plot	A1	8	None	0	0	Retouched Flake	Other Edge-Modified Tool	Volcanic	NA	1	179.7		
102	SDI-11399	Surface - Point Plot	A2	8	None	0	0	Biface	Drill	Chert	Almost Complete	1	6		missing tip, Elko point reworked into drill
103	SDI-11399	Surface - Point Plot	A3	8	None	0	0	Retouched Flake	Scraper	Volcanic	Almost Complete	1	20.9		
104	SDI-11399	Surface - Point Plot	A4	8	None	0	0	Ground Stone	Millingstone	Volcanic	Medial Portion	1	1000		
105	SDI-11399	Surface - Point Plot	A5	8	None	0	0	Core	Core Tool	Volcanic	NA	1	372.9		
106	SDI-11399	Surface - Point Plot	A6	8	None	0	0	Retouched Flake	Scraper	Volcanic	Lateral Portion	1	100.2		
107	SDI-11399	Surface - Point Plot	A7	8	None	0	0	Utilized Flake	Simple Flake Tool	Volcanic	Complete	1	102.5		
108	SDI-11399	STP	1	3	.5m-x-.25m	0	20	Debitage	Secondary	Volcanic	NA	1	4.4		
109	SDI-11399	STP	1	3	.5m-x-.25m	0	20	Debitage	Interior	Volcanic	NA	1	8.3		
110	SDI-11397	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	5	136.4		
111	SDI-11397	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	23	219.1		
112	SDI-11397	Surface - General		8	None	0	0	Retouched Flake	Scraper	Volcanic	Lateral Portion	1	97.4		
113	SDI-11397	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	NA	2	352.1		
114	SDI-11397	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	12	217.3		
115	SDI-11397	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	14	118.7		
116	SDI-11397	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	8	445.2		
117	SDI-11397	Surface - General		8	None	0	0	Retouched Flake	Scraper	Volcanic	Almost Complete	1	240.2		
118	SDI-11397	CSC	1	5	5m-x-5m	0	0	Debitage	Secondary	Volcanic	NA	1	86.9		
119	SDI-11397	CSC	1	5	5m-x-5m	0	0	Debitage	Interior	Volcanic	NA	35	74.1		
120	SDI-11397	CSC	1	5	5m-x-5m	0	0	Debitage	Shatter	Volcanic	NA	3	116.6		
121	SDI-11397	Surface - Point Plot	A1	8	None	0	0	Core	Multidirectional	Volcanic	NA	1	264		
122	SDI-11397	Surface - Point Plot	A2	8	None	0	0	Core	Multidirectional	Volcanic	NA	1	305.5		
123	SDI-11397	Surface - Point Plot	A3	8	None	0	0	Retouched Flake	Other Edge-Modified Tool	Volcanic	Complete	1	19.2		
124	SDI-6695B	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	8	144.2		
125	SDI-6695B	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	62	417.3		
126	SDI-6695B	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	5	105.4		
127	SDI-6695B	Surface - General		8	None	0	0	Debitage	Shatter	Quartzite	NA	2	78.6		
128	SDI-6695B	Surface - General		8	None	0	0	Debitage	Interior	Quartzite	NA	3	80.4		
129	SDI-6695B	Surface - General		8	None	0	0	Debitage	Interior	Chert	NA	1	2.9		
130	SDI-6695B	Surface - Point Plot	A3	8	None	0	0	Core	Multidirectional	Quartzite	NA	1	720		
131	SDI-6695B	Surface - Point Plot	A2	8	None	0	0	Debitage	Interior	Volcanic	NA	1	17.6		
132	SDI-6695B	Surface - General		8	None	0	0	Debitage	Secondary	Quartzite	NA	2	7.7		
133	SDI-6695B	Surface - General		8	None	0	0	Debitage	Interior	Quartzite	NA	10	29.7		
134	SDI-6695B	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	2	3.8		

CAT	SITE	RTYPE	UNO	ID	UNIT SIZE	TOPLEV	BOTLEV	CLASS	OBJECT	MATERIAL	Condition	CT	WT	DISCARDED?	COMMENTS
135	SDI-6695B	CSC	1A	5	5m-x-5m	0	0	Debitage	Secondary	Volcanic	NA	4	72.3		
136	SDI-6695B	CSC	1A	5	5m-x-5m	0	0	Debitage	Interior	Volcanic	NA	3	31.3		
137	SDI-6695B	CSC	1A	5	5m-x-5m	0	0	Debitage	Secondary	Quartzite	NA	1	18.8		
138	SDI-6695B	CSC	1A	5	5m-x-5m	0	0	Debitage	Interior	Quartzite	NA	6	96.8		
139	SDI-6695B	CSC	1A	5	5m-x-5m	0	0	Ceramic	Body Sherd	Ceramic	Fragment	10	41.4		
140	SDI-6695B	CSC	1B	5	5m-x-5m	0	0	Debitage	Interior	Volcanic	NA	2	12.3		
141	SDI-6695B	CSC	1B	5	5m-x-5m	0	0	Debitage	Secondary	Quartzite	NA	2	68.7		
142	SDI-6695B	CSC	1B	5	5m-x-5m	0	0	Debitage	Interior	Quartzite	NA	22	275.9		
143	SDI-6695B	CSC	1B	5	5m-x-5m	0	0	Debitage	Shatter	Quartzite	NA	4	130.3		
144	SDI-6695B	CSC	1B	5	5m-x-5m	0	0	Debitage	Shatter	Quartzite	NA	1	24.5		
145	SDI-6695B	CSC	1C	5	5m-x-5m	0	0	Debitage	Primary	Quartzite	NA	1	59.5		
146	SDI-6695B	CSC	1C	5	5m-x-5m	0	0	Debitage	Secondary	Quartzite	NA	3	94.1		
147	SDI-6695B	CSC	1C	5	5m-x-5m	0	0	Debitage	Interior	Quartzite	NA	12	73.8		
148	SDI-6695B	CSC	1D	5	5m-x-5m	0	0	Debitage	Interior	Quartzite	NA	2	32.1		
149	SDI-6695B	SSU	1	7	Other	0	10	Ceramic	Body Sherd	Ceramic	Body or Sidewall	23	90.3		
150	SDI-6695B	SSU	1	7	Other	0	10	Debitage	Primary	Volcanic	NA	1	68.3		
151	SDI-6695B	SSU	1	7	Other	0	10	Debitage	Secondary	Volcanic	NA	5	90.5		
152	SDI-6695B	SSU	1	7	Other	0	10	Debitage	Interior	Volcanic	NA	15	217.9		
153	SDI-6695B	SSU	1	7	Other	0	10	Debitage	Secondary	Quartzite	NA	10	209		
154	SDI-6695B	SSU	1	7	Other	0	10	Debitage	Interior	Quartzite	NA	60	493		
155	SDI-6695B	SSU	1	7	Other	0	10	Debitage	Shatter	Quartzite	NA	4	312.7		
156	SDI-12320	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	45.6		
157	SDI-12320	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	18	127.2		
158	SDI-12332	Surface - General		8	None	0	0	Debitage	Secondary	Quartzite	NA	1	20.5		
159	SDI-12332	Surface - General		8	None	0	0	Debitage	Interior	Quartzite	NA	1	57.1		
160	SDI-11399	Surface - General		8	None	0	0	Retouched Flake	Other Edge-Modified Tool	Volcanic	Almost Complete	1	12.9		
161	SDI-11399	CSC	2	8	None	0	0	Debitage	Secondary	Volcanic	NA	2	3.4		
162	SDI-11399	CSC	2	8	None	0	0	Biface	Late Stage	Chert	End	1	1		
163	SDI-6695A	CSC	1	8	None	0	0	Debitage	Interior	Volcanic	NA	2	2.3		
164	SDI-12330	Surface - General		8	None	0	0	Debitage	Interior	Quartzite	NA	1	25.4		
165	SDI-21925	STP	1	3	.5m-x-.25m	0	20	Debitage	Secondary	Volcanic	NA	2	136		
166	SDI-21925	STP	1	3	.5m-x-.25m	0	20	Debitage	Interior	Volcanic	NA	1	6.9		
167	SDI-12377	Surface - Point Plot	A1	8	None	0	0	Retouched Flake	Other Edge-Modified Tool	Volcanic	Almost Complete	1	512.3	Yes	not an artifact
168	SDI-12377	Surface - Point Plot	A4	8	None	0	0	Ground Stone	Millingstone	Granitic	Margin	1	999999		
169	SDI-11399	Surface - General		8	None	0	0	Retouched Flake	Other Edge-Modified Tool	Volcanic	Medial Portion	1	1.1		
170	SDI-12380	STP	2	3	.5m-x-.25m	0	20	Debitage	Secondary	Volcanic	NA	1	5.5		
171	SDI-12380	STP	2	3	.5m-x-.25m	0	20	Debitage	Shatter	Volcanic	NA	1	0.7		
172	SDI-11417	STP	9	3	.5m-x-.25m	0	0	Debitage	Interior	Volcanic	NA	1	28		
173	SDI-11417	STP	9	3	.5m-x-.25m	0	20	Debitage	Shatter	Volcanic	NA	1	1.4		
174	SDI-11417	STP	9	3	.5m-x-.25m	0	20	Debitage	Interior	Volcanic	NA	2	41.2		
175	SDI-12385	Surface - Point Plot		8	None	0	0	Debitage	Secondary	Volcanic	NA	1	30.8		
176	SDI-12380	Surface - Point Plot		8	None	0	0	Debitage	Shatter	Volcanic	NA	5	11.6		
177	SDI-12380	Surface - Point Plot		8	None	0	0	Debitage	Interior	Volcanic	NA	5	3.8		

CAT	SITE	RTYPE	UNO	ID	UNIT SIZE	TOPLEV	BOTLEV	CLASS	OBJECT	MATERIAL	Condition	CT	WT	DISCARDED?	COMMENTS
178	SDI-21630	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	15		
179	SDI-12380	Surface - Point Plot		8	None	0	0	Debitage	Secondary	Quartzite	NA	1	33.3		
180	SDI-11394	Surface - General		7	Other	0	0	Debitage	Interior	Volcanic	NA	3	14.5		
181	SDI-11417	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	Fragment	0	206.2	Yes	combined with CAT 209
182	SDI-11417	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	17	229.1		
183	SDI-11417	Surface - General		7	Other	0	0	Debitage	Secondary	Volcanic	NA	3	89.9		
184	SDI-12377	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	6	42.4		
185	SDI-12377	Surface - General		8	None	0	0	Debitage	Secondary	Chert	NA	1	1.3		
186	SDI-12377	Surface - General		8	None	0	0	Debitage	Primary	Chert	NA	2	21.1		
187	SDI-11394	Surface - General		8	None	0	0	Utilized Flake	Simple Flake Tool	Volcanic	Complete	1	2.2		
188	SDI-12377	Surface - General		8	None	0	0	Debitage	Shatter	Chert	NA	24	153.8		
189	SDI-12377	Surface - General		8	None	0	0	Debitage	Interior	Chert	NA	11	27.5		
190	SDI-12377	Surface - General		8	None	0	0	Debitage	Shatter	Quartzite	NA	1	11.9		
191	SDI-12377	Surface - Point Plot	A3	8	None	0	0	Core	Multidirectional	Chert	Fragment	1	36.3		
192	SDI-12379	Surface - General		8	None	0	0	Core	Assayed Cobble	Volcanic	Fragment	1	1130		
193	SDI-12379	Surface - General		8	None	0	0	Core	Assayed Cobble	Volcanic	Fragment	1	402.8	Yes	not an artifact
194	SDI-12379	Surface - General		8	None	0	0	Core	Multidirectional	Volcanic	Fragment	1	269.5	Yes	not an artifact
195	SDI-11417	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	73	835.2		
196	SDI-11417	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	3	92.4		
197	SDI-11417	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	21	540.2		
198	SDI-11417	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	Fragment	0	185		
199	SDI-11417	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	1	11.4		
200	SDI-11417	Surface - Point Plot		8	None	0	0	Core	Assayed Cobble	Volcanic	Fragment	1	541.7	Yes	not an artifact
201	SDI-11417	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	194.7		
202	SDI-11417	Surface - Point Plot		8	None	0	0	Core	Assayed Cobble	Volcanic	Fragment	1	277.9	Yes	not an artifact
203	SDI-11417	Surface - Point Plot		8	None	0	0	Core	Assayed Cobble	Volcanic	Fragment	1	22.8	Yes	not an artifact
204	SDI-11417	STP	9	3	.5m-x-.25m	0	20	Debitage	Secondary	Volcanic	NA	1	5.2		
205	SDI-21630	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	1	25.4		feature 2
206	SDI-11394	Surface - General		8	None	0	0	Retouched Flake	Other Edge-Modified Tool	Volcanic	Complete	1	182		
207	SDI-11394	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	3	50.8		
208	SDI-11394	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	82.7		
209	SDI-11417	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	62	776		
210	SDI-11417	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	Almost Complete	0	18.2	Yes	not an artifact
211	SDI-11417	Surface - General		8	None	0	0	Debitage	Shatter	Cryptocrystalline Silicate	NA	1	8.6		
212	SDI-11417	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	NA	1	14.6		
213	SDI-11394	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	3	43		
214	SDI-11417	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	Fragment	0	44.8	Yes	not an artifact
215	SDI-11394	Surface - Point Plot	A1	8	None	0	0	Ground Stone	Handstone	Granitic	Complete	1	730		
216	SDI-12379	Surface - Point Plot	A1	8	None	0	0	Core	Multidirectional	Metavolcanic	Almost Complete	1	990		
217	SDI-12379	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	5	119.3		
218	SDI-12379	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	6	57		
219	SDI-12379	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	4	47.6		
220	SDI-12377	Surface - General		8	None	0	0	Debitage	Shatter	Chert	NA	12	155		

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221	SDI-12377	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	3	16		
222	SDI-11394	Surface - General		8	None	0	0	Debitage	Shatter	Volcanic	NA	1	1.8		
223	SDI-12377	Surface - General		8	None	0	0	Debitage	Interior	Chert	NA	3	9.4		
224	SDI-12377	Surface - General		8	None	0	0	Debitage	Interior	Quartzite	NA	1	8.6		
225	SDI-12377	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	2	3.1		
226	SDI-12380	Surface - Point Plot	A1	8	None	0	0	Ground Stone	Handstone	Granitic	Complete	1	1150		
227	SDI-12377	Surface - Point Plot		8	None	0	0	Debitage	Shatter	Quartzite	NA	1	59.4		
228	SDI-12377	Surface - Point Plot	A1	8	None	0	0	Percussing Tool	Hammerstone	Volcanic	Almost Complete	1	482.8		
229	SDI-12377	Surface - Point Plot	A2	8	None	0	0	Core	Assayed Cobble	Quartzite	Almost Complete	1	316.5		
230	SDI-11417	Surface - Point Plot	A2	8	None	0	0	Core	Assayed Cobble	Volcanic	Fragment	1	536.1		Artifact C
231	SDI-11417	Surface - Point Plot	B	8	None	0	0	Core	Multidirectional	Volcanic	Fragment	1	1023	Yes	not an artifact
232	SDI-11417	Surface - Point Plot	D	8	None	0	0	Core	Unidirectional	Volcanic	Fragment	1	278.7	Yes	not an artifact
233	SDI-11417	Surface - Point Plot	D1	8	None	0	0	Core	Unidirectional	Volcanic	Fragment	1	187.2	Yes	not an artifact
234	SDI-11417	Surface - Point Plot	E	8	None	0	0	Core	Multidirectional	Volcanic	Fragment	1	308.2	Yes	not an artifact
235	SDI-11417	Surface - Point Plot	A1	8	None	0	0	Core	Multidirectional	Volcanic	Fragment	1	2200		Artifact A
236	SDI-11417	Surface - Point Plot	C1	8	None	0	0	Core	Multidirectional	Volcanic	Fragment	1	2320	Yes	not an artifact
237	SDI-12377	STP	7	3	.5m-x-.25m	20	40	Debitage	Interior	Chert	NA	4	2.6		
238	SDI-12377	STP	7	3	.5m-x-.25m	20	40	Debitage	Secondary	Chert	NA	2	6.5		
239	SDI-21912	STP	1	3	.5m-x-.25m	0	20	Debitage	Shatter	Chert	NA	1	1.6		
240	SDI-11394	Surface - Point Plot	A2	8	None	0	0	Retouched Flake	Scraper	Volcanic	Distal	1	26.4		
241	SDI-21912	Surface - General		8	None	0	0	Debitage	Secondary	Chert	NA	1	2.3		
242	SDI-11417	STP	2	3	.5m-x-.25m	0	20	Historic Artifact	Glass - Historic	Glass	NA	3	6.1		
243	SDI-12380	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	7.8		
244	SDI-11394	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	NA	1	5.3		
245	SDI-12333	Surface - Point Plot		8	None	0	0	Core	Multidirectional	Metavolcanic	Complete	1	1040	Yes	not an artifact
246	SDI-12333	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	3	60.1		
247	SDI-11417	Surface - General		8	None	0	0	Retouched Flake	Scraper	Volcanic	NA	1	353.1		
248	SDI-21632	Surface - General		8	None	0	0	Debitage	Interior	Volcanic	NA	1	145.6		
249	SDI-21632	Surface - General		8	None	0	0	Debitage	Interior	Cryptocrystalline Silicate	NA	2	2		
250	SDI-12333	Surface - Point Plot	A1	8	None	0	0	Biface	Projectile Point	Volcanic	Proximal	1	17.8		
251	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	Base	1	187.5		"PURE" printed on bottom, brown
252	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	Base	1	83.8		bottle bottom, green, 7up, star beverage corp., san diego
253	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	Base	1	42.3		bottle bottom, brown
254	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	Base	1	78.9		bottle bottom, clear, flask style
255	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	Base	1	36.8		bottle bottom, brown
256	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	Base	1	38		bottle bottom, clear, flask style, one pint
257	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	Base	1	30.8		bottle bottom, green, indistinguishable markers mark
258	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	Neck	1	33.5		bottle neck, clear, double lipped
259	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	Neck	1	16.6		bottle neck, clear, lipped, discoloration
260	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Glass - Historic	Glass	NA	1	8.9		melted and discolored fragment
261	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Ceramic - Historic	Ceramic	NA	2	15.8		glazed, decorated, plate fragments
262	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Ceramic - Historic	Ceramic	NA	1	79.8		glazed, decorated, undetermined fragment
263	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Misc. Metal - Historic	Ceramic	Complete	1	14.2		nail, iron

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264	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Misc. Metal - Historic	Metal	Complete	1	40.1		spoon, tin
265	SDI-11417	Surface - General		8	None	0	0	Historic Artifact	Misc. Metal - Historic	Metal	Complete	1	129.7		hinge, iron
266	SDI-11417	STP	2	3	.5m-x-.25m	0	0	Debitage	Interior	Volcanic	NA	2	13.1		
267	SDI-11417	Surface - General		8	None	0	0	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	NA	1	17.1		
268	SDI-11417	STP	2	3	.5m-x-.25m	0	20	Debitage	Shatter	Volcanic	NA	0	5.8	Yes	not an artifact
269	SDI-12333	Surface - General		8	None	0	0	Debitage	Interior	Cryptocrystalline Silicate	NA	1	34.7		
270	SDI-12333	Surface - General	A2	8	None	0	0	Utilized Flake	Simple Flake Tool	Chert	Complete	1	28.3		
271	SDI-12333	Surface - General		8	None	0	0	Debitage	Secondary	Volcanic	NA	2	60.8		
272	SDI-11394	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	NA	1	98.1		
273	SDI-12379	Surface - General		8	None	0	0	Debitage	Primary	Volcanic	NA	2	37.1		
274	SDI-12377	Surface - General		8	None	0	0	Debitage	Secondary	Chert	NA	5	46		
276	SDI-12373H	STP	3	3	.5m-x-.25m	20	35	Ceramic	Body Sherd	Ceramic	Body or Sidewall	1	7		Tizon brown
277	SDI-12373H	STP	4	3	.5m-x-.25m	0	8	Debitage	Interior	Volcanic	Fragment	18	15.9		
278	SDI-12373H	STP	4	3	.5m-x-.25m	0	8	Ceramic	Body Sherd	Ceramic	Body or Sidewall	4	3.45		Tizon brown; I oxidized, three reducing
279	SDI-12373H	STP	4	3	.5m-x-.25m	0	8	Debitage	Secondary	Volcanic	Fragment	4	4.9		
280	SDI-12373H	STP	4	3	.5m-x-.25m	0	8	Debitage	Primary	Volcanic	Fragment	1	0.8		
281	SDI-12373H	STP	4	3	.5m-x-.25m	0	8	Debitage	Shatter	Chert	Fragment	1	0		
282	SDI-12373H	STP	4	3	.5m-x-.25m	0	8	Debitage	Shatter	Volcanic	Fragment	6	11.3		
283	SDI-12373H	STP	4	3	.5m-x-.25m	0	8	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	3	1.4		
284	SDI-21916	STP	1	3	.5m-x-.25m	0	20	Debitage	Interior	Chert	Fragment	3	0.6		
285	SDI-21916	STP	1	3	.5m-x-.25m	0	20	Debitage	Secondary	Volcanic	Fragment	1	1.9		Coarse grain
286	SDI-21916	STP	1	3	.5m-x-.25m	0	20	Debitage	Shatter	Volcanic	Fragment	1	0.3		Coarse grain
287	SDI-21916	STP	1	3	.5m-x-.25m	0	20	Debitage	Interior	Basalt	Fragment	3	0.8		
288	SDI-21916	STP	1	3	.5m-x-.25m	0	20	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	1	0.3		Indeterminate
289	SDI-21916	STP	1	3	.5m-x-.25m	0	20	Ceramic	Body Sherd	Ceramic	Body or Sidewall	1	3.1		Salton Brown
290	SDI-21916	STP	1	3	.5m-x-.25m	20	40	Debitage	Interior	Volcanic	Fragment	5	5.1		
291	SDI-21916	STP	2	3	.5m-x-.25m	20	40	Debitage	Interior	Volcanic	Fragment	2	0.2		Coarse grain
292	SDI-21916	STP	2	3	.5m-x-.25m	20	40	Debitage	Interior	Basalt	Fragment	1	2.5		
293	SDI-21916	STP	2	3	.5m-x-.25m	0	20	Debitage	Secondary	Volcanic	Fragment	1	4		Coarse Grain
294	SDI-21916	STP	2	3	.5m-x-.25m	40	60	Debitage	Interior	Volcanic	Fragment	1	0.5		
295	SDI-21916	STP	3	3	.5m-x-.25m	20	40	Debitage	Interior	Volcanic	Fragment	1	2.1		
296	SDI-21916	STP	3	3	.5m-x-.25m	20	40	Debitage	Interior	Chert	Fragment	1	0		
298	SDI-12373H	STP	2	3	.5m-x-.25m	20	40	Debitage	Shatter	Volcanic	Fragment	1	2.8		Coarse grain
299	SDI-12373H	CU	1	1	1m-x-1m	0	18	Debitage	Shatter	Chert	Fragment	5	0.9		
300	SDI-12373H	CU	1	1	1m-x-1m	0	18	Debitage	Secondary	Volcanic	Fragment	3	16.6		Fine grained
301	SDI-12373H	CU	1	1	1m-x-1m	0	18	Debitage	Interior	Volcanic	Fragment	24	8.2		Fine grained
302	SDI-12373H	CU	1	1	1m-x-1m	0	18	Debitage	Shatter	Volcanic	Fragment	26	25		Fine grained
303	SDI-12373H	CU	1	1	1m-x-1m	0	18	Debitage	Shatter	Volcanic	Fragment	16	32.3		Coarse grain
304	SDI-12373H	CU	1	1	1m-x-1m	0	18	Debitage	Shatter	Volcanic	Fragment	6	63.7		Coarse grain
305	SDI-12373H	CU	1	1	1m-x-1m	0	18	Debitage	Shatter	Volcanic	Fragment	60	28.2		Coarse grain

CAT	SITE	RTYPE	UNO	ID	UNIT SIZE	TOPLEV	BOTLEV	CLASS	OBJECT	MATERIAL	Condition	CT	WT	DISCARDED?	COMMENTS
306	SDI-12373H	CU	1	1	1m-x-1m	0	18	Debitage	Primary	Volcanic	Fragment	1	0.7		Coarse grain
307	SDI-12373H	CU	1	1	1m-x-1m	0	18	Ground Stone	Millingstone	Volcanic	Margin	1	427.7		
308	SDI-12373H	CU	1	1	1m-x-1m	0	18	Ground Stone	Other Groundstone	Volcanic	Medial Portion	1	109.4		
309	SDI-12373H	CU	1	1	1m-x-1m	0	18	Retouched Flake	Scraper	Volcanic	Fragment	1	68.1		
310	SDI-12373H	CU	1	1	1m-x-1m	0	18	Ceramic	Body Sherd	Ceramic	Body or Sidewall	17	26.6		Mostly Tizon, 3 burned on interior surface; 2 buffware; at lest 3 vessles
311	SDI-12373H	CU	1	1	1m-x-1m	0	18	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	14	2		Indeterminate
312	SDI-12373H	CU	1	1	1m-x-1m	0	18	Misc.	Misc. Metal - Historic	Metal	Fragment	1	0.6		
313	SDI-12373H	CU	1	1	1m-x-1m	0	18	Invertebrate Remains	Bulk Shell	Shell - Unspeciated	Fragment	2	1.2		Chione and Argopecten
314	SDI-12373H	CU	2	7	Other	0	40	Vertebrate Remains	Bulk Bone	Tooth	Fragment	1	0.1		tooth
315	SDI-12373H	CU	2	7	Other	0	40	Debitage	Shatter	Volcanic	Fragment	11	19		Coarse grain
316	SDI-12373H	CU	2	7	Other	0	40	Debitage	Primary	Volcanic	Complete	1	0.5		Fine Grain
317	SDI-12373H	CU	2	7	Other	0	40	Debitage	Shatter	Chert	Fragment	5	1.2		
318	SDI-12373H	CU	2	7	Other	0	40	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	21	10.7		Indeterminate
319	SDI-12373H	CU	2	7	Other	0	40	Invertebrate Remains	Bulk Shell	Shell - Unspeciated	Fragment	4	0.8		Chione, Argopecten, and two indeterminate
320	SDI-12373H	CU	2	7	Other	0	40	Ceramic	Body Sherd	Ceramic	Body or Sidewall	20	11.9		Tizon brown; 5 burned; at least 2 vessels
321	SDI-12373H	CU	2	7	Other	0	40	Debitage	Shatter	Basalt	Fragment	8	3.6		
322	SDI-12373H	CU	2	7	Other	0	40	Misc.	Other	Glass	Fragment	1	1.9		
323	SDI-12373H	CU	2	7	Other	0	40	Core	Unidirectional	Volcanic	Complete	1	198.5		
324	SDI-12373H	CU	2	7	Other	0	40	Organic Sample	Radiocarbon Sample	Charcoal	Fragment	4	0.6		
325	SDI-12373H	CU	1	1	1m-x-1m	0	18	Debitage	Interior	Basalt	Complete	2	0.6		BTF
326	SDI-12373H	CU	1	1	1m-x-1m	0	18	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	2	0.1		Bird
327	SDI-12373H	CU	1	1	1m-x-1m	0	18	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	1	0		Reptile
328	SDI-12373H	CU	2	7	Other	0	40	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	3	0.7		Rodentia
329	SDI-12373H	CU	2	7	Other	0	40	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	1	0.3		Suuridae, scapula
330	SDI-12373H	CU	2	7	Other	0	40	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	1	0.2		Snake, vertebra
331	SDI-12373H	STP	2	3	.5m-x-.25m	0	20	Debitage	Shatter	Volcanic	Fragment	2	2.5		Coarse grain
332	SDI-21916	STP	7	3	.5m-x-.25m	0	20	Debitage	Shatter	Volcanic	Fragment	1	1.7		Coarse grain
333	SDI-21916	STP	7	3	.5m-x-.25m	20	40	Debitage	Shatter	Volcanic	Fragment	2	0.2		Coarse grain
334	SDI-21916	STP	6	3	.5m-x-.25m	0	20	Debitage	Interior	Volcanic	Complete	1	5		Coarse grain
335	SDI-21916	STP	5	3	.5m-x-.25m	0	20	Debitage	Interior	Chert	Complete	1	0.1		brown chert
336	SDI-21916	STP	5	3	.5m-x-.25m	0	20	Debitage	Interior	Quartz	Almost Complete	1	0.1		
337	SDI-21916	STP	5	3	.5m-x-.25m	0	20	Vertebrate Remains	Bulk Bone	Bone - Unspeciated	Fragment	2	0		indeterminate
338	SDI-21916	STP	5	3	.5m-x-.25m	0	20	Historic Artifact	Misc. Metal - Historic	Metal	Fragment	1	2.9		cut nail
339	SDI-12373H	CU	2	7	Other	0	40	Debitage	Interior	Chert	Complete	8	1.3		

CAT	SITE	RTYPE	UNO	ID	UNIT SIZE	TOPLEV	BOTLEV	CLASS	OBJECT	MATERIAL	Condition	CT	WT	DISCARDED?	COMMENTS
340	SDI-12373H	CU	2	7	Other	0	40	Retouched Flake	Other Edge-Modified Tool	Chert	Margin	1	0.7		
341	SDI-12373H	CU	2	7	Other	0	40	Debitage	Secondary	Volcanic	Complete	8	11.2		fine grain
342	SDI-12373H	CU	2	7	Other	0	40	Debitage	Shatter	Volcanic	Fragment	33	15.9		fine grain
343	SDI-12373H	CU	2	7	Other	0	40	Debitage	Interior	Volcanic	Complete	48	52.3		fine grain
344	SDI-12373H	CU	2	7	Other	0	40	Debitage	Primary	Basalt	Fragment	1	0.4		
345	SDI-12373H	CU	2	7	Other	0	40	Debitage	Interior	Basalt	Complete	11	4		
346	SDI-12373H	CU	2	7	Other	0	40	Debitage	Primary	Volcanic	Fragment	1	1.3		coarse grain
347	SDI-12373H	CU	2	7	Other	0	40	Debitage	Interior	Volcanic	Fragment	42	123.9		coarse grain
348	SDI-12373H	CU	2	7	Other	0	40	Debitage	Secondary	Basalt	Fragment	3	8.8		
349	SDI-12373H	STP	4	3	.5m-x-.25m	0	8	Retouched Flake	Other Edge-Modified Tool	Volcanic	Complete	1	8		

CAT	Site	RTYPE	UNO	TOPLEV	BOTLEV	MAT	COND	WT	ML	MW	MTH	STG	ARR	E1-SPA	E2-SPA	SHP	SZE	FRM	USE	Notes
162	SDI-11399	CSC	2	0	0	volcanic	6	1	21.56	15.55	4.41	Late	3	25	25	1	3	3	5,7,2	too small to identify in detail. Could be could be basal end; not symetrical angles on sides for distal tip. Hinge fracture just below tip. (use numbers correspond to Flake tool WEAR)
250	SDI-12333	surface	A1	0	0	volcanic	14	17.8	46.9	30.58	9.28	mid								

STG	ARR	E#	SPA	SHP		SZE		FRM		USE	
Stage	Arrises	Edge #	Spline Plane Angle	Shape		Size		Form		Use Wear	
#	#		# in degrees	1	Concave	1	Arrow	1	Nodule	1	Unifacial Microflaking
				2	Straight	2	Dart	2	Flake	2	Bifacial Microflaking
				3	Convex	3	Tool Blank	3	Indeterminate	3	Edge-rounding
				4	Perimeter	4	Indeterminate			4	Unifacially Flaked
										5	Bifacially Flaked
										6	Polish
										7	Step Fracturing
										8	Battering
										9	Indeterminate
										0	None

CAT	SITE	RTYPE	UNO	TOP LEV	BOT LEV	CLASS	OBJECT	MAT	COND	WT	ML	MW	MTH	FORM	CORE TYPE	# Plats	PLAT #	P-# CONF*	P-# TYPE*	P-# FLK LTH*	PLAT #	P-# CONF*	P-# TYPE*	P-# FLK LTH*	PLAT #	P-# CONF*	P-# TYPE*	P-# FLK LTH*	COMMENT
122	SDI-11392	surface	A2	0	0	2	5	volcanic	4	305.5	85.68	60.87	55.65	1	3	3	1	1	2	36.16	2	1	2	40.4	3	1	2	7.75	one face repatinated - this surface has 3 very small flake scars on the edge that may be intentional, but are presumed natural. If intentional, then it would be a planar edge for scraping; E3 is onle 2 or 3 minor scarstake off of repatinated surface
105	SDI-11399	surface	A5	0	0	2	9	volcanic	4	372.8	113.45	81.96	39.92	1	1	1	1	1	2	30.9									Core turned scraper/hammerstone. Scraper edge: concave irregular, step fracture, unifacial flaking; scraping edge could have ben used as chopper as well; Hammerstone - battering on proximal end where ~3 primary flakes were removed.
30	SDI-12332	surface	A6	0	0	2	6	volcanic	4	169	134.29	112.12	92.25	1	3	2	1	1	1	70.07	2	1	1	59.48					P1: last flakes step terminate short of longest flake and removed part of plat - measurement is approx.; P2: battering on edge from use as hammerstone; cobble shows evidence of many other flake removes from at least 3 other platforms, but those platforms have been destroyed
107	SDI-12332	surface	A7	0	0	2	5	volcanic	4	890	117.05	88.57	75.08	1	1	1	1	1	2	85.11									all cortex removed; low qualirty rock with numerous inclusions
29	SDI-12332	surface	A5	0	0	2	9	volcanic	4	45.8	60.49	44.32	19.63	6	4	2	1	4	4	41.86	2	1	1	13.16					small cobble withadditional (older) palts possibly destroyerd by subsequent flakes; P1: bifacial flaking, bifacial microflaking from cutting; E2 - 2-3 small flake scars on dorsal surface; proximal end battered, liely from attempted flake removal
49	SDI-12329	surface	A1	0	0	2	6	volcanic	4	195.3	82.2	59.06	43.42	1	3	1	1	3	2	40.54									additional paltforms have likely been destroyed; P1 forms decent chopping edge, but no evidnce of use as such
32	SDI-19332	surface	A8	0	0	2	6	volcanic	4	39.4	45	32.45	18.98	9	3	3	1	2	2	42.49	2	2	2	30.32	3	1	2	15.1	exhausted core; may have been used as hammerstone after exhaustion
71	SDI-12320	surface	A2	0	0	2	5	volcanic	5	32	54.37	22.97	23.59	9	9	IND													Core fragment, likely multiplatform, or one unidirectional perimeter platform; distal end fragment with tiny bit of cortex; battering on distal end - likely prior to fatal break
70	SDI-12320	surface	A1	0	0	2	9	volcanic	4	1130		104.55	73.14	1	4	1	1	4	2	73.97									Core-tool = chopper, although no battering/stepfracturing/crushing on edge. May simply be core with bifacial flaking off the one platform
130	SDI-6695B	surface	A3	0	0	2	6	quartzite	4	720	97.3	93.62	70.43	1	3	2	1	3	2	96.85	2	3	2	66.44					P1: full perimeter of cobble, with 1+ flake removed from ventral surface ; P2: 3 flake scars
25	SDI-12332	surface	A1	0	0	2	6	volcanic	4	3320	170	130.06	132.75	1	3	4	1	3	2	110.76	2	1	2	48.85	3	1	2	95.33	P4: unid., interior, 1+ flake scar, 69.00; additional platforms likely, but not discernable;

CAT	SITE	RTYPE	UNO	TOP LEV	BOT LEV	CLASS	OBJECT	MAT	COND	WT	ML	MW	MTH	FORM	CORE TYPE	# Plats	PLAT #	P-# CONF*	P-# TYPE*	P-# FLK LTH*	PLAT #	P-# CONF*	P-# TYPE*	P-# FLK LTH*	PLAT #	P-# CONF*	P-# TYPE*	P-# FLK LTH*	COMMENT
230	SDI-12378	2	Art. C	0	0	2	10	volcanic	4	536.1	110.21	79.17	56.42	1	2	2	1	1	2	49.36	2	2	2	27.75					barely a tested cobble; 4+ step fractures on Plat 2 give indiaction of testing; other flake scars, including the only flake scar off Plat 1, could be natural. Multiple probable natural scars alos present
216	SDI-12379	2	A1	0	0	2	6	volcanic	1	990	130.86	114.29	50.04	1	2	2	1	2	1	38.74	2	1	1	40.18					Tabular cobble; Plat 2: one refit secondary flake recovered wit the core.
229	SDI-12377	2	A2	0	0	2	10	quartzite	4	316.5	77.11	68.89	54.25	1	1	2	1	1	2	20.75	2	1	2	12.75					both plats on same face of cobble; low-quality cobble; 2 flakes on one plat, 3 on other; unlikely useful flakes removed
192	SDI-12379	2	A2	0	0	2	10	volcanic	4	1130	147.46	118.46	74.5	1	1	1	1	4	2	33.09									6-8 small flakes removed fom Plat 1; all are wider than long decort flakes; most end in step fractures; no useable flakes removed; 2 other possible Plats present on opposite side; one possible flake off each, but not possible to confirm as anthropogenic
191	SDI-12377	2	Conc 1	0	0	2	6	Chert	7	36.3	52.47	37.94	29.74	4	3	3	1	2	2	20.46	2	2	2	24.9	3	2	2	32.15	odd, bulbus cobble/fragment of a larger core/unknown origin. 2-4 small flakes off each platform
323	SDI-12373H	4	2	0	40	2	5	volcanic	4	198.5	85.7	79.98	33.57	2	1	1	1	1	2	23.32									larger flake taken at earlier stage wold have been at least 43mm, but subsequent flakes make measurement impossible; edge may have been used minimally for scraping

FORM	Core TYPE	# PLATS	P-# CONF*	P-# TYPE*	P-# FLK LTH*	COMMENT
		Actual number of Platforms	**Platform Configuration**	**Platform type**	**Platform Flake Length**	
1 Cobble	1 Unidirectional	1-#	1 Unidirectional	1 Cortex / Exterior	Length of longest flake taken from platform	
2 Split Cobble	2 Bidirectional		2 Bidirectional	2 Interior		
3 Flake	3 Multidirection		3 Multidirectional	3 Dorsal		
4 Chunk	4 Bifacial		4 Bifacial	4 Ventral		
9 Indeterminate	5 Bipolar		5 Bipolar	9 Indeterminate		
	6 Assayed cobble		9 Indeterminate			
	9 Indeterminate					

*Analyse for each platform

CATNO	CT.	Wt.	Material	Ct	Type	Size
2	1	18.6	ccs	1	12	4
3	1	4	quartzite	1	4	3
4	3	12.3	chalcedony	2	10	3
4	3	12.3	chalcedony	1	10	2
5	1	0.6	chalcedony	1	4	3
6	13	18.1	chert	2	3	4
6	13	18.1	chert	2	4	3
6	13	18.1	chert	1	5	3
6	13	18.1	chert	3	4	2
6	13	18.1	chert	2	6	2
6	13	18.1	chert	3	7	2
7	2	12.1	chert	1	10	3
7	2	12.1	chert	1	12	6
8	2	24.6	volcanic	1	2	6
8	2	24.6	volcanic	1	2	5
9	27	165.8	volcanic	4	3	6
9	27	165.8	volcanic	5	3	5
9	27	165.8	volcanic	3	3	4
9	27	165.8	volcanic	3	12	4
9	27	165.8	volcanic	1	5	4
9	27	165.8	volcanic	8	4	3
9	27	165.8	volcanic	1	4	2
9	27	165.8	volcanic	2	6	2
10	6	182.5	volcanic	1	10	7
10	6	182.5	volcanic	1	12	6
10	6	182.5	volcanic	1	10	5
10	6	182.5	volcanic	1	12	5
10	6	182.5	volcanic	2	10	4
15	1	0.3	chert	1	4	2
16	1	1.5	chert	1	4	3
17	2	10.6	volcanic	2	3	4
18	7	112.5	volcanic	1	2	8
18	7	112.5	volcanic	1	2	6
18	7	112.5	volcanic	2	2	5
18	7	112.5	volcanic	3	2	4
19	16	111.6	volcanic	1	10	6
19	16	111.6	volcanic	1	10	4
19	16	111.6	volcanic	2	3	6
19	16	111.6	volcanic	3	3	5
19	16	111.6	volcanic	3	3	4
19	16	111.6	volcanic	5	4	3
19	16	111.6	volcanic	1	4	2
20	4	100.5	volcanic	2	12	6
20	4	100.5	volcanic	2	12	4
21	1	9	chert	1	3	4
21	1	9	chert	1	3	5
22	1	47.1	chert	1	2	7
23	2	3.7	chert	1	3	4
23	2	3.7	chert	1	4	3
24	1	12.3	chert	1	10	4
26	1	18.4	volcanic	1	3	5
27	1	4.5	ccs	1	3	4
33	1	2.8	volcanic	1	3	4
34	2	10.4	volcanic	1	3	4

CATNO	CT.	Wt.	Material	Ct	Type	Size
34	2	10.4	volcanic	1	6	2
36	1	29.9	volcanic	1	1	5
37	2	11	volcanic	1	3	5
37	2	11	volcanic	1	4	3
38	3	12.6	volcanic	1	3	5
38	3	12.6	volcanic	1	3	4
38	3	12.6	volcanic	1	4	3
39	2	45.8	volcanic	1	2	7
39	2	45.8	volcanic	1	2	6
42	1	50.5	volcanic	1	1	8
43	1	16.7	volcanic	1	2	6
44	1	78.7	volcanic	1	10	6
45	6	174.2	volcanic	1	3	9
45	6	174.2	volcanic	1	3	7
45	6	174.2	volcanic	1	3	4
45	6	174.2	volcanic	1	4	3
45	6	174.2	volcanic	2	12	3
46	1	44.4	volcanic	1	2	7
50	5	127.5	volcanic	2	10	6
50	5	127.5	volcanic	1	10	5
50	5	127.5	volcanic	2	12	4
51	3	90.3	chalcedony	2	10	5
51	3	90.3	chalcedony	1	10	6
52	1	31.2	volcanic	1	2	7
53	3	24.9	volcanic	2	3	5
53	3	24.9	volcanic	1	3	4
54	1	24.9	volcanic	1	10	4
56	1	171	volcanic	1	2	10
57	1	9.8	volcanic	1	2	7
58	5	15	volcanic	2	3	5
58	5	15	volcanic	1	12	4
58	5	15	volcanic	2	4	2
59	1	11.7	volcanic	1	2	5
60	1	142	volcanic	1	3	10
61	2	6.9	volcanic	1	2	5
61	2	6.9	volcanic	1	2	4
62	1	15	volcanic	1	3	5
63	1	15.2	css	1	3	6
64	2	46.1	volcanic	1	3	6
64	2	46.1	volcanic	1	3	5
65	4	19.1	volcanic	3	3	4
65	4	19.1	volcanic	1	4	3
66	1	21.1	metavolcanic	1	2	6
67	1	3.5	ccs	1	2	3
68	3	77.7	volcanic	2	2	7
68	3	77.7	volcanic	1	3	4
69	3	18.6	volcanic	1	3	5
69	3	18.6	volcanic	1	3	4
69	3	18.6	volcanic	1	4	3
72	6	237	volcanic	2	12	7
72	6	237	volcanic	1	12	6
72	6	237	volcanic	1	12	4
72	6	237	volcanic	2	12	3
73	1	150.7	volcanic	1	1	11

CATNO	CT.	Wt.	Material	Ct	Type	Size
74	5	136.4	volcanic	1	2	7
74	5	136.4	volcanic	2	2	6
74	5	136.4	volcanic	2	2	5
75	21	282	volcanic	1	12	6
75	21	282	volcanic	1	12	3
75	21	282	volcanic	3	3	6
75	21	282	volcanic	8	3	5
75	21	282	volcanic	6	3	4
75	21	282	volcanic	1	4	3
75	21	282	volcanic	1	4	2
76	6	126.9	volcanic	1	10	7
76	6	126.9	volcanic	1	10	5
76	6	126.9	volcanic	2	12	4
76	6	126.9	volcanic	1	12	3
76	6	126.9	volcanic	1	10	2
77	3	19	chert	2	3	4
77	3	19	chert	1	1	3
78	2	72.5	volcanic	1	3	8
78	2	72.5	volcanic	1	6	4
79	1	11	volcanic	1	2	6
80	1	24.1	volcanic	1	1	6
82	1	103.4	volcanic	1	10	8
83	13	979.4	volcanic	1	2	15
83	13	979.4	volcanic	1	2	9
83	13	979.4	volcanic	1	2	8
83	13	979.4	volcanic	3	2	7
83	13	979.4	volcanic	2	2	5
83	13	979.4	volcanic	2	2	4
83	13	979.4	volcanic	2	2	3
83	13	979.4	volcanic	1	2	2
84	62	516	volcanic	2	2	6
84	62	516	volcanic	2	3	7
84	62	516	volcanic	1	3	6
84	62	516	volcanic	9	3	5
84	62	516	volcanic	10	3	4
84	62	516	volcanic	12	4	3
84	62	516	volcanic	1	4	2
84	62	516	volcanic	1	11	6
84	62	516	volcanic	1	11	7
84	62	516	volcanic	1	12	5
84	62	516	volcanic	3	12	2
84	62	516	volcanic	12	12	3
84	62	516	volcanic	7	12	4
85	3	98.5	volcanic	1	10	6
85	3	98.5	volcanic	1	10	5
85	3	98.5	volcanic	1	10	4
86	2	1.7	chert	2	2	2
89	2	6.5	volcanic	1	3	4
89	2	6.5	volcanic	1	4	3
90	17	112.7	volcanic	1	3	6
90	17	112.7	volcanic	3	3	5
90	17	112.7	volcanic	6	3	4
90	17	112.7	volcanic	5	4	3
90	17	112.7	volcanic	1	4	2

CATNO	CT.	Wt.	Material	Ct	Type	Size
90	17	112.7	volcanic	1	6	2
92	1	70.8	volcanic	1	12	6
94	2	51.3	volcanic	1	2	7
94	2	51.3	volcanic	1	2	6
95	19	76.4	volcanic	1	3	6
95	19	76.4	volcanic	1	3	5
95	19	76.4	volcanic	4	3	4
95	19	76.4	volcanic	4	4	3
95	19	76.4	volcanic	4	4	2
95	19	76.4	volcanic	1	12	4
95	19	76.4	volcanic	1	12	3
95	19	76.4	volcanic	2	12	2
95	19	76.4	volcanic	1	4	2
96	5	26.6	quartzite	3	3	4
96	5	26.6	quartzite	2	4	3
97	1	8.3	chert	1	2	4
98	8	34.6	volcanic	1	3	5
98	8	34.6	volcanic	1	4	3
98	8	34.6	volcanic	2	12	2
98	8	34.6	volcanic	3	12	1
98	8	34.6	volcanic	1	6	1
99	4	32.3	chert	1	3	6
99	4	32.3	chert	2	3	4
99	4	32.3	chert	1	4	2
100	9	16.2	chert	1	3	5
100	9	16.2	chert	1	3	4
100	9	16.2	chert	1	4	3
100	9	16.2	chert	2	4	2
100	9	16.2	chert	2	6	2
100	9	16.2	chert	2	8	1
108	1	4.4	volcanic	1	2	3
109	1	8.3	volcanic	1	3	4
110	5	136.4	volcanic	2	2	7
110	5	136.4	volcanic	1	2	6
110	5	136.4	volcanic	2	2	4
111	23	219.1	volcanic	1	3	7
111	23	219.1	volcanic	3	3	6
111	23	219.1	volcanic	6	3	5
111	23	219.1	volcanic	4	3	4
111	23	219.1	volcanic	4	4	3
111	23	219.1	volcanic	3	4	2
111	23	219.1	volcanic	1	5	4
111	23	219.1	volcanic	1	5	3
113	2	352.2	volcanic	1	1	13
113	2	352.2	volcanic	1	1	6
114	12	217.3	volcanic	2	2	7
114	12	217.3	volcanic	1	2	6
114	12	217.3	volcanic	3	2	5
114	12	217.3	volcanic	2	2	4
114	12	217.3	volcanic	3	2	3
114	12	217.3	volcanic	1	10	6
115	14	118.7	volcanic	1	3	6
115	14	118.7	volcanic	3	3	5
115	14	118.7	volcanic	6	3	4

CATNO	CT.	Wt.	Material	Ct	Type	Size
115	14	118.7	volcanic	4	4	3
116	8	445.2	volcanic	1	12	4
116	8	445.2	volcanic	2	12	3
116	8	445.2	volcanic	1	10	10
116	8	445.2	volcanic	2	10	7
116	8	445.2	volcanic	1	10	6
116	8	445.2	volcanic	1	10	4
118	1	86.9	volcanic	1	2	8
119	35	74.1	volcanic	1	2	5
119	35	74.1	volcanic	1	4	3
119	35	74.1	volcanic	1	3	4
119	35	74.1	volcanic	5	4	2
119	35	74.1	volcanic	5	3	3
119	35	74.1	volcanic	2	12	1
119	35	74.1	volcanic	12	12	2
119	35	74.1	volcanic	7	12	3
119	35	74.1	volcanic	1	12	4
120	3	116.6	volcanic	1	10	6
120	3	116.6	volcanic	1	12	6
120	3	116.6	volcanic	1	12	5
124	8	144.2	volcanic	3	2	6
124	8	144.2	volcanic	2	2	5
124	8	144.2	volcanic	3	2	4
125	62	417.3	volcanic	6	3	6
125	62	417.3	volcanic	10	3	5
125	62	417.3	volcanic	2	5	5
125	62	417.3	volcanic	20	3	4
125	62	417.3	volcanic	14	4	3
125	62	417.3	volcanic	2	12	2
125	62	417.3	volcanic	6	4	2
125	62	417.3	volcanic	1	6	2
125	62	417.3	volcanic	1	8	1
126	5	105.4	volcanic	2	10	4
126	5	105.4	volcanic	1	12	5
126	5	105.4	volcanic	1	12	6
126	5	105.4	volcanic	1	12	7
127	2	78.6	quartzite	1	12	6
127	2	78.6	quartzite	1	12	5
128	3	80.4	quartzite	1	3	8
128	3	80.4	quartzite	2	3	4
129	1	2.9	chert	1	4	3
131	1	17.6	volcanic	1	3	6
132	2	7.7	quartzite	1	2	4
132	2	7.7	quartzite	1	2	3
133	10	29.7	quartzite	1	5	5
133	10	29.7	quartzite	1	5	4
133	10	29.7	quartzite	1	5	3
133	10	29.7	quartzite	2	12	3
133	10	29.7	quartzite	3	4	3
133	10	29.7	quartzite	2	4	2
134	2	3.8	volcanic	2	4	3
135	4	72.3	volcanic	1	2	6
135	4	72.3	volcanic	2	2	5
135	4	72.3	volcanic	1	2	2

CATNO	CT.	Wt.	Material	Ct	Type	Size
136	3	31.3	volcanic	1	3	6
136	3	31.3	volcanic	2	4	3
137	1	18.8	quartzite	1	2	6
138	6	96.9	quartzite	1	3	8
138	6	96.9	quartzite	2	3	5
138	6	96.9	quartzite	2	3	4
138	6	96.9	quartzite	1	4	3
140	2	12.3	volcanic	1	3	4
140	2	12.3	volcanic	1	4	3
141	2	68.7	quartzite	1	2	6
141	2	68.7	quartzite	1	2	5
142	22	275.9	quartzite	1	5	7
142	22	275.9	quartzite	1	5	4
142	22	275.9	quartzite	1	3	10
142	22	275.9	quartzite	1	3	7
142	22	275.9	quartzite	5	3	6
142	22	275.9	quartzite	4	3	5
142	22	275.9	quartzite	4	3	4
142	22	275.9	quartzite	2	4	3
142	22	275.9	quartzite	2	6	3
142	22	275.9	quartzite	1	12	2
143	4	130.3	quartzite	1	12	5
143	4	130.3	quartzite	1	10	6
143	4	130.3	quartzite	1	10	4
143	4	130.3	quartzite	1	10	6
144	1	24.9	volcanic	1	12	7
145	1	59.5	quartzite	1	1	7
146	3	94.1	quartzite	1	2	8
146	3	94.1	quartzite	1	2	6
146	3	94.1	quartzite	1	2	5
147	12	73.8	quartzite	2	3	5
147	12	73.8	quartzite	2	3	4
147	12	73.8	quartzite	5	4	3
147	12	73.8	quartzite	2	4	2
147	12	73.8	quartzite	1	5	6
148	2	32.1	quartzite	1	3	6
148	2	32.1	quartzite	1	3	4
150	1	68.3	volcanic	1	1	7
151	5	90.5	volcanic	2	2	7
151	5	90.5	volcanic	1	12	6
151	5	90.5	volcanic	1	3	4
151	5	90.5	volcanic	1	4	3
152	15	217.9	volcanic	1	3	10
152	15	217.9	volcanic	1	3	7
152	15	217.9	volcanic	1	3	6
152	15	217.9	volcanic	2	3	5
152	15	217.9	volcanic	2	3	4
152	15	217.9	volcanic	1	5	4
152	15	217.9	volcanic	6	4	3
152	15	217.9	volcanic	1	4	2
153	10	209	quartzite	1	2	7
153	10	209	quartzite	1	2	6
153	10	209	quartzite	5	2	5
153	10	209	quartzite	2	2	4

CATNO	CT.	Wt.	Material	Ct	Type	Size
153	10	209	quartzite	1	10	7
154	60	493	quartzite	1	3	8
154	60	493	quartzite	1	3	7
154	60	493	quartzite	7	3	6
154	60	493	quartzite	7	3	5
154	60	493	quartzite	12	3	4
154	60	493	quartzite	14	4	3
154	60	493	quartzite	5	12	3
154	60	493	quartzite	2	12	5
154	60	493	quartzite	9	4	2
154	60	493	quartzite	2	12	1
155	4	312.7	quartzite	1	12	9
155	4	312.7	quartzite	1	12	8
155	4	312.7	quartzite	1	12	7
155	4	312.7	quartzite	1	12	5
156	2	45.6	volcanic	1	2	8
156	2	45.6	volcanic	1	2	4
157	18	127.2	volcanic	1	3	6
157	18	127.2	volcanic	5	3	5
157	18	127.2	volcanic	5	3	4
157	18	127.2	volcanic	6	4	3
157	18	127.2	volcanic	1	4	2
158	1	20.5	quartzite	1	2	7
159	1	57.1	quartzite	1	3	7
161	2	3.4	volcanic	2	2	3
163	2	2.3	volcanic	1	4	3
163	2	2.3	volcanic	1	4	2
164	1	25.4	quartzite	1	3	7
165	2	136	volcanic	1	2	9
165	2	136	volcanic	1	2	6
166	1	6.5	volcanic	1	3	4
170	1	5.5	Volcanic	1	2	4
171	1	0.7	Volcanic	1	13	3
172	1	28	Volcanic	1	3	7
173	1	1.4	Volcanic	1	12	3
174	2	41.2	Volcanic	1	3	8
174	2	41.2	Volcanic	1	3	4
175	1	30.8	Volcanic	1	13	6
176	5	11.6	Volcanic	1	13	2
176	5	11.6	Volcanic	3	13	3
176	5	11.6	Volcanic	1	13	4
177	5	3.8	Volcanic	3	3	2
177	5	3.8	Volcanic	2	4	2
178	2	15	Volcanic	1	2	5
178	2	15	Volcanic	1	2	3
179	1	33.3	Quartzite	1	2	7
180	3	14.5	Volcanic	1	3	3
180	3	14.5	Volcanic	2	3	4
182	17	229.1	Volcanic	3	4	3
182	17	229.1	Volcanic	3	3	4
182	17	229.1	Volcanic	5	3	5
182	17	229.1	Volcanic	3	3	6
182	17	229.1	Volcanic	2	3	7
182	17	229.1	Volcanic	1	3	8

CATNO	CT.	Wt.	Material	Ct	Type	Size
183	3	54.2	Volcanic	1	2	5
183	3	54.2	Volcanic	1	2	8
183	3	54.2	Volcanic	1	2	7
184	6	42.4	Volcanic	4	13	4
184	6	42.4	Volcanic	1	13	5
184	6	42.4	Volcanic	1	13	6
185	1	1.3	Chert	1	2	3
186	2	21.1	Chert	1	1	3
186	2	21.1	Chert	1	1	5
188	24	153.8	Chert	1	10	2
188	24	153.8	Chert	1	10	6
188	24	153.8	Chert	2	10	3
188	24	153.8	Chert	3	13	5
188	24	153.8	Chert	4	13	4
188	24	153.8	Chert	4	13	3
188	24	153.8	Chert	8	13	2
188	24	153.8	Chert	1	13	1
189	11	27.5	Chert	1	8	2
189	11	27.5	Chert	3	3	4
189	11	27.5	Chert	2	4	3
189	11	27.5	Chert	5	4	2
190	1	11.9	Quartzite	1	13	4
195	73	835.2	Volcanic	1	10	7
195	73	835.2	Volcanic	2	10	6
195	73	835.2	Volcanic	2	10	4
195	73	835.2	Volcanic	1	10	2
195	73	835.2	Volcanic	5	12	2
195	73	835.2	Volcanic	10	12	3
195	73	835.2	Volcanic	22	12	4
195	73	835.2	Volcanic	18	12	5
195	73	835.2	Volcanic	8	12	6
195	73	835.2	Volcanic	4	12	7
196	3	92.4	Volcanic	1	2	7
196	3	92.4	Volcanic	2	2	6
197	21	540.2	Volcanic	1	3	11
197	21	540.2	Volcanic	1	3	9
197	21	540.2	Volcanic	4	3	7
197	21	540.2	Volcanic	3	3	6
197	21	540.2	Volcanic	4	3	5
197	21	540.2	Volcanic	7	3	4
197	21	540.2	Volcanic	1	4	3
199	1	11.4	Volcanic	1	3	4
201	2	194.7	Volcanic	2	2	8
204	1	5.2	Volcanic	1	2	4
205	1	25.4	Volcanic	1	13	5
207	3	50.8	Volcanic	1	12	4
207	3	50.8	Volcanic	1	12	6
207	3	50.8	Volcanic	1	12	7
208	2	82.7	Volcanic	1	2	5
208	2	82.7	Volcanic	1	2	8
209	62	776	Volcanic	4	13	2
209	62	776	Volcanic	1	10	3
209	62	776	Volcanic	2	10	5
209	62	776	Volcanic	2	10	7

CATNO	CT.	Wt.	Material	Ct	Type	Size
209	62	776	Volcanic	1	10	8
209	62	776	Volcanic	2	12	2
209	62	776	Volcanic	5	12	3
209	62	776	Volcanic	18	12	4
209	62	776	Volcanic	12	12	5
209	62	776	Volcanic	8	12	6
209	62	776	Volcanic	4	12	7
209	62	776	Volcanic	2	12	8
209	62	776	Volcanic	1	12	9
211	1	8.6	CCS	1	10	3
212	1	14.6	Volcanic	1	1	4
213	3	43	Volcanic	1	3	3
213	3	43	Volcanic	1	3	9
213	3	43	Volcanic	1	4	3
217	5	119.3	Volcanic	2	2	6
217	5	119.3	Volcanic	1	2	3
217	5	119.3	Volcanic	2	2	7
218	6	57	Volcanic	1	4	3
218	6	57	Volcanic	2	3	4
218	6	57	Volcanic	2	3	6
218	6	57	Volcanic	1	4	7
219	4	47.6	Volcanic	1	10	5
219	4	47.6	Volcanic	1	13	4
219	4	47.6	Volcanic	1	13	5
219	4	47.6	Volcanic	1	13	6
220	12	155	Chert	1	10	7
220	12	155	Chert	1	10	5
220	12	155	Chert	1	13	6
220	12	155	Chert	2	13	4
220	12	155	Chert	6	13	3
220	12	155	Chert	1	13	1
221	3	16	Volcanic	1	13	2
221	3	16	Volcanic	1	13	3
221	3	16	Volcanic	1	13	5
222	1	1.8	Volcanic	1	13	3
223	3	9.4	Chert	1	3	3
223	3	9.4	Chert	1	4	2
223	3	9.4	Chert	1	3	4
224	1	8.6	Quartzite	1	3	4
225	2	3.1	Volcanic	1	4	3
225	2	3.1	Volcanic	1	4	2
227	1	59.4	Quartzite	1	13	8
237	4	2.6	Chert	2	4	3
237	4	2.6	Chert	2	4	2
238	2	6.5	Chert	1	2	2
238	2	6.5	Chert	1	2	4
239	1	1.6	Chert	1	12	3
241	1	2.3	Chert	1	2	3
243	2	7.8	Volcanic	1	2	3
243	2	7.8	Volcanic	1	2	4
244	1	5.3	Volcanic	1	1	5
246	3	60.1	Volcanic	1	3	5
246	3	60.1	Volcanic	2	3	6
248	1	145.6	Volcanic	1	3	11

CATNO	CT.	Wt.	Material	Ct	Type	Size
249	2	2	Chert	2	4	3
266	2	13.1	Volcanic	2	4	4
269	1	34.7	Chert	1	3	6
271	2	60.8	Volcanic	1	2	5
271	2	60.8	Volcanic	1	2	7
272	1	98.1	Volcanic	1	1	8
273	2	37.1	Volcanic	1	1	5
273	2	37.1	Volcanic	1	1	6
274	5	46	Chert	1	2	3
274	5	46	Chert	2	2	4
274	5	46	Chert	2	2	5
306	1	0.7	Volcanic	1	1	2
304	6	63.7	Volcanic	1	2	6
304	6	63.7	Volcanic	2	2	5
304	6	63.7	Volcanic	2	2	4
304	6	63.7	Volcanic	1	2	3
302	26	25	Volcanic	6	12	1
302	26	25	Volcanic	11	12	2
302	26	25	Volcanic	3	12	3
302	26	25	Volcanic	1	11	2
302	26	25	Volcanic	4	11	3
302	26	25	Volcanic	1	11	4
305	60	28.2	Volcanic	1	10	1
305	60	28.2	Volcanic	1	11	4
305	60	28.2	Volcanic	6	11	2
305	60	28.2	Volcanic	14	12	1
305	60	28.2	Volcanic	35	12	2
305	60	28.2	Volcanic	3	12	3
303	16	32.3	Volcanic	1	3	5
303	16	32.3	Volcanic	2	3	4
303	16	32.3	Volcanic	5	4	3
303	16	32.3	Volcanic	4	4	2
303	16	32.3	Volcanic	3	4	1
303	16	32.3	Volcanic	1	7	1
301	24	8.2	Volcanic	1	3	4
301	24	8.2	Volcanic	1	4	3
301	24	8.2	Volcanic	1	4	1
301	24	8.2	Volcanic	12	4	2
301	24	8.2	Volcanic	1	8	2
301	24	8.2	Volcanic	8	8	1
325	2	0.6	Basalt	2	7	2
300	3	16.6	Volcanic	1	2	2
300	3	16.6	Volcanic	2	2	5
298	1	2.8	Volcanic	1	12	4
299	5	0.9	Chert	2	6	2
299	5	0.9	Chert	1	12	1
299	5	0.9	Chert	1	12	2
299	5	0.9	Chert	1	11	2
296	1	0	Chert	1	8	1
293	1	4	Volcanic	1	2	3
331	2	2.5	Volcanic	1	12	3
331	2	2.5	Volcanic	1	12	2
291	2	0.2	Volcanic	2	8	1
294	1	0.5	Volcanic	1	4	2

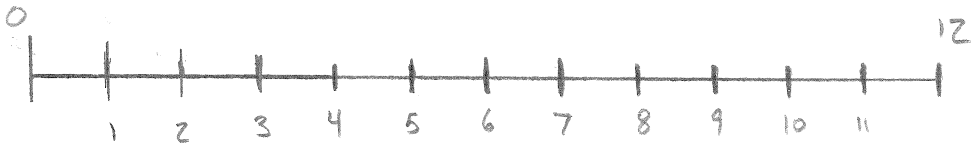
CATNO	CT.	Wt.	Material	Ct	Type	Size
290	5	5.1	Volcanic	1	3	4
290	5	5.1	Volcanic	1	4	2
290	5	5.1	Volcanic	2	4	2
290	5	5.1	Volcanic	1	4	3
285	1	1.9	Volcanic	1	2	3
292	1	2.5	Basalt	1	4	3
295	1	2.1	Volcanic	1	4	3
286	1	0.3	Volcanic	1	12	2
287	3	0.8	Basalt	1	4	3
287	3	0.8	Basalt	2	8	1
284	3	0.6	Chert	1	4	2
284	3	0.6	Chert	1	8	2
284	3	0.6	Chert	1	8	2
332	1	1.7	Volcanic	1	12	3
333	2	0.2	Volcanic	1	12	1
333	2	0.2	Volcanic	1	12	2
334	1	5	Volcanic	1	3	4
335	1	0.1	Chert	1	8	2
336	1	0.1	Quartz	1	4	2
317	5	1.2	Chert	1	12	1
317	5	1.2	Chert	4	12	2
339	8	1.3	Chert	5	8	1
339	8	1.3	Chert	1	8	2
339	8	1.3	Chert	1	6	2
339	8	1.3	Chert	1	4	2
316	1	0.5	Volcanic	1	1	3
341	8	11.2	Volcanic	2	2	2
341	8	11.2	Volcanic	4	2	3
341	8	11.2	Volcanic	2	2	4
342	33	15.9	Volcanic	1	10	2
342	33	15.9	Volcanic	1	10	4
342	33	15.9	Volcanic	2	11	2
342	33	15.9	Volcanic	1	12	3
342	33	15.9	Volcanic	1	12	4
342	33	15.9	Volcanic	21	12	2
342	33	15.9	Volcanic	6	12	1
343	48	52.3	Volcanic	1	3	6
343	48	52.3	Volcanic	3	3	4
343	48	52.3	Volcanic	4	4	3
343	48	52.3	Volcanic	7	4	2
343	48	52.3	Volcanic	1	4	1
343	48	52.3	Volcanic	3	6	2
343	48	52.3	Volcanic	2	7	3
343	48	52.3	Volcanic	8	7	2
343	48	52.3	Volcanic	1	7	1
343	48	52.3	Volcanic	10	8	1
343	48	52.3	Volcanic	8	8	2
344	1	0.4	Basalt	1	1	2
321	8	3.6	Basalt	5	12	2
321	8	3.6	Basalt	1	12	1
321	8	3.6	Basalt	2	12	3
345	11	4	Basalt	2	8	1
345	11	4	Basalt	1	8	2
345	11	4	Basalt	1	7	2

CATNO	CT.	Wt.	Material	Ct	Type	Size
345	11	4	Basalt	2	4	3
345	11	4	Basalt	4	4	2
345	11	4	Basalt	1	4	1
315	11	19	Volcanic	1	10	3
315	11	19	Volcanic	1	12	4
315	11	19	Volcanic	4	12	3
315	11	19	Volcanic	5	12	2
346	1	1.3	Volcanic	1	1	3
347	42	123.9	Volcanic	3	8	1
347	42	123.9	Volcanic	1	7	2
347	42	123.9	Volcanic	2	4	1
347	42	123.9	Volcanic	16	4	2
347	42	123.9	Volcanic	7	4	3
347	42	123.9	Volcanic	2	4	5
347	42	123.9	Volcanic	1	3	3
347	42	123.9	Volcanic	6	3	4
347	42	123.9	Volcanic	3	3	5
347	42	123.9	Volcanic	1	3	8
348	3	8.8	Basalt	1	2	4
348	3	8.8	Basalt	1	2	3
348	3	8.8	Basalt	1	2	2
280	1	0.8	Volcanic	1	1	2
281	1	0	Chert	1	12	1
279	4	4.9	Volcanic	2	2	3
279	4	4.9	Volcanic	1	2	3
279	4	4.9	Volcanic	1	2	2
282	6	11.3	Volcanic	1	12	4
282	6	11.3	Volcanic	3	12	3
282	6	11.3	Volcanic	2	2	2
277	18	15.9	Volcanic	1	3	4
277	18	15.9	Volcanic	3	3	3
277	18	15.9	Volcanic	1	4	2
277	18	15.9	Volcanic	3	4	3
277	18	15.9	Volcanic	1	4	3
277	18	15.9	Volcanic	4	8	1
277	18	15.9	Volcanic	1	8	2
277	18	15.9	Volcanic	1	6	2
277	18	15.9	Volcanic	1	7	2
277	18	15.9	Volcanic	2	7	3

Debitage Analysis Codes

1) **Early cortical:** percussion flake w/ 70+% cortex
2) **Late cortical:** percussion flake w/ <70% cortex
3) **Early interior:** Percussion flake, large size (>3 cm diameter) and thickness, straight cross-section, 1 dorsal arris
4) **Late interior:** Percussion flake, moderate to small size (1-3 cm diameter) and thickness, straight cross-section, more than one dorsal arris
5) **Linear interior:** Percussion flake, moderate size (2-3 cm diameter), straight in cross-section, twice as long as wide, with one lengthwise dorsal arris, with an interior platform
6) **Early biface thinning:** percussion flake curved in cross section w/ one or two dorsal arrises
7) **Late biface thinning:** percussion flake curved in cross section w/ more than two dorsal arrises, and often more intensively prepared platforms than the earlier thinning flakes
8) **Pressure:** any small flake (<1 cm in diameter) with a simple or complex dorsal surface, a small focal platform, and variable shape
9) **Bipolar:** small, straight-sided flakes deriving from small cobbles or nodules, with or without cortex, and possibly showing opposing platforms and percussion rings on same faces
10) **Cortical chunk:** a large, chunky or angular piece of stone with a cortical face
11) **Cortical fragment or shatter:** a piece of a broken cortical flake, cortical chunk, or cortical bipolar flake
12) **Percussion fragment or shatter:** a piece of broken interior flake, bifacial thinning flake, or non-cortical bipolar flake that is too small to identify as any type
13) **Indeterminate:** any flake that cannot be assigned to one of the above types due to weathering or other hinderance

Size



CAT	SITE	RTYPE	UNO	TOP LEV	BOT LEV	CLASS	OBJECT	MAT	COND	WT	ML	MW	MTH	FORM	FLK TYPE	E FREQ	E-1 FORM	E-1 SHP	E-1 MOD	E-1 ANG	E-1 WEAR	E-2 FORM	E-2 SHP	E-2 MOD	E-2 WEAR	E-2 ANG	E-3 FORM	E-3 SHP	E-3 MOD	E-3 WEAR	COMMENT
11	PV-01	surface	A01			4	12	Volcanic	4	24.7	39.37	31.47	19.6	1	2	1	2	1	A	65	1,4,7									typical thumb nail scraper - distal end is retouched; probably basalt, fine grained; flaking and microflaking on left edge, but continuous with end; photo needed
160	SDI-11399	surface				4	15	Volcanic	4	12.9	39.94	38	11.15	1	9	1	1	3	B	55	1,4,7									was probably secondary flake, but no bulb visible; distal edge retouched; proximal end is pointed - may have been used/retouched but damage obscures edge
1	P-37-026524	surface				4	25	basalt	14	5.4	37.53	22.55	7.42	1	3	1	2	3	A	25	1,1									left edge; retouch and microflaking up to broken edge - break occurred post-use as RTF
28	SDI-12332	surface	A4			4	12	Volcanic	4	32.4	61.5	29.61	18.4	1	3	2	3	3	A	65	2,5,7	2	2	A	1,4,7	40					E2: 1 microflake on ventral side; probale cutting/slicing ede; E1: distal edge fo flake; probably thumb nail type scraper
48	SDI-12317	surface				4	12	Volcanic	4	54.5	64.44	41.9	14.63	3	9	1	2	3	B	80	1,4									Edge forms notch between 2 burin-like point; one of the points may be intentional, other looks unintentional; flake is non-cortical shattter
47	SDI-12317	surface				4	15	Volcanic	7	13.7	54.55	18.39	17.16	3	9	2	2	2	A	60	2,4,7	2	3	A	4	60					probable flake fragment; E1 and E2 intersect to form a point - probably intended as burin-like tip utilizing natural brak to help form tip; E1 proably used as scraper prior to braking, then E2 flekd (two flakes removed) to form tip
93	SDI-11399	Conc.	1			4	15	Volcanic	5	11.3	45.44	25.02	12.41	1	9	2	2	2	A	55	1,4	2	2	A	1,4	60					edges adjacent, could be considered one ede, but movement for use is in different direction for scraping; both are thimb nail like scraping edges
167	SDI-12377	surface	A1			4	15	Volcanic	4	512.3	151.18	130.17	24.5	1	2	1	2	2	B	30	4									edge slightly concave, but not really; right edge may hve one flake scar, but just as likely natural damage
112	SDI-11392	surface				4	12	Volcanic	4	97.4	68.023	57.76	24.51	1	2	1	2	4	B	60	1, 4, 7									edge covers about 2/3 of perimeter; only left side not modifed; could be considered 2 3 edges: with middle portion/edge making small burin-like point between 2 larges flake scars
123	SDI-11392	surface	A3			4	15	Volcanic	4	19.2	53.15	28.24	14.45	1	9	2	3	3	A	25	2,4,	3	3	A	2,5,7	55					E2: end blunted - use as burin/drill tip; E1 - covers aobut 50% of perimeter, extensive microflaking, limited flaking
101	SDI-11399	surface	A1			4	12	Volcanic	4	179.7	107.84	67.82	24.17	1	2	3	2	2	A	50	1,4,7	2	2	B	2,4,7	60	2	3	B	1,4	incidental/natural damage; E3 - foremd by 3-4 medium flake scars; step fracturing may be from edge prep, not use
106	SDI-11399	surface	A6			4	12	Volcanic	4	100.2	78.36	58.35	19.42	1	2	1	2	3	B	65	1,4,7									End scraper, distal end of flake
103	SDI-11399	surface	A3			4	15	Volcanic	4	20.9	50.77	35.25	11.28	1	3	1	3	3	B	30	1,5,7									flaking irregular, step fracturing minimal, crude cutting edge
117	SDI-11392	Conc.	1			4	12	Volcanic	4	240.2	93.53	60.53	46.01	2	2	1	2	3	B	75	1,4,7									modified edge is >50% of perimeter; could be called core-tool scraper; recent damage to distal end; small burin-like tip iin middle of edge - probably not used that way though

CAT	SITE	RTYPE	UNO	TOP LEV	BOT LEV	CLASS	OBJECT	MAT	COND	WT	ML	MW	MTH	FORM	FLK TYPE	E FREQ	E-1 FORM	E-1 SHP	E-1 MOD	E-1 ANG	E-1 WEAR	E-2 FORM	E-2 SHP	E-2 MOD	E-2 WEAR	E-2 ANG	E-3 FORM	E-3 SHP	E-3 MOD	E-3 WEAR	COMMENT
107	SDI-11399	surface	A7			3	11	Volcanic	3	102.5	61.96	53.45	30.43	2	9	2	3	1	A	45	2	1	2	A	1,7	70					Core fragment, distal end, althugh no platforms remain post-break; E2 -probably used as scraper; E1 - probably used to cut
169	SDI-11399	surface				4	15	Volcanic	11	1.1	26.21	16.78	4.78	1	3	2	2	1	B	30	4	2	3	A	2,4	30					artifact may be a broken unifacial projectile point/or in progress PPT. E1 is partially broken, leaving only 1 visible flake scar; both proximal and distal end broken: distal - bending fracture, Proximal: natural seam in end likely contributed to fracture, probaly bending
270	SDI-12333	surface				3	11	Chert	4	28.3	56.4	35.16	15.74	1	2	1	3	3	A	35	2										fairly light use, microflaking very small, clustered in multiple spots along edge
187	SDI-11394	surface				3	11	Volcanic	4	2.2	34.85	22.9	3.46	1	2	1	2	2	A	35	1										used edge is distal, like small end scraper; microflakeing along full length of distal edge (which is the MW;
240	SDI-11394	surface	A2			4	12	Volcanic	5	26.4	43.52	36.24	15.42	1	1	1	1	3	A	65	1,4,7										classic end/thumbnail scraper; one microflake removed from lateral edge - may be incidental, or edge may have been used as well - flake is broken at this point so not possible to determine;
206	SDI-11394	surface	Conc. 1			4	15	Volcanic	4	182	95.09	69.95	25.82	1	2	1	1	3	B	70	1,4,6,7										large flake removed from distal edge, forms platform for thumb; small notch formed at distal end, left side, which has all the unifacial step fractures
247	SDI-12417	surface				4	15	Volcanic	4	353.1	115.79	74.78	35.37	1	2	1	2	2	B	70	2,1,7										microflakeing predominately at distal end; steepest edge is distal, proximal is less steep; likely used right handed, with distal end of flake proximal to user (left hand use covers used portion of edge)
349	SDI-12373H	STP	4	0	8	4	15	Volcanic	4	8	46.02	22.83	7.91	1	3	2	1	3	A	45	1	2	2	A	4	35					E1 is right edge, E2 is distal.
309	SDI-12373H	SSU	1	0	20	4	12	Volcanic	1	68.1	59.14	55.6	24.3	3	9	2	1	2	B	70	1,4,7	1	1	B	1,4,7	80					Tool likely was core, but could have been flake, lightly repatinated on ventral surface; E1 - more prepared, many flake removals; E2 - minimal prep, likely only used in notch of concavity,
340	SDI-12373H	CU	2	0	40	4	15	Chert	10	0.7	15.02	12.41	3.99	3	9	1	9	2	A	50	1,4										

FORM		FLK TYPE		E FREQ		E FORM		E SHP				E ANG	E WEAR	
			Flake Type		Edge Number		Edge Form		Edge Shape		Modifier		Edge Angle		Edge Wear
1	Flake													
2	Core	1	Primary Decort	1 - 5	Actual edge number	1	Ventral	1	Concave	A	Regular	# in degrees	1	Unifacial Microflaking
3	Indeterminate	2	Secondary Decort	9	Indeterminate	2	Dorsal	2	Straigt	B	Irregular		2	Bifacial Microflaking
		3	Interior Percussion			3	Bifacial	3	Convex				3	Edge-rounding
		4	Biface Thinning			9	Indeterminate	4	Perimeter				4	Unifacially Flaked
		5	Bipolar										5	Bifacially Flaked
		6	Cortical Shatter										6	Polish
		7	Interior Percussion Shatter										7	Step Fracturing
		9	Indeterminate										8	Battering
													9	Indeterminate
													0	None

SITE	CAT	OBJ	COND	ML	MW	MTH	SHP DEGREE	SHP TYPE	SURF FREQ	SURF SHP 1	SURF TEXT 1	POLISH 1	STRIAE 1	PECK 1	SURF SHP 2	SURF TEXT 2	POLISH 2	STRIAE 2	PECK 2	End Blunted	End Polish	SEC MOD	FIRE AFF	COMMENT
SDI-11399	104	24	11	114.95	97.68	72.45	4	4	1	1	1	1	1	1						3	3	3	2	volcanic - Santiago Peak; Sec. Mod. = 1+ flake scar on interior edgeof break; platform shows unifacial microflaking, as if used for scraping (E ANG= 75; interior plaform)
SDI-12380	226	23	4	128.8	89.88	76.08	0	0	2	3	1	1	0	1	3	1	1	1	0	1	1	0	0	End 1: some polishing; End 2: blunted bt possblie falek removal, then battered heavily; SURF 1: >50% pecked
SDI-11394	215	23	4	106.3	99.3	50.7	0	0	1	3	2	1	1	0						2	2	2	2	irregular cobble, opportunisticaly used for groundstone.; if cound in different geological deposit, would be hard to call groundstone
SDI-12377	168	24	10	400	275	260	2	1,2	2	2	1	1	2	1	2	1	1	2	1	3	3	3	2	broken milling stone fragment, milling surfaces on two different sides.
SDI-12373H	308	23	11	67.11	47.37	38.47	4	4	1	1	1	1	1	1						3	3	0	1	cracking from heat on one side; volcanic material - coarse grain
SDI-12373H	307	24	10	59.88	59.68	84.06	0	0	1	1	1	1	1	1						3	3	0	1	heavily pecked laterally, less pecked medially, coarse grain volcanic - similar to CAT 308

Groundstone Attribute Table

Attribute

Condition	Whole	Margin	End	Indeterminate	
	1	2	3	4	

Shape Type	N/A	Pecked	Ground	Flaked	Indeterminate
	0	1	2	3	4

Shape Degree	None	0-30%	31-70%	>70%	Indeterminate
	0	1	2	3	4

Surface Frequency	Number
	#

Surface Shape	Flat	Basin	Convex	Indeterminate
	1	2	3	4

Surface Texture	Regular/Smooth	Irregular	Indeterminate
	1	2	3

Polished	Absent	Present	Indeterminate
	0	1	2

Striations	Absent	Present	Indeterminate
	0	1	2

Pecking	Absent	Present	Indeterminate
	0	1	2

Secondary Modification	None	Battering	Anvil	Other
	0	1	2	3

Fire Affected	Yes	No	Indeterminate
	1	2	3

End Blunted	Yes	No	Indeterminate
	1	2	3

Site	Cat	Object	RType	TOPLEV	BOTLEV	Condition	Material	WT	ML	MW	MTH	LOC OF BATT	SEC MOD	FIRE AFF	NOTES
SDI-12377	228	20	1	0	0	4	10	482.80	82.89	70.97	66.3	E	+	-	

Attributes:

WT - Weight

ML - Maximum Length (mm)

MW - Maximum Width (mm)

MTH - Maximum Thickness (mm)

MTH - Maximum Thickness (mm)

LOC of BATT - Location of Battering: E-End, M-Margin, P-Perimeter

SEC MOD - Secondary Modification: + Present, - Absent

FIRE AFF - Fire Affected: + Yes, - No

SITE	CAT	RTYPE	UNO	TOPLEV	BOTLEV	MAT	COND	WT	ML	MW	MTH	AL	BW	NW	PSA	DSA	BI	NO	MWP	STL	SHW	Type	Notes
SDI-11399	102	surface	A2		0	0	chert	1	6	41.82	32.53	5.96	38.87	22.12	15.5	125	170	2.95	45	11.79	11.28	32.53	Elko Eared	point modified into drill; base and shoulder fully intact; only pooint modified; distal end is broken

KEY

AL	Axial Length	Measurement of concave base points from tip to center of base
BW	Basal Width	Measurement at the maximum width of the haft
NW	Neck Width	Measurement at the most narrow part of neck (notched points) or shoulder/haft junction (contracting stemmed points)
PSA	Proximal Shoulder Angle	Measurement on the side with the lowest angle and the most notch closure
DSA	Distal Shoulder Angle	Measurement on the side with the lowest angle and the most notch closure
BI	Basal Indentation	Measurement from the basal edge to the maximum basal concavity. On complete specimens, = (max length) - (basal indentation)
SNO	Smallest Notch Opening	Measurement of the notch with the smallest opening at the edge of the preform
MWP	Maximum Width Position	Measurment from the basal edge to the position of maximum width which can fall anywhere from the base to the tip
STL	Stem Length	Measurement from the basal edge to the shoulder/haft juncture
SHW	Shoulder Width	Measurement at the maximum width of the shoulder

CATNO	SubCat	Site	RTYPE	UNIT	TOPLEV	BOTLEV	TAXON	Ct	Wt.	# Hinges	MNI	Notes
313	A	SDI-12373H	SSU	1	0	20	Chione sp.	1	0.2	0	1	
313	B	SDI-12373H	SSU	1	0	20	Argopecten	1	1	0	1	
319	A	SDI-12373H	CU	2	0	40	Chione sp.	1	0.4	0	1	
319	B	SDI-12373H	CU	2	0	40	Argopecten	1	0.1	0	1	
319	C	SDI-12373H	CU	2	0	40	Indeterminate	2	0.4	0	2	1 likely Chione, 1 unknown

CAT	Taxon	Count	Weight (g)	Burned? (Y/N)	Elements Observed
311	Indeterminate	14	2	Yes	
327	Reptile	1	0	No	
326	Aves	2	0.1	Yes	Tibiotartsus
318	Indeterminate	21	10.7	Yes	
328	Rodentia	3	0.7	No	Left maxilla, right humerus, tooth
329	Scuridae	1	0.3	No	Scapula
330	Serpentes	1	0.2	No	Vertebra
314	Ungulate	1	0.1	No	Tooth
283	Indeterminate	3	1.4	No	
288	Indeterminate	1	0.3	No	
267	Indeterminate	1	17.1	No	
337	Indeterminate	2	0	No	
Total		**51**	**32.9**		

APPENDIX E

Tribal Documentation (Confidential)

APPENDIX F

Data Recovery Plan (Confidential)