CULTURAL RESOURCES STUDY FOR THE OCEAN BREEZE RANCH PROJECT

BONSALL, SAN DIEGO COUNTY, CALIFORNIA

PDS2016-TM-5615; PDS2016-MUP-16-012; PDS2016-MUP-16-013

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Report Date:	September 15, 2016; Revised May 24, 2018; Revised December 10, 2018; Revised May 9, 2019; Revised August 26, 2019
Report Title:	Cultural Resources Study for the Ocean Breeze Ranch Project, Bonsall, San Diego County, California (PDS2016-TM-5615; PDS2016-MUP-16-012; PDS2016-MUP-16-013)
Type of Study:	Phase I Cultural Resources Survey and Phase II Testing Program
New Sites:	SDI-21,874, SDI-21,875, and SDI-21,876
Updated Sites:	SDI-766A through I, SDI-1083, SDI-8237, SDI-12,550, SDI-20,174, P-37-028134, P-37-028139, P-37-031762, and P-37-035850
USGS Quadrangle:	*Bonsall, California* (7.5 minute), Sections 14, 15, and 20 through 23, Township 10 South, Range 3 West
Acreage:	1,402.52 acres
Key Words:	Survey; bedrock milling; prehistoric isolates; artifact scatters; prehistoric rock art; historic water conveyance and storage; historic road; prehistoric rock shelter; historic rock and concrete dam; historic structure complex; Bonsall; SDI-12,550 and P-37-028139 not relocated; SDI-776 C to I, SDI-1083, SDI-12,550, SDI-20,174, P-37-028134, P-37-028139, P-37-031762, SDI-21,874, SDI-21,875, and SDI-21,876 evaluated as having limited significance; SDI-776A, SDI-776B, SDI-8237, and P-37-035850 evaluated as CEQA-significant Historical Resources; mitigation of potential impacts recommended; MMRP is recommended.

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List of Acronyms

AB	Assembly Bill
AMSL	Above Mean Sea Level
APE	Area of Potential Effect
APN	Assessor's Parcel Number
BFSA	Brian F. Smith and Associates, Inc.
BMF	Bedrock Milling Feature
CRM	Cultural Resource Management
CEQA	California Environmental Quality Act
CRHR	California Register of Historical Resources
DPR	Department of Parks and Recreation
DPW	Department of Public Works
FAR	Fire-Affected Rock
GPS	Global Positioning System
MFP	Multifaceted Platform
MLD	Most Likely Descendent
MOU	Memorandum of Understanding
MMRP	Mitigation Monitoring and Reporting Program
MNI	Minimum Number of Individuals
NAHC	Native American Heritage Commission
NISP	Number of Identifiable Specimens
NP	Natural/Cortical Platform
NRHP	National Register of Historic Places
PDL	Piedra de Lumbre
PDS	Planning and Development Services
RPO	Resource Protection Ordinance
SCIC	South Coastal Information Center
SDAC	San Diego Archaeological Center
SDSU	San Diego State University
SEUT	Steep-Edged Unifacial Tools
SFP	Single-Facet Platform
SHPO	State Historic Preservation Officer
SOI	Secretary of the Interior
STP	Shovel Test Pit
TCL	Traditional Cultural Landscape
TCP	Traditional Cultural Properties
TCR	Traditional Cultural Resource
TU	Test Unit
USGS	United States Geological Survey
XRF	X-Ray Fluorescence
YBP	Years Before the Present

MANAGEMENT SUMMARY/ABSTRACT

The following cultural resources study was prepared on behalf of Ocean Breeze Ranch, LLC to assess potential impacts to cultural resources resulting from the proposed development of Ocean Breeze Ranch. This study has been prepared in conformance with the environmental review requirements of the County of San Diego and the statutory requirements of the California Environmental Quality Act (CEQA). The project consists of a Tentative Map proposal to subdivide 1,402.52 acres into 396 residential lots and a separate, privately owned and operated equestrian facility. The project may be found immediately northeast of the intersection of West Lilac Road and Vessels Ranch Road, south of the San Luis Rey River, in the community of Bonsall, San Diego County, California. The project is located in Sections 14, 15, and 20 through 23 on the 7.5-minute United States Geological Survey (USGS) *Bonsall, California* topographic quadrangle, Township 10 South, Range 3 West. The project includes Assessor's Parcel Numbers (APNs) 124-150-28, -34, and -35, 125-080-21, 125-131-48, -49, and -54, 126-060-78, 127-191-20, 127-230-59, and 127-271-01 and -02.

The purpose of this archaeological investigation was to locate and record any cultural resources present within the project and subsequently evaluate any resources as part of the County of San Diego's environmental review process conducted in compliance with CEQA and County of San Diego guidelines. The archaeological investigation of the project also included a review of an archaeological records search performed at the South Coastal Information Center (SCIC) at San Diego State University (SDSU) in order to assess previous archaeological studies and identify any previously recorded archaeological sites within the project boundaries or in the immediate vicinity.

Brian F. Smith and Associates, Inc. (BFSA) requested a review of the Sacred Lands Files by the Native American Heritage Commission (NAHC). The County of San Diego also conducted Native American consultation through the State Assembly Bill (AB) 52 process. A copy of all BFSA Native American correspondence can be found in Appendix D (see Confidential Appendix). A review of the records search provided by the SCIC indicates that eight previously recorded resources (SDI-776 [loci A through I], SDI-1083, SDI-8237, SDI-12,550, SDI-20,174, P-37-028134, P-37-028139, and P-37-031762) have been recorded within the subject property. In addition, 37 cultural resources have been recorded within a one-mile radius of the project. The cultural resources survey was conducted March 13, 14, 15, 17, and 19, 2014, and April 17, 2014. The survey was undertaken with the assistance of Banning Taylor, a Luiseño Native American representative from Saving Sacred Sites.

During the survey, previously recorded sites SDI-12,550 and P-37-028139 could not be relocated. The property has been previously disturbed by grading and equestrian use; because of this, most of the sites that were recorded as single artifacts, which are situated within plowed agricultural fields, have likely been buried by cultivation. Impacts to the property include the establishment of dirt roads, agricultural uses, and the construction of several residential and equestrian buildings and fencing for horse rinks and pastures. Sites SDI-776A through SDI-776I,

SDI-1083, SDI-8237, SDI-20,174, P-37-028134, and P-37-035850 were relocated during the survey. The sites consist of bedrock milling features (SDI-776A, SDI-776B, SDI-776G, SDI-776H), prehistoric isolates (SDI-776C, SDI-776D, SDI-776E, SDI-776F, SDI-776I), an artifact scatter (SDI-1083), a boulder with prehistoric rock art (SDI-8237), historic water conveyance and storage features (SDI-20,174), a historic road (P-37-028134), and a historic structure complex related to the historical use of the property (P-37-035850). While Site P-37-031762 (two historic cisterns) was relocated during the survey, the cisterns are located outside of the current Area of Potential Effect (APE). Three previously unrecorded cultural resources were also identified during the survey. These include a bedrock milling site (SDI-21,874), a prehistoric rock shelter (SDI-21,875), and a historic rock and concrete dam (SDI-21,876).

Based upon the results of the field survey and records search, a testing program was implemented for both the relocated and the newly recorded sites in accordance with County of San Diego guidelines and site evaluation protocols on March 17, 18, 21 through 24, and 28 through 30, 2016, and April 11, 12, 21, and 22, 2016, with the assistance of Ray Mojado, Shelly Nelson, John Chavez, and P.J. Stoneburner, Luiseño Native American representatives from Saving Sacred Sites. None of the recorded sites had been previously tested or evaluated. As a result of the testing and site significance evaluation program, three of the prehistoric sites, SDI-776A, SDI-776B, and SDI-8237, were identified as CEQA-significant Historical Resources. According to the County of San Diego, SDI-776A and SDI-776B are also considered to represent Resource Protection Ordinance (RPO)-significant sites and were identified as Tribal Cultural Resources (TCRs) during the AB 52 Native American consultation process. Site SDI-8237 is a recorded rock art location that is considered significant and is listed as an RPO-significant resource. The historic structure complex at P-37-035850 is also identified as a Historical Resource under CEQA criteria.

For the Historical Resources identified on the property, including SDI-776A, SDI-776B, SDI-8237, and P-37-035850, preservation is recommended to avoid direct impacts. The project currently includes a proposed secondary access road across a portion of SDI-776A that follows the general alignment of Dulin Road. Dulin Road corresponds to the historic Pala Road (P-37-028134) that connected Mission San Luis Rey to Pala. The construction of the secondary access road could result in an adverse impact to significant elements of SDI-776A. Following consultation with tribal representatives, the County of San Diego, and the applicant, it was agreed that the access road could pass across SDI-776A as long as the improvements were limited to the previously disturbed dirt road alignment (Dulin Road). The area of SDI-776A and SDI-776B outside of the alignment of the secondary access road will be preserved in open space. The location of SDI-8237 is currently within an open space preserve and will not be impacted by the project. Open space easements for the prehistoric sites are recommended to ensure preservation of the resources. Preservation of the historic ranch structures through a Use, Maintenance, and Repair Easement is recommended and will allow for continued use of the structures. All future exterior repairs, restoration, or rehabilitation would need to be conducted in accordance with the Secretary of the Interior's (SOI) "Standards for the Treatment of Historic Properties with Guidelines for

Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings" (Grimmer 2017). Any modifications made to the structures should be designed by a qualified historical architect and approved by the Director of Planning and Development Services (PDS). The easement would not apply to the interior of the structures.

In addition to preservation of significant cultural resources, a Mitigation Monitoring and Reporting Program (MMRP) will be recommended due to the potential for encountering buried cultural deposits during any grading or excavations as part of the development of the property. The MMRP shall include archaeological and Native American monitoring of all earthmoving activities and the subsequent implementation of mitigation measures should inadvertent discoveries be made.

A copy of the final technical cultural resources report will be permanently filed with the SCIC at SDSU. All notes, photographs, and other materials related to this project will be curated at a San Diego curation facility, curated at a culturally affiliated tribal curation facility, or repatriated to a culturally affiliated Native American tribe.

1.0 INTRODUCTION

1.1 Project Description

The archaeological study for the Ocean Breeze Ranch Project was conducted in order to comply with CEQA and County of San Diego environmental guidelines. The project, which is currently partially developed with several residential and utility buildings associated with an equestrian center and fencing for horse pastures and rinks, may be found immediately northeast of the intersection of West Lilac Road and Vessels Ranch Road in Bonsall, San Diego County, California (Figure 1.1–1). The project is located in Sections 14, 15, and 20 through 23 on the 7.5-minute USGS *Bonsall, California* topographic quadrangle, Township 10 South, Range 3 West (Figure 1.1–2). The project includes APNs 124-150-28, -34, and -35, 125-080-21, 125-131-48, -49, and -54, 126-060-78, 127-191-20, 127-230-59, and 127-271-01 and -02.

Ocean Breeze Ranch is a planned residential community located in northern San Diego County in the unincorporated community of Bonsall. The property consists of 1,402.52 acres located at 5820 West Lilac Road, east of Camino del Rey and west of Old Highway 395 and the Interstate 15 freeway. The proposed project will consist of the subdivision of the 1,402.52-acre property into 396 residential lots and a separate, privately owned and operated equestrian facility (Figure 1.1–3). The residential portion of the project will include three planning areas:

- Planning Area 1 (PA-1) will include 144 production lots;
- Planning Area 2 (PA-2) will include 237 production lots; and
- Planning Area 3 (PA-3) will include 14 estate-sized lots.

An additional, larger, estate parcel is planned near Sullivan Middle School, with a parcel size of 24.24 acres. The project proposes public streets in PA-1 and -2, and gated, private streets within PA-3. Included in the residential portion of the project are roads, parks, trails, and Homeowner's Association-owned landscape parcels. The total area of the residential component of the project is approximately 311 acres.

Figure 1.1–1

General Location Map

The Ocean Breeze Ranch Project

DeLorme (1:250,000)

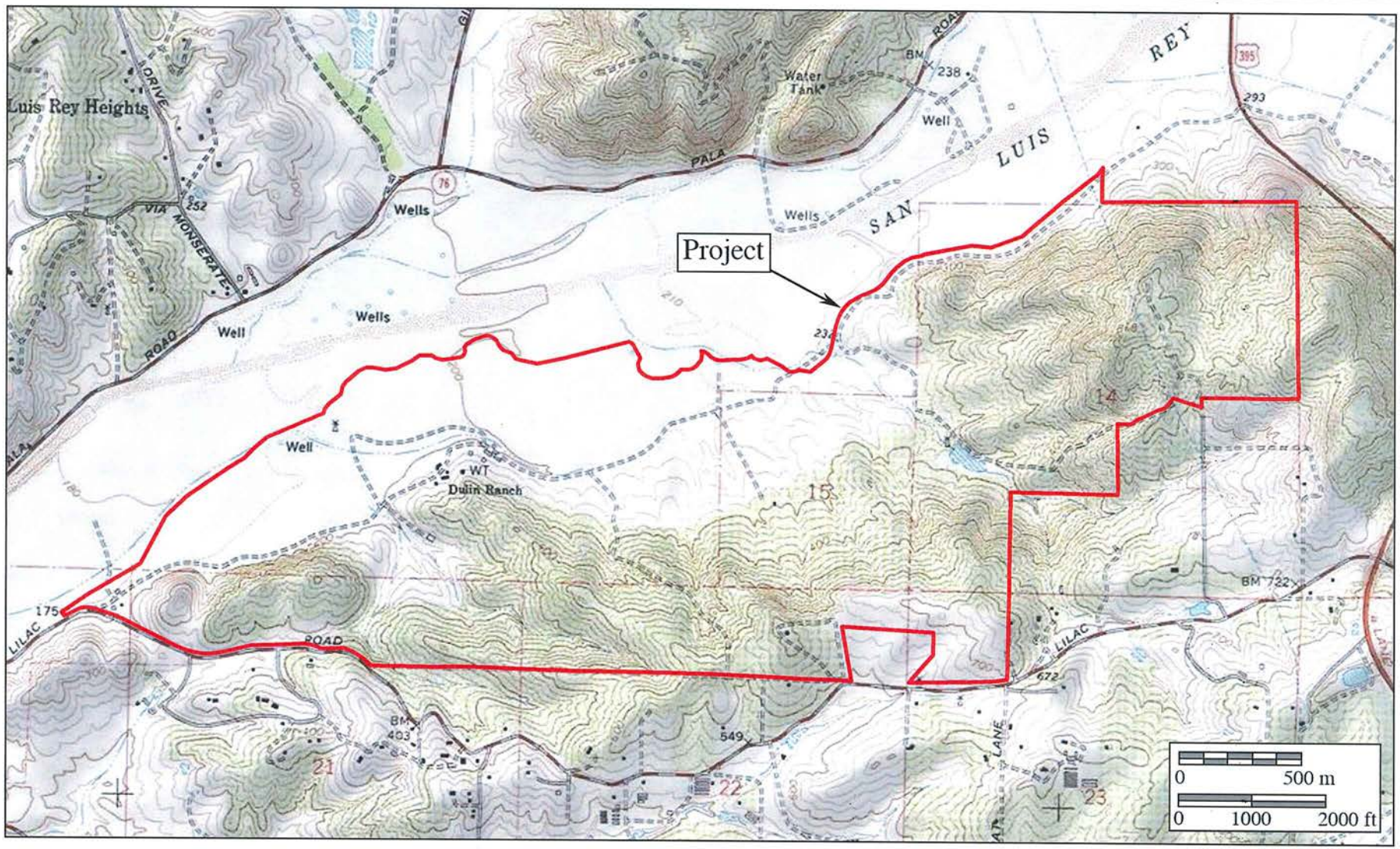

Figure 1.1–2

Project Location Map

The Ocean Breeze Ranch Project

USGS *Bonsall* Quadrangle (7.5-minute series)

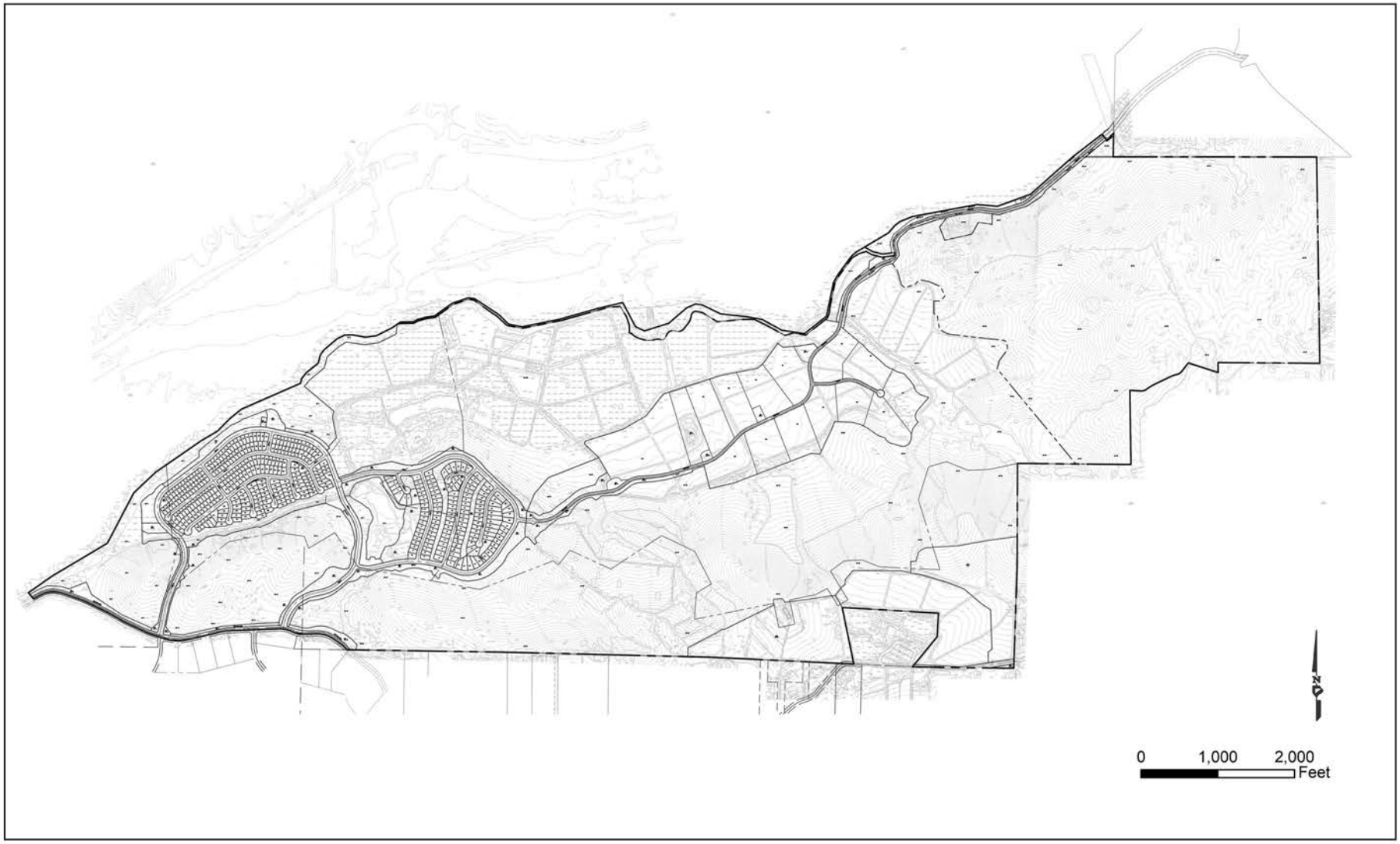

Figure 1.1–3

Project Development Map

The Ocean Breeze Ranch Project

The requirement for a cultural resources study is based upon cultural resource sensitivity of the locality as suggested by known site density and predictive modeling. Sensitivity for cultural resources in a given area is usually indicated by known settlement patterns, which in the inland foothills area are focused around fresh water resources and a food supply. Certainly, the position of this property along the course of the San Luis Rey River and the fertile floodplain that extends onto the property were key environmental resources that attracted prehistoric populations to this area. The field survey resulted in the relocation of six previously identified sites (SDI-776A through I, SDI-1083, SDI-8237, SDI-20,174, P-37-028134, and P-37-035850) and the identification of three additional previously unrecorded sites (SDI-21,874, SDI-21,875, and SDI-21,876) within the project boundaries.

1.2 Existing Conditions

1.2.1 Environmental Setting

Natural Setting

The Ocean Breeze Ranch property is south of State Highway 76 and the San Luis Rey River and includes a variety of terrain, which ranges from relatively flat alluvial plain near the river along the northern boundary to ridges and hillsides near the property's southern boundaries. Elevations at the northern boundary vary from 175 feet above mean sea level (AMSL) at the northwest, to 840 feet AMSL at the northeast. Elevations increase progressively to the south, with ridgelines at or near the southern boundary having elevations ranging from 367 feet AMSL at the southwest to 725 AMSL at the southeast.

The property has been in use as an equestrian facility for several decades, dating back to the purchase of the property by the Vessels family in 1981. Large portions of the property's lower elevations have been used over many decades, first as grazing area for cattle on Gird Ranch beginning in the late 1800s, and subsequently as pastures for horses. Portions of the property have also been utilized for agriculture. Extensive slope areas along the hillsides to the south have been farmed for avocados for many decades. In addition, portions of the lower valley have been converted from pastures to row crops, such as tomatoes, over the past several years and are currently planted as oat grass.

Bonsall is located within the geologic province known as the Peninsular Ranges Province, which is characterized by hills, mountains, and steep canyons with occasional flat valleys. The Peninsular Ranges generally run north to south from the Santa Monica and San Bernardino mountains down into Baja California. The general geology of this region consists of Cretaceous granitic, dioritic, and gabbroic rocks of the southern California batholith, which also includes mixed rocks of various types. This batholith was implanted and became exposed to the surface in the Mesozoic Era during the Jurassic and Cretaceous periods, respectively. Even when only sedimentary rocks are visible on the surface, the batholith underlies them. It averages 60 miles in width and the rocks go from older to younger from west to east (Bergen et al. 1997:53; McArthur 1984:17-18).

Soil types in the area are primarily comprised of the Cieneba-Fallbrook Series soils (USDA 1973). The Cieneba-Fallbrook rocky sandy barns occur throughout the project area and consist of eroded, excessively drained, shallow soils. The mixture within the project area is 30.00 percent Cieneba coarse sandy loam and 16.00 percent Fallbrook sandy loam. These soils formed in material weathered in place from granitic rock and can be found on rolling to mountainous uplands with slopes of 5.00 to 75.00 percent. Vista coarse sandy loams make up 14.00 percent of the low-lying portions of the project area, while Tujunga sandy soils deposited from the San Luis Rey River make up 11.00 percent of those portions closest to the river. The remainder of the property includes soils from the Bonsall, Grangeville, Placentia, Ramona, and Visalia, which make up less than 5.00 percent each.

Fresh water in the area would have been present year-round within the San Luis Rey River located immediately north of the project area. The climate of the region can be generally described as Mediterranean, with cool, wet winters and hot, dry summers. Rainfall limits vegetation growth, but drought-tolerant southern mixed chaparral and coastal sage scrub vegetation of the region were probably present over most of the property in the past. Small corridors of riparian vegetation, including coast live oaks, are also present along drainages within the project area. Components of these communities provided important resources to Native Americans in the region. Sage seed, yucca, buckwheat, acorns, and native grasses formed important food resources for Late Prehistoric Native Americans. Animal resources in the region probably included deer, fox, raccoon, skunk, bobcat, coyote, rabbit, and various rodent, reptile, and bird species. Small game, dominated by rabbits, was probably relatively abundant.

Cultural Setting

The project setting includes the natural, physical, geological, and biological contexts of the proposed project, as well as the cultural setting of prehistoric and historic human activities in the general area. The following sections discuss both the environmental and cultural settings at the subject property, the relationship between the two, and the relevance of that relationship to the project.

Paleoenvironment

Because of the close relationship between prehistoric settlement and subsistence patterns and the environment, it is necessary to understand the setting in which these systems operated. At the end of the final period of glaciation, approximately 11,000 to 10,000 years before the present (YBP), the sea level was considerably lower than it is now; the coastline at that time would have been two to two and a half miles west of its present location (Smith and Moriarty 1985a, 1985b). At approximately 7,000 YBP, the sea level rose rapidly, filling in many coastal canyons that had been dry during the glacial period. The period between 7,000 and 4,000 YBP was characterized by conditions that were drier and warmer than they were previously, followed by a cooler, moister environment similar to the present-day climate (Robbins-Wade 1990). Changes in sea level and

coastal topography are often manifested in archaeological sites through the types of shellfish that were utilized by prehistoric groups. Different species of shellfish prefer certain types of environments, and dated sites that contain shellfish remains reflect the setting that was exploited by the prehistoric occupants.

Unfortunately, pollen studies have not been conducted for this area of San Diego; however, studies in other areas of southern California, such as Santa Barbara, indicate that the coastal plains supported a pine forest between approximately 12,000 and 8,000 YBP (Robbins-Wade 1990). After 8,000 YBP, this environment was replaced by more open habitats, which supported oak and non-arboreal communities. The coastal sage scrub and chaparral environments of today appear to have become dominant after 2,200 YBP (Robbins-Wade 1990).

Prehistory

In general, the prehistoric record of San Diego County has been documented in many reports and studies, several of which represent the earliest scientific works concerning the recognition and interpretation of the archaeological manifestations present in this region. Geographer Malcolm Rogers initiated the recordation of sites in the area during the 1920s and 1930s, using his field notes to construct the first cultural sequences based upon artifact assemblages and stratigraphy (Rogers 1966). Subsequent scholars expanded the information gathered by Rogers and offered more academic interpretations of the prehistoric record. Moriarty (1966, 1967, 1969), Warren (1964, 1966), and True (1958, 1966) all produced seminal works that critically defined the various prehistoric cultural phenomena present in this region (Moratto 1984). Additional studies have sought to further refine these earlier works (Cardenas 1986; Moratto 1984; Moriarty 1966, 1967; True 1970, 1980, 1986; True and Beemer 1982; True and Pankey 1985; Waugh 1986). In sharp contrast, the current trend in San Diego prehistory has also resulted in a revisionist group that rejects the established cultural historical sequence for San Diego. This revisionist group (Warren et al. 1998) has replaced the concepts of La Jolla, San Dieguito, and all of their other manifestations with an extensive, all-encompassing, chronologically undifferentiated cultural unit that ranges from the initial occupation of southern California to around A.D. 1000 (Bull 1983, 1987; Ezell 1983, 1987; Gallegos 1987; Kyle et al. 1990; Stropes 2007). For the present study, the prehistory of the region is divided into four major periods including: Early Man, Paleo Indian, Early Archaic, and Late Prehistoric.

Early Man Period (Prior to 8500 B.C.)

At the present time, there has been no concrete archaeological evidence to support the occupation of San Diego County prior to 10,500 years ago. Some archaeologists, such as Carter (1957, 1980) and Minshall (1976), have been proponents of Native American occupation of the region as early as 100,000 years ago. However, their evidence for such claims is sparse at best and has lost much support over the years as more precise dating techniques have become available for skeletal remains thought to represent early man in San Diego. In addition, many of the

"artifacts" initially identified as products of early man in the region have since been rejected as natural products of geologic activity. Some of the local proposed Early Man Period sites include Texas Street, Buchanan Canyon, and Brown, as well as Mission Valley (San Diego River Valley), Del Mar, and La Jolla (Bada et al. 1974; Carter 1957, 1980; Minshall 1976, 1989; Moriarty and Minshall 1972; Reeves 1985; Reeves et al. 1986).

Paleo Indian Period (8500 to 6000 B.C.)

For the region, it is generally accepted that the earliest identifiable culture in the archaeological record is represented by the material remains of the Paleo Indian Period San Dieguito Complex. The San Dieguito Complex was thought to represent the remains of a group of people who occupied sites in this region between 10,500 and 8,000 YBP, and who were related to or contemporaneous with groups in the Great Basin. As of yet, no absolute dates have been forthcoming to support the great age attributed to this cultural phenomenon. The artifacts recovered from San Dieguito Complex sites duplicate the typology attributed to the Western Pluvial Lakes Tradition (Moratto 1984; Davis et al. 1969). These artifacts generally include scrapers, choppers, large bifaces, and large projectile points, with few milling tools. Tools recovered from San Dieguito Complex sites, along with the general pattern of their site locations, led early researchers to believe that the people of the San Dieguito Complex were a wandering, hunting, and gathering society (Moriarty 1969; Rogers 1966).

The San Dieguito Complex is the least understood of the cultures that have inhabited the San Diego County region. This is because of an overall lack of stratigraphic information and/or datable materials recovered from sites identified as San Dieguito Complex. Currently, controversy exists among researchers regarding the relationship of the San Dieguito Complex and the subsequent cultural manifestation in the area, the La Jolla Complex. Although, firm evidence has not been recovered to indicate whether the San Dieguito Complex "evolved" into the La Jolla Complex, the people of the La Jolla Complex moved into the area and assimilated with the people of the San Dieguito Complex, or the people of the San Dieguito Complex retreated from the area because of environmental or cultural pressures.

Early Archaic Period (6000 B.C. to A.D. 0)

Based upon evidence suggesting climatic shifts and archaeologically observable changes in subsistence strategies, a new cultural pattern is believed to have emerged in the San Diego region around 6000 B.C. This Archaic Period pattern is believed by archaeologists to have evolved from or replaced the San Dieguito Complex culture, resulting in a pattern referred to as the Encinitas Tradition. In San Diego, the Encinitas Tradition is believed to be represented by the coastal La Jolla Complex and its inland manifestation, the Pauma Complex. The La Jolla Complex is best recognized for its pattern of shell middens and grinding tools closely associated with marine resources and flexed burials (Shumway et al. 1961; Smith and Moriarty 1985a, 1985b). Increasing numbers of inland sites have been identified as dating to the Archaic Period, which focused upon

terrestrial subsistence (Cardenas 1986; Smith 1996; Raven-Jennings and Smith 1999a, 1999b).

The tool typology of the La Jolla Complex displays a wide range of sophistication in the lithic manufacturing techniques used to create the tools found at their sites. Scrapers, the dominant flaked tool type, were created by either splitting cobbles or by finely flaking quarried material. Evidence suggests that after about 8,200 YBP, milling tools began to appear in La Jolla Complex sites. Inland sites of the Encinitas Tradition (Pauma Complex) exhibit a reduced quantity of marine-related food refuse and contain large quantities of milling tools and food bone. The lithic tool assemblage shifts slightly to encompass the procurement and processing of terrestrial resources, suggesting seasonal migration from the coast to the inland valleys (Smith 1996). At the present time, the transition from the Archaic Period to the Late Prehistoric Period is not well understood. Many questions remain concerning cultural transformation between periods, possibilities of ethnic replacement, and/or a possible hiatus from the western portion of the county.

Late Prehistoric Period (A.D. 0 to 1769)

For the following discussion regarding the Late Prehistoric Period, both the Kumeyaay and Luiseño cultures are represented, as the project area is situated in proximity to the tribal territorial boundaries of both Native American groups. For the topics of subsistence and settlement, social organization, and material culture, only the Luiseño are discussed as an example of Late Prehistoric Period Native American lifeways in the region.

The transition into the Late Prehistoric Period is primarily represented by a marked change in archaeological patterning known as the Yuman Tradition. This tradition is primarily represented by the Cuyamaca Complex, which is believed to have derived from the mountains of southern San Diego County. The people of the Cuyamaca Complex are considered as ancestral to the ethnohistoric Kumeyaay (Diegueño). Although several archaeologists consider the local Native American tribes to be relatively latecomers, the traditional stories and histories passed down through oral tradition by the local Native American groups speak both presently and ethnographically to their presence here since the creation of all things.

The Kumeyaay Native Americans were a seasonal hunting and gathering people with cultural elements that were very distinct from the people of the La Jolla Complex. Noted variations in material culture include cremation, the use of the bow and arrow, and adaptation to the use of the acorn as a main food staple (Moratto 1984). Along the coast, the Kumeyaay made use of marine resources by fishing and collecting shellfish for food. Seasonally available plant food resources (including acorns) and game were sources of nourishment for the Kumeyaay. By far the most important food resource for these people was the acorn. The acorn represented a storable surplus, which in turn allowed for seasonal sedentism and its attendant expansion of social phenomena.

Firm evidence has not been recovered to indicate whether the people of the La Jolla Complex were present when the Kumeyaay Native Americans migrated into the coastal zone. However, stratigraphic information recovered from Site SDI-4609 in Sorrento Valley may suggest

a hiatus of 650 ± 100 years between the occupation of the coastal area by the La Jolla Complex (1730 ± 75 YBP is the youngest date for the La Jolla Complex inhabitants at SDI-4609) and Late Prehistoric cultures (Smith and Moriarty 1983). More recently, a reevaluation of two prone burials at the Spindrift Site excavated by Moriarty (1965) and radiocarbon dates of a pre-ceramic phase of Yuman occupation near the San Diego suburb of Santee suggest a comingling of the latest La Jolla Complex inhabitants and the earliest Yuman inhabitants about 2,000 years ago (Kyle and Gallegos 1993).

Approximately 1,300 YBP, a Shoshonean-speaking group from the Great Basin region moved into northern San Diego County, marking the transition to the Late Prehistoric Period. This period is characterized by higher population densities and development in social, political, and technological systems. Economic systems diversified and intensified during this period, with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive, yet effective, technological innovations. Technological developments during this period include the introduction of the bow and arrow between A.D. 400 and 600. Atlatl darts were replaced by smaller arrow darts, including the Cottonwood series points. Other hallmarks of the Late Prehistoric Period include cremation of the dead and extensive trade networks as far reaching as the Colorado River Basin. The period is divided into two phases based upon the introduction of pottery, which include San Luis Rey I and San Luis Rey II (Meighan 1954). Radiocarbon dating and the introduction of pottery established that the San Luis Rey II phase began at approximately A.D. 1300. San Luis Rey I is characterized by the use of portable shaped or unshaped slab metates and non-portable bedrock milling features. Manos and pestles can also be shaped or unshaped. Cremations, bone awls, and stone and shell ornaments are also prominent in the material culture. The later San Luis Rey II assemblage is augmented by pottery, which consisted of cooking and storage vessels, cremation urns, and polychrome pictographs, or rock art, which likely appeared as the result of increased population sizes and increased sedentism (True et al. 1974). Flaked stone dart points are dominated by the Cottonwood Triangular series, but Desert Side-Notched, Dos Cabazas Serrated, leaf-shaped, and stemmed styles also occurred. Subsistence is thought to have focused upon the utilization of acorns, a storable species that allowed for relative sedentism and increased population sizes.

Ethnohistoric and ethnographic evidence indicates that the Shoshonean-speaking group that occupied the northern portion of San Diego County was the Luiseño. Along the coast, the Luiseño made use of available marine resources by fishing and collecting mollusks for food. Seasonally available terrestrial resources, including acorns and game, were also sources of nourishment for Luiseño groups. The elaborate kinship and clan systems between the Luiseño and other groups facilitated a wide-reaching trade network that included trade of Obsidian Butte obsidian, resources from the eastern desert region, and steatite from the Channel Islands.

When the Spanish began exploring the region in the sixteenth century, the Luiseño occupied a territory bounded on the west by the Pacific Ocean, on the east by the Peninsular Ranges mountains including Palomar Mountain to the south and Santiago Peak to the north, on the south

by Agua Hedionda Lagoon, and on the north by Aliso Creek in present-day San Juan Capistrano. The Luiseño were a Takic-speaking people more closely related linguistically and ethnographically to the Cahuilla, Gabrielino, and Cupeño to the north and east rather than to the Kumeyaay, a Yuman-speaking group, who occupied territory to the south. The Luiseño differed from their neighboring Takic speakers in having an extensive proliferation of social statuses, a system of ruling families that provided ethnic cohesion within the territory, a distinct world view that stemmed from use of the hallucinogen *datura,* and an elaborate religion that included ritualized sand paintings of the sacred being "Chingichngish" (Bean and Shipek 1978; Kroeber 1976). The following is a summary of ethnographic data regarding this group.

Subsistence and Settlement

The Luiseño occupied sedentary villages, most often located in sheltered areas in valley bottoms, along streams, or along coastal strands near mountain ranges. Villages were located near water sources to facilitate acorn leaching, and in areas that offered thermal and defensive protection. Villages comprised areas that were both publicly and privately (family) owned. Publicly owned areas included trails, temporary campsites, hunting areas, and quarry sites. Inland groups had fishing and gathering sites along the coast that were utilized, particularly from January to March, when inland food resources were scarce. During October and November, most of the village would relocate to mountain oak groves to harvest acorns. For the remainder of the year, the Luiseño remained at village sites, where food resources were within a day's travel (Bean and Shipek 1978).

The most important food source of the Luiseño was the acorn, of which six different species were used (*Quercus californica*, *Quercus agrifolia*, *Quercus chrysolepis*, *Quercus dumosa*, *Quercus engelmannii*, and *Quercus wislizeni*). Seeds, particularly of grasses, composits, and mints, were also heavily utilized. Seed-bearing species were encouraged through controlled burns, which were conducted at least every third year. A variety of other stems, leaves, shoots, bulbs, roots, and fruits were also utilized. Hunting also augmented this vegetal diet. Animal species used for subsistence included deer, rabbit, hare, woodrat, ground squirrel, antelope, quail, duck, freshwater fish from mountain streams, and marine mammals, fish, crustaceans, and mollusks (particularly abalone [*Haliotis* sp.]) from the coast. In addition, a variety of snakes, small birds, and rodents also provided sources of food (Bean and Shipek 1978; Kroeber 1976).

Social Organization

Luiseño social groups consisted of patrilineal families or clans, which were politically and economically autonomous. Several clans comprised a religious party, or *nota,* which was headed by a chief who organized religious ceremonies and controlled economics and warfare. The chief had assistants who specialized in particular aspects of ceremonial or environmental knowledge, and who, with the chief, were part of a cultic social group with special access to supernatural power, particularly that of Chingichngish. The positions of chief and assistants were hereditary,

and the complexity and multiplicity of these specialists' roles likely increased in larger villages, notably along the coast (Bean and Shipek 1978; Kroeber 1976).

Marriages were arranged by the parents, often made to forge alliances between lineages. Useful alliances included those between groups of differing ecological niches, and those that resulted in territorial expansion. Residence was patrilocal (Bean and Shipek 1978; Kroeber 1976). Women were primarily responsible for plant gathering, while men were responsible for hunting, although at times, particularly during acorn and marine mollusk harvests, there was no division of labor. Elderly women cared for children, while elderly men were active participants in rituals, ceremonies, and political affairs, and were responsible for manufacturing hunting and ritualistic implements. Children were taught subsistence skills at the earliest age possible (Bean and Shipek 1978; Kroeber 1976).

Material Culture

House structures were conical, partially subterranean, and thatched with reeds, brush, or bark. Ramadas were rectangular-shaped and generally used to protect workplaces for domestic chores, including cooking. Ceremonial sweathouses, which were important in purification rituals, were round, partially subterranean thatched structures covered with a layer of mud. Another ceremonial structure was the wámkis, which was located in the center of the village, and was the place of rituals, including the sand painting associated with the Chingichngish cult (Bean and Shipek 1978; Kroeber 1976).

Clothing was minimal; women wore a cedar-bark, netted-twine double apron and men wore a waist cord. In cold weather, cloaks or robes of rabbit fur, deerskin, or sea otter fur were worn by both sexes. Footwear included sandals fashioned from yucca fibers and deerskin moccasins. Adornments included bead necklaces and pendants made from bone, clay, stone, shell, bear claws, mica sheets, deer hooves, and abalone shell. Men wore ear and nose piercings made of cane or bone, which were sometimes decorated with beads (Bean and Shipek 1978; Kroeber 1976).

Hunting implements included the bow and arrow. Arrows were tipped with either a carved, fire-hardened wooden tip, or a lithic point, usually fashioned from locally available Santiago Peak metavolcanic or quartz. Throwing sticks fashioned from wood were used in hunting small game, while deer head decoys were used during deer hunts. Coastal groups fashioned dugout canoes for nearshore fishing and harvested fish with seines, nets, traps, and hooks made of bone or abalone shell (Bean and Shipek 1978; Kroeber 1976).

The Luiseño had a well-developed basket industry; baskets were used in resource gathering, food preparation, storage, and food serving. Pottery containers, which were shaped by paddle and anvil and then fired in shallow open pits, were used for food storage, cooking, and serving. Other utensils included wooden implements, steatite bowls, and ground stone manos, metates, mortars, and pestles (Bean and Shipek 1978; Kroeber 1976). Additional tools included knives, scrapers, choppers, awls, and drills. Shamanistic items included soapstone or clay smoking pipes, and crystals made of quartz or tourmaline (Bean and Shipek 1978; Kroeber 1976).

Native American Perspective

In addition to the point of view discussed above, it is acknowledged herein that other perspectives exist to explain the presence of Native Americans in the region. The Native American perspective is that they have been here from the beginning, as described by their oral histories. Similarly, they do not necessarily agree with the distinction that is made between different archaeological cultures or periods, such as "La Jolla" or "San Dieguito." Instead, they believe that there is a continuum of ancestry, from the first people to the present Native American populations of San Diego County.

Historic Period

Exploration Period (1530 to 1769)

The historic period around San Diego Bay began with the landing of Juan Rodriguez Cabrillo and his men in 1542 (Chapman 1925). Sixty years after the Cabrillo expeditions (1602 to 1603), an expedition under Sebastian Vizcaíno made an extensive and thorough exploration of the Pacific coast. Although his voyage did not extend beyond the northern limits of the Cabrillo track, Vizcaíno had the most lasting effect on the nomenclature of the coast. Many of the names Vizcaíno gave to various locations throughout the region have survived to the present time, whereas nearly every one of Cabrillo's has faded from use. For example, Cabrillo gave the name "San Miguel" to the first port at which he stopped in what is now the United States; 60 years later, Vizcaíno changed the port name to "San Diego" (Rolle 1969).

Spanish Colonial Period (1769 to 1821)

The Spanish occupation of the claimed territory of Alta California took place during the reign of King Carlos III of Spain (Engelhardt 1920). Jose de Gálvez, a powerful representative of the king in Mexico, conceived the plan to colonize Alta California and thereby secure the area for the Spanish Crown (Rolle 1969). The effort involved both a military and a religious contingent, where the overall intent of establishing forts and missions was to gain control of the land and the native inhabitants through conversion. Actual colonization of the San Diego area began on July 16, 1769 when the first Spanish exploring party, commanded by Gaspar de Portolá (with Father Junípero Serra in charge of religious conversion of the native populations), arrived by the overland route to San Diego to secure California for the Spanish Crown (Palou 1926). The natural attraction of the harbor at San Diego and the establishment of a military presence in the area solidified the importance of San Diego to the Spanish colonization of the region and the growth of the civilian population. Missions were constructed from San Diego to as far north as San Francisco. The mission locations were based upon important territorial, military, and religious considerations. Grants of land were made to persons who applied, but many tracts reverted back to the government for lack of use. As an extension of territorial control by the Spanish Empire, each mission was placed so as to command as much territory and as large a population as possible. While primary access to California during the Spanish Period was by sea, the route of El Camino Real served as

the land route for transportation, commercial, and military activities within the colony. This route was considered to be the most direct path between the missions (Rolle 1969; Caughey 1970). As increasing numbers of Spanish and Mexican peoples, as well as the later Americans during the Gold Rush, settled in the area, the Native American populations diminished as they were displaced or decimated by disease (Carrico and Taylor 1983).

Mexican Period (1821 to 1846)

On September 16, 1810, the priest Father Miguel Hidalgo y Costilla started a revolt against Spanish rule. He and his untrained Native American followers fought against the Spanish, but his revolt was unsuccessful and Father Hidalgo was executed. After this setback, Father José Morales led the revolutionaries, but he too failed and was executed. These two men are still symbols of Mexican liberty and patriotism. After the Mexican-born Spanish and the Catholic Church joined the revolution, Spain was finally defeated in 1821. Mexican Independence Day is celebrated on September 16 of each year, signifying the anniversary of the start of Father Hidalgo's revolt. The revolution had repercussions in the northern territories, and by 1834, all of the mission lands had been removed from the control of the Franciscan Order under the Acts of Secularization. Without proper maintenance, the missions quickly began to disintegrate, and after 1836, missionaries ceased to make regular visits inland to minister to the Native Americans (Engelhardt 1920). Large tracts of land continued to be granted to persons who applied for them or who had gained favor with the Mexican government. Grants of land were also made to settle government debts and the Mexican government was called upon to reaffirm some older Spanish land grants shortly before the Mexican-American War of 1846 (Moyer 1969).

Anglo-American Period (1846 to Present)

California was invaded by United States troops during the Mexican-American War from 1846 to 1848. The acquisition of strategic Pacific ports and California land was one of the principal objectives of the war (Price 1967). At the time, the inhabitants of California were practically defenseless, and they quickly surrendered to the United States Navy in July of 1847 (Bancroft 1886).

The cattle ranchers of the "counties" of southern California prospered during the cattle boom of the early 1850s. Cattle ranching soon declined, however, contributing to the expansion of agriculture. With the passage of the "No Fence Act," San Diego's economy changed from stock raising to farming (Rolle 1969). The act allowed for the expansion of unfenced farms, which was crucial in an area where fencing material was practically unavailable. Five years after its passage, most of the arable lands in San Diego County had been patented as either ranchos or homesteads, and growing grain crops replaced raising cattle in many of the county's inland valleys (Blick 1976; Elliott 1883 [1965]). By 1870, farmers had learned to dry farm and were coping with some of the peculiarities of San Diego County's climate (*San Diego Union* 1868; Van Dyke 1886). Between 1869 and 1871, the amount of cultivated acreage in the county rose from less than 5,000, to more

than 20,000 acres (*San Diego Union* 1872). Large-scale farming in San Diego County was limited by a lack of water and the small size of arable valleys, while the small urban population and poor roads restricted commercial crop growing. Nevertheless, cattle continued to be grazed in inland San Diego County (Gordinier 1966).

During the first two decades of the twentieth century, the population of San Diego County continued to grow. The population of the inland county declined during the 1890s, but between 1900 and 1910, it rose by about 70 percent. The pioneering efforts were over, the railroads had broken the relative isolation of southern California, and life in San Diego County became similar to other communities throughout the west. After World War I, the history of San Diego County was primarily determined by the growth of San Diego Bay. During this time period, the history of inland San Diego County was subsidiary to that of the city of San Diego, which became a Navy center and industrial city (Heiges 1976). In inland San Diego County, agriculture became specialized and recreational areas were established in the mountain and desert areas.

General History of Bonsall

Prior to the formation of Bonsall, Don Ysidro Maria Alvarado owned portions of this area in 1846. Alvarado acquired the property through a land grant from Governor Pio Pico of Mexico, which encompassed areas south and east of the present-day Fallbrook border to the north side of the San Luis Rey River. Alvarado created Rancho Monserrate on the land grant, where he raised cattle and horses. Rancho Monserrate was located approximately 12.5 miles northeast of Mission San Luis Rey; its southeast boundary was situated on the present-day intersection of Old Highway 395 and Highway 76 (Plate 1.2–1). Alvarado filed for a land patent with the United States government in 1853, five years after the Treaty of Guadalupe Hidalgo. Before the patent was granted, in 1863, smallpox swept through the area killing Alvarado and his wife, which left the property divided among

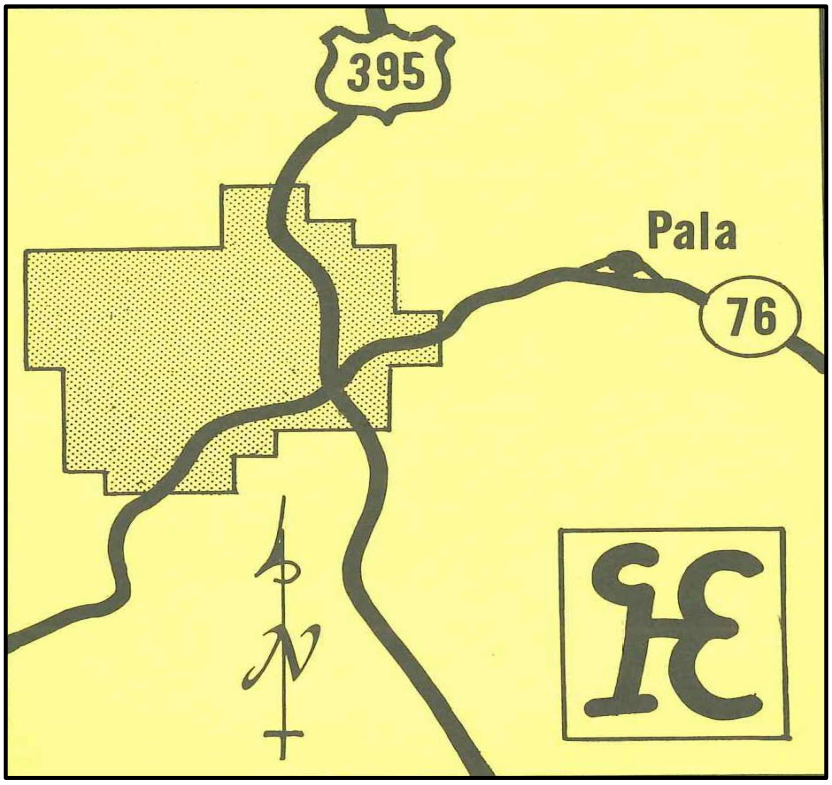

Plate 1.2–1: Rancho Monserrate property boundaries per Bob Fassett. ***(Courtesy of Moyer 1969)***

his three children. The patent was finally completed in 1872; however, parcels of land had been sold off over time, some of which were sold to Henry H. Gird and his son, William.

The Girds were one of the first pioneering families to come to the Fallbrook and Bonsall areas. After having purchased the land from Alvarado's heirs, Henry Gird constructed a frame house in 1878. In 1914, his family built a 4,000-square-foot concrete home. Throughout time, the Gird family sold parcels of Rancho Monserrate to the growing community (Moyer 1969; Bonsall Community Sponsor Group 2016).

Development of the area was a result of the expansion of roads, the creation of water districts, and the construction of railways. In the 1870s, the Southern California Railway Surveys recorded the area of Mount Fairview in the southeastern quarter of Fallbrook. In 1871, the name was changed to Osgood in honor of chief engineer Joseph O. Osgood (Your North County 2016). However, in 1889, the people of Osgood looked to change the name again, choosing the options of "Reed," "Favorite," or "Bonsall." The name Bonsall was chosen in commemoration of James Bonsall, a retired Methodist minister who came to the area after his wagon broke down while transporting lumber through Gopher Canyon. He purchased land from a settler in the area and used it to create a fruit tree nursery in 1889 (Funk 1984; Rivers 1998a, 1998b; Central Pacific Railroad Photographic History Museum 2010; Bonsall Community Sponsor Group 2016).

According to post office records, Bonsall was given was given its first post office in 1890. In addition to delivering mail, the postman would also take cream from the ranches and farms in the area to Oceanside to then be delivered by train to San Diego (Funk 1984; Rivers 1998a, 1998b). Along with the post office, the town consisted of four other nonresidential buildings: a blacksmith, the George D. Stevens & Co. general store, a hotel, and a schoolhouse. Surrounding the schoolhouse and hotel were ranches and small farms.

1.2.2 Results of the Archaeological Records Search

An archaeological records search for a one-mile radius around the project area was conducted by the SCIC at SDSU, the results of which were reviewed by BFSA. The SCIC reported that 45 previously recorded archaeological sites are recorded within the one-mile search radius (Table 1.2–1). Eight of these sites were recorded within the project boundaries (SDI-776 [loci A through I], SDI-1083, SDI-8237, SDI-12,550, SDI-20,174, P-37-028134, P-37-028139, and P-37-031762), and include one site with four bedrock milling feature loci and five prehistoric isolate loci, one prehistoric habitation site, prehistoric rock art, one bedrock milling feature site with a rock ring, one historic irrigation system, a historic road, one historic isolate, and historic cisterns. The remaining 37 cultural resource locations recorded within a one-mile radius of the project area include one historic reservoir, two historic roads, five prehistoric isolates, one piece of burned shell, one historic earthen dam, one historic isolate, three historic irrigation systems, one historic adobe, one bedrock milling feature site with an associated midden deposit and an artifact scatter, three bedrock milling feature sites, one prehistoric lithic scatter, one prehistoric lithic scatter with a possible rock enclosure, one prehistoric shell scatter, one prehistoric rock art site, one prehistoric

habitation site (which subsumed another recorded site within the search radius), two prehistoric midden deposits with shell and/or lithic scatters, seven small prehistoric camps, two prehistoric artifact scatters, and one multicomponent artifact scatter.

Table 1.2–1
Cultural Resources Within One Mile of the Project Area

Site Number	Site Type	Site Dimensions	Report Reference/Recorded By
P-37-028133	Historic Reservoir	15x25 feet	EDAW, Inc.
P-37-028134*	Historic Dulin Road/San Luis Rey Mission to Pala Asistencia Travel Route	3.5 miles	EDAW, Inc.; subsequently updated by ASM Affiliates
P-37-028135	Historic Route 395	0.1 miles	EDAW, Inc.
P-37-028136	Historic Gird Road	0.1 miles	EDAW, Inc.
P-37-028137	Prehistoric Isolate	N/A	EDAW, Inc.; subsequently updated by ASM Affiliates
P-37-028138	Prehistoric Isolate	N/A	EDAW, Inc.
P-37-028139*	Historic Isolate	N/A	EDAW, Inc.
P-37-030071	Prehistoric Isolate	N/A	EDAW, Inc.
P-37-030072	Prehistoric Isolate	N/A	EDAW, Inc.
P-37-031757	Historic Earthen Dam	Approximately 550 feet in length by 10 to 25 feet in width	ASM Affiliates
P-37-031758	Historic Irrigation System	Unknown	ASM Affiliates
P-37-031759	Historic Isolate	N/A	ASM Affiliates
P-37-031762	Historic Cisterns	Unknown	ASM Affiliates
P-37-031860	Prehistoric Isolate	N/A	AECOM
SDI-674	Small Prehistoric Camp With Bedrock Milling Features, Midden, and "Chipping Waste"	Approximately 0.25 acre	D.L. True; updated by ASM Affiliates, Inc.
SDI-675	Midden Deposits With Observed Shell and Lithics	96x48 meters	D.L. True; updated by DeCosta and then by EDAW, Inc.
SDI-679	Lithic scatter	One acre	D.L. True
SDI-680	Small Prehistoric Camp	50x50 feet	D.L. True
SDI-681	Prehistoric Habitation Site (updated to include SDI-5589)	600x90 meters	D.L. True and Carol Walker; updated by EDAW, Inc.
SDI-684	Small Prehistoric Camp	Unknown	D.L. True
SDI-772	Small Prehistoric Camp With Bedrock Milling Features and Midden	7x16 meters; 112 square meters	D.L. True; updated by Tim Gross; most recently updated by EDAW, Inc.
SDI-776* (Locus A)	Bedrock Milling Feature(s) With Lithic Scatter	100x100 meters	D.L. True; subsequently updated by Regional

Site Number	Site Type	Site Dimensions	Report Reference/Recorded By
			Environmental Consultants, EDAW, Inc., and Caltrans District 11
SDI-776* (Locus B)	Bedrock Milling Feature(s) With Lithic Scatter	120x160 meters	D.L. True; subsequently updated by Regional Environmental Consultants
SDI-776* (Locus C)	Metate Fragment	Unknown	D.L. True; subsequently updated by Regional Environmental Consultants
SDI-776* (Locus D)	Basalt Flake	Unknown	D.L. True; subsequently updated by Regional Environmental Consultants and EDAW, Inc.
SDI-776* (Locus E)	Metate Fragment	Unknown	D.L. True; subsequently updated by Regional Environmental Consultants and EDAW, Inc.
SDI-776* (Locus F)	Metate Fragments	Unknown	D.L. True; subsequently updated by Regional Environmental Consultants and EDAW, Inc.
SDI-776* (Locus G)	Possible Bedrock Milling Feature	Unknown	D.L. True; subsequently updated by Regional Environmental Consultants
SDI-776* (Locus H)	Possible Bedrock Milling Feature	Unknown	D.L. True; subsequently updated by Regional Environmental Consultants
SDI-776* (Locus I)	Metate Fragment	Unknown	D.L. True; subsequently updated by Regional Environmental Consultants and EDAW, Inc.
SDI-783	Prehistoric Midden Area With Lithic Scatter	"Unknown"	D.L. True; subsequently updated by EDAW, Inc.
SDI-784	Prehistoric Camp or Slight Midden	"50x50"	D.L. True
SDI-785	Small Prehistoric Camp With Bedrock Milling Features and Lithic Scatter	¼ acre	D.L. True; subsequently updated by EDAW, Inc.
SDI-1083*	Prehistoric Habitation Site	30x106 meters	D.L. True; subsequently updated by EDAW, Inc.
SDI-1284	Prehistoric Artifact Scatter	100x50 yards	T. Kearns
SDI-1285	Prehistoric Artifact Scatter	30 square yards	T. Kearns
SDI-4543	Burned Shell	Unknown	Unknown; subsequently updated by EDAW, Inc.
SDI-5589	SDI-5589 subsumed by SDI-681; see SDI-681	One acre	D.L. True; subsequently updated by the San Diego County Archaeological Society and EDAW, Inc.

Site Number	Site Type	Site Dimensions	Report Reference/Recorded By
SDI-5590	Prehistoric Camp Site With Bedrock Milling Features and Artifact Scatter	50x40 meters	San Diego County Archaeological Society; subsequently updated by RECON and EDAW, Inc.
SDI-8237*	Prehistoric Rock Art	6x6 meters	Ken Hedges
SDI-8663	Bedrock Milling Feature(s) With Midden Deposit and Artifact Scatter	25x50 meters	RECON
SDI-9855	Bedrock Milling Feature(s)	Unknown	Archaeological Resource Management Corp
SDI-11,911	Prehistoric Lithic Scatter and Possible Rock Enclosure	25x30 meters; 570 square meters	Brian F. Smith and Associates
SDI-12,207/H	Historic Adobe and Associated Debris	175x4 feet	Cultural Resource Management Services; subsequently updated by EDAW, Inc.
SDI-12,550*	Bedrock Milling Feature(s) With Rock Ring Feature	60x50 meters; 3000 square meters	Gallegos and Associates
SDI-12,948	Prehistoric Shell Scatter	12x100 meters; 1200 square meters	Brian F. Mooney Associates
SDI-17,736	Prehistoric Rock Art	2.06x2.7 meters	ASM Affiliates
SDI-17,795	Bedrock Milling Feature(s)	3.0x3.1 meters	SWCA Environmental Consultants
SDI-19,167	Bedrock Milling Feature(s)	3x10 meters	EDAW, Inc.
SDI-19,454	Multicomponent Artifact Scatter	13.8x15.6 meters	Professional Archaeological Services
SDI-20,172	Historic Irrigation System and Retaining Wall	10x25 meters	ASM Affiliates
SDI-20,173	Historic Irrigation System, Well, and Barbed Wire Fence	20x180 meters	ASM Affiliates
SDI-20,174*	Historic Cistern and Irrigation System	195x260 meters	ASM Affiliates

**Located within the project APE*

Five historic addresses have been recorded within one mile of the project APE, mostly clustered to the southwest of the southwesternmost project boundary. In total, 114 cultural resource studies have been conducted within a one-mile radius of the proposed project area, 12 of which included portions of the project area (Smith 1990a; RECON 1977; Case 2002; Daly 1976; Wlodarski 2006a, 2006b; Shalom 2006; Robbins-Wade 2005; Tsunoda 2011a, 2011b; EDAW, Inc. 2009; Ni Ghabhlain et al. 2011). As a result of these studies, within the project APE, sites SDI-20,174 and P-37-031762 were recorded as part of the ASM Affiliates, Inc. 2011 survey (Ni Ghabhlain et al. 2011), RECON updated Site SDI-776 in 1977 (RECON 1977), Site SDI-776 loci A and B were updated by EDAW, Inc. in 2006 (Shalom 2006), and Site SDI-776 was updated by Koji Tsunoda in 2011 (Tsunoda 2011a, 2011b).

Table 1.2–2

Cultural Resource Studies Within One Mile of the Project Area

American Pacific Environmental Consultants, Inc.

1979 Golf Green Estates Draft Environmental Impact Report TM3787; P79; Log#78-2-129. American Pacific Environmental Consultants, Inc. Submitted to Walder Development Co. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

ASM Affiliates

2006 Treatment Plan for Buried Cultural Resources: State Route 76 Widening and Realignment Project Near Bonsall, San Diego County, California. ASM Affiliates. Submitted to California Department of Transportation. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Baksh, Michael

2006 Native American Consultation for the State Route 76 Melrose to Mission Corridor Improvement Project. Tierra Environmental Services. Submitted to Caltrans. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Beddow, Donna

2002a Negative Survey Report for Granger Haugh TPM. Donna Beddow. Submitted to private. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2002b Negative Survey Report for Via Monserate. Donna Beddow. Submitted to private. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2007 Negative Cultural Resources Survey Report for the Pfaff Tentative Parcel Map TPM 21016 / Log No. 0602-005. County of San Diego – Department of Planning and Land Use. Submitted to Stephen and Mary Jo Pfaff. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Berryman, Judy

1991 Cultural Resource Assessment for the San Luis Rey Venture. TMI. Submitted to TRS Consultants. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Berryman, Stanley R.

1977 Archaeological Reconnaissance of Ranch Monserate Project. Berryman Archaeological Consultants. Submitted to Toups Corporation. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Bonner, Wayne and Christeen Taniguchi

2004 Record Search and Site Visit Results for Cingular Telecommunications Facility Candidate SD947-04 (Leatherbury), 3701 Pala Mesa Drive, Fallbrook, California. Michael Brandman Associates. Submitted to Environmental Assessment Specialists, Inc. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Browne & Vogt

1983a Draft Environmental Impact Report San Luis Rey Vistas Proposed Mobile Home Park. Browne & Vogt Civil Engineers Land Surveyors & Planning Cons. Submitted to San Luis Rey Vistas, Inc. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

1983b Proposed Reclamation Plan and Major Use Permit for Sand Mining. Browne & Vogt. Submitted to Los Alamitos Enterprise, Inc. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Bull, Charles S.

1981 Archaeological Resources of Lake Rancho Viejo. Charles S. Bull. Submitted to The Wellington Group. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Caltrans

1982a Archaeological Survey Report for a Proposed Truck Weigh Station on Northbound I-15 11-SD-15 PMR 46.1-R46.7. California Department of Transportation. Submitted to private. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

1982b An Archaeological Survey Report of Route 76 East of Bonsall 11-SD-76, P.M. 13.0-14.3. Caltrans. Submitted to private. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

1987 Historic Property Survey 11-SD-76 P.M. 16.0/16.4. Caltrans. Submitted to private. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Carrico, Richard

1973 Environmental Impact Statement Golf Greens Estates 28.5 Acres. San Diego State University. Submitted to unknown. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Case, Robert

2002 Phase I Cultural Resources Pedestrian Survey for the Lower San Luis Rey River Valley Groundwater Storage and Recovery Program, San Diego County, CA. Money & Associates. Submitted to Tetra Tech, Inc. Unpublished report on file at the South Coastal Information

Center at San Diego State University, San Diego, California.

Clifford, James and Alex Wesson

2006 Cultural Resources Study for the Bether Project, Bonsall, San Diego County, California. SWCA Environmental Consultants. Submitted to Continental Residential, Inc. D/B/A D.R. Horton. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Coleman Planning Group

1991 Appendix to the Groves Draft Environmental Impact Report. Coleman Planning Group. Submitted to Jack Bronwer. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

1992 Draft Environmental Impact Report for: Hidden Hills, A Proposed Residential Subdivision of 55 Lots on 131 Acres in Bonsall, California. Arie de Jong. Submitted to San Diego County Department of Planning and Land Use. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Corum, Joyce

1977 An Archaeological Survey Report for the Proposed Interstate 15/Route 76 Interchange (11-SD-15/76, P.M. 46.3-48.1/16.8-17.7) 11203-095091. CALTRANS. Submitted to CALTRANS. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Daly, Kenneth

1976 Environmental Impact Evaluation: Archaeological Survey of a Portion of the San Luis Rey River Valley Near Bonsall, San Diego County, California. University of California at Riverside, Archaeological Research Unit. Submitted to Albert A. Webb Associates. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

De Barros, Philip

2007 Negative Cultural Resources Survey Report for a 24.61-Acre Parcel at 3624 Monserate Hill Road, Fallbrook, San Diego County, California. Professional Archaeological Services. Submitted to Kachay Homes. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2009 Cultural Resources Survey and Evaluation of the Gainer Stable Project, a 9.36-Acre Parcel at 6893 West Lical Road, APN 127-350-02, Bonsall, San Diego County, California. Professional Archaeological Services. Submitted to County of San Diego Department of Planning and Land Use. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

DeCosta, Joan M.

1982 An Archaeological Survey of Route 76 East of Bonsall, 11-SD-76, P.M. 13.0-1.3, 11245-

185060. Caltrans. Submitted to Caltrans. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Duke, Curt

2003 Cultural Resource Assessment Cingular Wireless Facility No. SD 113-02 Fallbrook, San Diego County, California. LSA Associates, Inc. Submitted to Cingular Wireless. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Eckhardt, Leslie C.

1978 Archaeological – Historical Survey of the San Luis Rey Highlands. Westec Services, Inc. Submitted to San Luis Rey Highlands, Inc. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

EDAW, Inc.

2009 State Route 76 Corridor – SR-76 Highway Improvement Project Historic Property Survey Report. EDAW, Inc. Submitted to California Department of Transportation, Dis. 11. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Fulmer, Scott

1983 Archaeological Survey Report for Proposed Road Widening on Route 76 in San Diego County, 11-SD-76 P.M. 14.8-15.3 (11359-185090). Caltrans. Submitted to Caltrans. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

1984a A Report of an Extended Phase I Investigation at Archaeological Site CA-SDI-5589 San Diego County, California 11-SD-79 P.M. 14.8-15.3 11359-185090. Caltrans. Submitted to Caltrans. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

1984b Request for Determination of Effect CA-SDI-5589. Scott Fulmer. Submitted to National Register of Historic Places. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

1984c First Supplemental Historical Property Survey 11-SD-76. Scott Fulmer. Submitted to National Register of Historic Places. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

1984d Request for Determination of Eligibility for Inclusion in the National Register of Historic Places SDI-5589. Caltrans. Submitted to Office of Historic Preservation. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

1984e Historic Property Survey 11-SD-76 P.M. 14.8-15.3 11359-1185090. Scott Fulmer. Submitted

to Caltrans. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Gallegos, Dennis, Andrew Pigniolo, and Richard Carrico

1987 Cultural Resource Survey of the Brookside Farms Stream Channelization Project, San Diego County, California. WESTEC Services, Inc. Submitted to Brookside Farms. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Hovey, Kevin

2007a Fifth Supplemental Archaeological Survey Report: State Route 76 Widening and Realignment Project Near Bonsall, San Diego County, California. Caltrans. Submitted to California Department of Transportation. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2007b Historic Property Survey Report for the State Route 76 Lemrose to Mission Realignment and Widening Project. Caltrans. Submitted to private. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Iversen, Dave

2008 West Lilac Farms Project Negative Cultural Resources Survey Report. ASM Affiliates. Submitted to West Lilac Farms LLC. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Jordan, Stacey C., Andrea M. Craft, Michael J. Wise, and Joshua Patterson

2006 Archaeological Survey Report for the Realignment of State Route 76, San Diego County, California. Mooney, Jones & Stokes. Submitted to Caltrans District 11. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Joyner, Kathie and Anna Noah

1989 Fallbrook Drainage and Flood Control. Kathie Joyner. Submitted to County of San Diego Public Works. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Kwiatowski, Heather

2008 Cultural Resources Survey Report for Dabbs-TM 5346. Department of Planning and Land Use. Submitted to private. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Laylander, Don

2003a Archaeological Survey Report for the State Route 76 Widening and Realignment Project Near Bonsall, San Diego County, California. ASM Affiliates. Submitted to California Department of Transportation. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2003b Negative Archaeological Survey Report – First Supplemental – for the Proposed Widening of SR-76 Between Melrose Drive and South Mission Road. ASM Affiliates. Submitted to Caltrans. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2004a Negative Archaeological Survey Report – Second Supplemental – for the Proposed Widening of SR-76 Between Melrose Drive and South Mission Road. ASM Affiliates. Submitted to Caltrans. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2004b Negative Archaeological Survey Report – Third Supplemental – for the Proposed Widening of SR-76 Between Melrose Drive and South Mission Road. ASM Affiliates. Submitted to Caltrans. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2004c Extended Phase I Testing at Five Prehistoric Archaeological Sites (SDI-1260, -6003, -14,047, -16,497, and -16,499) Near Bonsall, San Diego County, California. ASM Affiliates. Submitted to California Department of Transportation. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2006a Archaeological Survey Report for the Morrison Advanced Mitigation Parcels, Near Bonsall, San Diego County, California. ASM Affiliates. Submitted to California Department of Transportation. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2006b Archaeological Survey Report for the Groves Advanced Mitigation Parcels Near Bonsall, San Diego County, California. ASM Affiliates. Submnitted to California Department of Transportation. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Loftus, Shannon

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- The National Register of Historic Places (NRHP) Index
- The Office of Historic Preservation, Archaeological Determinations of Eligibility
- The Office of Historic Preservation, Directory of Properties in the Historic Property Data File
- San Diego County 1872 map
- San Diego County Historic Roads (1769-1885)
- *Bonsall* USGS topographic map (7.5-minute series)

These sources did not indicate the presence of cultural resources within or immediately adjacent to the project.

1.3 Applicable Regulations

Resource importance 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, and culture. A number of criteria are used in demonstrating resource importance. Specifically, criteria outlined in CEQA, the County of San Diego RPO, and the San Diego County Local Register provide the guidance for making such a determination. The following sections detail the criteria that a resource must meet in order to be determined important.

1.3.1 California Environmental Quality Act

According to CEQA, §15064.5(a), the term "historical resource" includes the following:

1) A resource listed in, or determined to be eligible by, the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR) (Public Resources Code SS5024.1, Title 14 CCR. Section 4850 et seq.).

2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3) Any object, building, structure, site, area, place, record, or manuscript, which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. 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 SS5024.1, Title 14, Section 4852), including the following:

    a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    b) Is associated with the lives of persons important in our past;
    c) 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
    d) Has yielded, or may be likely to yield, information important in prehistory or history.

4) The fact that a resource is not listed in, or determined eligible for listing in, the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Section 5020.1(j) or 5024.1.

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

1) 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.

2) The significance of an historical resource is materially impaired when a project:

    a) 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
    b) 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,
    c) 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.

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

1. 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).
2. 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, Section 15126.4 of the guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
3. 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 21803.2 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.
4. If an archaeological resource is neither a unique archaeological nor 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 Environmental Impact Report, 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:

> (d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, the lead agency shall work with the appropriate Native Americans as identified by the NAHC as provided in Public Resources Code SS5097.98. 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 NAHC. Action implementing such an agreement is exempt from:
>
> 1) 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).
> 2) The requirement of CEQA and the Coastal Act.

1.3.2 San Diego County Local Register of Historical Resources (Local Register)

The County requires that resource importance be assessed not only at the state level as required by CEQA, but at the local level as well. If a resource meets any one of the following criteria as outlined in the Local Register, it will be considered an important resource:

1) Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;
2) Is associated with the lives of persons important to the history of San Diego or its communities;
3) Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4) Has yielded, or may be likely to yield, information important in prehistory or history.

1.3.3 County of San Diego Resource Protection Ordinance

The County of San Diego's RPO protects significant cultural resources. The RPO defines "Significant Prehistoric or Historic Sites" as follows:

> Location of past intense human occupation where buried cultural deposits can provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, State, or Federal importance. Such locations shall include, but not be limited to:

1) Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:

    a) Formally determined eligible or listed in the NRHP by the Keeper of the National Register; or
    b) To which the Historic Resource ("H" Designator) Special Area Regulations have been applied; or

2) One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials; and
3) Any location of past or current sacred religious or ceremonial observances, which is either:

    a) Protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures, or
    b) Other formally designated and recognized sites, which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

The RPO does not allow non-exempt activities or uses damaging to significant prehistoric or historic lands on properties under County of San Diego jurisdiction. The only exempt activity is scientific investigation authorized by the County. All discretionary projects are required to be in conformance with applicable County of San Diego standards related to cultural resources, including the noted RPO criteria for prehistoric and historic sites. Non-compliance would result in a project that is inconsistent with the County's standards.

2.0 GUIDELINES FOR DETERMINING SIGNIFICANCE

Pursuant to County of San Diego *Guidelines for Determining Significance, Cultural Resources: Archaeological and Historic Resources* (September 26, 2006; Revised December 5, 2007), any of the following will be considered a significant impact to cultural resources:

1) The project, as designed, causes a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State CEQA Guidelines.
2) The project, as designed, causes a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines.
3) The project, as designed, disturbs any human remains, including those interred outside of formal cemeteries.
4) The project proposes non-exempt activities or uses damaging to, and fails to preserve, significant cultural resources as defined by the RPO.

Guidelines 1 and 2 are derived directly from CEQA. Sections 21083.2 and 15064.5 of the State CEQA Guidelines require evaluating historical and archaeological resources to determine whether or not a proposed action would have a significant effect upon 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 NAHC, for any project in which human remains have been identified. Guideline 4 was selected because the RPO requires that cultural resources be considered when assessing environmental impacts. Any project that would have an adverse impact (direct, indirect, or cumulative) on significant cultural resources, as defined by Guideline 4, would be considered a significant impact. The only exemption is scientific investigation.

Traditional Cultural Properties

AB 52 became effective on July 1, 2015, requiring the evaluation of TCRs under CEQA. The regulation requires that projects be evaluated for the presence of TCRs (including heritage values to tribes), and that appropriate mitigation be implemented should TCRs be located within a project site.

Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regards to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the project site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Potentially relevant to prehistoric archaeological sites is the category termed Traditional

Cultural Properties (TCPs) in discussions of cultural resource management (CRM) performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices.

The County of San Diego Guidelines identify that cultural resources can also include TCPs, such as gathering areas, landmarks, and ethnographic locations, in addition to archaeological districts (2007). These guidelines incorporate both state and federal definitions of TCPs. Generally, a TCP may consist of a single site, a group of associated archaeological sites (district; traditional cultural landscape), or an area of cultural/ethnographic importance.

The Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American representatives during the project planning process. The intent of this legislation is to encourage consultation and assist in the preservation of "Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance" (County of San Diego 2007). It further allows for tribal cultural places to be included in open space planning. AB 52, which went into effect as of July 1, 2015, introduces the TCR as a class of cultural resource and the need for additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally defined TCP; however, it incorporates consideration of local and state significance and required mitigation under CEQA. A TCR may be considered significant if it: is included in a local or state register of historical resources; is determined by the lead agency to be significant pursuant to criteria set forth in Public Resources Code §5024.1; is a geographically defined cultural landscape that meets one or more of these criteria; is a historical resource described in Public Resources Code §21084.1; is a unique archaeological resource described in Public Resources Code §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

In 1990, the National Park Service and Advisory Council for Historic Preservation introduced the term TCP through National Register Bulletin 38 (Parker and King 1990). A TCP may be considered eligible based upon "its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1990:1). Strictly speaking, TCPs are both tangible and intangible; they are anchored in space by cultural values related to community-based, physically defined "property referents" (Parker and King 1990:3). On the other hand, TCPs are largely ideological, a characteristic that may present substantial problems in the process of delineating specific boundaries. As such, a property's extent is based upon community conceptions of how the surrounding physical landscape interacts with existing cultural values. By its nature, a TCP need only be important to community members and not the general outside population as a whole. In this way, a TCP boundary, as described by Bulletin 38, may be defined based upon viewscape, encompassing topographic features, extent of archaeological district or use

area, or a community's sense of its own geographic limits. Regardless of why a TCP is of importance to a group of people, outsider acceptance or rejection of this understanding is made inherently irrelevant by the relativistic nature of this concept.

3.0 RESEARCH DESIGN

The primary goal of the research design is to attempt to understand the way in which humans have used the land and resources within the project through time, as well as to aid in the determination of resource significance. For the current project, the study area under investigation is the northern inland foothills of San Diego County and the San Luis Rey River Valley. The scope of work for the cultural resources study conducted for the Ocean Breeze Ranch Project included the survey of a 1,402.52-acre area. Given the area involved and the recorded presence of archaeological sites, the research design for this project was focused upon realistic study options. Since the main objective of the investigation was to identify the presence of and potential impacts to cultural resources, the goal here is not necessarily to answer wide-reaching theories regarding the development of early southern California, but to investigate the role and importance of the identified resources. Nevertheless, the assessment of the significance of a resource must take into consideration a variety of characteristics, as well as the ability of the resource to address regional research topics and issues.

Although elementary site testing programs are limited in terms of the amount of information available, several specific research questions were developed that could be used to guide the initial investigations of any observed cultural resources. The following research questions take into account the small size and location of the project area discussed above.

Research Questions:

- Can located cultural resources be situated with a specific time period, population, or individual?
- Do the types of located cultural resources allow a site activity/function to be determined from a preliminary investigation? What are the site activities? What is the site function? What resources were exploited?
- How do the located sites compare to others reported from different surveys conducted in the area?
- How do the located sites fit existing models of settlement and subsistence for valley and inland foothill environments of the region?

Data Needs

At the test level, the principal research objective is a generalized investigation of changing settlement patterns in both the prehistoric and historic periods within the study area. The overall goal is to understand settlement and resource procurement patterns of the project area occupants. Therefore, adequate information on site function, context, and chronology from an archaeological perspective is essential for the investigation. The fieldwork and archival research were undertaken with the following primary research goals in mind:

1) To identify cultural resources occurring within the project;
2) To determine, if possible, site type and function, context of the deposit, and chronological placement of each cultural resource identified;
3) To place each cultural resource identified within a regional perspective; and
4) To provide recommendations for the treatment of each of the cultural resources identified.

4.0 ANALYSIS OF PROJECT EFFECTS

The cultural resources study of the project consisted of an institutional records search, an intensive cultural resource survey of the entire 1,402.52-acre project, and the detailed recordation of all identified archaeological sites. This study was conducted in conformance with County of San Diego environmental guidelines, Section 21083.2 of the California Public Resources Code, and CEQA. Statutory requirements of CEQA (Section 15064.5) were followed for the identification of each cultural resource, in addition to the County of San Diego RPO. Specific definitions for archaeological resource type(s) used in this report are those established by the State Historic Preservation Office (SHPO 1995).

4.1 Methods

4.1.1 Survey Methods

The survey methodology employed during the current investigation followed standard archaeological field procedures and was sufficient to accomplish a thorough assessment of the project. Archaeological Field Director Clarence Hoff and field archaeologists James Shrieve David Grabski, Kyle Coulter, and Richard Savitch conducted the intensive pedestrian survey on March 13, 14, 15, 17, and 19, 2014 and April 17, 2014 under the direction of Principal Investigator Brian Smith. The survey was undertaken with the assistance of Banning Taylor, a Luiseño Native American representative from Saving Sacred Sites.

The field methodology employed for the project included walking evenly-spaced survey transects set approximately five meters apart and oriented north to south across the property on the flat to gently sloping areas of the northern two-thirds of the property, while transects were less regular on the steep slopes that characterize the south and east areas of the property. All potentially sensitive areas where cultural resources might be located were closely inspected. Photographs documenting survey discoveries and overall survey conditions were taken frequently.

The survey process was limited in some areas by ground cover, particularly in the area of the horse facility, where the fields of grass and permanent buildings and enclosures obscure the ground surface and prevented the observation of any artifacts that might be otherwise visible on the ground surface. The agricultural fields in the central area of the property were temporarily problematic due to issues related to the chemical quarantine of the area for a period of time. Eventually, all of the property was able to be studied. All newly recorded cultural resources were recorded as necessary, and all previously recorded resources were updated, according to the Office of Historic Preservation's manual, *Instructions for Recording Historical Resources,* using Department of Parks and Recreation (DPR) forms.

4.1.2 Test Methods

The testing program and evaluation of the project, which was implemented in accordance with the approved testing program by the County of San Diego on March 16, 2016 (Appendix H),

were implemented on March 17, 18, 21 through 24, and 28 through 30, 2016, and April 11, 12, 21, and 22, 2016 by Brian Smith, consulting archaeologist and archaeological Field Director Clarence Hoff, with field archaeologists James Shrieve, David Grabski, Kyle Coulter, Richard Savitch, Eric Rodriguez, and Kirstie McPeek, with the assistance of Ray Mojado, Shelly Nelson, John Chavez, and P.J. Stoneburner, Luiseño Native American representatives from Saving Sacred Sites. Of the sites identified within the project APE, SDI-776A through I and SDI-1083 were subjected to subsurface tests. The remaining sites are either outside the development envelope or do not require subsurface testing as part of their evaluation. All sites were recorded using Trimble Nomad Global Positioning System (GPS) instruments. Sites with milling features were mapped in detail and recorded with the appropriate milling feature forms. Only SDI-776A and B exhibited surface artifacts.

The testing program was accomplished using shovel test pits (STPs). The STPs were circular and measured 25 centimeters in diameter and up to 110 centimeters in depth. The STPs were excavated in contour levels (levels that parallel the original ground surface) that were each 10 centimeters in depth. All excavated sediments were passed through one-eighth-inch mesh hardwire screens. Only the STPs excavated at SDI-776A and B returned positive results. The locations of all tests were mapped via GPS. All field data was recorded on appropriate forms, and photographs were used to document the excavations.

4.1.3 Laboratory and Cataloging Procedures

In keeping with generally accepted archaeological procedures, any specimens collected during archaeological investigations were categorized as to artifact form, mineralogy, and function. Comparative collections curated in the BFSA laboratory are often helpful in identifying the unusual or highly fragmentary specimens. The cataloging process for specimens utilizes a classification system commonly employed in this region. After cataloging and identification, the collections are marked with the appropriate provenience and catalog information, then packaged for permanent curation. Acid-free paper and packaging materials that meet federal standards and the guidelines of the San Diego Archaeological Center (SDAC) are used for the preparation of artifacts for curation.

4.1.4 Curation

All project field notes, photographs, and reports will be curated at the offices of BFSA in Poway, California. Artifacts, copies of field notes, and the final cultural resources study will be submitted for permanent curation to the SDAC, submitted to a culturally affiliated tribal curation facility, or repatriated to a culturally affiliated Native American tribe.

4.1.5 Native American Participation

Banning Taylor, Ray Mojado, Shelly Nelson, John Chavez, and P.J. Stoneburner, Luiseño Native American representatives from Saving Sacred Sites, were present during the current survey and testing phase of the project.

4.2 Results of the Field Survey

The survey methodology employed during the current investigation followed standard archaeological field procedures and was sufficient to accomplish a thorough assessment of the project. The survey process was limited in some areas by ground cover, particularly in the area of the horse facility, where the fields of grass and permanent buildings and enclosures obscure the ground surface and prevented the observation of any artifacts that might be otherwise visible on the ground surface. The agricultural fields in the central area of the property were temporarily problematic due to issues related to the chemical quarantine of the area for a period of time. Eventually, all of the property was able to be studied.

In general, the property follows a gradual slope downward in elevation from the northeastern reaches of the APE to the southwestern terminus. The archaeological survey of the property was an intensive reconnaissance consisting of a series of parallel survey transects spaced at approximately five-meter intervals. Photographs documenting survey discoveries and overall survey conditions were taken frequently (Plates 4.2–1 and 4.2–2). During the pedestrian survey, the observation was made that the impacts to the property include the establishment of dirt roads, agricultural uses, general weed abatement activity, and the construction of several residential and equestrian buildings and fencing for horse rinks and pastures. The least amount of disturbance was noted in the northeastern portion of the project area, even though this area has been highly burned in the recent past.

The current status of the property appears to have affected the potential to discover any surface scatters of artifacts. All potentially sensitive areas where cultural resources might be located were closely inspected. During the archaeological survey, three previously unrecorded archaeological sites (SDI-21,874, SDI-21,875, and SDI-21,876) and one historic structure complex (P-37-035850) were identified. During the survey, sites SDI-776A through SDI-776I, SDI-1083, SDI-8237, SDI-20,174, and P-37-028134 were relocated within the APE. In some instances, the site location was relocated, but the recorded artifacts and features were not. However, the recorded locations of the sites identified by the SCIC were recorded and tested as appropriate. Sites SDI-12,550 and P-37-028139 could not be relocated. The locations of the sites identified within the project APE are illustrated on the attached map (Figure 4.2–1).

Plate 4.2–1: Overview of the project, looking west.

Plate 4.2–2: Overview of the project, looking southwest.

Figure 4.2–1
Cultural Resources Location Map

(Deleted for Public Review; Bound Separately)

4.3 Field Investigation

The following section provides the pertinent field results for the evaluation of significance of the Ocean Breeze Ranch Project. The testing program was implemented for both the relocated and previously unrecorded sites in accordance with County of San Diego guidelines and site evaluation protocols on March 17, 18, 21 through 24, and 28 through 30, 2016, and April 11 and 12, 2016, with the assistance of Ray Mojado, Shelly Nelson, John Chavez, and P.J. Stoneburner, Luiseño Native American representatives from Saving Sacred Sites. The milling features that characterize SDI-776A and B, SDI-776G, SDI-776H, and SDI-21,874 were recorded in detail. The potential for subsurface deposits was assessed through STP excavations at SDI-776A through I and SDI-1083. For SDI-776A and B, two test units were excavated.

4.3.1 Site SDI-776A and B

Previous Work

Site SDI-776 Locus A and Locus B was originally recorded in the 1960s by Delbert True, and then updated in 1977 by Charles Bull, as a village or semi-permanent camp area with associated milling features. Originally, SDI-776 was split into Loci A through I; however, these sites were largely widespread and lacked any direct association. Additional studies reviewing and updating Loci A and B, however (Shalom 2006; Tsunoda 2011a, 2011b), further refined the site boundaries and indicated that SDI-776A and B were likely one continuous site. Previous studies (Bull 1977) identified the presence of milling, ceramics, shell, lithic materials, projectile points, midden deposits, and other materials associated with a habitation deposit.

Current Study

Portions of SDI-776A and all of SDI-776B are located within the APE for the Ocean Breeze Ranch Project, as recorded by the SCIC at SDSU. Considering the results of previous studies, both loci were treated as a single site (SDI-776A and B) for the purpose of significance testing; however, the two loci will be evaluated separately as SDI-776A and SDI-776B. The portion of SDI-776A and B within the project includes 65 bedrock milling features, a rich midden deposit, and a moderate density of surface and subsurface cultural materials. The areas of Locus A and Locus B are separated by a distance of 100 meters where very few artifacts or milling features were recorded. The distinctions between the two loci are important. Locus A on the north terrace above the San Luis Rey River contains a significant cultural deposit averaging a meter in depth. Locus B has very little midden but contains a large number of milling features with several deep mortars and slicks indicating an intense food grinding and processing location. Based upon the current project plans, portions of SDI-776A are situated within the proposed secondary access road alignment (Figure 4.3–1). Site SDI-776B will not be directly affected by the project. In order to appropriately evaluate the site within the APE, the site was relocated and subjected to an intensive testing program as part of the current investigation.

Figure 4.3–1
Excavation Location Map
Site SDI-776A and B

(Deleted for Public Review; Bound Separately)

The landscape within Site SDI-776A and B contains a large amount of bedrock outcrops. Some areas of the site have been disturbed, with evidence of past clearing, farming, equestrian traffic, and road grading. In addition, many of the exposed bedrock outcrops at the site are extensively exfoliated, which suggests that more milling elements may have been present, but are now unidentifiable. Vegetation at the site consists of pockets of native coastal sage scrub species, coast live oak trees around the rock outcrops, and dense growth of non-native grasses and weeds over the majority of the site. Elevations at the site range from approximately 245 to 275 feet AMSL. The general configuration of the site is shown in Figure 4.3–1 and pictured in Plate 4.3–1 (see Appendix F in the Confidential Appendix). A site form update with the updated site boundary (as shown in Figure 4.3–1) will be submitted to the SCIC at SDSU as part of this study.

Testing of Site SDI-776A and B consisted of removing soils and vegetation from the margins of bedrock to search for grinding surfaces, mapping and recording all milling features within and adjacent to the APE, mapping and collecting surface artifacts, and excavating 51 STPs and two test units. The testing program at Site SDI-776A and B was conducted on March 17, 18, 21 through 24, and 28 through 30, 2016 using standard archaeological methodologies. Results of these field investigations are discussed below.

Surface Collection

The entire surface of the site was inspected for artifacts and features, and a datum was established. The datum and all artifacts and features were mapped using a handheld Trimble GPS unit providing sub-meter mapping accuracy. Vegetation consisted of dense grass over most of the site, and subsequently, surface visibility was poor across the majority of the site. A total of 65 bedrock milling features and 88 surface artifacts were identified at Site SDI-776A and B. The locations of these features and artifacts are shown on Figure 4.3–1.

The 65 bedrock milling features (recorded as BMF A through BMF MMM) identified at Site SDI-776A and B contain a total of 226 grinding surfaces (155 slicks, four basins, 33 mortars, 10 mortar starts, 14 collars, two collar remnants, seven rubs, and one oval), most of which were identified as slicks (Table 4.3–1). The majority of the milling features were identified within Locus B. The surfaces of the bedrock outcrops were extremely weathered, and therefore, the edges of the grinding surfaces were often difficult to identify. Photographs and sketches of the 65 identified milling features are provided in Appendix F.

Table 4.3–1
Bedrock Milling Feature Data
Site SDI-776A and B

Feature	Locus	Milling Surface	Type	Dimensions (cm)		
				Length	Width	Depth
A	A	1	Slick	30.0	13.0	<1.0

Feature	Locus	Milling Surface	Type	Dimensions (cm)		
				Length	Width	Depth
		2	Mortar	20.0	20.0	12.0
B	A	1	Mortar	15.0	13.0	5.0
		2		20.0	20.0	12.0
C	A	1	Mortar Start	17.0	16.0	4.0
D	A	1	Slick	36.0	20.0	<1.0
E	A	1	Slick	20.0	13.0	<1.0
		2	Mortar Start	18.0	14.0	4.0
F	A	1	Mortar	15.0	13.0	4.0
		2	Collar	19.0	17.0	<1.0
G	A	1	Slick	22.0	18.0	<1.0
		2		23.0	18.0	<1.0
		3		24.0	17.0	1.0
		4		30.0	25.0	<1.0
		5		29.0	20.0	3.0
		6		28.0	14.0	4.0
		7	Collar	35.0	36.0	<1.0
		8	Mortar	18.0	18.0	5.0
		9	Slick	30.0	28.0	<1.0
		10		42.0	23.0	<1.0
		11		19.0	14.0	<1.0
		12		30.0	22.0	3.0
		13	Mortar	18.0	15.0	7.0
H	A	1	Mortar Start	22.0	22.0	7.0
I	A	1	Oval	31.0	13.0	6.0
J	A	1	Slick	33.0	26.0	<1.0
		2	Mortar	23.0	22.0	14.0
		3	Collar	36.0	25.0	2.0
		4	Slick	13.0	13.0	<1.0
		5	Mortar	20.0	19.0	17.0
		6	Slick	24.0	18.0	<1.0
		7	Mortar	19.0	19.0	16.0
		8	Slick	26.0	14.0	<1.0
		9		30.0	26.0	<1.0
K	A	1	Basin	22.0	15.0	2.0
L	A	1	Slick	36.0	22.0	2.0
M	A	1	Slick	48.0	30.0	<1.0
N	A	1	Slick	28.0	24.0	<1.0
		2		36.0	20.0	<1.0
O	A	1	Slick	20.0	17.0	<1.0

Feature	Locus	Milling Surface	Type	Dimensions (cm)		
				Length	Width	Depth
P	A	1	Slick	39.0	36.0	<1.0
Q	A	1	Slick	18.0	12.0	<1.0
R	B	1	Slick	18.0	15.0	2.0
		2		25.0	19.0	1.0
		3		24.0	17.0	2.0
		4		23.0	21.0	<1.0
		5		40.0	28.0	2.0
		6		18.0	15.0	2.0
		7		42.0	30.0	3.0
		8		28.0	13.0	1.0
		9		32.0	21.0	<1.0
		10		33.0	25.0	<1.0
S	B	1	Slick	29.0	23.0	1.0
		2		26.0	17.0	1.0
		3		18.0	17.0	1.0
		4		64.0	41.0	3.0
		5		27.0	15.0	2.0
		6		33.0	24.0	2.0
		7		29.0	17.0	<1.0
		8		46.0	42.0	2.0
T	B	1	Slick	20.0	17.0	1.0
U	B	1	Slick	39.0	29.0	<1.0
V	B	1	Slick	36.0	24.0	<1.0
		2		36.0	23.0	1.0
		3		32.0	24.0	<1.0
		4	Collar	31.0	28.0	1.0
		5	Mortar Start	17.0	14.0	2.0
		6	Slick	31.0	24.0	1.0
W	B	1	Slick	42.0	20.0	1.0
		2		27.0	18.0	1.0
		3	Basin	40.0	25.0	3.0
		4	Slick	14.0	12.0	<1.0
		5		26.0	21.0	1.0
X	B	1	Slick	37.0	19.0	<1.0
Y	B	1	Slick	59.0	22.0	1.0
		2		45.0	32.0	1.0
		3		28.0	26.0	1.0
		4		18.0	13.0	<1.0
		5		20.0	20.0	1.0

Feature	Locus	Milling Surface	Type	Dimensions (cm)		
				Length	Width	Depth
Z	B	1	Slick	37.0	31.0	<1.0
		2		54.0	49.0	<1.0
		3		34.0	22.0	<1.0
		4		31.0	26.0	<1.0
		5		27.0	24.0	<1.0
		6		34.0	25.0	<1.0
		7		38.0	22.0	<1.0
		8		28.0	26.0	<1.0
		9		22.0	17.0	<1.0
		10		54.0	36.0	<1.0
		11	Basin	28.0	19.0	4.0
AA	B	1	Slick	24.0	26.0	0.1
		2	Rub	117.0	59.0	1.0
		3	Slick	39.0	38.0	1.5
		4	Mortar	26.0	25.0	16.0
		5	Collar	56.0	53.0	1.5
		6	Slick	62.0	40.0	1.0
		7		26.0	18.0	1.0
		8	Mortar	16.0	15.0	7.0
		9		20.0	20.0	14.0
BB	B	1	Mortar Start	20.0	18.0	3.0
		2	Collar	48.0	35.0	1.5
		3	Slick	32.0	37.0	1.0
		4		38.0	23.0	0.1
		5		40.0	23.0	0.5
		6		40.0	36.0	1.0
		7		19.0	17.0	-
		8		32.0	25.0	1.0
		9		29.0	23.0	-
		10	Basin	26.0	21.0	2.0
		11	Collar	42.0	39.0	1.0
CC	B	1	Slick	26.0	16.0	-
		2		27.0	19.0	1.0
		3	Mortar	21.0	21.0	13.0
		4	Collar	61.0	47.0	2.0
		5	Slick	29.0	20.0	0.5
		6		36.0	29.0	0.5
		7		34.0	28.0	-
		8	Mortar	22.0	20.0	3.5

Feature	Locus	Milling Surface	Type	Dimensions (cm)		
				Length	Width	Depth
		9	Collar	35.0	40.0	1.5
		10	Slick	22.0	13.0	1.0
DD	B	1	Mortar Start	19.0	18.0	4.0
		2	Slick	30.0	20.0	1.0
		3		15.0	15.0	0.5
		4	Mortar	22.0	20.0	13.0
		5	Collar Remnant	14.0	5.0	0.5
		6		16.0	9.0	0.5
		7	Slick	19.0	18.0	-
		8	Mortar	20.0	20.0	9.0
		9	Slick	21.0	26.0	-
		10		25.0	23.0	-
EE	B	1	Slick	23.0	22.0	1.0
		2		20.0	19.0	1.0
		3		18.0	12.0	-
FF	B	1	Slick	26.0	25.0	1.5
		2		23.0	22.0	-
GG	B	1	Slick	27.0	27.0	1.0
HH	B	1	Slick	19.0	18.0	1.0
		2	Mortar	23.0	21.0	11.0
		3	Collar	17.0	12.0	1.0
		4	Mortar	22.0	20.0	13.0
		5	Collar	26.0	25.0	1.0
II	B	1	Mortar	21.0	19.0	6.0
		2		20.0	20.0	13.0
		3		23.0	22.0	15.0
		4	Slick	33.0	30.0	0.5
		5		69.0	46.0	1.0
JJ	B	1	Slick	28.0	27.0	1.0
KK	B	1	Slick	23.0	22.0	0.5
LL	B	1	Slick	20.0	16.0	1.0
		2	Mortar	19.0	18.0	4.0
MM	B	1	Slick	75.0	34.0	1.0
NN	B	1	Slick	43.0	24.0	1.0
		2		28.0	27.0	1.5
		3		27.0	19.0	-
OO	B	1	Rub	78.0	39.0	1.5
		2	Slick	39.0	22.0	-
		3		36.0	27.0	1.0

Feature	Locus	Milling Surface	Type	Dimensions (cm)		
				Length	Width	Depth
		4		53.0	44.0	1.5
		5		29.0	28.0	-
PP	B	1	Mortar	26.0	22.0	13.0
		2	Slick	22.0	27.0	0.5
		3	Mortar	23.0	21.0	10.0
		4	Slick	30.0	21.0	0.1
		5		19.0	16.0	3.0
		6	Mortar	34.0	33.0	1.0
QQ	B	1	Slick	16.0	15.0	1.0
		2		23.0	18.0	0.5
		3		39.0	30.0	1.0
		4		21.0	18.0	-
		5		42.0	40.0	1.0
		6		33.0	19.0	0.5
		7		29.0	26.0	0.5
		8		50.0	33.0	-
RR	B	1	Slick	44.0	33.0	1.0
SS	B	1	Slick	25.0	19.0	-
		2		35.0	24.0	0.5
		3	Mortar	26.0	22.0	5.0
		4	Mortar Start	16.0	17.0	1.5
		5		17.0	18.0	2.0
		6	Slick	76.0	56.0	1.5
		7		18.0	17.0	-
TT	B	1	Slick	32.0	27.0	1.0
UU	B	1	Slick	28.0	25.0	0.1
VV	B	1	Slick	22.0	20.0	1.0
WW	B	1	Slick	29.0	19.0	1.0
		2		64.0	52.0	2.0
XX	B	1	Slick	29.0	27.0	-
		2	Mortar Start	22.0	16.0	1.5
		3	Collar	34.0	29.0	-
		4	Rub	55.0	33.0	0.1
		5	Mortar Start	13.0	13.0	1.0
		6	Rub	74.0	38.0	0.1
		7		74.0	47.0	0.1
		8	Mortar	27.0	23.0	4.0
		9		33.0	28.0	6.5
		10	Rub	82.0	68.0	0.1

Feature	Locus	Milling Surface	Type	Dimensions (cm)		
				Length	Width	Depth
		11	Mortar	24.0	23.0	4.0
		12	Collar	50.0	49.0	0.1
		13	Slick	41.0	28.0	1.0
		14		28.0	19.0	0.1
		15	Mortar	19.0	19.0	2.5
		16		22.0	20.0	10.0
		17	Collar	51.0	50.0	3.0
		18	Rub	37.0	34.0	1.0
YY	B	1	Slick	46.0	33.0	0.5
ZZ	B	1	Mortar	26.0	25.0	10.0
AAA	B	1	Slick	45.0	34.0	0.5
BBB	B	1	Slick	32.0	23.0	-
CCC	B	1	Slick	22.0	19.0	-
DDD	B	1	Slick	21.0	20.0	0.5
EEE	B	1	Slick	35.0	31.0	-
		2		25.0	16.0	-
FFF	B	1	Slick	30.0	24.0	0.5
GGG	B	1	Slick	35.0	23.0	-
		2		49.0	33.0	0.5
		3		30.0	27.0	-
		4		45.0	22.0	-
HHH	B	1	Slick	23.0	20.0	1.0
		2		22.0	18.0	-
		3		25.0	19.0	-
III	B	1	Slick	39.0	34.0	2.0
JJJ	B	1	Slick	16.0	14.0	-
		2		26.0	24.0	-
KKK	B	1	Mortar	20.0	12.0	2.0
		2	Slick	45.0	33.0	1.0
LLL	B	1	Slick	25.0	20.0	0.5
MMM	B	Beehive near the feature – photographed, but not measured				

All artifacts observed on the surface of the site were mapped and collected. The surface collection, which was primarily located within Locus A and is summarized in Table 4.3–2, contains 88 artifacts, 5.9 grams of faunal bone, 17.4 grams of faunal shell, and 421.7 grams of fire-affected rock (FAR) from 29 different surface locations. The surface artifact assemblage includes one biface, 57 debitage, three manos, one metate fragment, and 26 ceramic vessel fragments.

Table 4.3–2
Surface Collection Data
Site SDI-776A and B

SC No.	Flaked Stone		Ground Stone		Ceramic	Uncounted Items (grams)			Total*	Percent
	Biface	Debitage	Mano	Metate	Vessel	Faunal Shell	Faunal Bone	FAR		
1	-	1	-	-	-	-	-	-	1	1.14
2	-	2	-	-	-	-	-	-	2	2.27
3	-	2	-	-	-	-	-	-	2	2.27
4	-	-	-	-	1	-	-	-	1	1.14
5	-	1	-	-	-	-	-	-	1	1.14
6	-	-	-	-	-	0.5	-	-	-	-
7	-	2	-	-	-	4.7	-	-	2	2.27
8	-	-	-	-	2	-	-	-	2	2.27
9	-	1	-	-	-	-	-	-	1	1.14
10	-	2	-	-	2	4.7	-	-	4	4.55
11	-	4	-	-	1	1.0	2.5	-	5	5.68
12	-	4	-	-	-	-	-	-	4	4.55
13	1	4	-	-	-	1.8	0.4	-	5	5.68
14	-	3	-	-	4	0.4	1.4	-	7	7.95
15	-	5	-	-	4	2.6	0.5	-	9	10.23
16	-	4	-	-	2	-	-	-	6	6.82
17	-	3	-	-	2	1.7	-	-	5	5.68
18	-	4	-	-	-	-	-	-	4	4.55
19	-	-	-	-	1	-	0.2	-	1	1.14
20	-	3	-	-	-	-	-	-	3	3.41
21	-	4	-	-	1	-	0.4	-	5	5.68
22	-	-	-	-	-	-	-	421.7	-	-
23	-	3	-	-	2	-	-	-	5	5.68
24	-	1	-	-	-	-	0.5	-	1	1.14
25	-	4	-	-	3	-	-	-	7	7.95
26	-	-	-	1	-	-	-	-	1	1.14
27	-	-	-	-	1	-	-	-	1	1.14
28	-	-	2	-	-	-	-	-	2	2.27
29	-	-	1	-	-	-	-	-	1	1.14
Total	1	57	3	1	26	17.4	5.9	421.7	88*	100.00**
Percent	1.14	64.77	3.41	1.14	29.55	-	-	-	100.00**	

**Totals do not include grams*

***Rounded totals may not equal 100.00 percent*

Subsurface Investigation

The potential for subsurface cultural deposits at Site SDI-776A and B was investigated through the excavation of 51 STPs and two standard one-square-meter test units. The STPs were positioned based upon the project limits, topography of the site, and location of surface artifacts and milling features in order to determine the presence and extent of any subsurface expression within the site. The test units were positioned to sample the areas of greatest potential for subsurface deposits based upon surface collection, STP data, and proximity to milling locations in the southern portion of the site.

All of the shovel tests were excavated in decimeter levels to at least 30 centimeters unless bedrock was encountered. Several of the STPs, located in areas with dark midden soil, were excavated until a soil change was encountered. Twenty-three of the 51 STPs excavated within the APE for the current phase of the investigation were positive for cultural material. The locations of the STPs are shown on Figure 4.3–1. Artifacts were recovered during the shovel tests up to a depth of 110 centimeters (STP 9) and include 209 debitage, 43 ceramic vessel fragments, two projectile points, one core, one biface, one metate fragment, one bone tool, one shell bead, one ceramic pipe fragment, 9.1 grams of faunal shell, 46.8 grams of faunal bone, and 498.5 grams of FAR. Detailed recovery information for the STP excavations is presented in Table 4.3–3.

Table 4.3–3
Shovel Test Excavation Data
Site SDI-776A and B

STP	Depth (cm)	Flaked Stone				Ground Stone	Worked Items				Uncounted Items (grams)			Total*	Percent
		Proj. Point	Biface	Core	Deb.	Metate	Bone Tool	Shell Bead	Cer. Pipe	Cer. Vessel	Faunal Bone	Faunal Shell	FAR		
1	0-10	No Recovery													
	10-20														
2	0-10	No Recovery													
	10-20														
	20-30	-	-	-	-	-	-	-	-	1	0.4	-	-	1	0.38
	30-40	No Recovery													
	40-50														
3	0-10	-	-	-	1	-	-	-	-	-	-	-	-	1	0.38
	10-20	No Recovery													
	20-30														
	30-40														
4	0-10	-	-	-	2	1	-	-	-	1	-	-	-	4	1.54
	10-20	-	-	-	-	-	-	-	-	-	-	-	299.2	-	-
	20-30	-	-	-	1	-	-	-	-	-	1.7	-	-	1	0.38
5	0-10	-	-	-	12	-	-	-	-	-	1.5	-	-	12	4.62
	10-20	-	-	-	15	-	-	-	-	1	3.9	-	-	16	6.15

STP	Depth (cm)	Flaked Stone				Ground Stone	Worked Items				Uncounted Items (grams)			Total*	Percent
		Proj. Point	Biface	Core	Deb.	Metate	Bone Tool	Shell Bead	Cer. Pipe	Cer. Vessel	Faunal Bone	Faunal Shell	FAR		
	20-30	-	-	-	10	-	-	-	-	-	1.3	0.3	-	10	3.85
	30-40	-	-	-	5	-	-	-	-	-	0.5	-	-	5	1.92
6	0-10	-	-	-	3	-	-	-	-	3	0.2	-	-	6	2.31
	10-20	-	-	-	6	-	-	-	-	-	1.3	2.4	-	6	2.31
	20-30	-	-	-	11	-	-	-	-	-	2.0	-	-	11	4.23
	30-40	-	-	-	7	-	-	-	-	1	2.2	0.9	-	8	3.08
	40-50	-	-	-	-	-	-	-	-	7	1.9	-	-	7	2.69
	50-60	-	-	-	3	-	-	-	-	-	1.6	-	-	3	1.15
	60-70	-	-	-	-	-	-	-	-	-	-	-	32.0	-	-
	70-73	No Recovery													
7	0-10	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-
	10-20	No Recovery													
	20-30	-	-	-	1	-	-	-	-	-	-	-	-	1	0.38
	30-40	No Recovery													
8	0-10	-	-	-	5	-	-	-	-	-	-	-	-	5	1.92
	10-20	-	-	-	7	-	-	-	-	-	0.6	-	-	7	2.69
	20-30	-	-	-	10	-	-	-	-	1	0.7	-	-	11	4.23
	30-40	-	-	-	4	-	-	-	-	-	0.4	-	-	4	1.54
	40-50	-	1	-	3	-	-	-	-	-	1.6	-	-	4	1.54
	60-70	-	-	-	4	-	-	-	-	-	0.5	-	91.7	4	1.54
	70-80	-	-	-	4	-	-	-	-	1	0.2	-	-	5	1.92
	80-90	-	-	-	4	-	-	-	-	-	0.3	-	-	4	1.54
	90-100	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-
	100-110	No Recovery													
9	0-10	-	-	-	3	-	-	-	-	1	0.1	-	-	4	1.54
	10-20	-	-	-	1	-	-	-	-	1	-	-	-	2	0.77
	20-30	-	-	-	1	-	-	-	-	-	-	-	-	1	0.38
	30-40	-	-	-	1	-	-	-	-	-	2.5	-	-	1	0.38
	40-50	-	-	-	-	-	-	-	-	-	0.5	-	75.6	-	-
	50-60	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-
	60-70	-	-	-	2	-	-	-	-	-	1.2	-	-	2	0.77
	70-80	-	-	-	2	-	-	-	-	-	0.9	-	-	2	0.77
	80-90	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-
	90-100	-	-	-	-	-	-	-	-	-	0.8	-	-	-	-
	100-110	-	-	-	2	-	-	-	-	1	7.7	-	-	3	1.15
10	0-10	-	-	-	9	-	-	-	-	1	1.3	-	-	10	3.85
	10-20	-	-	-	4	-	-	-	-	-	0.1	0.3	-	4	1.54
	20-30	-	-	-	6	-	-	1	-	1	1.6	-	-	8	3.08
	30-40	-	-	-	1	-	-	-	-	1	0.3	-	-	2	0.77

STP	Depth (cm)	Flaked Stone				Ground Stone	Worked Items				Uncounted Items (grams)			Total*	Percent
		Proj. Point	Biface	Core	Deb.	Metate	Bone Tool	Shell Bead	Cer. Pipe	Cer. Vessel	Faunal Bone	Faunal Shell	FAR		
11	0-10	No Recovery													
	10-20	-	-	-	2	-	-	-	-	-	-	-	-	2	0.77
	20-30	No Recovery													
12	0-10	-	-	-	2	-	-	-	-	2	-	0.6	-	4	1.54
	10-20	-	-	-	4	-	-	-	-	1	0.4	3.5	-	5	1.92
	20-30	-	-	-	5	-	-	-	-	1	0.2	0.4	-	6	2.31
	30-40	-	-	-	-	-	-	-	-	-	-	0.04	-	-	-
	40-50	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-
13	0-10	1	-	-	-	-	-	-	-	-	-	-	-	1	0.38
	10-20	No Recovery													
	20-30														
14	0-10														
	10-20														
	20-30														
15	30-40														
	0-10														
	10-20														
	20-30														
16	0-10														
	10-20	-	-	-	1	-	-	-	-	-	-	-	-	1	0.38
	20-30	-	-	-	-	-	-	-	-	1	-	-	-	1	0.38
	30-40	No Recovery													
	40-50														
	50-60														
	60-70														
17	0-10														
	10-20	1	-	-	5	-	-	-	-	-	1.1	-	-	6	2.31
	20-30	-	-	1	2	-	-	-	-	2	-	0.04	-	5	1.92
	30-40	-	-	-	-	-	-	-	-	2	-	-	-	2	0.77
	40-50	-	-	-	1	-	-	-	-	1	-	-	-	2	0.77
	50-60	-	-	-	2	-	1	-	-	1	0.1	-	-	4	1.54
18	0-10	No Recovery													
	10-20														
	20-30														
19	0-10	-	-	-	-	-	-	-	-	1	-	-	-	1	0.38
	10-20	No Recovery													
	20-30	-	-	-	1	-	-	-	-	-	-	-	-	1	0.38
20	0-10	-	-	-	2	-	-	-	-	-	-	-	-	2	0.77
21	0-10	No Recovery													

STP	Depth (cm)	Flaked Stone				Ground Stone	Worked Items				Uncounted Items (grams)			Total*	Percent
		Proj. Point	Biface	Core	Deb.	Metate	Bone Tool	Shell Bead	Cer. Pipe	Cer. Vessel	Faunal Bone	Faunal Shell	FAR		
	10-20														
	20-30														
22	0-10	-	-	-	-	-	-	-	-	2	-	-	-	2	0.77
	10-20	-	-	-	-	-	-	-	-	1	-	-	-	1	0.38
	20-30	No Recovery													
	30-40														
23	0-10														
	10-20														
24	0-10														
	10-20														
	20-30														
25	0-10														
	10-12														
26	0-10														
	10-20														
	20-30														
27	0-10	-	-	-	2	-	-	-	-	-	-	-	-	2	0.77
	10-20	-	-	-	6	-	-	-	-	-	-	-	-	6	2.31
	20-30	-	-	-	7	-	-	-	-	-	-	-	-	7	2.69
	30-40	-	-	-	2	-	-	-	-	-	-	-	-	2	0.77
	40-50	No Recovery													
	50-60														
28	0-10														
	10-20														
	20-30														
29	0-10														
	10-20														
	20-25														
30	0-10	-	-	-	1	-	-	-	1	1	0.1	-	-	3	1.15
	10-20	-	-	-	4	-	-	-	-	-	0.2	-	-	4	1.54
	20-30	No Recovery													
	30-40														
31	0-10														
	10-20														
	20-30														
	30-40														
32	0-10														
	10-20														
	20-30														

STP	Depth (cm)	Flaked Stone				Ground Stone	Worked Items				Uncounted Items (grams)			Total*	Percent
		Proj. Point	Biface	Core	Deb.	Metate	Bone Tool	Shell Bead	Cer. Pipe	Cer. Vessel	Faunal Bone	Faunal Shell	FAR		
33	0-10														
	10-20														
	20-30														
34	0-10														
	10-20														
	20-30														
35	0-10														
	10-20														
	20-30														
36	0-10														
	10-20														
	20-30														
37	0-10														
	10-20														
	20-30														
38	0-10														
	10-20														
	20-30														
39	0-10														
	10-20														
	20-30														
40	0-10														
	10-20														
	20-30														
41	0-10														
	10-20														
	20-30	-	-	-	2	-	-	-	-	-	0.1	-	-	2	0.77
	30-40	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-
	40-50	No Recovery													
42	0-10														
	10-20	-	-	-	2	-	-	-	-	-	0.3	-	-	2	0.77
	20-30	-	-	-	-	-	-	-	-	-	1.3	-	-	-	-
	30-40														
	40-50														
43	0-10	No Recovery													
	10-20														
	20-30														
	30-40														
	40-50														

STP	Depth (cm)	Flaked Stone				Ground Stone	Worked Items				Uncounted Items (grams)			Total*	Percent
		Proj. Point	Biface	Core	Deb.	Metate	Bone Tool	Shell Bead	Cer. Pipe	Cer. Vessel	Faunal Bone	Faunal Shell	FAR		
44	0-10														
	10-20														
	20-30														
45	0-10														
	10-20														
	20-30														
	30-40														
46	0-10														
	10-20														
	20-30														
47	0-10														
	10-20														
	20-30														
48	0-10														
	10-20														
	20-30														
49	0-10														
	10-20														
	20-30														
50	0-10	-	-	-	-	-	-	-	-	2	0.1	-	-	2	0.77
	10-20	-	-	-	2	-	-	-	-	-	-	-	-	2	0.77
	20-30	No Recovery													
	30-40														
	40-50														
51	0-10	-	-	-	-	-	-	-	-	1	-	-	-	1	0.38
	10-20	-	-	-	-	-	-	-	-	1	-	-	-	1	0.38
	20-30	-	-	-	3	-	-	-	-	1	0.9	-	-	4	1.54
	30-40	-	-	-	1	-	-	-	-	-	-	-	-	1	0.38
	40-50	No Recovery													
	50-60														
Total		2	1	1	209	1	1	1	1	43	46.8	9.1	498.5	260*	100.00**
Percent		0.77	0.38	0.38	80.38	0.38	0.38	0.38	0.38	16.54	-	-	-	100.00**	

**Totals do not include grams*

***Rounded totals may not equal 100.00 percent*

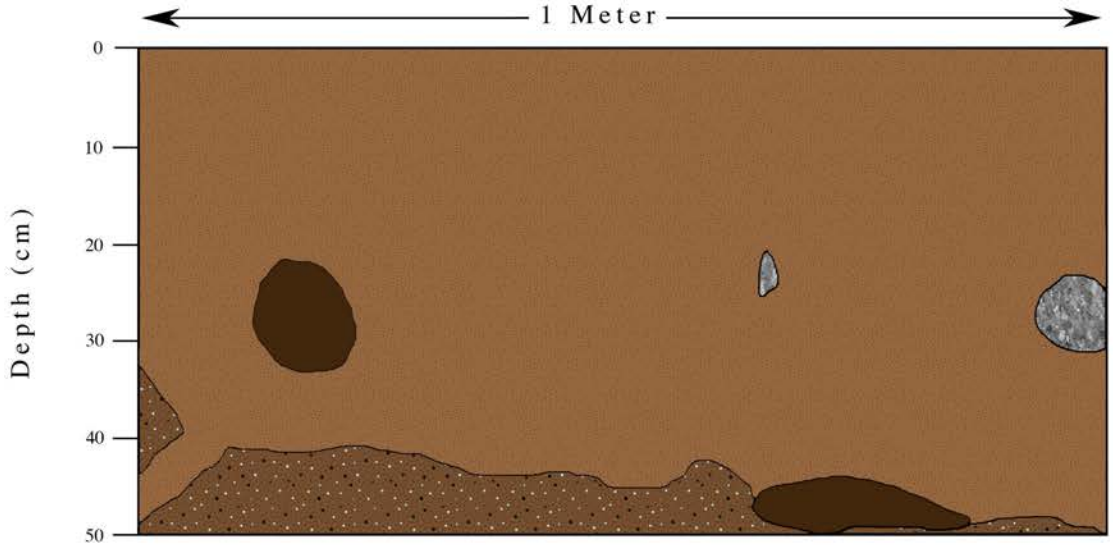
Test Unit 1 (TU 1) was placed within the core area defined by the STP data. The location of TU 1 is shown on Figure 4.3–1. The test unit was excavated in standard decimeter levels to 50 centimeters and all removed soils were processed on-site through one-eighth-inch mesh hardwire cloth. The recovery from TU 1 consists of 179 debitage, six projectile points/fragments, one core, one flake tool, two manos, four bone tools/fragments, two prehistoric pipe fragments, 49 ceramic vessel fragments, 1.8 grams of faunal shell, 73.7 grams of faunal bone, and 248.6 grams of FAR. Recovery information for TU 1 is summarized in Table 4.3–4. The soil from TU 1 was characterized as a dark brown (10YR 3/3), semi-compact, silty midden underlain by decomposing granite. The north wall soil profile of TU 1 is presented in Figure 4.3–2 and Plate 4.3–2.

Table 4.3–4
TU 1 Excavation Data
Site SDI-776A and B

Object Type	Depth (cm)					Total	Percent
	0-10	10-20	20-30	30-40	40-50		
Flaked Stone							
Debitage	29	59	43	33	15	179	73.36
Core	-	1	-	-	-	1	0.41
Projectile Point	-	1	4	-	1	6	2.46
Flake Tool	-	1	-	-	-	1	0.41
Ground Stone							
Mano	-	-	1	1	-	2	0.82
Other Worked Items							
Bone Tool	1	1	2	-	-	4	1.64
Pipe, Prehistoric Ceramic	-	-	1	-	1	2	0.82
Vessel, Prehistoric Ceramic	9	30	7	3	-	49	20.08
Uncounted Items (grams)							
Faunal Bone	6.9	29.4	15.8	8.2	13.4	73.7	-
Faunal Shell	1.0	0.5	0.3	-	-	1.8	-
FAR	-	248.6	-	-	-	248.6	-
Total*	39	93	58	37	17	244	100.00**
Percent	15.98	38.11	23.77	15.16	6.97	100.00**	

**Totals do not include grams*

***Rounded totals may not equal 100.00 percent*



Legend
- Rock
- Semi-Compact, Dark Brown, 10YR 3/3, Silty Midden
- Solid Decomposed Granite
- Krotovina

0 10 20 cm
0 3 6 in

Figure 4.3–2

North Wall Profile of TU 1

Site SDI-776A and B

The Ocean Breeze Ranch Project

Test Unit 2 (TU 2) was positioned to sample the core area of the southern portion of the site, as identified by the STP data and presence of a high frequency of milling features. The location of TU 2 is shown on Figure 4.3–1. The test unit was excavated in standard decimeter levels to 70 centimeters and all removed soils were processed through one-eighth-inch mesh hardwire cloth. The recovery from TU 2 consists of 14 debitage, one mano, and 5.0 grams of faunal bone. Recovery information for TU 2 is summarized in Table 4.3–5. The soil from TU 2 was characterized as a loose, dark brown (10YR 4/3) silt underlain by semi-compact, dark yellowish brown (10YR 3/6) sandy silt. The north wall soil profile of TU 2 is presented in Plate 4.3–3 and Figure 4.3–3.

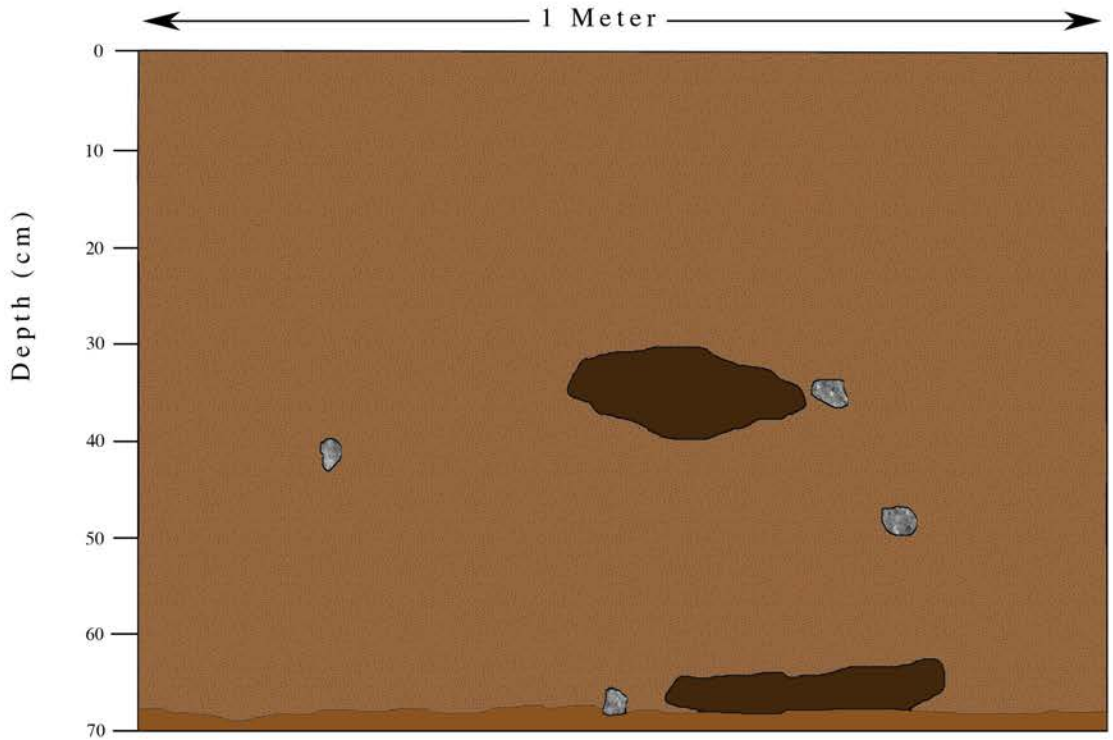
Table 4.3–5
TU 2 Excavation Data
Site SDI-776A and B

Object Type		10-20		30-40		50-60			Percei
Mano		-		-		1			6.67
Total*		3		4		3			100.00

**Totals do not include grams*

***Rounded totals may not equal 100.00 percent*

Plate 4.3–3: TU 2 at Site SDI-776A and B, zero to 70 centimeters.



Legend

- Rock
- Loose, Dark Brown, 10YR 4/3, Silt
- Semi-Compact, Dark Yellowish Brown, 10YR 3/6, Sandy Silt
- Krotovina

0 10 20 cm

0 3 6 in

Figure 4.3–3

North Wall Profile of TU 2

Site SDI-776A and B

The Ocean Breeze Ranch Project

In total, the recovery from Site SDI-776A and B includes 459 debitage, eight projectile points/fragments, two bifaces, two cores, one flake tool, six manos, two metate fragments, five bone tools/fragments, one shell bead, three prehistoric pipe fragments, 118 ceramic vessel fragments, 1,168.8 grams of FAR, 135.1 grams of faunal bone, and 28.5 grams of faunal shell. Total artifact recovery for Site SDI-776A and B is summarized in Table 4.3–6. All artifacts, ecofacts, and features were subjected to analysis and interpretation. The following sections detail the results of these studies.

Table 4.3–6
Summary of Cultural Materials
Recovered From Site SDI-776A and B

Object Type	SC	STP	TU	Total	Percent
Flaked Stone					
Debitage	57	209	193	459	75.62
Core	-	1	1	2	0.33
Projectile Point	-	2	6	8	1.32
Biface	1	1	-	2	0.33
Flake Tool	-	-	1	1	0.16
Ground Stone					
Mano	3	-	3	6	0.99
Metate	1	1	-	2	0.33
Other Worked Items					
Bone Tool	-	1	4	5	0.82
Bead, Shell	-	1	-	1	0.16
Pipe, Prehistoric Ceramic	-	1	2	3	0.49
Vessel, Prehistoric Ceramic	26	43	49	118	19.44
Uncounted Items (grams)					
Faunal Bone	5.9	46.6	79.00	135.1	-
Faunal Shell	17.6	9.1	1.8	28.5	-
FAR	421.7	498.5	248.6	1,168.8	-
Total*	88	260	259	607	100.00**
Percent	14.50	42.83	42.67	100.00**	

**Totals do not include grams*

***Rounded totals may not equal 100.00 percent*

Flaked Lithic Artifacts

Debitage Analysis

Methodology

The preliminary technological review of all debitage sampled was based upon work done by Flenniken (1978, 1981) for analysis and interpretation. Technological lithic analysis based upon replicative data was conducted for all debitage recovered from test unit excavations at SDI-776A and B. Technological reduction stage flake categories were defined by comparing technological attributes of replicated artifacts from known stone tool reduction technologies to the recovered lithic assemblage. By comparing the recovered assemblage to the replicated assemblage in terms of manufacture, reduction stages were assigned to technologically diagnostic debitage. Some debitage, however, was considered technologically undiagnostic because of its fragmented condition. Data from each excavated level was compared to identify changes in the percentages of diagnostic debitage, which can be used to: define a change in reduction techniques in separate and distinct flintknapping activities at different locations throughout the site, delineate different depths in site stratigraphy, or define homogeneity of the deposit. Although technological analysis of flaked stone artifacts from each excavated level is designed to segregate differences in reduction technology, technological differences were not identified either horizontally or vertically within the site matrix. The flaked stone assemblage recovered from SDI-776A and B is extremely homogeneous in terms of reduction technology. However, there is some variation across the site in terms of ratio of tool stone materials and frequency of artifacts.

Debitage classification attributes were divided into reduction-oriented technological categories, and then these categories were segregated into stages. By segregating the technologically diagnostic debitage into technological categories that represent and identify reduction techniques, two different reduction sequences were defined. Both nodule core reduction and biface reduction were identified within the present assemblage. Nodule core debitage was recognized and grouped into technological categories based upon the amount and location of dorsal cortex, platform attributes, dorsal arris count and direction, and flake cross/long-section shape. Debitage was classified according to three platform types identified among the flakes from nodule core reduction: natural/cortical platforms (NP), single-facet platforms (SFP), and multifaceted platforms (MFP). In addition, flakes were further subdivided according to the location of dorsal cortex (*i.e.,* flake categories NP-1 through NP-11 and SFP-1 through SFP-11). The reduction-oriented technological categories of diagnostic flakes were also separated on the basis of geological material types (*i.e.,* metavolcanic, quartz, chert, or obsidian). Flake fragments that lacked the necessary attributes to be placed in one of these categories were classified as undiagnostic fragments. Only the raw material type and presence or absence of cortex was recorded for these artifacts. Interpretation of the reduction sequence from this site was determined using only the technologically diagnostic debitage.

Often, it is possible that two different reduction sequences may or may not be part of a single, interrelated reduction continuum. For instance, bifacial artifacts may have been

manufactured from flake blanks produced from nodule cores, and thus, the collection may be viewed as a single continuum. Reduction stage, as employed for this analysis, is a concept designed to separate a flintknapping continuum for analytical purposes only. The reduction-oriented technological stages (processes) employed in this analysis, the flake categories (based upon replicated artifacts that correspond to the processes), and the flake attributes used to define those categories are all within the nodule core reduction technology that was well established in prehistoric southern California.

All debitage recovered from the excavation of TUs 1 and 2 were analyzed, identified, and assigned to specific technological categories and stages to characterize and provide a basis for understanding the lithic technology(ies) present at the site. Technologically diagnostic debitage was assigned to a specific reduction category, which served as the basis for interpretation of lithic technology. Preliminary analyses indicate that artifacts recovered from the site are intra-site similar in technological character. As such, the sample of the entire excavated assemblage is considered homogeneous. No technological change within the debitage sample was identified either horizontally through the site or vertically across the site. In light of this lack of technological change, all artifacts from the site were combined for the purpose of interpretation of the site's overall lithic technology.

Technological Assessment

Technological review of the artifact sample recovered from the two test units at SDI-776A and B identified three specific reduction technologies that were employed by the site's prehistoric knappers. The assemblage is composed of three reduction technologies, including biface reduction, and to a lesser extent, nodule core reduction and bipolar reduction. As stated previously, these reduction technologies may be part of the same continuum, as flakes from nodule core reduction may have been used as flake blanks for flake-based biface production. In contrast, bipolar reduction may have been specifically employed to reduce smaller nodules of high quality lithic material. The flaked stone assemblage recovered from the current test is an adequate sample to provide an initial characterization of the reduction strategies of the inhabitants of the site. With few exceptions (*i.e.,* obsidian or Monterey chert), all lithic artifacts are made of local materials. Interestingly, the entire lithic material assemblage from Site SDI-776A and B indicates that quartz (N=179) and Piedra de Lumbre (PDL) chert (N=124), rather than metavolcanic (N=83), make up the highest frequency of materials across the site. Of the 193 debitage selected from the test unit excavations, 85 (44.04 percent) are technologically diagnostic of three different reduction technologies (Tables 4.3–7 and 4.3–8), while 108 (55.96 percent) are technologically undiagnostic (Tables 4.3–9 and 4.3–10).

Table 4.3–7
Technologically Diagnostic Debitage Recovered From TU 1
Site SDI-776A and B

Diagnostic Debitage	Material					Total	Percent of Total Debitage
	MV	VOL	Q	OB	PDL		
Nodule Core Reduction							
SFP-1: Flake with single-facet platform and 100 percent dorsal surface cortex	-	1	-	-	-	1	1.27
SFP-11: Flake with single-facet platform and no dorsal surface cortex	5	2	2	-	3	12	15.19
SFP Total	5	3	2	-	3	**13**	**16.46**
Percent of SFP Debitage	38.46	23.08	15.38	-	23.08	100.00	
MFP-11: Flake with multifaceted platform and no dorsal surface cortex	-	-	1	-	-	1	1.27
MFP Total	-	-	1	-	-	**1**	**1.27**
Percent of MFP Debitage	-	-	100.00	-	-	100.00	
Nodule Core Reduction Total	5	3	3	-	3	**14**	**17.72**
Percent of Nodule Core Debitage	35.71	21.43	21.43	-	21.43	100.00	
Biface Reduction							
Bifacial thinning flake with characteristics of an alternate flake	1	1	-	-	2	4	5.06
Bifacial thinning fake with characteristics of an edge preparation flake	4	-	-	1	1	6	7.59
Bifacial thinning flake with characteristics of a margin removal flake	-	-	-	-	1	1	1.27
Early percussion bifacial thinning flake	5	2	2	-	4	13	16.46
Late percussion bifacial thinning flake	1	-	-	-	-	1	1.27
Early pressure bifacial reduction flake	5	3	3	-	7	18	22.78
Late pressure bifacial reduction flake	8	-	2	-	6	16	20.25
Bipolar flake	-	-	-	-	1	1	1.27
Bipolar shatter	-	-	-	-	5	5	6.33

Diagnostic Debitage	Material					Total	Percent of Total Debitage
	MV	VOL	Q	OB	PDL		
Biface Reduction Total	24	6	7	1	27	**65**	**82.28**
Percent of Biface Reduction Debitage	36.92	9.23	10.77	1.54	41.54	100.00	
Total Debitage	29	9	10	1	30	**79**	**100.00***
Percent of Total Debitage	36.71	11.39	12.66	1.27	37.97	100.00*	
MV= Metavolcanic VOL = Volcanic Q = Quartz PDL = Piedra de Lumbre Chert OB = Obsidian							

**Rounded totals may not equal 100.00 percent*

Table 4.3–8

Technologically Diagnostic Debitage Recovered From TU 2
Site SDI-776A and B

Diagnostic Debitage	Material			Total	Percent of Total Debitage
	VOL	Q	PDL		
Nodule Core Reduction					
SFP-11: Flake with single-facet platform and no dorsal surface cortex	1	-	-	1	16.67
SFP Total	1	-	-	**1**	**16.67**
Percent of SFP Debitage	100.00	-	-	100.00	
MFP-11: Flake with multifaceted platform and no dorsal surface cortex	-	-	1	1	16.67
MFP Total	-	-	1	**1**	**16.67**
Percent of MFP Debitage	-	-	100.00	100.00	
Nodule Core Reduction Total	1	-	1	**2**	**33.33**
Percent of Nodule Core Debitage	50.00	-	50.00	100.00	
Biface Reduction					
Early percussion bifacial thinning flake	-	-	1	1	16.67
Late percussion bifacial thinning flake	-	1	-	1	16.67
Early pressure bifacial reduction flake	1	-	-	1	16.67

Diagnostic Debitage	Material			Total	Percent of Total Debitage
	VOL	Q	PDL		
Late pressure bifacial notching flake	-	1	-	1	16.67
Biface Reduction Total	1	2	1	**4**	**66.67**
Percent of Biface Reduction Debitage	25.00	50.00	25.00	100.00	
Total Debitage	2	2	2	**6**	**100.00***
Percent of Total Debitage	33.33	33.33	33.33	100.00*	
VOL = Volcanic Q = Quartz PDL = Piedra de Lumbre Chert					

**Rounded totals may not equal 100.00 percent*

Table 4.3–9

Technologically Undiagnostic Debitage Recovered From TU 1
Site SDI-776A and B

Undiagnostic Debitage	Material					Total	Percent
	MV	VOL	Q	OB	PDL		
With incipient core cortex (Uw/icc)	1	-	-	-	-	1	1.00
With original geologic cortex (Uw/geoc)	1	-	-	-	-	1	1.00
Without cortex (Uwo/c)	16	13	46	3	20	98	98.00
Total	18	13	46	3	20	**100**	100.00*
Percent	18.00	13.00	46.00	3.00	20.00	100.00*	
MV= Metavolcanic VOL = Volcanic Q = Quartz PDL = Piedra de Lumbre Chert OB = Obsidian							

**Rounded totals may not equal 100.00 percent*

Table 4.3–10
Technologically Undiagnostic Debitage Recovered From TU 2
Site SDI-776A and B

Undiagnostic Debitage	Material				Total	Percent
	VOL	Q	CH	PDL		
Without cortex (Uwo/c)	1	3	1	3	8	100.00
Total	1	3	1	3	**8**	100.00*
Percent	12.50	37.50	12.50	37.50	100.00*	
VOL = Volcanic Q = Quartz PDL = Piedra de Lumbre Chert CH = Chert						

**Rounded totals may not equal 100.00 percent*

Bipolar Core Reduction

In general, with regards to technique, bipolar percussion employs an anvil stone and hammer stone to reduce the objective piece. Through resting the objective piece on the anvil and applying percussive force to the tool stone, smaller, high-quality tool stone may be split into useful flakes/flake fragments. Bipolar percussion has the benefit of producing multiple sharp flakes and triangular pieces of stone (for drills, etc.), and requires only a small amount of parent material to be successful. Bipolar percussion is often employed with exhausted cores, broken bifaces, and tools that have been reworked to the extent that traditional lithic reduction is not applicable. For SDI-776A and B, one bipolar flake and five pieces of bipolar shatter were identified within the collection (see Table 4.3–7). Interestingly, the materials used for this reduction technique were exclusively PDL chert. This suggests that much of the PDL raw material was only available to the inhabitants of the site as small nodules. In total, bipolar reduction comprises only 7.06 percent of the total diagnostic assemblage.

Nodule Core Reduction

Nodule core reduction is known in southern California archaeological literature as "cobble core reduction" (Gallegos et al. 2002; Gallegos et al. 2003). The term nodule was substituted for cobble because the term cobble is geologically defined as a size clast (64 to 256 millimeters), and many core and core-based artifacts (such as some battered implements) were manufactured from boulders (>256 millimeters) as well as pebbles (four to 64 millimeters). The term "nodule" was selected because a nodule can be any size, and tends to be somewhat rounded to subrounded in shape. When TUs 1 and 2 are considered as a whole analytic set, 16 (18.82 percent) of the technologically diagnostic debitage support nodule core reduction. Only two of the three nodule core platform types are represented by the test unit recovery at SDI-776A and B. SFP debitage is represented by 14 flakes and MFP debitage is represented by two flakes. NP debitage is not

represented within the collection (see Tables 4.3–7 and 4.3–8). These two platform configurations suggest two different platform preparations on cores. The most frequently occurring is SFP-11 (N=13). This flake category comprises ideal flake blanks, but the specific flakes from TUs 1 and 2 at SDI-776A and B are broken or too small for use. MFP debitage totals two flakes, both of which are categorized as MFP-11. Again, these specific flakes are broken or too small to be ideal flake blanks and were discarded.

Biface Reduction

Biface reduction was identified as the most common lithic reduction technique represented by the test units at SDI-776A and B. For this analysis, biface reduction debitage was divided into four reduction-oriented technological categories (as defined by Flenniken 2001) that were, in turn, employed to define the reduction sequences used at SDI-776A and B. These include core reduction (Stage 1), edge preparation (Stage 2), percussion bifacial thinning (Stage 3), and pressure bifacial thinning (Stage 4). For SDI-776A and B, portions (Stages 2 through 4) of three of the four stages were identified in the assemblage. Although no Stage 1 bifacial reduction debitage was identified in the present assemblage, this may in fact be a result of separating those materials and classifying them as nodule core reduction. The following are technological definitions by Flenniken (2001) for bifacial technological categories:

1. Core reduction, that is, primary decortication debitage segregated on the basis of approximately 100.00 percent cortex on the dorsal surface and platform configuration; secondary decortication debitage separated based upon partial dorsal cortex and platform type; and interior debitage categorized by platform attributes, dorsal arris count and direction, flake cross/long-section configuration, and especially, absence of dorsal cortex.
2. Edge preparation, that is, bifacial reduction debitage classified on the basis of multifaceted platform configuration and location, location of remnant bulb of force, dorsal arris count and direction, flake termination, flake cross/long-section orientation, and presence or absence of detachment scar.
3. Percussion bifacial thinning, that is, debitage segregated on the basis of multifaceted platform configuration, size, lipping, and location, dorsal arris count and direction, flake termination, cross/long-section orientation, and presence or absence of detachment scar.
4. Pressure bifacial thinning, that is, debitage separated on the basis of multifaceted platform configuration and location, dorsal arris count and direction, flake termination, platform to long axis geometry, cross/long-section orientation, and presence or absence of detachment scar.

Stage 2 edge preparation debitage includes six edge preparation flakes and four alternate flakes. Edge preparation flakes are created by preparing the margin (moving the margin by percussion into the mass) of a flake blank for reduction into a biface. While Stage 2 debitage constitutes only 11.76 percent (N=10) of the total amount of technologically diagnostic debitage (which is typical of this reduction stage), it supports the technological assumption that flake blanks were manufactured at the site or flake blanks were transported to the site, some of which would then be partially reduced by direct, freehand percussion.

Stage 3 technologically diagnostic flakes recovered from test unit excavations at SDI-776A and B primarily include early percussion bifacial thinning flakes (N=14), late percussion bifacial thinning flakes (N=2), and a margin removal flake (N=1). Stage 3 materials make up 20.00 percent of the technologically diagnostic debitage. Some of the early biface thinning flakes were produced as a result of bifacial blank manufacture by direct, freehand percussion flaking. The majority of the Stage 3 flakes are small (arrow-point size, or less than approximately 6.0x2.5x1.0 centimeters), indicating small biface production at the site. It is not possible to produce large bifaces via the production of small debitage, as this would fail to thin the biface. In general, the length of complete bifacial thinning flakes represents approximately two-thirds the width of the biface being reduced. Although a large fraction of complete bifacial thinning flakes from test unit excavations at SDI-776A and B are within the arrow point blank size range, some did indicate manufacture of larger bifacial blanks.

Stage 4 pressure biface reduction flakes are represented by 19 early pressure flakes, 16 late pressure flakes, and one late pressure notching flake, forming 42.35 percent (N=36) of the overall diagnostic assemblage. All of the pressure flakes are small and were the result of bifacial thinning and shaping bifacial tools. This high representation of pressure flakes in the assemblage suggests that pressure flaking was a major flintknapping activity conducted at the site, most likely for the production and/or rejuvenation of pressure-flaked tools such as projectile points. The majority of small pressure flakes suggests that the shaping of bifacial tools was more common than thinning bifacial tools by pressure. Given that the dominant tool stone materials are quartz, PDL chert, and metavolcanic, much of the thinning of the arrow point blanks was completed by percussion. In terms of arrow point manufacture in general throughout the American West, percussion thinning of arrow point blanks is rare, but raw material constraints at SDI-776A and B necessitated percussion thinning of arrow point blanks.

Undiagnostic Debitage

One hundred and eight technologically undiagnostic flake fragments were identified in the SDI-776A and B test unit assemblage (see Tables 4.3–9 and 4.3–10). Only two fragments possess cortex (Uw/icc or Uw/geoc), while 106 are cortex-free (Uwo/c). The cortex noted on these flakes includes both incipient cone cortex (Uw/icc; N=1), which is common on local lithic materials, and cortex indicative of direct removal from the original geologic source (Uw/geoc; N=1). The amount of cortex on debitage across the site suggests that the cores used to produce flakes at SDI-776A

and B may have been prepared (decorticated and shaped) away from the site. However, it is likely that the majority of raw tool stone material was gathered relatively close to the site. As with the technologically diagnostic debitage, undiagnostic flake fragment materials were collected from both primary geological (primary geological cortex) and alluvial (incipient cone cortex) contexts.

It should be noted that the primary geological cortex discussed herein is calcium carbonate, which is found on many rounded and subrounded metavolcanic materials. This nodule was most likely collected from the local Lindavista cobble formations in the area. Because these formations have been *in situ* for so long, geologically speaking, they have formed "primary geological cortex." Incipient cone cortex herein refers to a material with a thin exterior rind that is punctuated by hundreds, if not thousands, of intersecting Hertzian cones caused by being transported by moving water in the not-so-distant past.

Anthropological Interpretation

Based upon the technological assessment of the debitage assemblage recovered from the test units excavated at SDI-776A and B, the following anthropological interpretation of the assemblage is offered. Biface reduction technology is the most common technology identified in the lithic sample from SDI-776A and B, as measured by the percent of technologically diagnostic flakes. The flaked stone reduction technology identified at SDI-776A and B was almost exclusively related to arrow point production and rejuvenation. Furthermore, the formed artifacts are supported by the technologically diagnostic debitage, in that the debitage resulted from arrow point production and rejuvenation. The nodule core reduction portion of the assemblage appears to be dominated by non-cortical SFP flakes that were either brought to the site or produced at the site during the production of flake blanks for arrow points from flake cores. Flake cores were either transported from the site and/or laterally cycled into other tools, such as angular hammers or steep-edged unifacial tools (SEUTs), as flake cores are not represented in the assemblage. Based upon the low frequency of cortical debitage, non-cortical flake blanks and/or partially prepared cores (free of most of the cortex) were transported to the site.

Both flake blanks (as evidenced in the Stage 2 biface reduction debitage identified in the assemblage) and bifacial blanks were reduced into preforms and arrow points. By definition, Stage 2 debitage represents flake blank production. Stage 3 percussion biface thinning is not well represented at this site, which supports arrow point manufacture, as percussion bifacial thinning is not extensively employed when manufacturing arrow points from smaller flake blanks. However, given the raw material constraints, percussion bifacial thinning appears to have been employed to thin some arrow point blanks. However, it is clear based upon the initial review of the debitage that only a low frequency of the technologically diagnostic debitage supports direct, freehand percussion biface manufacture. In addition, these bifacial thinning flakes are small, which suggests small biface manufacture, such as blanks for arrow points.

Pressure biface thinning debitage appears to be well distributed between early and late pressure flakes. A predominance of early pressure flakes indicates original tool manufacture over

bifacial tool rejuvenation. The presence of both suggests that arrow points were being manufactured and rejuvenated on-site. Overall, this may imply that more intense hunting activities occurred within the vicinity of the site. The presence of arrow point preforms also supports Stage 4 bifacial reduction at SDI-776A and B.

Complete, but exhausted, arrow points were also discarded at the site. Broken arrow points (proximal ends, midsections, and distal ends) were also deposited into the archaeological context of SDI-776A and B. This discard behavior most likely represents activities associated with the retooling of bow and arrow hunting equipment. Broken arrow points were disposed of and replaced with new arrow points manufactured on-site. In addition to debitage, formed artifacts strongly support this interpretation. Even the small, undiagnostic, pressure-flaked biface fragments are most likely fragments of arrow points. Interestingly, site activities concerning the flaked stone artifacts were associated with arrow point manufacture and replacement, not arrow shaft production, as fragments of arrow shaft straighteners, abraders, flake tools, and/or scrapers are not well represented in the excavated assemblage from SDI-776A and B. For this site, it is clear that a large portion of the site activities within the APE were associated with arrow point manufacture and replacement, but not arrow shaft production. This is because of a lack of fragments of arrow shaft straighteners and abraders, and a very low frequency of flake tools and/or scrapers within the excavated assemblage from the test units at SDI-776A and B within the project APE. However, other portions of the assemblage may contain more diversity, which may represent different human behavior patterns.

Finally, although there appears to be technological homogeneity across the site, there also appears to be a variation in the frequency of material employed for that technology. Initial observations suggest that the favored approach to the PDL chert materials at the site was bipolar reduction. This reduction technique involves holding a core, or the item to be flaked, on an anvil, and then striking that core with a hammerstone, using necessary force to split the parent piece or detach flakes. Bipolar fractures are initiated by wedging, propagating under compressive force, and terminating axially. These fractures are characterized by a lack of bulbs of force, crushed platforms and terminations, pronounced compression rings and radial striations, and a relatively flat fracture plane oriented perpendicular to the initiation surface. Flake scars on cores and the dorsal surface of flakes are often oriented parallel to each other and initiate from opposite directions. Bipolar technologies are frequently employed to reduce small, rounded lithic materials such as alluvial pebbles and the products of the lateral cycling of bifaces. Interestingly, this suggests that the inhabitants of SDI-776A and B may have been exploiting small nodules of PDL chert rather than larger materials. Additional data from the site may help to shed light on this technological/material preference and its correlative relationship to arrow point production. Regardless, this research issue should be explored in more depth as part of future studies for SDI-776A and B.

Formed Artifacts

Cores

Two cores were recovered from SDI-776A and B (for example, see Plate 4.3–4). Both cores are representative of bipolar reduction. As stated previously, bipolar reduction employs the use of an anvil and hammerstone to split the objective piece and/or detach useable flakes. This technique is often employed with high quality, small, rounded materials to maximize tool stone recovery. The remnant flake scars on bipolar cores serve to help identify the prehistoric technology. The flake scars from this technology often include flake scars that are oriented parallel to each other, which originate in opposite directions. Crushed opposed platforms are also common on bipolar cores. A review of each of the specimens' lithic quality indicates that each specimen was of high quality PDL chert and lent itself to bipolar reduction as a means of maximizing the toolstone potential of the material. Both of the cores lack cortex of any kind. The presence of these cores supports bipolar core reduction activities focused upon PDL chert at SDI-776A and B, as indicated by the debitage analysis.

Bifaces and Projectile Points

A total of 10 bifaces and projectile points were recovered during the current testing at Site SDI-776A and B. This sample includes three complete or nearly complete specimens and seven fragmentary specimens. Their shape, size, and weight indicate that three of the recovered specimens are arrow points (Fenenga 1953), or arrow point fragments. The remaining seven specimens include one perform, two unidentifiable biface fragments, three projectile point tips, and one projectile point midsection. Examples of projectile points recovered from SDI-776A and B are provided in Plate 4.3–5.

The bifacial preform fragment is small in size and also supports the manufacture of arrow points on-site. Bifacial preforms differ from bifacial blanks in that they represent the later stages of shaping bifacial blanks into more refined bifacial preforms via pressure flaking. The PDL chert specimen (Cat. No. 68) failed during manufacture as a result of perverse fractures (see Plate 4.3–5). The presence of a preform further supports on-site production of arrow points.

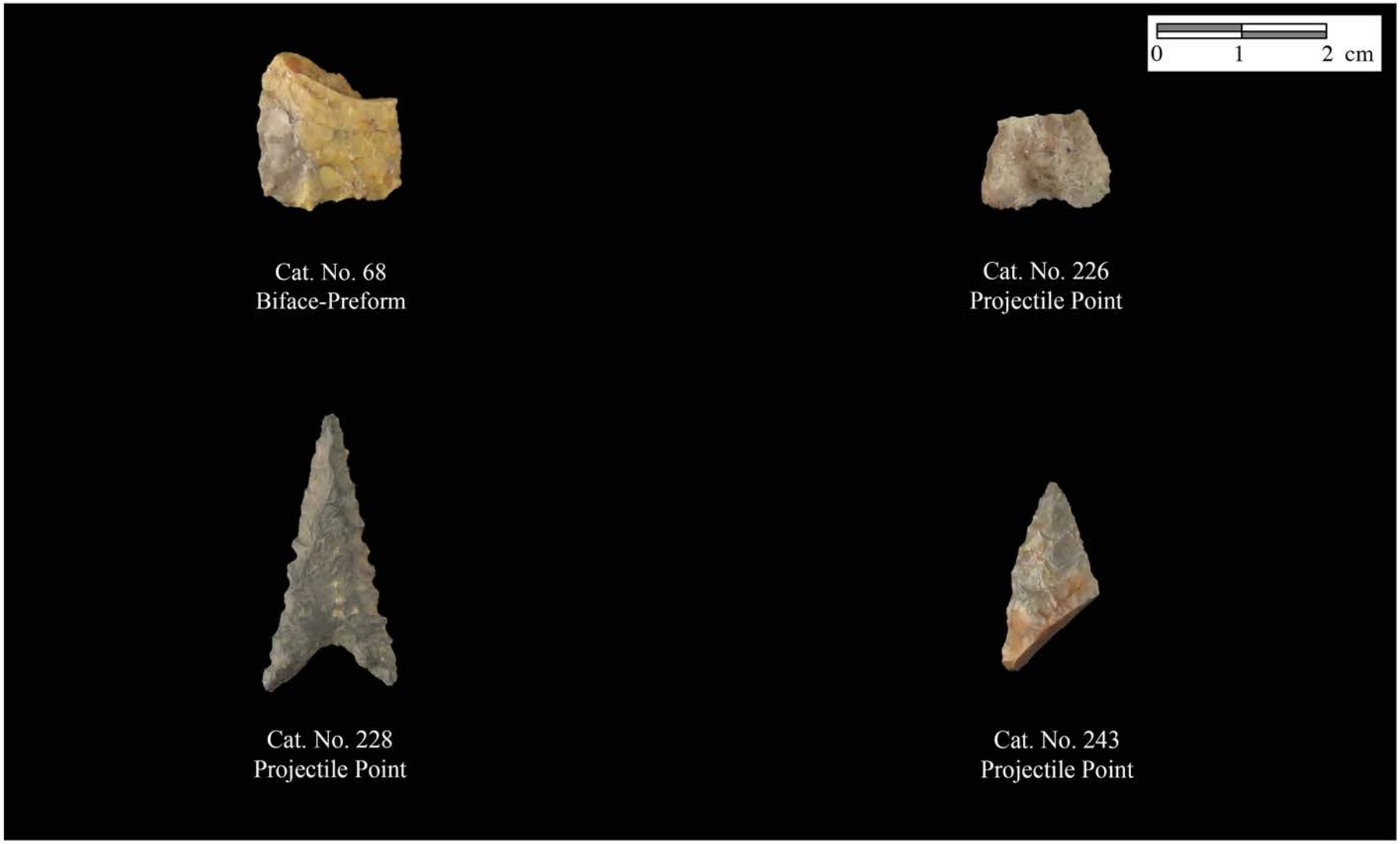


Plate 4.3–5

Examples of Bifaces and Projectile Points

Recovered From Site SDI-776A and B

The Ocean Breeze Ranch Project

Complete, but exhausted, arrow points, in addition to broken arrow points (proximal ends and distal ends), were deposited into the archaeological context at SDI-776A and B. This discard behavior most likely represents activities associated with retooling bow and arrow hunting equipment. Broken arrow points were disposed of and replaced with new arrow points manufactured on-site. The artifacts and debitage recovered strongly support this interpretation. Arrow points from SDI-776A and B (and arrow points overall) are temporally sensitive, based upon the weapon they were used in conjunction with, the bow and arrow. The atlatl and dart were replaced by the bow and arrow an estimated 1,500 years ago in San Diego County (Moratto 1984). This change required a transition to smaller projectile points, which suggests that the site is less than 1,500 years old.

Of the three identified arrow points/arrow point fragments, all are identifiable to the Cottonwood Series. For Cottonwood Series projectile points, all specimens display a concave base with relatively straight margins. In addition, all three specimens maintain remnants of their original detachment scar, indicating manufacture directly from flake blanks.

Two of the projectile point specimens display evidence of direct impact to the tip, likely from use. Both of these specimens (Cat. Nos. 225 and 226) maintain only minor damage in the form of bending fractures (see Plate 4.3–5). It is possible that the damage incurred by the use of these points was too severe, and as a result, the points were discarded. These patterns of breakage are indicative of direct impact to an opposing surface, possibly in a hunting situation (Woods 1987). Experimental data concerning the fracture patterns and rejuvenation of projectile points employed in simulated hunting situations is well established in the archaeological literature (Flenniken 1985; Flenniken and Raymond 1986; Titmus and Woods 1986; Woods 1987; Towner and Warburton 1990). The biface assemblage and technological analysis indicate that reusable arrow points were rejuvenated, as badly broken arrow points were discarded and replaced with newly made arrow points on-site.

In addition to the three type-able points and point bases, one midsection and three tips were also recovered. These specific point fragments recovered from the site display impact damage that may be indicative of hunting activities. Often, projectile points were broken on impact with inanimate objects (missed targets) or inside of animals (Flenniken 1985). Because of their small, unusable condition, tips and midsections were not retrieved, and therefore, may have remained at kill sites; however, they may have also been deposited at the butchering location while remaining inside the dispatched animals. Additionally, these arrow point fragments may have been the result of flintknapping errors that occurred during arrow point manufacture. Bases and complete points are often indicative of rejuvenation and weapon repair, while tips and midsections are indicative of hunting activities. If this scenario is true for SDI-776A and B, then the site is associated with occupation rather than use as a kill site, wherein game was hunted. However, the actual kill site may be in the vicinity of, or a minimal distance away from, SDI-776A and B. Given that faunal remains are moderately abundant in the present assemblage, the type of game being hunted may be identified. Despite this, some small fragments of arrow points would have been brought back

to the site in the hunted meat package. Once back at the site, the hunters repaired the broken, but reusable, arrow point bases brought back to the site on arrow shafts, and discarded badly broken and exhausted arrow points, replacing them with new arrow points made at the site.

Flake Tools and Utilized Flakes

Utilized flakes have a minimal amount or no shaping with modification (if any), generally restricted to the working edge, which often result from naturally occurring use-wear. These tools are frequently used for a short period of time and then discarded. Only a single flake tool (Cat. No. 210), a laterally utilized flake, was identified in the present collection. Laterally utilized flake tools exhibit use or modification along a single lateral margin of the flake from which the tools were produced. In addition, small areas of polish are exhibited on natural arrises on the flake tools, suggesting use in a scraping activity. The specimen maintains a relatively straight edge and the angle of the working face of the specimen is relatively low (less than 45 degrees). It is likely that this flake tool was used in a scraping motion for various purposes, including the working of opposing curved surfaces (such as vegetable products), animal materials (such as animal hides), and/or other softer stone.

Analysis Summary

Based upon the flaked lithic assemblage, flintknapping activities at SDI-776A and B within the Ocean Breeze Ranch Project APE were primarily limited to the production/rejuvenation of arrow points/small bifaces. The analyzed debitage assemblage from SDI-776A and B provides an example of a site wherein the last stages of biface manufacture occurred. The primary flintknapping activity that occurred at the site was clearly associated with arrow point manufacture. Of the technologically diagnostic flakes present in the assemblage, the majority appear to be biface technology-based. Therefore, the primary flintknapping activity that occurred at SDI-776A and B was likely biface reduction. Selection of nodule core tool stone, nodule core platform preparation, nodule core decortication and manufacture, and extensive nodule core reduction did not occur within the APE. Interestingly, there also appears to be a significant focus upon bipolar reduction of PDL chert at the site. The materials produced by this technique are also likely feeding into the production of arrow points at SDI-776A and B. The reason for this patterning is unclear, and may be related to access to resources over time or change in material preference over time. As stated previously, this research issue should be explored in more depth.

Based upon the lithic technology represented by the artifact collections from SDI-776A and B, these site areas may have served as secondary reduction loci where arrow points were manufactured and retooled. Although a small amount of flake production from metavolcanic, volcanic, and quartzite nodules from local sources occurred at the site, it is only a very small portion of the assemblage. Most likely, flake blanks were manufactured off-site, or at other portions of the site not within the boundary of the current project area. The evidence for manufacturing arrow points suggests that hunting activities may have also occurred near the site.

The presence of flake tools supports non-flintknapping activities and implies possible processing of a range of materials.

Ground Lithic Artifacts

All ground stone materials identified at SDI-776A and B were selected for analysis and interpretation. Ground stone implements/features may include a wide range of objects used for or created by the processes of abrasion, impaction, or polishing (Adams 2002). Often, ground stone tools are associated with the processing/milling of seeds, nuts (*i.e.,* acorns, walnuts, and holly leaf cherry), and small mammals. In addition, ethnographic evidence indicates that bone, clay, and pigments may have also been processed using the same tools (Gayton 1929; Kroeber 1976; Spier 1978). Implements or features of this type may be identified by the pattern of wear developed through milling stone against stone. This process often results in a smooth and/or polished surface, depending upon the substance ground and the lithic material type. These surfaces were frequently pecked or resharpened when ground too smooth. These implements/features are sometimes shaped into a desired form through pecking, grinding, and/or flaking. Thus, tool identification is based upon the presence of ground or smooth surfaces, pecked or resharpened surfaces, and evidence of shaping the tool form.

Manos

Six manos were recovered as a result of the testing program conducted at SDI-776A and B, all of which were produced from granitic cobbles. Three of the specimens are complete (Cat. Nos. 327, 328, and 329; see Plate 4.3–6) and three are fragmentary (Cat. Nos. 230, 237, and 258). Each whole specimen demonstrates evidence of shaping such as pecking, flaking, and end-battering, which suggests extended use. This extended usage and mano curation may imply long-term occupation of the site. There is end-battering present on two of the whole specimens, and all three exhibit pecked grinding surfaces. The end-battering visible on the specimens may indicate that the mano was also used as a hammer to sharpen metate grinding surfaces when the metate face became too slick to grind. Conversely, the battering may have been purposefully generated to produce a grip for the mano. The overall curvature of each mano face is slight, indicating that the opposing milling surface that the manos were ground against (*i.e.,* metate or milling slick) was shallow in form. In addition, the grinding patterns evident on the faces of each mano indicate that the majority are flat manos used primarily in a reciprocal stroke manner in concert with flat metates (Adams 2002). The three fragmentary specimens appear to also be bifacial. However, they are too fragmentary to make any additional conclusions about overall form or use. All of the manos collected are thermally damaged to varied degrees. It is likely, given the amount of bedrock milling at SDI-776A and B, that the manos present were recycled at the site for use in rock hearth/earth ovens.

Plate 4.3–6

Examples of Manos

Recovered From Site SDI-776A and B

The Ocean Breeze Ranch Project

Metates

Metates were identified based upon the presence of at least one ground surface and the configuration of the grinding surface rather than the overall shape (*i.e.,* slab, block, etc.). Two fragmentary, granitic, and thermally damaged metates were recovered during the present excavations at SDI-776A and B. As a result of their condition, the basin form of the specimens could not be accurately typed. However, each appears to be a shallow, flat/concave metate. Flat/concave metate designs are generally used in concert with one-handed manos shorter than the overall metate width. Extensive and intensive use can wear a depression deep enough to confine the intermediary material (*i.e.,* seeds, flour, etc.) in a similar manner to a basin metate. However, in contrast to a basin metate, the depression of a flat/concave metate is not intentionally shaped or manufactured like the depression of a basin metate. The intentional shaping of a basin metate often results in a deeper and much narrower basin design. Flat/concave metates are a result of progressive wear with manos that are often longer than basin manos, which may be worked against metate surfaces with several different strokes. Overall, the analysis indicates that the frequency of flat/concave metates is consistent with the frequency of flat/convex manos recovered from the assemblage.

In general, the archaeological record indicated that the thickness of the metates at the site indicates that the specimens were likely too heavy to transport and can be defined by Binford (1980) as "site furniture." The presence of the large metates and the frequency of the metates, in general, may be evident of a more permanent site occupation. This is consistent with the recorded presence of a water source, such as the San Luis Rey River, being on-site, in addition to the density of the remaining artifact assemblage. Although the metates show evidence of shaping in the form of pecking, flaking, and/or grinding generally around the outer circumference, very little debitage from milling equipment manufacture was identified within the assemblage. This suggests that perhaps the metates were either manufactured off-site or that the detritus from that manufacture was deposited elsewhere. Alternatively, the metates may have been used contemporaneously with the bedrock, with the metates serving as in-house milling equipment during the rainy season.

Bedrock Milling Features

During the current study, the survey of SDI-776A and B identified 65 bedrock milling features that were drawn, photographed, and recorded. The recording and subsequent analyses of the 65 bedrock milling features were based upon parameters partially defined by Adams (2002) and further refined by Stropes (2007). Traditionally, three basic types of elements on bedrock features have been considered. These milling element types include mortars, basins, and slicks, which may occur separately or together in any combination. The 65 features contain 226 milling elements including 155 slicks, four basins, 33 mortars, 10 mortar starts, 14 collars, two collar remnants, seven rubs, and one oval. Milling features, unlike metates or portable mortars, provide a unique opportunity to the analyst because they are fixed in space. The presence of bedrock milling features is indicative of pre-contact subsistence activities on both the individual and group

levels, providing an anchor point for anthropological investigations into subsistence, social, and technological activities performed at or near a given site. The following sections provide a brief analysis and discussion of milling elements by type and the implications of the present milling features for the pre-contact reconstruction of SDI-776A and B.

Milling Slick, Rub, and Collar Elements

To date, the milling slick has remained the most enigmatic of all bedrock milling elements. Rubs are less used than slicks, and are therefore more difficult to analyze than slicks. This is likely because of the lack of a large sample of slicks that can be studied as a group. Past studies have included only a small sample of slicks, and have thus failed to produce the amount of data required to develop a better understanding of slick technology. Slicks have been attributed to a wide range of behaviors including basin production, hide processing, clay proofing, fiber processing, and human wear (created by sitting on a rock and performing other milling activities). However, an analysis of the 155 bedrock milling slicks identified at SDI-776A and B sheds some light on the mystery of the milling slick. When compared to flat metates, milling slicks on milling features are similar in use and form. It is simply the lack of a defined edge that creates problems for the analyst. If a basin metate is analogous to a basin element, then it is probable that the same is true for milling slicks and flat metates. Certainly, this is not the case for all milling slicks, but it is likely the case for most. For the 155 specimens at SDI-776A and B, the average length is 32 centimeters and the average width is 24 centimeters. This is nearly a 3:2 ratio for length to width. This measurement falls within the reasonable range of motion for the circular stroke performed during the milling process, which suggests that most slicks operated as a flat metate may have.

The collars present at SDI-776A and B are primarily slick collars. These may have been created through repeated use of a single location, moving from a longer grinding stroke to a shorter grinding stroke over time. Alternatively, the collars may represent moving from slick to basin milling technology, or a need for both element types in the milling process being employed. However, this can only be speculation, as the true nature of milling collars is not clear.

Basin Elements

Basin elements on milling features are similar in use and form to basin metates. As defined by Adams (1999), basins are generally manufactured with a semi-circular or elliptical depression and are thought to be used in concert with a handheld mano. The depth of a basin may be suggestive of the type of item being milled (*i.e.,* dry ground products versus wet ground products). Adams (1999) has demonstrated through replication experiments that dry products may be more easily ground in a deeper basin as it minimizes the amount of flour lost to wind action. The use of the mano itself often removes any evidence of the manufacturing process of milling feature basin elements. No evidence of manufacture was visible on any of the recorded basin elements. This can also create some difficulty when trying to distinguish between basins versus well used (depressed) slicks or elongated mortar holes. Four basins were identified at SDI-776A and B. The

majority of the basins identified on the milling features across the site are generally shallow (less than three centimeters in depth) with an average length of 29 centimeters and an average width of 20 centimeters. This is basically a 3:2 ratio for the length and width.

Mortar Elements

Mortar elements are semi-circular to circular holes in bedrock that were either produced through design and manufacture or simply through the process of use. In general, four primary morphologies have been identified for mortars identified in the San Diego region. These forms include conical mortars, oval mortars, saucer mortars, and cupped mortars. It has been suggested that the shape of the bottom of the mortar (*i.e.,* conical or cup-shaped) may relate to the morphology of the pestle. However, unlike metates and manos, this assumption is uncertain because unlike a mano, pestles have been identified ethnographically as being produced from wood. Therefore, it is possible that the morphology of the mortar may relate to function rather than as a result of the impact of its counterpart, the pestle. For the 43 mortar elements identified at SDI-776A and B, there was no evidence of manufacture visible. The 43 mortar elements are all conical mortars. For conical mortars, the average circumference is 22 centimeters with an average depth of nine centimeters. Ten of the specimens are starter mortars. Starter mortars are like miniature mortars pecked into the stone, often next to a large mortar. Ethnographically, these have been identified among Western Mono women (Jackson 1991) in California for use in the initial cracking and pulverizing activities during food processing. The initially processed materials are then cleared of detritus and swept into the deeper mortar for final processing. For starter mortars, the average circumference is 17 centimeters with an average depth of three centimeters.

Summary

In total, 65 milling features were identified and recorded for SDI-776A and B. On these features, a total of 226 milling elements including 155 slicks, four basins, 33 mortars, 10 mortar starts, 14 collars, two collar remnants, seven rubs, and one oval. BMFs G, J, R, Z, AA, BB, CC, DD, and XX are of key importance, as these features contain the largest frequency of elements (between nine and 18). Although the quantity and variety of elements is important, it is the frequency and proximity at a single milling station that presents interesting questions. A single grinding feature/station only allows for or represents the work of a single individual. Multiple elements on a single grinding feature/station suggest that multiple grinders may have worked in concert. This presents a range of possibilities for various kinds of social interaction not evident with only a single milling element. Although it may be argued that a feature with multiple elements may represent overlapping time periods of use, this is not likely the case, as the other cultural elements of SDI-776A and B indicate that the site is a habitation site. Although the presence of multiple grinding stations has been noted both archaeologically and ethnographically, these references are generally made with regards to areas such as the Southwest Culture Area. This is because of the intensive study of milling technology in the Southwest. Generally, the ethnographic

record for multiple milling stations is in reference to maize grinding, and involves several women working at multiple stations in proximity to one another at the same time. If this activity is analogous to the prehistoric social constructs of southern California, then these areas may be defined as female activity loci for the present analysis. However, such gender-specific data can never be determined for certain. What is clear, based upon the present analysis, is that at some level, the communal processing and likely distribution of milling-based foods was occurring prehistorically at SDI-776A and B. In order to understand this cultural phenomenon better and how it relates to distribution of milling elements across the site, this research issue should be explored in more depth.

Ceramic Artifacts

Ceramic Vessels

One hundred and eighteen pottery fragments were recovered during the testing program at SDI-776A and B, all of which were included in the sample review (for examples, see Plate 4.3–7). The specimens include both body sherds and rim sherds and were visually analyzed under a microscope to identify specific mineral inclusions and their possible corresponding geologic locales. Results of this analysis indicate that the majority of the sherds appear to be Tizon Brown Ware specimens with a low frequency of Colorado Buff Ware.

The manufacturing patterns observed in a small number of the body specimens indicate that coil pattern production methods were used on-site in at least a portion of the ceramic assemblage. Finger/thumb imprints are also common across the assemblage. An examination of the specimens also indicates that sand temper was used in the majority of the assemblage. The limitations of the rim samples make it difficult to determine the range of vessel forms present at SDI-776A and B. However, based upon some of the larger wall fragments, many of the vessels employed at SDI-776A and B were likely sizeable in form. As Site SDI-776A and B is located inland, the clay was likely obtained from the local foothill and mountain regions of San Diego County.

Ceramic Pipes

Compared to prehistoric ceramic vessels, prehistoric ceramic pipes are not common in the archaeological record of San Diego County. Archaeologists have traditionally recognized two main pipe styles that include a somewhat straight and tubular pipe form, in addition to a curved bow-shaped pipe form that typically displays a flanged handle. Ethnographically, the narrow range of pipe forms has been attributed to different ethnic traditions. Sparkman (1908) reported that the Luiseño used short, tubular pipes, while Spier (1923) would later note that the southern Kumeyaay preferred bow pipe forms and did not employ the straight form. D.L. True (True 1966, 1970; True et al. 1991) reported that bow pipe forms are typical of Kumeyaay territory, although they have been found among Luiseño sites. True suggested that ceramic pipes may "have potential future diagnostic value" for separating Yuman from Uto-Aztecan assemblages (True 1966:237-239).

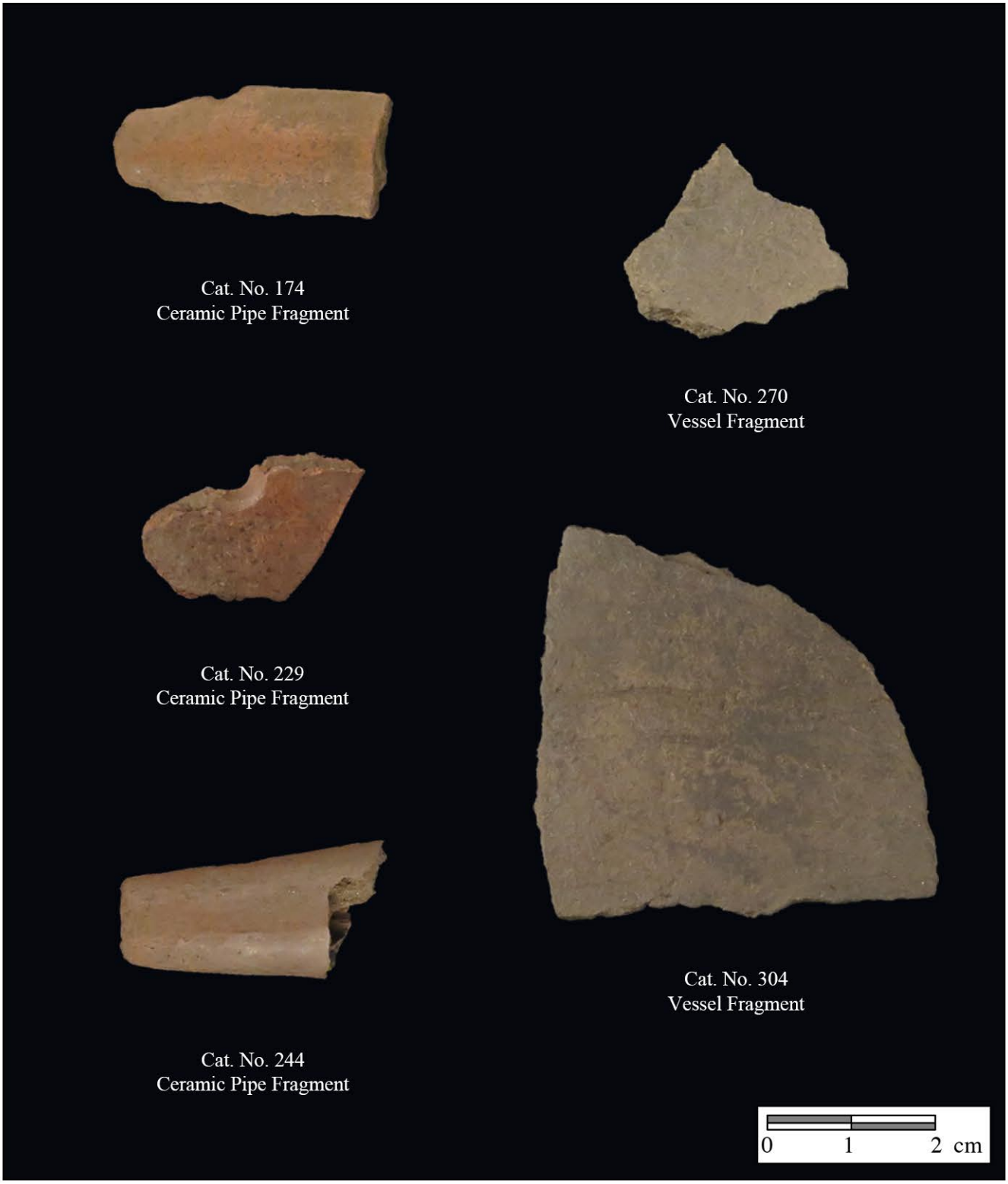


Plate 4.3–7

Examples of Ceramic Vessels and Pipes Recovered From SDI-776A and B

The Ocean Breeze Ranch Project

For SDI-776A and B, three pipe fragments were identified (Plate 4.3–7). The analysis of the ceramic fragments suggests that at least two of the pipe fragments (Cat. Nos. 229 and 244) can be attributed to curved, bow-shaped pipes typical of Kumeyaay pipe designs. The third specimen (Cat. No. 174) is too fragmentary to make a definitive conclusion. The presence of the pipe fragments at the site is suggestive of ritual tobacco use at Site SDI-776A and B. The presence of Kumeyaay pipes within territory traditionally attributed to the Luiseño suggests either direct trade with the neighboring Ipai or a potential variation in the territory boundaries traditionally associated with the neighboring groups. Additional data from the site may help to shed light on the presence of these pipes at the site and the correlative relationship to which culture group inhabited the site during the Late Period. This research issue should be explored in more depth in future studies for SDI-776A and B.

Bone Artifacts

One bone artifact and four pieces of modified bone were recovered from excavations at SDI-776A and B (see Plate 4.3–8). Gifford's 1940 publication was used to assign a typological category when possible. The single bone artifact's morphology and wear pattern suggests use as a bone pressure flaker. The specimen maintains a blunt, rounded point that is relatively sturdy. Based upon the morphology of the specimen, it may be typed as Gifford's C7 (1940). The specimen may have been manufactured from fragments of long bones, based upon its overall morphology. The flaking tool demonstrates evidence of use-wear on the tip in the form of small amounts of chipping from the loading of force at the distal end. The presence of the flaking tools supports pressure flaking activities at SDI-776A and B, as is also evidenced in the debitage assemblage.

Shell Artifacts

For San Diego County, a processual understanding of manufacture, distribution, and use of shell artifacts has not been achieved. In addition, the range of morphological types of beads used in the San Diego region is not well understood. In contrast to other regions of California, there is little information concerning the process by which shell artifacts were manufactured and used, or of the evolutionary changes these artifacts may have gone through over time. The analysis of shell artifacts from other regions of California (most notably the Chumash culture area) has demonstrated considerable anthropological value in the understanding of prehistoric economies, trade systems and networks, and the organization of wealth and status in prehistoric societies (Fenenga 1988). For these regions, particular styles of shell artifacts have been established as chronologically diagnostic in a number of archaeological sites. The shell artifact assemblage from SDI-776A and B is small in comparison to many coastal sites in the San Diego region. Although the present data will not answer some of the larger questions that may be resolved by a greater regional study of multiple archaeological sites, it will certainly contribute to the presently limited body of data and will be of value to future research issues regarding shell artifacts.

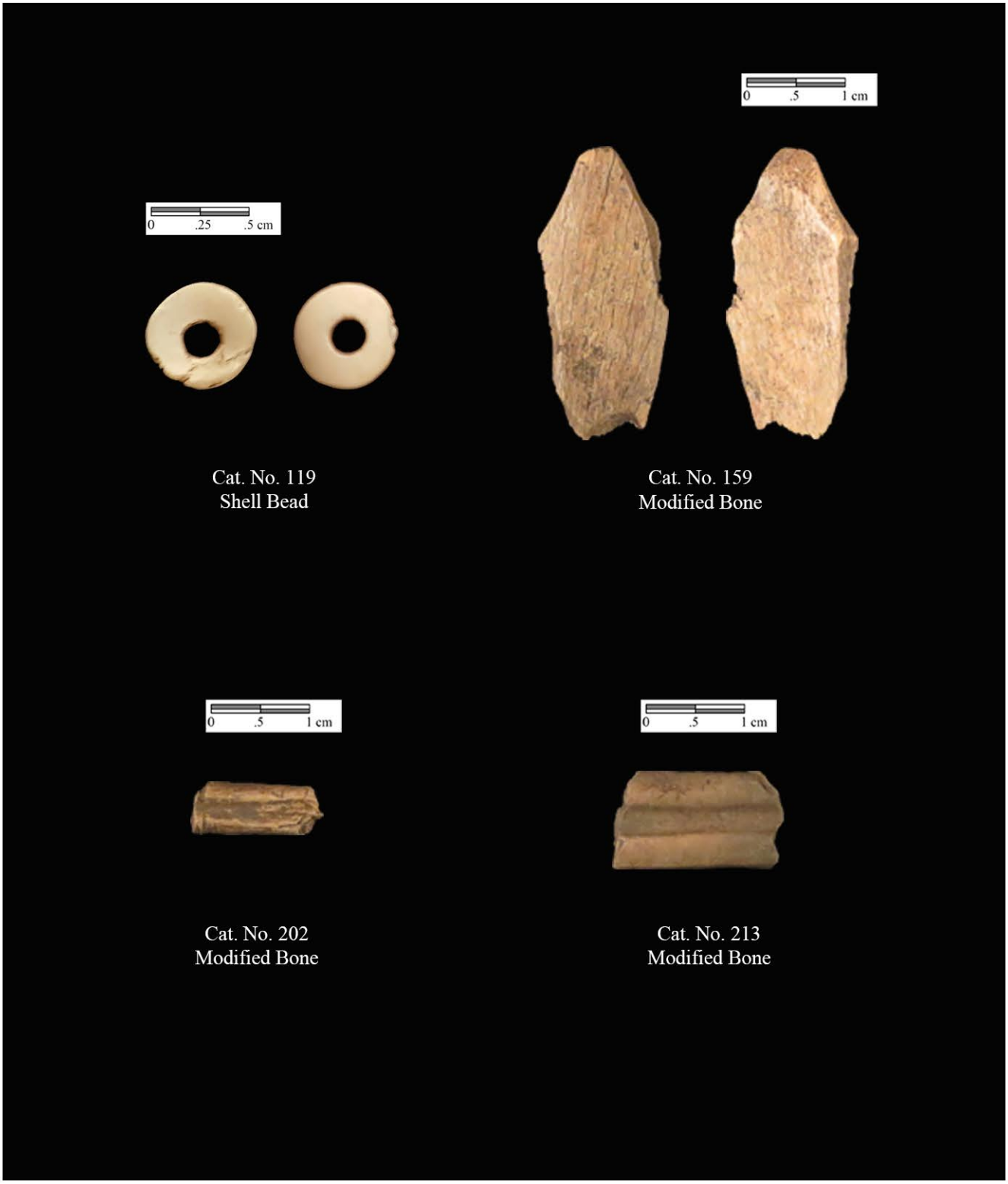


Plate 4.3–8

Examples of Bone and Shell Artifacts Recovered From SDI-776A and B

The Ocean Breeze Ranch Project

The shell bead in the present analysis was recovered from the 20- to 30-centimeter level of STP 10. The use of one-eighth-inch hardware mesh cloth facilitated the recovery of the shell artifact, as the use of larger screen sizes can often bias the recovery of specific small bead types, possibly removing them from the assemblage altogether. It should also be noted that the present specimen was not identified in context with any identifiable archaeological features, and appears to be randomly distributed within the site. However, "scattered, isolated beads often are found in and around living areas of aboriginal villages in California" (Fenenga 1988). The single bead, a sidewall *Olivella* sp. bead, was manufactured from the shells of *Olivella biplicata*, a relatively small marine gastropod. The specimen appears to be conically drilled inward from the exterior surface of the shell (Plate 4.3–8). Oftentimes, these specimens are biconically drilled to prevent breakage during manufacture. However, this does not appear to be the case with the current specimen. No evidence of wear from suspension is evident.

Vertebrate Faunal Remains

Faunal Analysis

Methodology

A total of 135.1 grams of vertebrate faunal remains was recovered from testing excavations at SDI-776A and B. All faunal material from TU 1 was chosen as the sample for the faunal analysis, which included 72.7 grams of bone (N=207). The preliminary analysis of the sampled faunal remains was based upon work done by Kraft (2016) for analysis and interpretation. Each bone or bone fragment from TU 1 was counted, weighed, and identified to the lowest taxonomic category possible (order, family, genus, and species). Those specimens identifiable to genus or species were then inspected further in order to determine the element, side (right or left), portion (*e.g.,* proximal, distal, or medial), age (*e.g.,* adult or juvenile), breakage pattern (spiral or angular), and modification (*e.g.,* burning, weathering, root etching, cut marks, rodent gnawing, or carnivore chewing). Assessments and classifications were made with the use of comparative faunal collections and references housed in the BFSA laboratory.

Because many faunal assemblages from southern California are highly fragmented due to both weathering and cultural processes (Tuma 2002), it was not possible to identify a significant portion of the bone to a specific species, genera, or family taxonomic category. In instances where bone fragments were identifiable only to order or class, based upon their characteristics, these fragments were placed into size class categories like the remainder of the assemblage. Those animals identifiable to the taxonomic class mammal were also categorized by size including small, medium, and large. The size categories used for this study are based upon those established by David Hurst Thomas (1969). For instance, mammal bone identified as belonging to a mule deer-sized mammal (with a live weight of 25.0 kilograms or more) was placed into the large mammal category. Likewise, mammal remains the size of a coyote or raccoon (with a live weight of 5.0 to 25.0 kilograms) were characterized as medium mammals, while mammal remains the size of a rabbit (with a live weight of 700.0 grams to 5.0 kilograms) were characterized as small mammals

(Lyman 2008). Following identification, the Number of Identifiable Specimens (NISP) for each identified taxonomic category was recorded.

Faunal Analysis Results

Taxonomic Categories

The majority of the TU 1 assemblage consists of mammal remains, representing 93.24 percent (N=193) of the total faunal count and 92.71 percent (67.4 grams) of the total faunal weight. Other animal classes that make up the TU 1 assemblage consist of reptiles (N=9, 4.35 percent of the total faunal count; 2.9 grams, 3.99 percent of the total faunal weight), birds (N=3, 1.45 percent of the total faunal count; 1.8 grams, 2.48 percent of the total faunal weight), and fish (N=2, 0.97 percent of the total faunal count; 0.6 gram, 0.83 percent of the total faunal weight).

Small mammals represent the largest group of elements in the mammal category, making up 34.78 percent (N=72) of the total faunal count, but only 14.72 percent (10.7 grams) of the total faunal weight. Medium mammal remains represent the second most abundant mammal size category, comprising 29.95 percent (N=62) of the total faunal count and 22.83 percent (16.6 grams) of the total faunal weight. Large mammal remains represent the third most abundant mammal size category with 28.50 percent (N=59) of the total faunal count and 55.16 (40.1 grams) of the total faunal weight. The total counts and weights of each animal class are provided in Table 4.3–11.

Table 4.3–11
Animal Classes Recovered From TU 1
Represented by NISP and Weight
Site SDI-776A and B

Animal Class	NISP	Count Percentage		Weight in Grams	Weight Percentage
Bird	3	1.45		1.8	2.48
Fish	2	0.97		0.6	0.83
Large mammal	59	28.50		40.1	55.16
Medium mammal	62	29.95		16.6	22.83
Reptile	9	4.35		2.9	3.99
Small mammal	72	34.78		10.7	14.72
Total	207	100.00*		72.7	100.00*

**Rounded totals may not equal 100.00 percent*

Of the 207 bones and bone fragments recovered from TU 1, only 28 were identifiable to order. The orders identified within TU 1 include Artiodactyla (deer, cow, and sheep), Carnivora (coyote, bobcat, and raccoon), Lagomorpha (rabbit and hare), Perciformes (bony fish), Rodentia (mouse, rat, and squirrel), and Testudines (turtle). The most abundant orders identified within the

TU 1 assemblage are Lagomorpha and Testudines, each represented by nine specimens. Artiodactyla is represented by four specimens, and Carnivora, Perciformes, and Rodentia are all represented by only two specimens each. Orders represented within the TU 1 faunal assemblage are provided in Table 4.3–12.

Table 4.3–12
Specimens Recovered From TU 1 Identifiable to Order
Represented by NISP and Weight
Site SDI-776A and B

Order	NISP	Count Percentage		Weight in Grams	Weight Percentage
Artiodactyla	4	14.29		10.9	61.58
Carnivora	2	7.14		0.7	3.95
Lagomorpha	9	32.14		2.1	11.86
Perciformes	2	7.14		0.6	3.39
Rodentia	2	7.14		0.5	2.82
Testudines	9	32.14		2.9	16.38
Total	28	100.00*		17.7	100.00*

**Rounded totals may not equal 100.00 percent*

Within the six identified orders, five different families, which encompass five separate genera, were identified. The families consist of Bovidae (cow and sheep), Cervidae (deer and pronghorn), Emydidae (turtle), Leporidae (rabbit and hare), and Sciuridae (squirrel). A total of 22 specimens were identifiable to family, and are listed in Table 4.3–13.

Table 4.3–13
Specimens Recovered From TU 1 Identifiable to Family
Represented by NISP and Weight
Site SDI-776A and B

Family	NISP	Count Percentage		Weight in Grams	Weight Percentage
Bovidae	1	4.55		8.3	58.87
Cervidae	1	4.55		0.3	2.13
Emydidae	9	40.91		2.9	20.57
Leporidae	9	40.91		2.1	14.89
Sciuridae	2	9.09		0.5	3.55
Total	22	100.00*		14.1	100.00*

**Rounded totals may not equal 100.00 percent*

The same 22 specimens that were identifiable to family were also identifiable to genus. The genera identified within the TU 1 assemblage consist of *Actinemys* (pond turtle), *Odocoileus* (deer), *Ovis* (sheep), *Sciurus* (squirrel), and *Sylvilagus* (rabbit) (Table 4.3–14).

Table 4.3–14
Specimens Recovered From TU 1 Identifiable to Genus
Represented by NISP and Weight
Site SDI-776A and B

Genus	NISP	Count Percentage		Weight in Grams	Weight Percentage
Actinemys	9	40.91		2.7	19.15
Odocoileus	1	4.55		0.3	2.13
Ovis	1	4.55		8.3	58.87
Sciurus	2	9.09		0.5	3.55
Sylvilagus	9	40.91		2.1	14.89
Total	22	100.00*		14.1	100.00*

**Rounded totals may not equal 100.00 percent*

While nearly half of the specimens identified to genus were also identifiable to the species level (Table 4.3–15), the NISP for the TU 1 assemblage was only calculated to the genus level due to the fact that post-cranial elements of specimens belonging to the *Sylvilagus* genus are often unidentifiable to species due to a lack of variation within the genus (Dean 2007; Neusius and Flint 1985; Ruedas 1998).

Table 4.3–15
Specimens Recovered From TU 1
Represented by NISP and Weight
Site SDI-776A and B

Class	Order	Family	Genus	Species	NISP	Count Percentage	Weight in Grams	Weight Percentage
Actinopterygii	Perciformes	-	-	-	2	0.97	0.6	0.61
Aves	-	-	-	-	3	1.45	1.8	1.81
Mammalia (Large)	Artiodactyla	Bovidae	*Ovis*	sp.	1	0.48	8.3	8.33
		Cervidae	*Odocoileus*	*hemionus*	1	0.48	0.3	0.33
		-	-	-	2	0.97	2.2	2.24
	-	-	-	-	55	26.57	29.2	29.20
Mammalia (Medium)	Carnivora	-	-	-	2	0.97	0.7	0.70
	-	-	-	-	60	28.99	15.9	15.91
	Lagomorpha	Leporidae	*Sylvilagus*	sp.	9	4.35	2.1	2.07

Class	Order	Family	Genus	Species	NISP	Count Percentage	Weight in Grams	Weight Percentage
Mammalia (Small)	Rodentia	Sciuridae	*Sciurus*	*griseus*	1	0.48	0.2	0.24
			Sciurus	sp.	1	0.48	0.2	0.24
	-	-	-	-	61	29.47	8.1	8.13
Reptilia	Testudines	Emydidae	*Actinemys*	*marmorata*	9	4.35	2.9	2.86
				Total	207	100.00*	72.7	100.00*

**Rounded totals may not equal 100.00 percent*

The geographic ranges of *Sylvilagus audubonii* (desert cottontail) and *Sylvilagus bachmani* (western brush rabbit) currently overlap in the area where SDI-776A and B is located (Chapman 1974; Jameson and Peeters 1986), so having the specimens discussed only on the genus level for the purposes of this study likely has no impact on the overall understanding of the site due to the similarity of the two species. Since the animals exhibit the same behavior patterns, both species would require the same techniques for hunting and capture. However, given the past environment and proximity of Site SDI-776A and B to the San Luis Rey River, it is more likely that prehistorically, *Sylvilagus bachmani* would have been the more prominent species in the area.

In addition to *Sylvilagus*, one specimen belonging to the genus *Sciurus* was also not classified by species due to the very minute differences between members of the genus and because several species of tree squirrels currently exist within the geographic range of SDI-776A and B. However, because the *Sciurus* genus consists only of tree squirrels, the presence of the genus within the faunal assemblage is not indicative of any potential site disturbance due to tunneling behaviors.

Given the relatively high number of turtle and rabbit specimens, as well as the presence of deer, sheep, and tree squirrel, it is likely that SDI-776A and B was more heavily vegetated during its period of occupation, or that inhabitants of the site traveled east toward Palomar Mountain in order to hunt and/or trap tree squirrels and mountain sheep. The single *Ovis* sp. specimen identified within the faunal assemblage exhibits characteristics of the big horn sheep *Ovis canadensis*; however, due to its fragmentary nature and intra-species diversity, it could not be definitively identified as *Ovis canadensis* or *Ovis aries* (domestic sheep).

Minimum Number of Individuals

In order to analyze the assemblage even further, the Minimum Number of Individuals (MNI) was calculated for each genus identified within the assemblage. Although many of these specimens were identifiable to the species level, the MNI was calculated for each genus due to difficulties in identifying post-cranial bone fragments of the genus *Sylvilagus* to species, and because an MNI calculated to the genus level would be more easily compared to the NISP values for the assemblage.

Of the 207 specimens comprising the TU 1 assemblage, 22 were identifiable to genus. For each of the 22 specimens, the MNI for each genus was calculated based upon the most abundant element from that genus. This was done by only utilizing elements that were comprised

of the same portion of the bone. For example, only the acetabulum of the left innominate or complete left innominate was used to determine the MNI for *Sylvilagus* because it could be certain that these were not just broken portions of the same element being counted more than once.

The most abundant genus identified within genus sample was *Sylvilagus.* The MNI for *Sylvilagus* was two and was calculated by using the left innominate. Due to the small sample size of the assemblage, the remaining genera had an MNI calculation of only one per genus. Table 4.3–16 provides the MNI for each genus represented within the TU 1 assemblage and the element used for calculation.

Table 4.3–16
MNI of Genera Recovered From TU 1
Site SDI-776A and B

Genus	Element	Portion	Side	MNI
Actinemys	Plastron	Anal Scute	Right	1
Odocoileus	Premolar 2	Buchal	Right	1
Ovis	Scapula	Proximal	Left	1
Sciurus	Humerus	Distal	Left	1
Sylvilagus	Innominate	Acetabulum	Left	2
			Total	6

Age

Age was only inspected for those specimens from TU 1 that were identifiable to genus. Due to the high levels of fragmentation observed within the sample, 40.91 percent (N=9) of the specimens did not exhibit enough characteristics to be assigned to any specific age category. However, those specimens that were complete enough to be assigned to an age category primarily consist of mature animals with clear evidence of complete epiphyseal fusion. These specimens were placed into the "Adult" category, which was comprised of four separate genera including *Actinemys, Odocoileus, Ovis*, *Sciurus,* and *Sylvilagus*. Only one specimen placed in the "Juvenile" category was identified within the assemblage, which was represented by the left scapula of a juvenile *Sylvilagus*. The number of specimens from each age category are provided in Table 4.3–17.

Table 4.3–17
Age Categories Represented Within the TU 1 Assemblage
Site SDI-776A and B

Age Category	Overall Quantity	Quantity by Genus		Percentage	
Adult	12	*Actinemys*	3	54.56	13.64
		Odocoileus	1		4.55
		Ovis	1		4.55
		Sciurus	2		9.09
		Sylvilagus	5		22.73
Juvenile	1	*Sylvilagus*	1	4.55	
N/A	9	*Actinemys*	6	40.91	27.27
		Sylvilagus	3		13.64
Total	22		22	100.00*	

**Rounded total may not equal 100.00 percent*

Burning

Most of the bones and bone fragments identifiable to genus or species within the TU 1 assemblage (N=15; 68.18 percent) exhibit characteristics of Heating Stage 2, indicating that the bone had been exposed to low levels of heat between 185 and 285 degrees Celsius. Bones exhibiting characteristics of Heating Stage 2 have either been boiled often, fire-roasted away from an open flame, exposed to grassland brushfires, or buried under hearths or areas that experienced shrub land brush fires (Bennett 1999:6; Stiner et al. 1995; McCutcheon 1992; Bailey and Anderson 1980). The heating stage index used for this analysis is provided in Table 4.3–18, created based upon data reported on by Shipman, Foster, and Schoeninger during a 1984 study on the analysis of burnt skeletal remains (Shipman et al. 1984). Although separate rubrics were used to describe the morphologic and chromatic effects that heat has on bone, for the ease of classification into one system of categorization for heat alteration, the morphologic and chromatic stages were combined, as was done by Kraft (2016).

Table 4.3–18
Bone Heating Stages* Used in the TU 1 Faunal Analysis
Site SDI-776A and B

Heating Stage	Temperature	Characteristics
1	20-<185˚C	Common colors are neutral white, pale yellow, and yellow. The bone surface is intact and continuous.
2	185-<285˚C	Common colors are reddish brown, very dark grey-brown, neutral dark grey, and reddish-yellow. The bone surface becomes glassy and smoother than it was in Stage 1. At higher temperatures, the bone surface becomes cracked.

Heating Stage	Temperature	Characteristics
3	285-<440˚C	Common colors are neutral black with medium blue and some reddish-yellow. The bone surface exhibits cracking.
4	440-<800˚C	Common colors are predominately neutral white with light blue-grey and light grey. The bone surface is highly particulate and turns frothy.
5	800+˚C	Color is neutral white with some medium grey and reddish-yellow. The bone surface is smooth but nodular.

**Adapted from Shipman et al. 1984*

All of the possible scenarios that produce similar effects to those seen in the Heating Stage 2 specimens from the sampled faunal assemblage are very likely to have occurred at SDI-776A and B; however, due to the high level of fragmentation, boiling or burial after processing seem the most likely. Specimens assigned to Heating Stage 2 include members of the genera *Actinemys, Sciurus,* and *Sylvilagus.*

In addition to the bones that were assigned to Heating Stage 2, 22.73 percent (N=5) of bones identifiable to genus or species within the TU 1 assemblage was analyzed as belonging to Heating Stage 1, indicating that these bones were either entirely unburned or exposed to extremely low fire temperatures (less than 185 degrees Celsius), which had little to no impact on the physical appearance of the bones. The range of genera and species assigned to Heating Stage 1 was one less than that assigned to Heating Stage 2, and included only *Actinemys* and *Ovis*. The presence of unburned specimens belonging to *Actinemys* might indicate that the turtles were boiled for a very short amount of time, or perhaps the animal was removed from the shell prior to cooking. The single *Ovis* scapula also showed signs of root etching (discussed later in this section), and may have been a tool fragment that was broken and subsequently buried without having been exposed to any heat. It is possible that if the animal was indeed cooked in some manner, it is likely that all meat was removed from the bone and the scapula was not further modified (*i.e.,* used to make bone grease or pemmican).

The remainder of the specimens identifiable to genus (N=2; 9.09 percent of the assemblage) was assigned to Heating Stage 3. No specimens were assigned to Heating Stages 4 or 5. The percentage of remains that contributed to this category was substantially smaller and, much like Heating Stage 1, contained elements (turtle plastron and deer premolar) likely to have been discarded into the fire. Bones and bone fragments that exhibit signs of Heating Stage 3 are generally those elements that have been discarded in the vicinity of a hearth feature or directly exposed to a shrub land brushfire. The number of specimens identified within each heating stage category within the TU 1 assemblage is listed in Table 4.3–19.

Table 4.3–19
Heating Stage Categories Represented Within the TU 1 Assemblage
Site SDI-776A and B

Heating Stage	Overall Quantity	Quantity by Genus		Percentage	
1	5	*Actinemys*	4	22.73	18.18
		Ovis	1		4.55
2	15	*Actinemys*	4	68.18	18.18
		Sciurus	2		9.09
		Sylvilagus	9		40.91
3	2	*Actinemys*	1	9.10	4.55
		Odocoileus	1		4.55
Total	22		22	100.00*	

**Rounded total may not equal 100.00 percent*

Weathering

Very few of the specimens from TU 1 that were identifiable to genus showed signs of weathering. Most of the specimens (N=20; 90.91 percent) in the assemblage were assigned to Weathering Stage 0, indicating that they had either not been exposed to weathering conditions long enough to show physical signs of deterioration, or the exposure to low heat temperatures and "glazing" that occurred in most of the Heating Stage 2 specimens helped to prolong the life of the bone fragments. Only one specimen exhibited characteristics of Weathering Stage 1 and one specimen exhibited characteristics of Weathering Stage 2. No other weathering stages are represented within the specimens identifiable to genus. Table 4.3–20 displays the rubric used to determine the weathering stages, while Table 4.3–21 provides the weathering stages for the specimens identifiable to genus from the TU 1 assemblage.

Table 4.3–20
Bone Weathering Stages* Used in the TU 1 Faunal Analysis
Site SDI-776A and B

Weathering Stage	Characteristics
0	Bone surface shows no sign of cracking or flaking due to weathering. Usually bone is still greasy, marrow cavities contain tissue and skin, and muscle/ligament may cover part of all of the bone surface.
1	Bone shows cracking, normally parallel to the fiber structure (*e.g.,* longitudinal in long bones). Articular surfaces (as well as within the bone itself) may show mosaic cracking of covering tissue. Fat, skin, and other tissue may or may not be present.
2	Outermost concentric thin layers of bone show flaking, usually associated with cracks, in that the bone edges along the cracks tend to separate and flake first.

Weathering Stage	Characteristics
	Long, thin flakes, with one or more sides still attached to the bone, are common in the initial part of Stage 2. Deeper and more extensive flaking follows, until most of the outermost bone is gone. Crack edges are usually angular in cross section. Remnants of ligaments, cartilage, and skin may be present.
3	Bone surface is characterized by patches of rough, homogenously weathered compact bone, resulting in a fibrous texture. In these patches, all the external, concentrically layered bone has been removed. Gradually, the patches extend to cover the entire bone surface. Weathering does not penetrate deeper than 1.0 to 1.5 millimeters at this stage, and bone fibers are still firmly attached to each other. Crack edges are usually rounded in cross section. Tissue is rarely present at this stage.
4	The bone surface is coarsely fibrous and rough in texture; large and small splinters occur and may be loose enough to fall away from the bone when it is moved. Weathering penetrates into inner cavities. Cracks are open and have splintered or rounded edges.
5	Bone is falling apart in situ, with large splinters lying around what remains of the whole, which is fragile and easily broken by moving. Original bone shape may be difficult to determine. Cancelleous bone usually exposed, when present, and may outlast all traces of the former more compact, outer parts of the bone.

**Adapted from Behrensmeyer 1978*

Table 4.3–21

Weathering Stage Categories Represented Within the TU 1 Assemblage
Site SDI-776A and B

Weathering Stage	Overall Quantity	Quantity by Genus		Percentage	
0	20	*Actinemys*	9	90.91	40.91
		Odocoileus	1		4.55
		Sciurius	2		9.09
		Sylvilagus	8		36.36
1	1	*Sylvilagus*	1	4.55	
2	1	*Ovis*	1	4.55	
Total	22		22	100.00*	

**Rounded total may not equal 100.00 percent*

Breakage Pattern

Breakage patterns were recorded for all specimens from the TU 1 assemblage that were identifiable to genus. Of the 22 bones or bone fragments analyzed from the assemblage (Table 4.3–22), most specimens exhibit angular breakage patterns (N=11; 50 percent), while the remainder of broken specimens were separated from the remainder of the element along natural suture lines (N=9; 40.91 percent), or exhibited spiral-shaped breaks (N=2; 9.10 percent). The suture breaks were only present on *Actinemys* plastrons (dorsal shells).

Table 4.3–22
Breakage Patterns Represented Within the TU 1 Assemblage
Site SDI-776A and B

Breakage Pattern	Overall Quantity	Quantity by Genus		Percentage	
Angular	11	*Odocoileus*	1	50.00	4.55
		Sciurius	2		9.09
		Sylvilagus	8		36.36
Suture	9	*Actinemys*	9	40.91	
Spiral	2	*Ovis*	1	9.10	4.55
		Sylvilagus	1		4.55
Total	22		22	100.00*	

**Rounded total may not equal 100.00 percent*

When combined with the information gathered from the weathering and burning analyses, it is clear that most of the bones were intentionally fragmented, likely after having been roasted. Fifty percent of the TU faunal assemblage identifiable to genus exhibited characteristics of angular breaks, which indicates that the bones were broken after weathering or heating. Because none of the bones with angular breaks showed signs of weathering, it is likely that the animals were roasted whole or "bone in," and then the bones were later ground up in order to produce pemmican or bone grease. Of the two bone fragments that showed evidence of spiral breakage patterns, the *Sylvilagus* fragment was assigned to the Heating Stage 2 category, indicating that the bone was likely broken shortly after the animal had been captured or hunted and then boiled or fire roasted away from an open flame. The *Ovis* specimen was not thermally altered, indicating that the bone was likely broken and discarded away from any sources of fire. Because the *Ovis* specimen was also weathered and showed signs of root etching, it is likely that the scapula fragment was discarded in the open, left to weather, and then buried in a vegetative environment.

Cut Marks

None of the TU 1 specimens identifiable to genus showed any signs of cut marks. This may have been due to the highly fragmented nature of the specimens and the elements that survived for analysis. Because the majority of the specimens identified to genus are small mammals or reptiles, it is possible that the specimens lack observable cut marks due to the fact that small animals do not necessarily need to be disarticulated prior to roasting, boiling, or other cooking practices.

Gnawing and Chewing

Much like cut marks, rodent gnawing and carnivore chewing are most often observed on medium to large mammal remains. Despite inspection of each specimen that was identifiable to

genus, no rodent gnawing or carnivore chewing was observed on any of the TU 1 specimens. The lack of rodent gnawing may indicate that burrowing rodent activity was not prevalent within the site, which is substantiated by a lack of burrowing species identified within the assemblage. The lack of carnivore gnawing may be explained by the high levels of fragmentation found within the assemblage. Because nearly the entire TU 1 faunal assemblage was fragmented, it is also likely that most of the specimens were cooked, broken, or processed before carnivores would have had a chance to access them.

Root Etching

Another characteristic looked for on all TU 1 specimens was root etching. Only one specimen, the *Ovis* sp. scapula, showed signs of root etching. This could indicate that plants with root systems, which would normally produce root etching, were not present throughout the entirety of TU 1. Vegetation surrounding the site at the time of excavation consisted of native grasses and inland sage scrub habitat; however, it is likely that the area once contained a more riparian habitat type due to its proximity to the San Luis Rey River. However, this does not explain the lack of root etching visible on the remainder of the specimens.

Summary and Discussion

Based upon the data collected from the faunal analysis of TU 1 at SDI-776A and B, it was determined that small mammals are the most abundant class of animal identified across the site. Small mammals represent 34.78 percent of the NISP from the site. In order to more fully understand the animal genera represented within the faunal assemblage and the manner in which each genus may have been utilized by the occupants of SDI-776A and B, the TU 1 assemblage was submitted to an in-depth analysis. Each specimen from the TU 1 assemblage was identified to the lowest possible taxonomic category. Those specimens identifiable to genus were further inspected for element, side, age, and human and non-human modifications including breakage pattern, weathering, and heating.

Six separate orders were identified within the TU 1 assemblage. A total of 28 specimens were identifiable to the order category. The orders identified within the assemblage consisted of Artiodactyla (N=4), Carnivora (N=2), Lagomorpha (N=9), Perciformes (N=2), Rodentia (N=2), and Testudines (N=9). The TU 1 specimens were then further identified to the genus level and inspected for characteristics indicating age, heating stage, weathering stage, breakage pattern, cut marks, gnawing and/or chewing, and root etching. Twenty-two specimens from the TU 1 assemblage were identifiable to genus. The genus *Sylvilagus,* which was assigned to the small mammal category based upon its live weight of 1.5 kilograms, was the most abundant identifiable mammal genus with a NISP count of nine. *Actinemys* was also equally abundant with a NISP count of nine. The least abundant genera were *Ovis* and *Odocoileus,* with only one specimen identified per genus. The only other genus represented within the sample was *Sciurus* (N=2). The MNI for all specimens identifiable to genus was also calculated for the TU 1 assemblage; however,

due to the high level of fragmentation and resultant low number of elements identifiable to genus, the result was an MNI of one for each taxa, except for *Sylvilagus,* which resulted in a count of two.

Those elements identifiable to genus within the TU 1 assemblage were subjected to weathering and heating stage analysis in order to understand the taphonomic nature of the assemblage. The majority of the specimens (90.91 percent) did not exhibit any signs of weathering, suggesting that discarded faunal material was not left out in the open for extended periods of time. One specimen, a *Sylvilagus* distal femur, showed signs of Weathering Stage 1, indicating that the element was likely exposed to the sun, air, and rain for possibly several months. Only one specimen, an *Ovis* sp. scapula, exhibited signs of Weathering Stage 2, which is indicative of lying out on the surface for potentially a few years before being buried. Most of the specimens, however, showed no signs of weathering, but exhibited signs of Heating Stage 2 or greater. This heating stage indicates that the majority of the TU 1 assemblage was subjected to boiling, fire-roasted away from an open flame, exposed to grassland brushfires, or buried under hearths or areas that experienced shrub land brush fires. Fifteen specimens (68.18 percent) exhibited signs of Heating Stage 2. All of the possible scenarios that produce similar effects to those seen in the Heating Stage 2 specimens are very likely to have occurred at SDI-776A and B; however, due to the high level of fragmentation and the fact that 22.73 percent show no signs of heat modification, boiling, or burial after processing, it seems more likely than large-scale fires that encompassed the entire site. Bones and bone fragments that exhibited signs of Heating Stage 3 (N=2; 9.09 percent) were likely discarded in the vicinity of a hearth feature or directly exposed to a shrub land brushfire.

In total, 50.00 percent (N=11) of the specimens from the TU 1 assemblage identifiable to genus exhibited signs of angular breakage. This high frequency of angular breakage is indicative of bones that were intentionally fragmented, likely after having been boiled or roasted. The secondary butchering practice of crushing the bones after initial cooking and consumption of the animal is often used to prepare bone grease pemmican. This process likely occurred at SDI-776A and B and provides an explanation for why the bones were so fragmented. Bones that were broken before heat modification (or that were not heat modified at all), which produced spiral breakage patterns, were less numerous. Only 9.10 percent (N=2) of elements identifiable to genus exhibited spiral breakage patterns. The remaining specimens (N=9) consisted of turtle plastrons that separated from the remainder of the dorsal shell along natural suture lines.

Determining the age of the specimens from TU 1, especially rabbits, was helpful in determining season of occupation for SDI-776A and B. While rabbits are plentiful year-round in the vicinity of SDI-776A and B, the presence of a juvenile *Sylvilagus* specimen indicates that the animal was procured between February and December. Although a sample of one is less than ideal, the animal's presence does imply that the site was likely occupied at least during the spring, summer, and/or autumn seasons. This is further substantiated by the presence of mortars within the bedrock milling features at SDI-776A and B, which were likely used for the grinding of acorns in the autumn months (Moriarty 1991; Stropes 2007).

Although all specimens identifiable to genus from the TU 1 assemblage were inspected for cut marks, gnawing and chewing, and root etching, only one specimen, the *Ovis* sp. scapula, showed signs of root etching. The lack of cut marks is likely due to the fact that small mammals (the majority of the specimens identifiable to genus) are generally not butchered, and those that are skinned are usually done so in a manner that does not leave cut marks on the bones. The lack of gnawing and chewing on the specimens is indicative of a lack of these types of disturbance within the sampled test unit.

As the majority of the faunal material represented in the TU 1 assemblage can be attributed to human behavior, as is shown by the thermal alteration and breakage patterns present on the bones, the proportions of each animal type recovered from the assemblage was of interest. Of the sampled faunal assemblage, 185 specimens (89.37 percent) were not identifiable to genus or species, and were instead classified only to taxonomic class, order, or family. These specimens consisted of unidentifiable large mammals, unidentifiable medium mammals, unidentifiable small mammals, unidentifiable birds, and members of the orders Artiodactyla, Carnivora, and Perciformes. No special studies, such as heating stage, weathering stage, or age were inspected for on these specimens. In addition, no statistical analyses were conducted due to the small sample size of the TU 1 assemblage.

Should additional excavations be conducted during a data recovery phase at SDI-776A and B, additional analyses would be warranted. At this time, it is clear that minimal animal processing occurred in the vicinity of TU 1; however, other locations within the site may contain larger quantities of faunal remains or a wider diversity of species. Further faunal studies conducted for SDI-776A and B should include inter- and intra-site statistical analyses to determine if there are any changes in animal procurement over time or between nearby sites.

Invertebrate Faunal Remains

A total of 28.5 grams of shell were recovered as part of the current project. The majority of the species were made up of *Chione* sp. and *Argopecten* sp. The presence of these species suggests that the inhabitants of the site likely visited the nearest bay/lagoon/estuary to gather shellfish. The remainder of the recovered shell was either too small or too weathered to allow for identification. Although the highest quantity of shell was recovered from the surface, archaeological excavations indicated that the shell extended up to 50 centimeters in depth.

Obsidian Source Analysis

Six obsidian flakes were identified within the current assemblage. Unfortunately, all of the specimens were too small for X-Ray Fluorescence (XRF) analysis. However, since obsidian does not occur in San Diego, prehistoric populations had to trade for this material. Sources of this material can indicate the aboriginal groups who traded the obsidian and suggest the general timeframe in which the trading occurred. Visual microscopic inspection suggests that all of the obsidian flakes recovered from SDI-776A and B originated from the Obsidian Butte quarry in

Imperial Valley. This source was available primarily during the Late Prehistoric Period and was traded by Luiseño-speaking people between the desert and the coast principally over the past 1,500 years. However, this cannot be verified based upon the size of the specimens recovered from SDI-776A and B. Additional studies at SDI-776A and B may provide a large enough sample of obsidian to submit for XRF analysis.

Discussion

The archaeological investigations at SDI-776A and B identified 65 bedrock milling features, a surface scatter of artifacts, and subsurface cultural deposits. Although SDI-776A and SDI-776B were previously recorded as two separate loci in response to the mapped concentrations of milling features at the northern and southern limits of SDI-776, the current study recorded a depositional pattern of surface artifacts that clearly documents the two loci were contemporary use areas. As a result, the loci were combined into a single site for analysis.

Based upon the preliminary results of the current study, SDI-776A and B is interpreted as a habitation site with subsistence practices primarily focused upon floral food resource extraction and the processing and hunting of animals such as rabbit. Given the high number of arrow points and point production waste, flake stone technology at the site appears to be oriented toward the production and maintenance of arrow points, as is reflected in both the technological trajectory of the debitage and the presence of arrow points. Interestingly, this trajectory employs a range of reduction strategies (nodule core, biface technology, and bipolar technology) to meet its terminal goal: the production of arrow points. The presence of bow pipes (that are traditionally attributed to the Kumeyaay) in territory that is identified as Luiseño is also unusual and should require further research. The assertion that this area is part of the Luiseño traditional use area may not be supported by the archaeological resources. In addition, the high frequency of milling across the site indicates communal milling practices rather than individual household activities. The presences of ceramics and arrow points identified at SDI-776A and B suggests Late Prehistoric occupation of the site.

4.3.2 Site SDI-776C

D.L. True originally recorded Site SDI-776C in 1960 as a single, isolated metate fragment. The site of the recorded isolate has been previously revisited (Shalom and Bowden-Renna 2007), but to date, the artifact noted by True has not been relocated. The avocado grove where the metate fragment is recorded was revisited during the course of the current project (Plate 4.3–9 [see Appendix F in the Confidential Appendix]).

Although the metate fragment could not be relocated, in order to determine if cultural resources had been buried or masked within the mapped location of the resource, three STPs were excavated to 30 centimeters across the site (Figure 4.3–4). The diameter of each STP averaged about 30 centimeters. No prehistoric or historic artifacts were recovered and no culturally modified soil was observed (Table 4.3–23).

Figure 4.3–4
Excavation Location Map
Site SDI-776C

(Deleted for Public Review; Bound Separately)

Table 4.3–23
Shovel Test Excavation Data
Site SDI-776C

STP	Depth (cm)	Object Name	Total	Percent
1	0-10	No Recovery		
	10-20			
	20-30			
2	0-10	No Recovery		
	10-20			
	20-30			
3	0-10	No Recovery		
	10-20			
	20-30			

The native soil across the site includes a loose, dark brown (10YR 3/3), clayey sand ranging between zero and 30 centimeters in depth, which became more compacted in the lower levels. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site. The testing program has provided limited information, which facilitated the evaluation of SDI-776C as a location of limited archaeological significance as defined by the County of San Diego Historical Resources Guidelines. The site does not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the site is classified as an isolate with no subsurface component, reduced integrity due to use of the land, and therefore, no residual research potential following the data collection efforts during the current testing program.

4.3.3 Site SDI-776D

D.L. True originally recorded Site SDI-776D in 1960 as a single, isolated basalt flake fragment. The location of the recorded isolate has been previously revisited (Shalom and Bowden-Renna 2007; Tennyson and Tuthill 2008), but to date, the artifact noted by True has not been relocated. The active equestrian use where the debitage fragment is recorded was revisited during the course of the current project (Plate 4.3–10 [see Appendix F in the Confidential Appendix]); however, the flake or any other evidence of prehistoric use could not be relocated. Although the debitage fragment could not be relocated, three STPs were excavated in order to determine if cultural resources had been buried or masked within the mapped location of the resource (Figure 4.3–5). Each STP averaged about 30 centimeters in diameter and were excavated to a depth of 30 centimeters. No prehistoric or historic artifacts were recovered and no culturally modified soil was observed (Table 4.3–24).

Figure 4.3–5
Excavation Location Map
Site SDI-776D

(Deleted for Public Review; Bound Separately)

Table 4.3–24
Shovel Test Excavation Data
Site SDI-776D

STP	Depth (cm)	Object Name	Total	Percent
1	0-10	No Recovery		
	10-20			
	20-30			
2	0-10	No Recovery		
	10-20			
	20-30			
3	0-10	No Recovery		
	10-20			
	20-30			

The native soil across the site includes a brown (10YR 5/3), compact, silty sand ranging between zero and 30 centimeters in depth, which became more compacted in the lower levels. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site. The testing program has provided limited information, which facilitated the evaluation of SDI-776D as a location of limited archaeological significance as defined by the County of San Diego Historical Resources Guidelines. The site does not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the site is classified as a reported isolate with no subsurface component, reduced integrity due to use of the land, and therefore, no residual research potential following the data collection efforts during the current testing program.

4.3.4 Site SDI-776E

D.L. True originally recorded Site SDI-776E in 1960 as a single, isolated metate fragment. The site of the recorded isolate has been previously revisited (Shalom and Bowden-Renna 2007), but to date, the artifact noted by True has not been relocated. The existing horse paddock where the metate fragment is recorded was revisited during the course of the current project (Plate 4.3–11 [see Appendix F in the Confidential Appendix]). Although the metate fragment could not be relocated, in order to determine if cultural resources had been buried or masked within the mapped location of the resource, three STPs were excavated to 30 centimeters across the site (Figure 4.3–6). The diameter of each STP averaged about 30 centimeters. No prehistoric or historic artifacts were recovered and no culturally modified soil was observed (Table 4.3–25).

Figure 4.3–6
Excavation Location Map
Site SDI-776E

(Deleted for Public Review; Bound Separately)

Table 4.3–25
Shovel Test Excavation Data
Site SDI-776E

STP	Depth (cm)	Object Name	Total	Percent
1	0-10	No Recovery		
	10-20			
	20-30			
2	0-10	No Recovery		
	10-20			
	20-30			
3	0-10	No Recovery		
	10-20			
	20-30			

The native soil across the site includes a loose, brown (10YR 5/3), sandy silt ranging between zero and 30 centimeters in depth, which became more compacted in the lower levels. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site. The testing program has provided limited information, which facilitated the evaluation of SDI-776E as a location of limited archaeological significance as defined by the County of San Diego Historical Resources Guidelines. The site does not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the site is classified as a reported isolate location with no subsurface component, reduced integrity due to use of the land, and therefore, no residual research potential following the data collection efforts during the current testing program.

4.3.5 Site SDI-776F

D.L. True originally recorded SDI-776F in 1960 as five metate fragments. The site has been previously revisited (Shalom and Bowden-Renna 2007), but to date, the artifact fragments noted by True have not been relocated. The ranch house that the metate fragments are recorded near was revisited during the course of the current project (Plate 4.3–12 [see Appendix F in the Confidential Appendix]). Although the metate fragments could not be relocated, in order to determine if cultural resources had been buried or masked within the mapped location of the resource, three STPs were excavated to 30 centimeters across the site (Figure 4.3–7). The diameter of each STP averaged about 30 centimeters. No prehistoric or historic artifacts were recovered and no culturally modified soil was observed (Table 4.3–26).

Figure 4.3–7
Excavation Location Map
Site SDI-776F

(Deleted for Public Review; Bound Separately)

Table 4.3–26
Shovel Test Excavation Data
Site SDI-776F

STP	Depth (cm)	Object Name	Total	Percent
1	0-10	No Recovery		
	10-20			
	20-30			
2	0-10	No Recovery		
	10-20			
	20-30			
3	0-10	No Recovery		
	10-20			
	20-30			

The native soil across the site includes a loose brown (10YR 5/3) silt ranging between zero and 30 centimeters in depth, which became more compacted in the lower levels. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site. The testing program has provided limited information, which facilitated the evaluation of SDI-776F as a location of limited archaeological significance as defined by the County of San Diego Historical Resources Guidelines. The site does not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the site is classified as a reported location of isolated artifacts with no subsurface component, reduced integrity due to use of the land, and therefore, no residual research potential following the data collection efforts during the current testing program.

4.3.6 Site SDI-776G

D.L. True originally recorded Site SDI-776G in 1960 as a single bedrock milling feature with one milling slick. The recorded location of the milling feature (BMF A) was revisited during the course of the current project (Plate 4.3–13 [see Appendix F in the Confidential Appendix]), resulting in the relocation of BMF A in the southwestern corner of the project boundary (Figure 4.3–8). The single bedrock milling feature was identified, mapped, and photographed (Plate 4.3–14 and Figure 4.3–9). The milling feature is highly exfoliated and consists of a single slick measuring 5x6x0.01 centimeters on a boulder that measures 100x150x128 centimeters (Table 4.3–27). No additional features directly related to BMF A were identified within the immediate site area.

Figure 4.3–8
Excavation Location Map
Site SDI-776G

(Deleted for Public Review; Bound Separately)

Table 4.3–27
Bedrock Milling Feature Data
Site SDI-776G

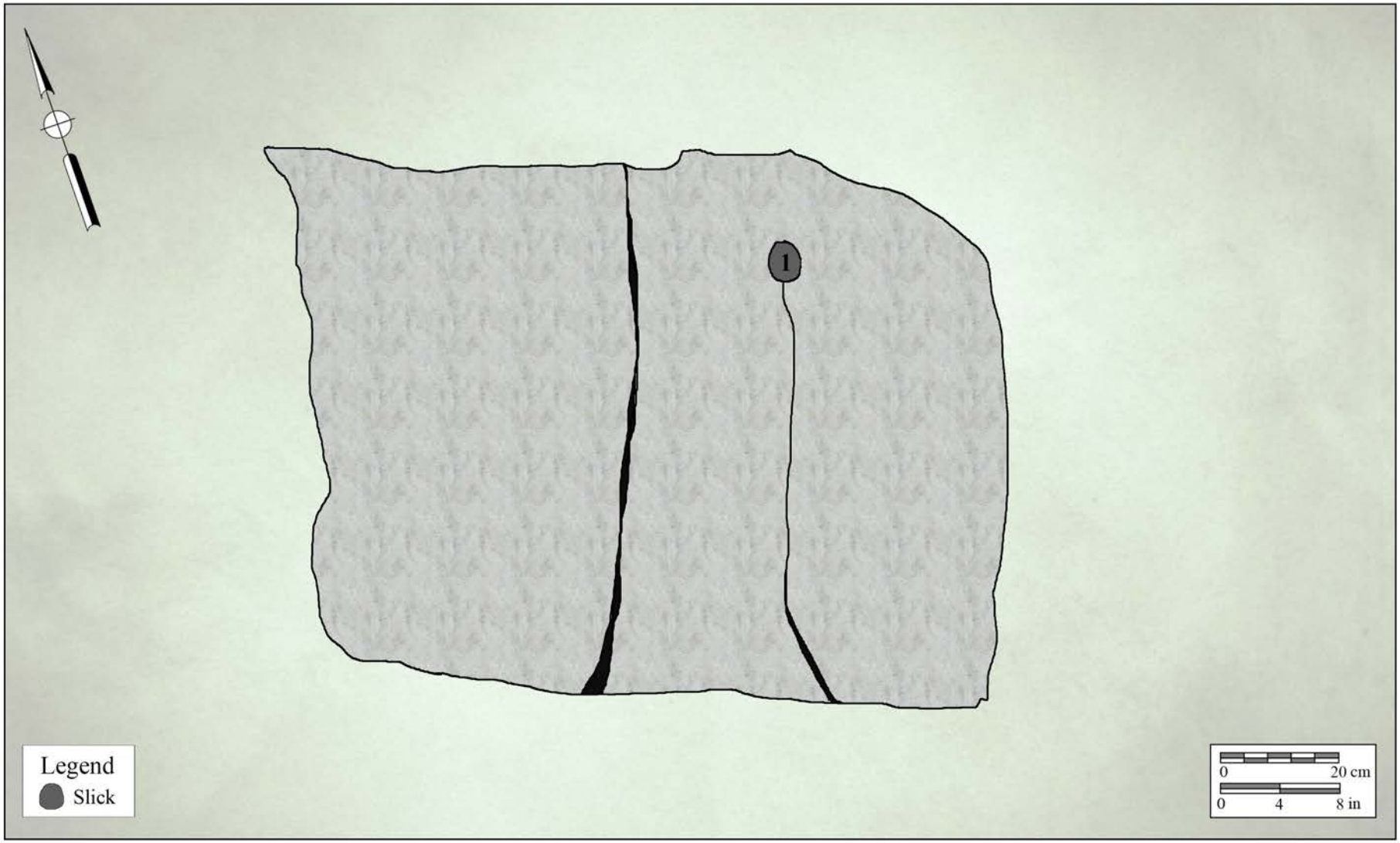


Figure 4.3–9

Bedrock Milling Feature A

Site SDI-776G

The Ocean Breeze Ranch Project

In order to determine if cultural resources had been buried or masked within the mapped location of the resource, two STPs were excavated to 30 centimeters across the site, around the milling feature (Figure 4.3–8). The diameter both STPs averaged about 30 centimeters. No prehistoric or historic artifacts were recovered and no culturally modified soil was observed (Table 4.3–28).

Table 4.3–28
Shovel Test Excavation Data
Site SDI-776G

STP	Depth (cm)	Object Name	Total	Percent
1	0-10	No Recovery		
	10-20			
	20-30			
2	0-10	No Recovery		
	10-20			
	20-30			

The native soil across the site includes a loose brown (10YR 5/3), sandy silt ranging between zero and 30 centimeters in depth, which became more compacted in the lower levels. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site and there are no cultural deposits associated with BMF A. The testing program has provided limited information, which facilitated the evaluation of SDI-776G as a location of limited archaeological significance as defined by the County of San Diego Historical Resources Guidelines. The site does not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the site is classified as a resource collection and food processing site with no subsurface component, reduced integrity due to use of the land, and therefore, no residual research potential following the data collection efforts during the current testing program.

4.3.7 Site SDI-776H

D.L. True originally recorded Site SDI-776H in 1960 by as a single bedrock milling feature with one milling slick. The recorded location of the milling feature (BMF A) was revisited during the course of the current project (Plate 4.3–15 [see Appendix F in the Confidential Appendix]), resulting in the relocation of BMF A in the southwestern corner of the project boundary in close proximity to SDI-776G (Figure 4.3–10). The single bedrock milling feature was identified, mapped, and photographed (Plate 4.3–16 and Figure 4.3–11). The milling feature is situated on a low-lying boulder, which measures 166x125x31 centimeters and consists of a single slick, which measures 34x28x0.1 centimeters (Table 4.3–29). No additional features directly related to BMF A were identified within the immediate site area.

Figure 4.3–10
Excavation Location Map
Site SDI-776H

(Deleted for Public Review; Bound Separately)

Table 4.3–29
Bedrock Milling Feature Data
Site SDI-776H

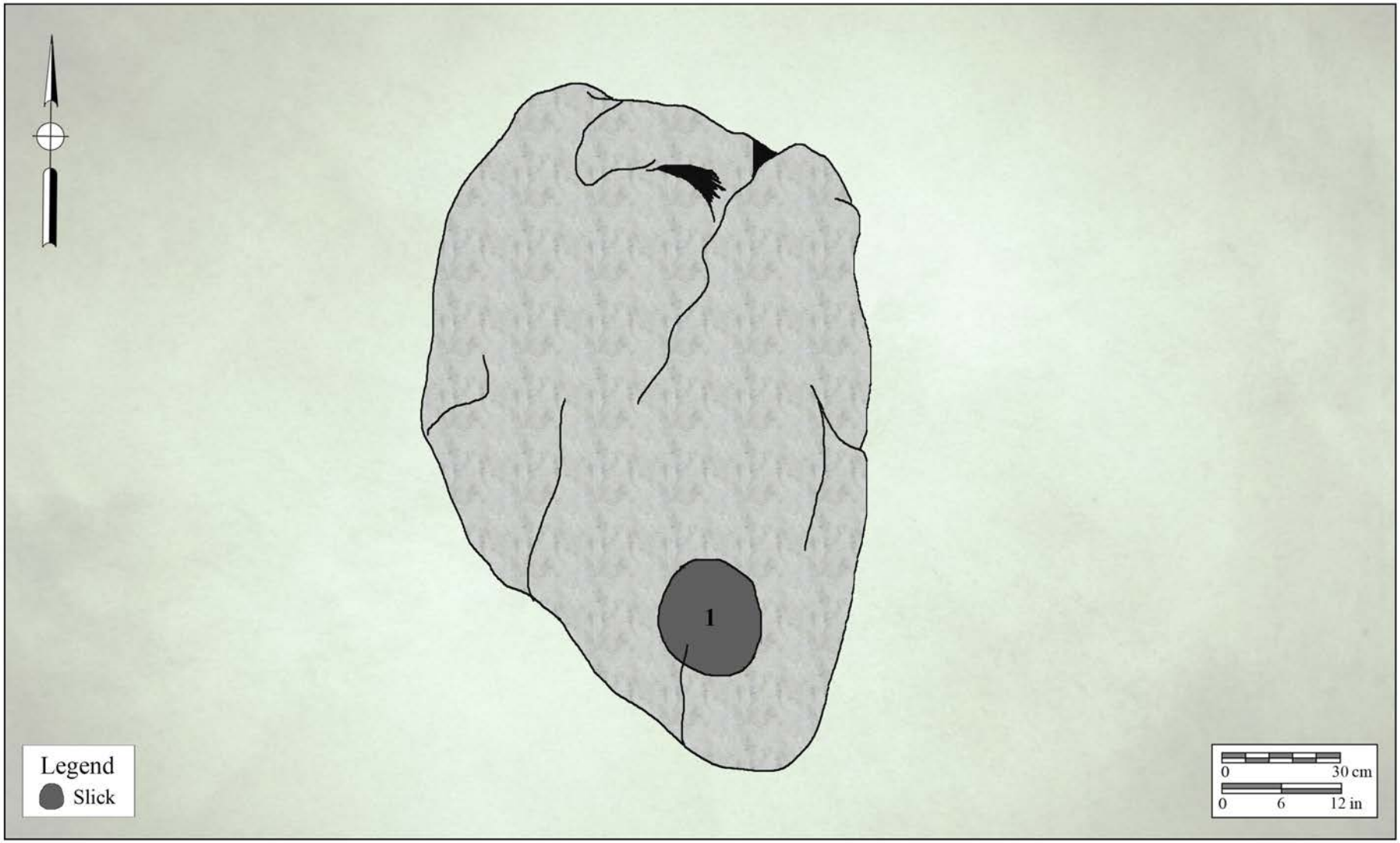


Figure 4.3–11

Bedrock Milling Feature A

Site SDI-776H

The Ocean Breeze Ranch Project

In order to determine if cultural resources had been buried or masked within the mapped location of the resource, three STPs were excavated to between 20 and 30 centimeters across the site, around the milling feature (Figure 4.3–10). The diameter of each STP averaged about 30 centimeters. No prehistoric or historic artifacts were recovered and no culturally modified soil was observed (Table 4.3–30).

Table 4.3–30
Shovel Test Excavation Data
Site SDI-776H

STP	Depth (cm)	Object Name	Total	Percent
1	0-10	No Recovery		
	10-20			
2	0-10	No Recovery		
	10-20			
	20-30			
3	0-10	No Recovery		
	10-20			
	20-30			

The native soil across the site includes a loose brown (10YR 5/3), sandy silt ranging between zero and 30 centimeters in depth, which became more compacted in the lower levels. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site and no cultural deposits in association with BMF A. The testing program has provided limited information, which facilitated the evaluation of SDI-776H as a location of limited archaeological significance as defined by the County of San Diego Historical Resources Guidelines. The site does not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the site is classified as a marginal resource collection and food processing site with no subsurface component, reduced integrity due to use of the land, and therefore, no residual research potential following the data collection efforts during the current testing program.

4.3.8 Site SDI-776I

D.L. True originally recorded Site SDI-776I in 1960 as an isolated metate fragment. The recorded site has been previously revisited (Shalom and Bowden-Renna 2007), but to date, the artifact noted by True has not been relocated. The recorded site location was revisited during the course of the current project (Plate 4.3–17 [see Appendix F in the Confidential Appendix]). Although the metate fragment could not be relocated, three 30-centimeter-diameter STPs were excavated to 30 centimeters at the reported location of the isolate (Figure 4.3–12). No prehistoric or historic artifacts were recovered and no culturally modified soil was observed (Table 4.3–31).

Figure 4.3–12
Excavation Location Map
Site SDI-776I

(Deleted for Public Review; Bound Separately)

Table 4.3–31
Shovel Test Excavation Data
Site SDI-776I

STP	Depth (cm)	Object Name	Total	Percent
1	0-10	No Recovery		
	10-20			
	20-30			
2	0-10	No Recovery		
	10-20			
	20-30			
3	0-10	No Recovery		
	10-20			
	20-30			

The native soil across the site includes a pale brown (10YR 6/3), silty sand ranging from zero to 30 centimeters in depth, which became more compacted in the lower levels. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site. The testing program has provided limited information, which facilitated the evaluation of SDI-776I as a location of limited archaeological significance as defined by the County of San Diego Historical Resources Guidelines. The site does not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the site is classified as a reported location of an isolated artifact with no subsurface component, reduced integrity due to use of the land, and therefore, no residual research potential following the data collection efforts during the current testing program.

4.3.9 Site SDI-1083

D.L. True originally recorded Site SDI-1083 in 1965 as an artifact scatter on a hillside in the area of Paddock #17. Artifacts recorded by True included projectile points, pottery, and lithics. EDAW, Inc. revisited the site in 2008 (Tennyson and Meiser 2008) and noted dark soil indicative of a cultural deposit; however, no cultural materials were reported at that time. The results of the current survey were consistent with the previous work done by EDAW, Inc. Although dark soils were again observed during the current study, no cultural materials were found to be present. An overview of the site is provided in Plate 4.3–18 (see Appendix F in the Confidential Appendix).

In order to determine if cultural resources had been buried by farming or masked within the mapped location of the resource, eight STPs were excavated to between 30 and 50 centimeters across the site (Figure 4.3–13). The diameter of each STP averaged about 30 centimeters. No prehistoric or historic artifacts were recovered and no culturally modified soil was observed (Table 4.3–32).

Figure 4.3–13
Excavation Location Map
Site SDI-1083

(Deleted for Public Review; Bound Separately)

Table 4.3–32
Shovel Test Excavation Data
Site SDI-1083

STP	Depth (cm)	Object Name	Total	Percent
1	0-10	No Recovery		
	10-20			
	20-30			
2	0-10	No Recovery		
	10-20			
	20-30			
3	0-10	No Recovery		
	10-20			
	20-30			
4	0-10	No Recovery		
	10-20			
	20-30			
5	0-10	No Recovery		
	10-20			
	20-30			
6	0-10	No Recovery		
	10-20			
	20-30			
	30-40			
	40-50			
7	0-10	No Recovery		
	10-20			
	20-30			
	30-40			
	40-50			
8	0-10	No Recovery		
	10-20			
	20-30			

The native soil across the site includes a brown (10YR 5/3), sandy silty ranging between zero and 50 centimeters in depth, which became more compacted in the lower levels. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site. The testing program has provided limited information, which facilitated the evaluation of SDI-1083 as a location of limited archaeological significance as defined by the County of San Diego Historical Resources Guidelines. The site does not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the site is classified as a reported artifact scatter with no subsurface component, reduced integrity due to use of the land, and therefore, no residual research potential following the data collection efforts during the current testing program.

4.3.10 Site SDI-8237

Ken Hedges previously recorded Site SDI-8237 in 1980 as rock art on a large boulder. The recorded design elements noted by Hedges in 1980 included vertical diamond chains, zigzags, and ladders. The site visit conducted by BFSA to relocate and assess the condition of the rock art resulted in the observation that the images listed by Hedges nearly 40 years ago were generally too faded to identify. The wildfire that passed through this area in 2015 and intensely burned the vegetation immediately around the rock art boulder may have affected the painted images. Based upon the description offered by Hedges, the pictographs appear to fall within the San Luis Rey style of iconography. However, without a detailed analysis of the pictographs, this can only be speculative. The pictograph location will remain in open space, so no additional study of the site is recommended at this time. The location of the rock art site is provided in Figure 4.2–1 and an overview of the site is provided in Plate 4.3–19 (see Appendix F in the Confidential Appendix).

4.3.11 Site SDI-12,550

Richard Cerreto and Russ Adamson of Gallegos and Associates previously recorded Site SDI-12,550 in 1991 as a rock ring/hearth feature and a possible milling feature located on the eastern high elevation of the project. No artifacts were previously recorded. Due to the presence of dense vegetation, the site was not relocated by BFSA during the survey process in 2014. The site location was revisited in 2016 after a major fire had swept through the eastern portion of the APE. The site was again not relocated during the survey update. No archaeological testing was conducted at this location because no resources were discovered, and this area will not be in the development footprint. The survey program has provided limited information, which facilitated the evaluation of SDI-12,550 as a location of limited archaeological significance as defined by the County of San Diego Historical Resources Guidelines. The site does not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the site is classified as a prehistoric rock feature that could not be relocated. The site retains no residual research potential.

Figure 4.3–14
Site Location Map
Site SDI-8237

(Deleted for Public Review; Bound Separately)

4.3.12 Site SDI-20,174

ASM Affiliates, Inc. recorded Site SDI-20,174 in 2011 (Gunderman et al. 2011) as a rectangular, plastic tarp-lined cistern, concrete pipe fence posts, broken concrete water pipe fragments, two linear ditches containing concrete water pipes, two concrete standpipes, and an oval watering hole. Of the features identified in 2011, the cistern, standpipes, ditches, and miscellaneous concrete fragments were relocated during the current study. Examples of the identified features are presented in Plates 4.3–20 through 4.3–24, locations of the features within the site boundaries are shown on Figure 4.3–15, and descriptions and dimensions of the features are provided in Table 4.3–33. An additional standpipe was identified outside of the current site boundary. An empty plywood shack, possibly used as a pump house (see Plate 4.3–24), which was present but not recorded as part of SDI-20,174 by ASM Affiliates, Inc. in 2011, was also observed near Concrete Standpipe 1 (Feature 1) (see Plate 4.3–20). No exact age for these features was immediately discernable based upon initial observation.

Plate 4.3–20: View of Feature 1, Concrete Standpipe 1, facing south.

Plate 4.3–21: View of Feature 3, Concrete Standpipe 3, facing east.

Plate 4.3–22: View of Feature 4, Cistern, facing northeast.

Plate 4.3–23: View of Feature 5, Concrete Pipeline 1, facing southwest.

Plate 4.3–24: View of Feature 7, Plywood Pump House, facing southeast.

Figure 4.3–15
Historic Feature Location Map
Site SDI-20,174

(Deleted for Public Review; Bound Separately)

Table 4.3–33
Historic Feature Data
Site SDI-20,174

Feature No.	Feature Type	Dimensions			Notes
		L	W	D	
1	Concrete Standpipe 1	11' 2"	3' 7.5"	-	-
2	Concrete Standpipe 2	-	-	-	-
3	Concrete Standpipe 3	-	-	-	New feature: 2016
4	Cistern	95'	70'	4	-
5	Concrete Pipeline 1	800'	-	-	-
6	Linear Ditch 2	60'	-	-	-
7	Plywood Pump House	-	-	-	New feature: 2016
8	Oval Watering Hole	45'	25'	-	Not relocated

Historic aerial photographs indicate the presence of structures at the location of the water conveyance and storage features in 1928. However, these structures are absent by 1938, which is consistent with the history of this property. In 1924, the property was transferred from the Canfield Estate Ranch, managed by Ben Thorpe, to the Chloe P. Canfield Memorial Home, a California Corporation that served as a Trustee for a Training School for Girls on the property. When Ben Thorpe left the property in 1924, traditional ranching ceased and the water conveyance system and storage features were likely abandoned and fell into a state of disrepair.

4.3.13 P-37-028134

Site P-37-028134 is a historic linear feature representing a segment of the historic trail or road from the San Luis Rey Mission to the Pala Asistencia. This alignment is illustrated on Figure 4.2–1. The alignment is not associated with any historic structures or features within the Ocean Breeze Ranch project. The trail itself could not be distinguished from various ranch roads that follow the same general alignment as the historic trail; however, it would be a reasonable conjecture that portions of the trail still exist within the property, but these have been obscured by the use of the ranch.

4.3.14 Site P-37-028139

Site P-37-028139 was recorded by Shalom (2008) as part of the historic resource survey for the State Route 76 East Widening Project. The report indicates that the site consists of a single, isolated historic can located in the northeastern portion of the current project APE. The identified isolate, and isolates in general, are not considered significant historic resources. The isolate was not relocated during the updated BFSA survey. Analysis indicates that the isolate is not significant and does not satisfy the criteria for significance or importance. Therefore, based upon the previous

evaluation of the site, no additional testing was recommended within the APE for P-37-028139.

4.3.15 Site P-37-031762

Site P-37-031762 was recorded in 2011 by ASM Affiliates, Inc. (Gunderman et al. 2011) as two cisterns measuring 25x25 feet and 35x35 feet, with a depth between four and six feet. The cisterns have large tamarisk trees growing from them. The current survey indicates that the cisterns are just outside of the project APE. No historic artifacts or additional features were identified in association with the features and their age is unknown. As the site is outside of the current APE, no additional study was conducted at the locations of the cisterns.

4.3.16 Site SDI-21,874

Site SDI-21,874 was identified as a result of the 2014 BFSA field survey (see Figure 4.2–1). The site consists of two large, low-lying bedrock outcrops (Plate 4.3–25 [see Appendix F in the Confidential Appendix]). The bedrock outcrops sit adjacent to each other in the northeastern and southwestern corners of the site boundaries. BMF A is located in close proximity to Site SDI-776A and B and BMF B is located directly adjacent to BMF A (Figure 4.3–16).

BMF A is situated on a low-lying boulder and consists of two slicks, which measure 21x15x0 centimeters and 20x18x0 centimeters on a boulder that measures 250x230 centimeters (Table 4.3–34). BMF B is situated on a low-lying, partially-buried boulder and consists of one slick, which measures 23x19x0.5 centimeters on a boulder that measures 73x25 centimeters (Table 4.3–34). BMFs A and B were identified, mapped, and photographed (Plates 4.3–26 and 4.3–27 and Figures 4.3–17 and 4.3–18).

Table 4.3–34
Bedrock Milling Feature Data
Site SDI-21,874

Feature	Milling Surface	Type	Dimensions (cm)		
			Length	Width	Depth
A	1	Slick	34.0	28.0	-
	2		20.0	18.0	-
B	1	Slick	23.0	19.0	0.5

No additional features that are directly related to BMF A or BMF B were identified within the immediate site area. Significance testing of the archaeological site was not conducted because the site will be preserved in an open space easement. With the placement of this site in open space, it will not be impacted by the development plan and no additional study is recommended.

Figure 4.3–16
Feature Location Map
Site SDI-21,874

(Deleted for Public Review; Bound Separately)

Plate 4.3–26: BMF A at Site SDI-21,874, facing north.

Plate 4.3–27: BMF B at Site SDI-21,874, facing north.

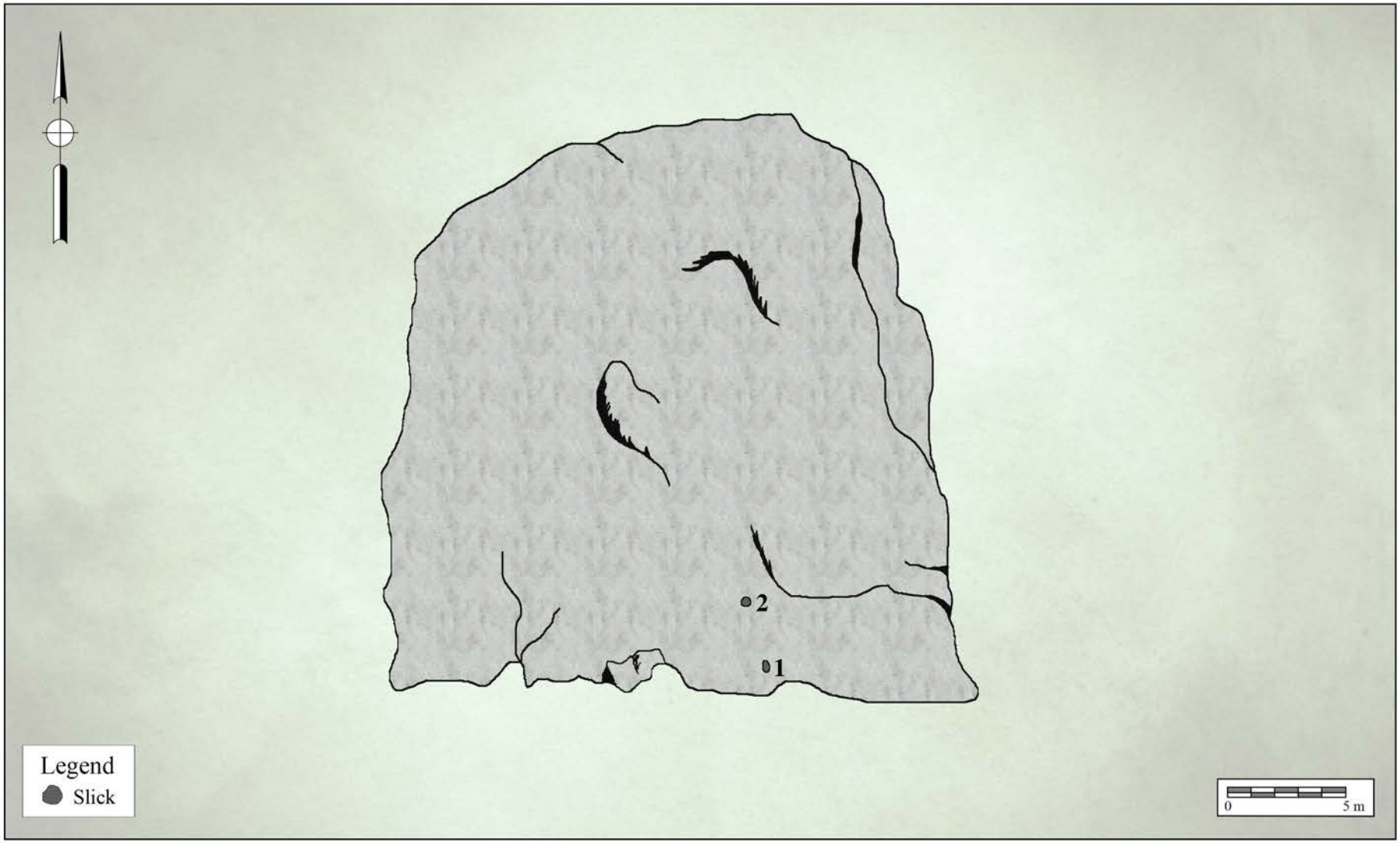


Figure 4.3–17

Bedrock Milling Feature A

Site SDI-21,874

The Ocean Breeze Ranch Project

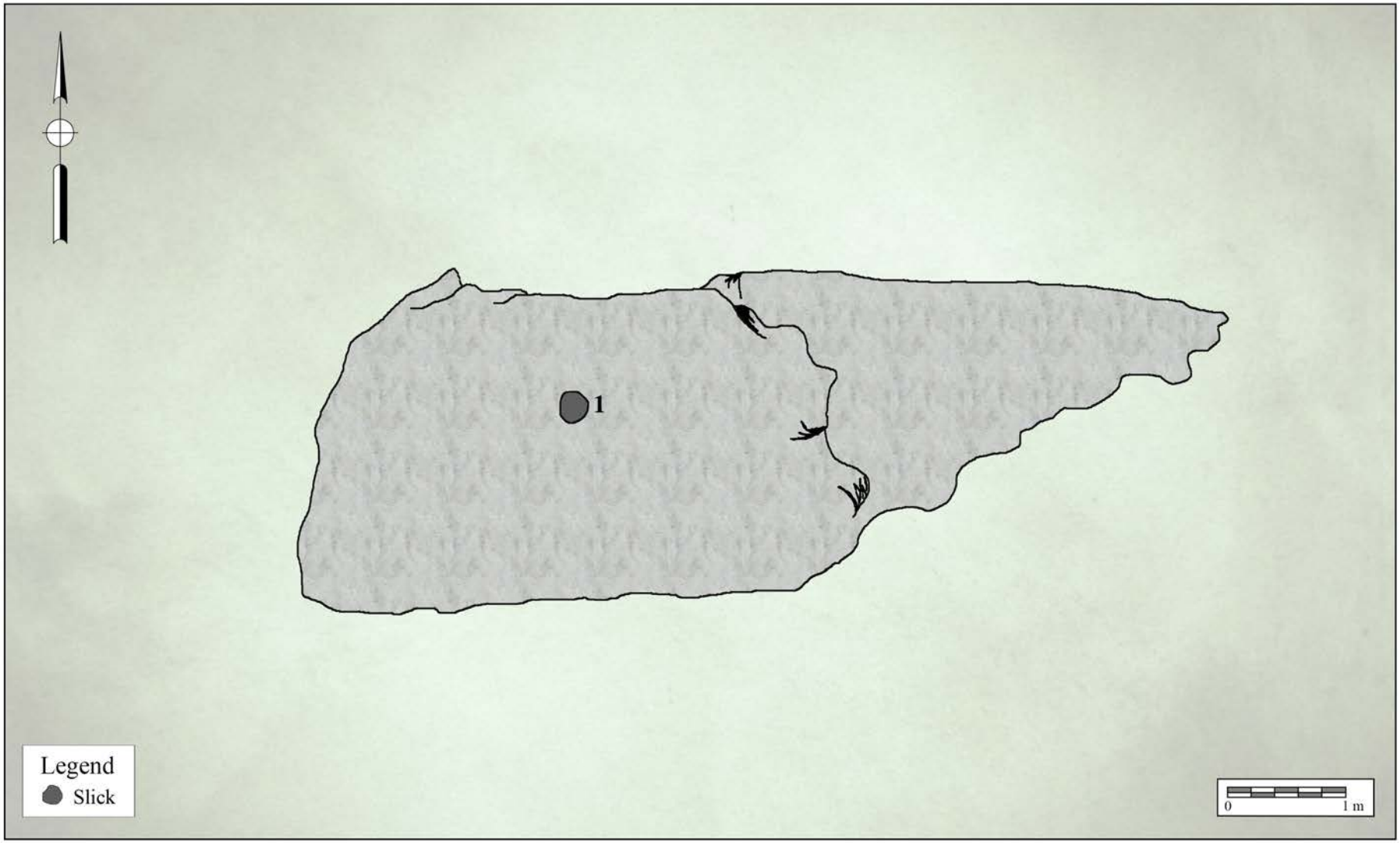


Figure 4.3–18

Bedrock Milling Feature B

Site SDI-21,874

The Ocean Breeze Ranch Project

4.3.17 Site SDI-21,875

During the course of the 2014 BFSA field survey, two possible rock shelters were identified; however, upon further investigation in 2016, it was determined that only one of the features was sizable enough to be considered a rock shelter (Plate 4.3–28 [see Appendix F in the Confidential Appendix] and Figure 4.3–19).

The rock shelter (Feature 1) is a small opening created between the convergence of two large granite boulders (Figure 4.3–20; Plate 4.3–29 [see Appendix F in the Confidential Appendix]). The eastern boulder measures 2.4 meters high by 3.6 meters wide and the western boulder measures 3.1 meters high by 7.0 meters wide. The two rocks create an opening approximately 3.1 meters wide and 1.6 meters high. The overall depth of the feature is approximately 2.7 meters deep. The roof and walls of the shelter do not show any evidence of charring and no midden soil or cultural materials were identified within or adjacent to the shelter.

4.3.18 Site SDI-21,876

During the 2014 BFSA field survey, a small historic rock and mortar dam (Feature 1) was identified in the northeastern portion of the property (Plate 4.3–30 and Figure 4.3–21). The dam was constructed with a rock and mortar arrangement that ranged between two and four courses high. Portions of the dam have been washed away by flood water.

Plate 4.3–30: Overview of Site SDI-21,876, facing northwest.

Figure 4.3–19
Feature Location Map
Site SDI-21,875

(Deleted for Public Review; Bound Separately)

Figure 4.3–20

Feature 1, Rock Shelter

Site SDI-21,875

The Ocean Breeze Ranch Project

Figure 4.3–21
Feature Location Map
Site SDI-21,876

(Deleted for Public Review; Bound Separately)

Upon further investigation in 2016, an etching in the cement cap near the eastern extent of the wall top was determined to read "ACL 1928." During this time period, the property was owned by the "Chloe P. Canfield Memorial Home, a California Corporation." Historic research indicates that the adjacent property owner, A.C. Loveland, may have built the dam. The dam currently measures 3.7 meters long, 1.0 meter wide, and 1.3 meters tall along the western segment. The eastern segment measures 3.7 meters long, 1.5 meters wide, and 1.7 meters high. Although of similar construction, the eastern side has incorporated naturally-occurring boulders into its structure. Finally, a south-trending wall feature was also incorporated into the feature along the eastern segment of the structure. The wall segment measures 5.0 meters long, 0.9 meter wide, and 1.1 meters high. The wall segment was constructed in a similar manner to the rest of the dam. A photograph of Feature 1 is provided in Plate 4.3–31. No cultural materials were observed in association with this feature. The dam is located outside of the development footprint in a biological open space easement and will not be impacted by the project.

Plate 4.3–31: Feature 1, rock and mortar dam, at Site SDI-21,876, facing east.

4.3.19 Site P-37-035850

Within the boundaries of the subject property, six historic residences have been identified. Five of the historic residences have been recorded as Dulin Ranch (Site P-37-035850) with the SCIC. However, additional research has concluded that the historic structure complex is more closely associated with the Charles A. Canfield and Louis and Hope Lighton than later owner, Edgar Dulin. The complex is therefore referred to in this section as the Canfield-Lighton Ranch Complex.

Four of the structures currently located within the complex were constructed between 1913 and 1937 by Charles A. Canfield and Louis D. and Hope Loring Lighton. The fifth structure located within the complex is recorded on the Assessor's building record as having been constructed in 1913, and thus, likely built by Canfield; however, the structure is not visible in historic photographs until 1953. The structure may have been constructed elsewhere in 1913 and moved to its current location circa 1953 or constructed after the Lightons had sold the property to Edgar Dulin. Regardless, the design and materials used to build the structure are similar to those used in the other buildings. The sixth structure, the only building not located within the complex, lies approximately 4,200 feet to the east of the other buildings and was constructed circa 1952. The following section provides a description and evaluation of the possible significance of each identified historic resource.

Background Information

BFSA evaluated the architectural and historical significance of the historic structures located within the Ocean Breeze Ranch Project. The historic structures include five historic residences associated with the Canfield-Lighton Ranch, one historic single-family residence located east of the ranch complex, the horse corrals, stables, storage sheds, hardscape, and administrative offices associated with the current Ocean Breeze Ranch, and agricultural land (see Figure 4.3–22).

Records relating to the ownership and developmental history of this project were sought with a view to not only fulfill the requirements of this report, but to identify any associated historical or architectural significance. Records located at the BFSA research library, those of the San Diego Assessor/Recorder/County Clerk, the San Diego History Center, the University of California at San Diego Special Collections, and the University of Arkansas Libraries Special Collections were accessed for information regarding the property.

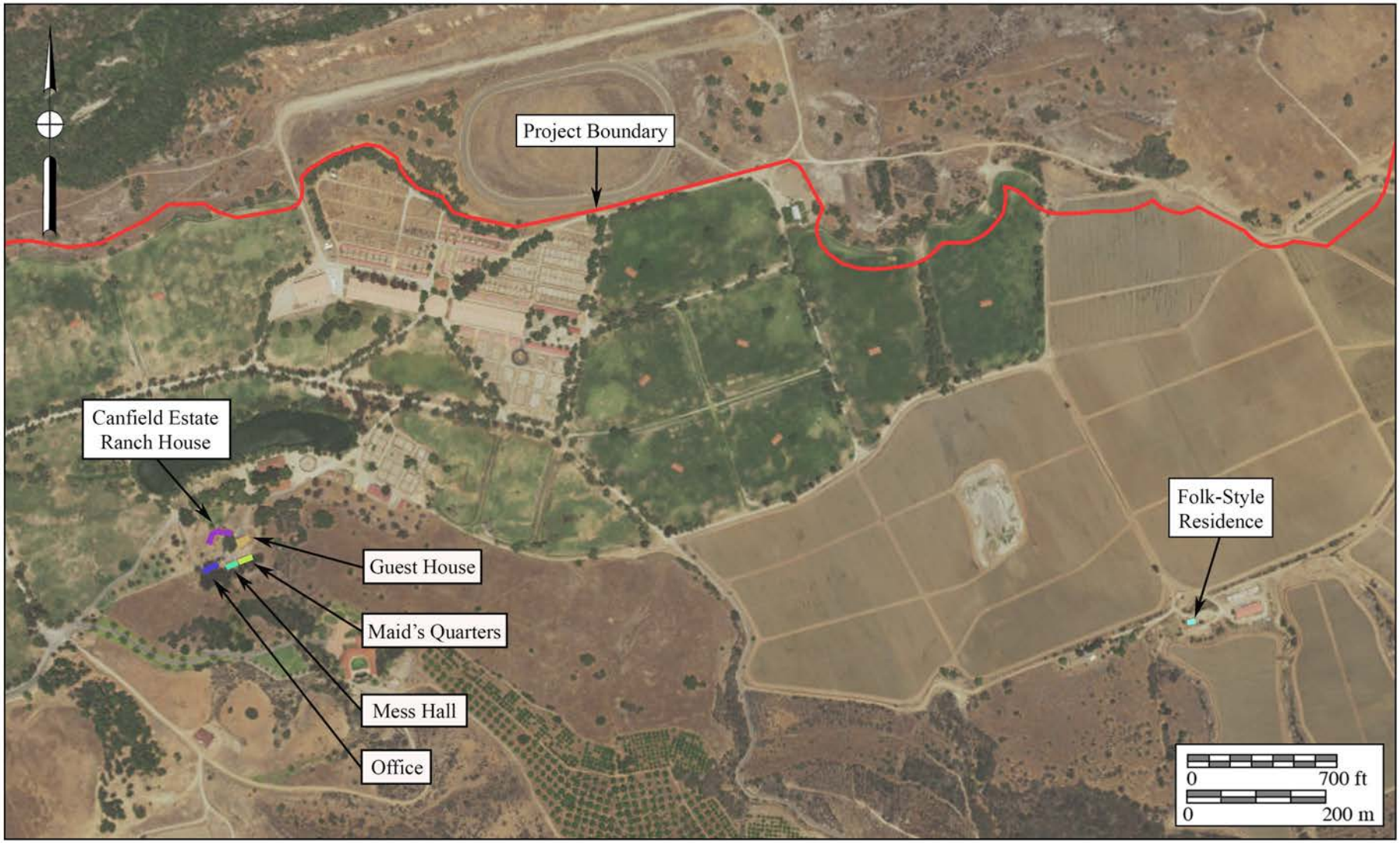


Figure 4.3–22

Structure Location Map

The Ocean Breeze Ranch Project

History of the Project Area

According to a land grant from Governor Pio Pico of Mexico in 1846, the first recorded owner of the land located within the project area was Don Ysidro Maria Alvarado. After being granted the land, Alvarado built an adobe on the north side of the San Luis Rey River and used the land to raise cattle and horses (Moyer 1969). The southern boundary of the current project follows the original boundary of the southern portion of the land grant, which Alvarado named Rancho Monserrate.

In 1853, Alvarado applied for a land patent with the United States government; however, the land was not recorded in his name until 1872. In 1863, smallpox had swept through the area and killed many of the inhabitants of Rancho Monserrate, including Alvarado and his wife. When the land patent was finally processed, it was divided amongst his three children (Moyer 1969).

Plate 4.3–32: Gird Family, Christmas 1899. ***(Photograph courtesy of Teddie Anne Driggs)***

In 1870, Henry Gird and his son William E. Gird purchased the majority of Rancho Monserrate from one of Alvarado's daughters. Having left Missouri in 1853 and pioneering across the United States, the Girds were one of the first pioneering families to settle in the Fallbrook area (Plate 4.3–32) (Driggs 2003). The head of the Gird family, Henry, purchased 5,500 acres of the northern portion of the rancho and William purchased an additional 4,500 acres of the southern portion. William Gird and his children lived in the original Serrano Adobe (SDI-12,207/H) until it was ravaged by a flood in 1883 (Driggs 2001). Afterward, they built their own home on nearby higher ground (Discover Fallbrook 2015). The majority of the project is located within the 4,500 acres that William Gird owned (Moyer 1969).

According to Bureau of Land Management records, the land began being divided again in the 1880s. The southeastern portion of the project area was divided and sold over the years to several different owners. Each owner purchased a parcel out of William Gird's southern portion of Rancho Monserrate. Owners and dates of purchase include: William Gird in 1888, Mangram Rice in 1890, Isaac Rooker in 1891, Horace Johnson in 1894, John Meyers in 1895, George Frey in 1898, James Walker in 1901, William Ogden in 1934, and Edgar Dulin in 1949. The project area is shown on the 1901 *San Luis Rey* USGS Quadrangle in Figure 4.3–23.

Figure 4.3–23

1901 USGS Map

The Ocean Breeze Ranch Project

USGS *San Luis Rey* Quadrangle (30-minute series)

In 1912, Charles Adelbert Canfield (Plate 4.3–33) purchased land that included the current project area from William Gird. However, newspaper clippings from 1968 state that Canfield built the main residence, the Canfield House, in 1908 (Moyer 1968). This is likely an error since Canfield did not own the property until 1912 and the Assessor's building records indicate that the structure was built in 1913.

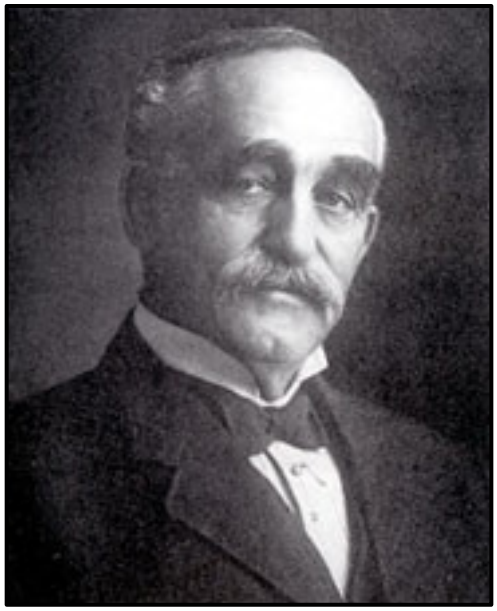


Plate 4.3–33: Charles Canfield.
(Photograph courtesy of Ancestry.com)

Canfield was born in Springville, New York in 1848. In the 1860s, Canfield worked as a miner in Nebraska where he met his wife, Chloe (Plate 4.3–34). The Canfields came to California in the 1880s, where Charles Canfield founded the Chanslor-Canfield Midway Oil Company in Los Angeles. In the 1890s, Canfield and future oilman Edward Doheny prospected in San Diego County. They formed the Pacific Gold and Silver Extracting Company; however, without achieving much success, they returned to Los Angeles.

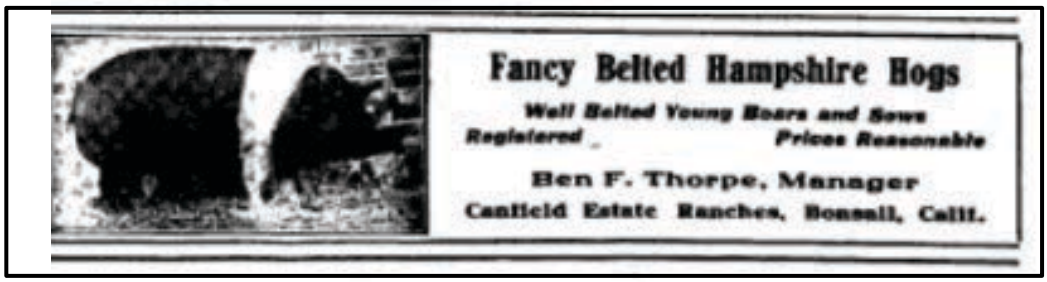
Plate 4.3–34: Chloe Canfield.
(Photograph courtesy of Ancestry.com)

In 1906, Chloe Canfield was murdered by the Canfields' former coachman at the couple's home at 8th and Alvarado in Los Angeles (Rasmussen 2000). That same year, Charles Canfield joined the South Coast Land Company to purchase large amounts of land along the San Luis Rey River and Palomar Mountain. Other investors included Henry Huntington, William Kerckhoff, Henry Keller, and Ed Fletcher (Brueggeman 2015).

In 1910, Canfield built one of the first homes in Del Mar, the Canfield-Wright House. The Canfield-Wright House was designed by John C. Austin and completed in 1910 (San Diego History Center 2016). In 1913, Canfield also constructed the Canfield Estate Ranch House on land he had purchased while with the South Coast Land Company. It is unknown if the Canfield Estate Ranch House was architect-designed.

Charles Canfield passed away in 1913 and left the ranch to his daughters, Daisy Canfield Danziger Moreno, Florence Canfield Whitney, Dorothy

Canfield Cheseldine, and Caroline Canfield Spalding. The land was locally known as the Canfield Estate Ranches and was used to raise Hereford cattle, fancy-bellied Hampshire hogs (Plate 4.3–35), and Mammoth Bronze turkeys. After Charles Canfield's death, the land was managed by Mr. Benjamin F. Thorpe of Covina from 1913 until at least 1922. Thorpe was president of the Chamber of Commerce of Northern San Diego County, vice president of the Oceanside Chamber of Commerce, and a director of the San Diego Chamber of Commerce. He also acted as a director of the Farm Bureau (McGrew 1922).



While under Thorpe's management, the ranch was heavily affected by the 1916 flood. Fortunately, the flooding does not appear to have damaged the Canfield-Dulin House due to its location on the knoll south of the San Luis Rey River floodplain (Plate 4.3–36). At the end of 1916, a light power line was put through the San Luis Rey area, bringing electricity to the ranch (Journal of Electricity, Power and Gas 1916).

Plate 4.3–36: Canfield Ranch in 1916.
(Photograph courtesy of the Department of the Interior, 1918)

Despite building the large ranch house and naming the ranch after the family, no evidence could be found indicating that the Canfields lived at the Canfield Estate Ranch during the 1910s. However, the manager of the ranch, Ben Thorpe, is listed on the 1920 Federal Census as residing on Lilac Road in Bonsall Hills, where the ranch is located. Thorpe can be found in Bonsall directories until 1921; however, by the time that the 1930 Federal Census was conducted, he had returned to Covina.

The Canfield sisters, who owned the ranch, lived in Los Angeles. Most notable of the four sisters was Daisy. At the time of her father's death, she was married to Jake Danziger, a Los Angeles banker and associate of Doheny. The couple had three children, Daisy, Elizabeth, and Robert, but divorced in 1921 (*Los Angeles Evening Herald* 1921; *New York Tribune* 1921). While it is unclear if the couple utilized the home at Canfield Estate Ranch, Danziger was known to frequent the Canfield-Wright House in Del Mar (*New York Tribune* 1921).

Plate 4.3–37: Antonio Moreno and Daisy Canfield. ***(Photograph courtesy of Ancestry.com)***

In 1922, Daisy Canfield built the The Crestmount, a 22,000-square-foot, Mediterranean Revival-style mansion in the Silver Lake district of Los Angeles. In 1923, she married Hollywood film star Antonio Moreno (Plate 4.3–37). Although they were never formally adopted by Moreno, Daisy Canfield's three children all changed their last names from Danziger to Moreno.

In 1924, the Canfield sisters deeded the Canfield Estate Ranch property to the "Chloe P. Canfield Memorial Home, a California corporation, as Trustee for a Training School for Girls under the Trust created by the Will of Charles A. Canfield." It is unclear, however, if a school for girls was ever operated out of the Canfield Estate Ranch House or anywhere else on the property. Four years later, Daisy Canfield and Antonio Moreno separated and deeded their Crestmount estate to the Chloe P. Canfield School for Girls. If a school for girls was being operated out of the Canfield Estate Ranch House, it is likely that it would have been moved to the Crestmount estate, where a girl's school did operate until 1953. With the transfer of the girl's school from the Canfield Estate Ranch to the Crestmount estate, the Canfield property was also transferred from the Chloe P. Canfield Memorial Home Trust to another Canfield sister, Eileen Canfield Himes. Around this time, potatoes were the primary crop grown at the ranch (*Vista Press* 1927). An aerial photograph of the property in 1928 is provided in Figure 4.3–24.

Figure 4.3–24

1928 Aerial Photograph

The Ocean Breeze Ranch Project

In 1929, Eileen Himes sold a portion of the property to John H. and Hazel K. Lashbrooke of Beverly Hills, who began a ranch on the land. In 1933, Hazel Lashbrooke opened the Casa de los Amigos restaurant in San Clemente (*Santa Ana Register* 1933). She is also listed as operating a bakery on Fourth Avenue in San Diego in 1935. Also in 1933, Daisy Canfield died in a car accident on Mulholland Drive (Beale 2009). Following her death, her daughter, Daisy Moreno Fickeisen of Beverly Hills, moved to the Canfield Estate Ranch (San Diego History Center 2016). At the time, Eileen Himes, Daisy Fickeisen's aunt, was the owner of a portion of the ranch. Daisy Fickeisen was married to Herman Fickeisen, who worked as a farmer. The couple is listed as residing in San Luis Rey from at least 1936 to 1940, but it is not clear if they ever lived at the Canfield Estate Ranch House. By 1944, however, the couple appears to have moved back to Los Angeles, as they are recorded as residing at Beloit Avenue in the Los Angeles City Register of Voters.

In 1934, Eileen Himes sold the remainder of the land to movie writer/producer Louis D. Lighton and his screenwriter wife Hope Loring Lighton (Plate 4.3–38). Likely friends of the Canfield family, the Lightons had previously worked with Antonio Moreno on the 1927 film "It." The film was a silent movie written by Hope Loring and Louis D. Lighton starring Clara Bow and Antonio Moreno (Plate 4.3–39).

Plate 4.3–38: Photographs of Louis and Hope Lighton with dogs and a juvenile pronghorn at an unknown residence on the ranch, circa 1939 to 1941. ***(Photograph courtesy of Special Collections, University of Arkansas Libraries, Lighton Family Papers, MC779, Box 26, File 5)***

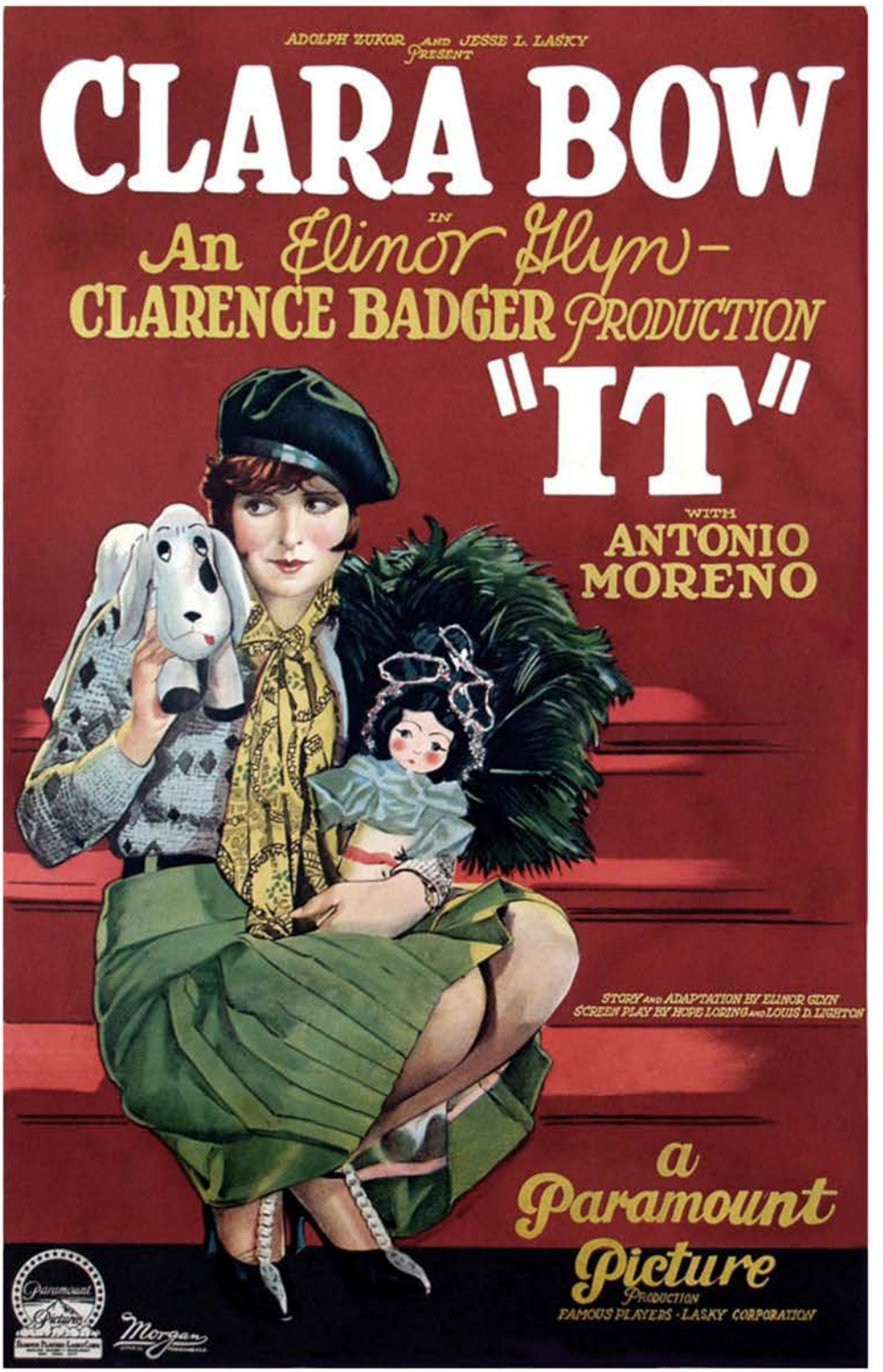


Plate 4.3–39

"It" Movie Poster

The Ocean Breeze Ranch Project

When the Lightons took ownership of the ranch, they used a variation of the original Rancho Monserrate name, calling it Rancho Monserate (Plate 4.3–40). They used the ranch as a second home and bred cattle there from 1935 until around 1941. The couple also owned the Wine Glass Ranch in Arizona (University of Arkansas Special Collections 2016; *San Bernardino County Sun* 1935).

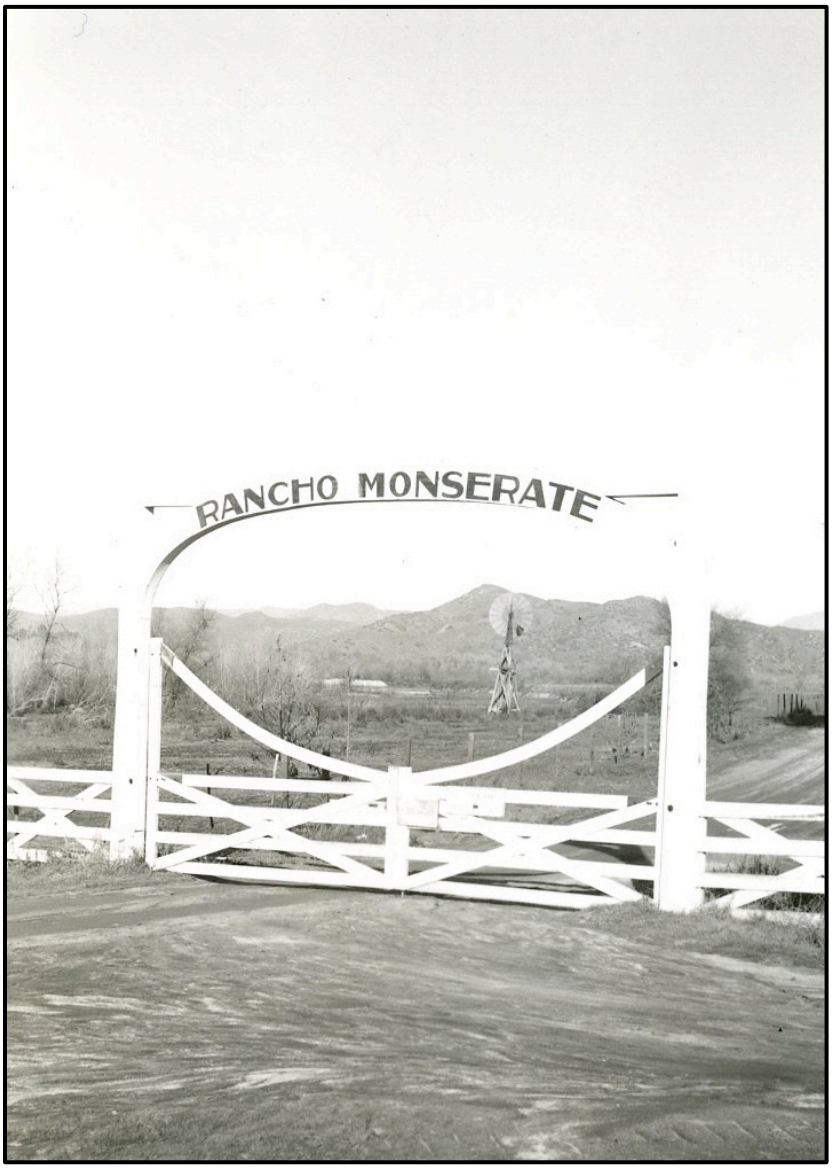


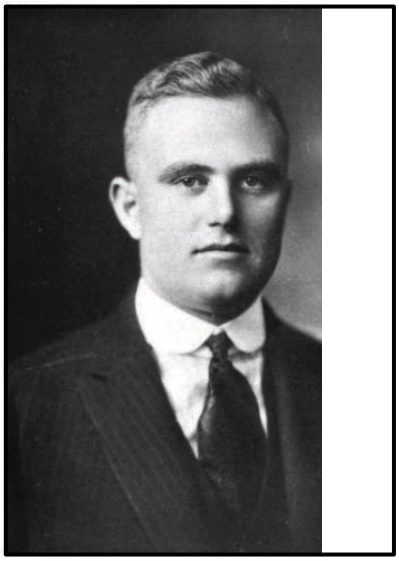
Plate 4.3–40: The entrance to Rancho Monserate, circa 1939 to 1941.
(Photograph courtesy of Special Collections, University of Arkansas Libraries, Lighton Family Papers, MC779, Box 26, File 5)

Photographs taken on the ranch between 1939 and 1941 from the archives of the University of Arkansas Libraries indicate that three of the historic structures currently standing on the property had all been built by 1941. Photographs of several other structures are also included in the special collections archive; however, these buildings have since been demolished or removed. The most notable structure depicted in the photographs is the Canfield Estate Ranch House (Plate 4.3–41), which was built in 1913 by Charles Canfield (Moyer 1968).

Plate 4.3–41: Southwest façade of the Canfield Estate Ranch House, circa 1939 to 1941.
(Photograph courtesy of Special Collections, University of Arkansas Libraries, Lighton Family Papers, MC779, Box 26, File 5)

Before retiring to Spain, in 1942, the Lightons sold the ranch to Edgar Shelton and Sueadele M. Dulin of Los Angeles. In 1914, Edgar Dulin (Plate 4.3–42) joined the investment banking firm Blankenhorn-Hunter Company and by 1915, was made secretary treasurer of the firm. At the end of 1918, Dulin was enlisted as an aviator in the United States Navy, stationed out of Seattle. In 1919, he returned to Blankenhorn-Hunter Company as vice president, only to form a new firm, Blankenhorn-Hunter-Dulin Company, in March of that year. Beginning in the 1920s, Blankenhorn and several unnamed associates purchased 28,000 acres in and around San Diego, including the Sweetwater Water Company, from J.P. Morgan and Company. It is likely that Dulin was also involved in the land purchase. In 1921, Hunter, Dulin and Company was opened in San Francisco, and had offices in both San Francisco and Los Angeles by 1924. Dulin

nd director for the firm (Platt 1996).



In 1944, Dulin deeded portions of the Rancho Monserate land to his daughters, Susan and Marjorie. In 1945, the remainder of the land was deeded to the San Luis Rey Company, of which Mr. Dulin was a member (California Avocado Society 1965). The San Luis Rey Company was a limited partnership, which was an offshoot of the original South Coast Land Company. It was developed in order to supply water from the San Luis Rey River to nearby landowners for domestic and irrigation purposes. Although Edgar and Sueadele Dulin lived in Los Angeles, they still maintained the Canfield Estate Ranch. By 1948, the Canfield-Lighton Ranch Complex appears on USGS topographic maps labeled as "Dulin Ranch" (Figure 4.3–25).

In 1968, Dulin still operated approximately 2,000 acres of land within the original Rancho Monserate. Out of the 2,000 acres, 850 acres were used to farm avocado, orange, and lemon groves, 200 acres were leased to another entity to grow gladiolus bulbs, and the remaining acreage was used to raise Hereford cattle. Dulin's cattle brand was SN (Moyer 1968; Moyer 1969). Portions of the land were sold again in 1979 and 1980 from the San Luis Rey Company to W.N. Shattuck, Inc., a Newport Beach-based real estate firm. In 1983, the land was sold once more to RPM Investments, Inc., a Los Angeles-based investment firm.

In 1983, widow Mildred Nelson Vessels purchased the ranch, which at the time included 1,400 acres, to serve as a racehorse breeding facility. Her son, Frank "Scoop" Vessels, III (Plate 4.3–43), was in charge of operations at Vessels Ranch and was personally involved in designing and building each of the structures used at the breeding facility. Vessels managed the ranch successfully for nearly 25 years until his death in 2010.

As of 2013, 300 acres of Dulin's avocado orchards still remained at Vessels Ranch, while the rest of the property consisted of 400 acres of horse property and 700 acres of undeveloped open space and commercial farmland.

In 2015, William D. Thead, successor of the Frank Nelson Vessels Family Trust, sold the property to Ocean Breeze Ranch, LLC.

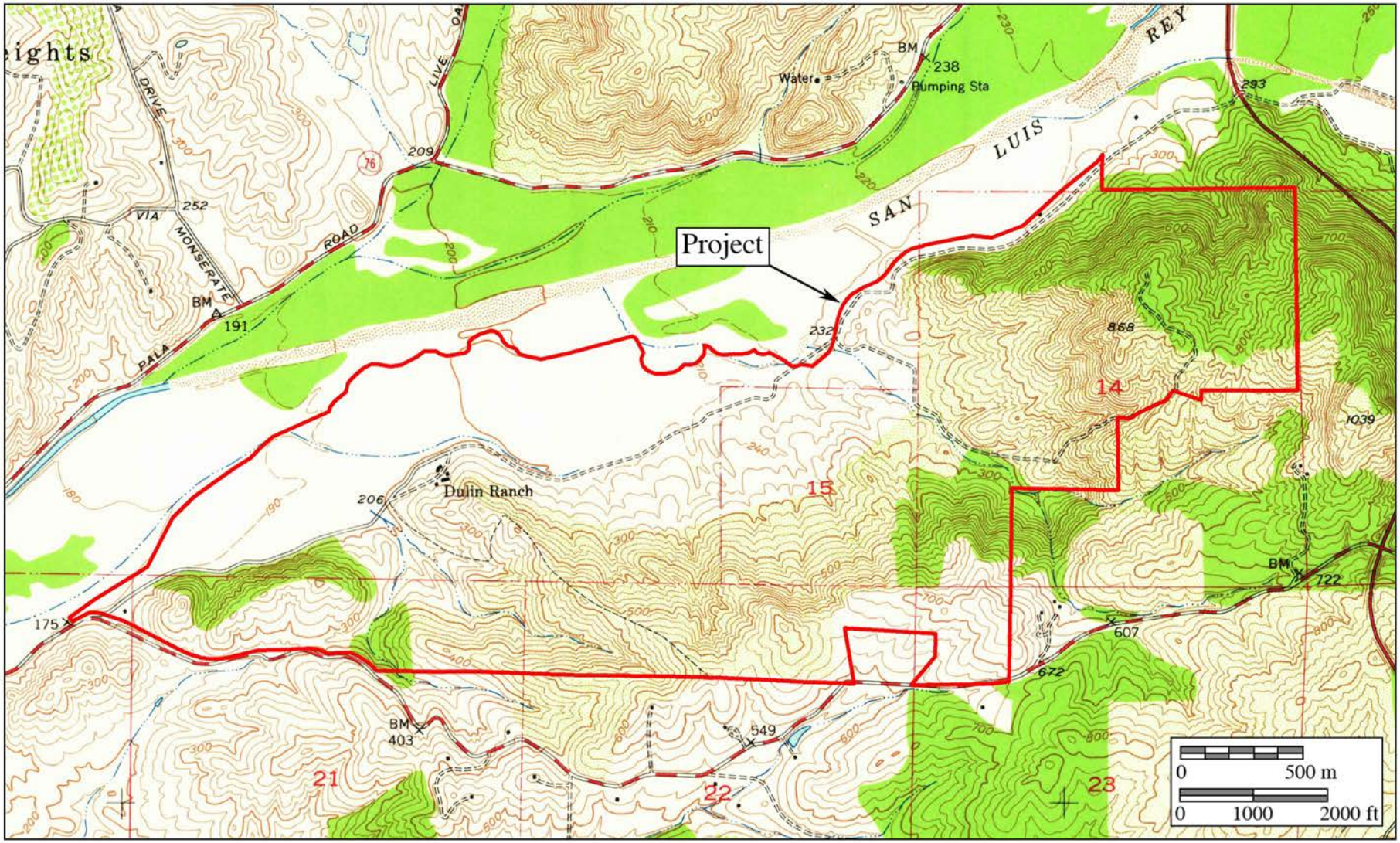


Figure 4.3–25

1948 USGS Map

The Ocean Breeze Ranch Project

USGS *Bonsall* Quadrangle (7.5-minute series)

Historic Structure Survey

Field Survey

A photographic documentation survey was conducted by BFSA on March 29, 2016. Preparation of architectural descriptions was conducted in the field and supplemented using the photographic documentation. Additional information was drawn from supplemental research efforts and incorporated into this report.

Description of Surveyed Resources

The five structures that make up the historic ranch complex were constructed between 1913 and 1953 (Figure 4.3–26), including: the one-and-a-half-story, Prairie-style Canfield Estate Ranch House (Plate 4.3–44); the smaller, two-story, Monterey Revival-style residence (the Guest House) (Plate 4.3–44); a single-story bungalow (the Office); and two smaller, single-story, Pre-railroad-style bunkhouses (the Mess Hall and the Maid's Quarters). The Canfield Estate Ranch House was built circa 1913. Three of the other structures were built between 1913 and 1937, while the Maid's Quarters, located in the southeast portion of the complex, was constructed sometime between 1913 and 1953. The long date range for the construction of the Maid's Quarters is due to Assessor's building records indicating that the structure was built in 1913, yet historic photographs not depicting the structure in its current location until 1953. An additional residence, located 4,200 feet east of the complex, was constructed in 1952 (Figure 4.3–26). This structure is a massed-plan, side-gabled, folk-style, single-story residence. All other structures on the property were constructed after 1981 and do not meet the minimum age threshold to be considered historic. Each historic structure was recorded separately on Assessor's building records (Appendix A) and will be discussed individually in this section.

Plate 4.3–44: View of the northeast façades of the Monterey-Revival-style Guest House (on the left) and the one-and-a-half-story, Prairie-style Canfield Estate Ranch House (on the right).

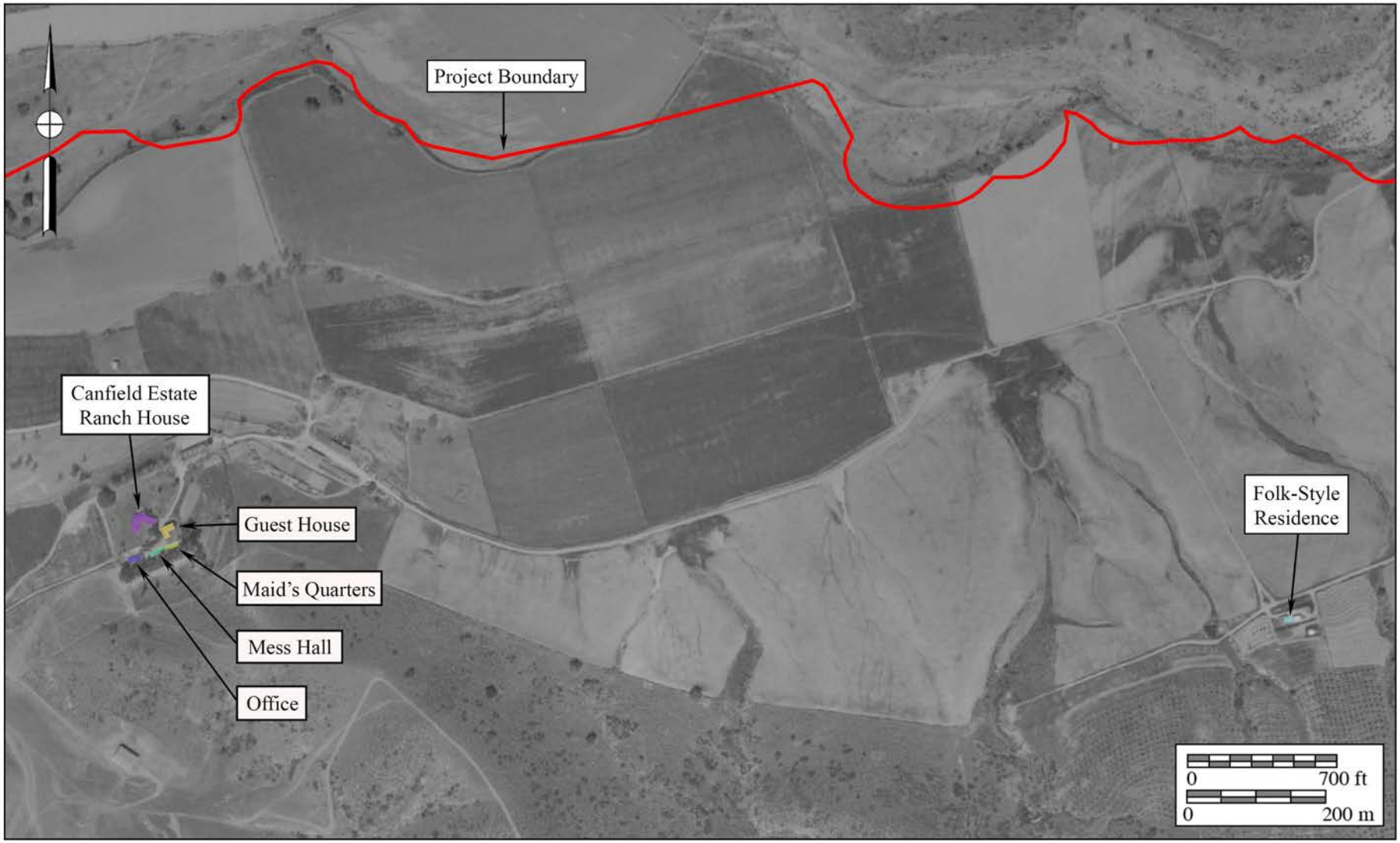


Figure 4.3–26

1953 Aerial Photograph

The Ocean Breeze Ranch Project

(*Courtesy of Historicalaerials.com*)

Canfield Estate Ranch House

The Canfield Estate Ranch House was constructed by Charles A. Canfield circa 1913. The structure exhibits the symmetry, the roofline, the full-width, single-story front porch, the double-hung sash windows, and details emphasizing horizontal lines, which are commonly seen in the Prairie architectural style (Plate 4.3–45). In addition, the structure also possesses a tile roof and "U"-shaped massing reminiscent of the Italian Renaissance Revival style. The tile roof, however, was added after 1939. The Prairie style was most popular between 1905 and 1915, originating out of Chicago. The first Prairie-style houses were symmetrical rectangles, much like the central portion of the Canfield Estate Ranch House. Many examples of the Prairie style include Mission or Italian Renaissance secondary details, such as tiled roofs or cornice-line breaks (McAlester 2015).

Plate 4.3–45: North façade of the Canfield Estate Ranch House.

As it currently stands, the structure exhibits a large, horseshoe-shaped footprint with a low-pitched, hipped roof with an irregular roofline and wide, exposed eave overhangs with extended, downward-flared rafters. The roof currently exhibits a red tile covering; however, historic photographs of the structure indicate that this was added sometime after 1939. The structure is finished in wide board, horizontal, beveled wood siding everywhere except for the east wing, which is constructed of brick. The front façade is symmetrical and includes a full

front porch with square, Doric columns. A wood railing is present on the north and east sides of the porch between the columns. The ceiling of the porch is finished in hardwood paneling, the base of the porch is finished in stucco, and the floor is poured concrete. Poured concrete risers, which stand seven high, lead to the front entryway. The steps of the front porch are flanked by square, flattened, pedestaled columns, which are finished in stucco. The entire residence is raised to the height of the porch with a crawl space underneath. All windows and doors, except for some on the east wing, exhibit Craftsman-style decorative framing.

The front entry door of the residence consists of a single-panel, nine-light, French door with Colonial-style spacing (Plate 4.3–46). The door sidelights each exhibit eight panes with Colonial/specified equal light spacing. A wood-framed, out-swing screen door is affixed to the entryway. Two large, single-hung windows are present on the front façade, one on each side of the entry door. The windows along the second story of the structure consist of single-hung windows. There are two triple-grouped windows on the far sides of the façade and four single windows in between.

Plate 4.3–46: Front entryway of the Canfield Estate Ranch House.

The west façade of the structure consists of the two-story, central, rectangular portion of the bottom of the "U"-shaped massing and a single-story wing protruding to the southwest (Plate 4.3–47). The second story of the west façade exhibits one set of double-grouped, single-hung sash windows, and a smaller single-hung sash window. The façade forms a "V" shape where the wing meets the central portion of the structure with the double-grouped and single windows on either side of the "V." This shape is also reflected in the roofline. The front porch is closed off by a 24-light picture window on the west façade. The single-story west wing includes one triple-grouped set of single-hung sash windows, a bay-like projection with a smaller fixed window at each face, and one set of double-grouped, single-hung sash windows. Historic photographs of the structure indicate that the fixed windows in the bay were once single-hung sash windows like those on the northern portion of the west wing (Plate 4.3–48).

The roof on the west wing matches the central roof in pitch, eave details, and tile covering; however, as can be seen in Plate 4.3–48, the roof was originally covered in composite shingles. The south façade of the west wing exhibits four ribboned, single-hung, sash windows and a small wood panel entry door (Plate 4.3–49). In historic photographs of the structure, a brick chimney was once present where the two middle windows are now. These windows at this location were once tall and single-hung. There was a fireplace box located to the south of the chimney (Plate 4.3–50).

Plate 4.3–47: View of the south façade of the west wing of the Canfield Estate Ranch House.

Plate 4.3–48: View of the west façade of the Canfield Estate Ranch House.

Plate 4.3–49: Historic photograph of the west façade of the Canfield Estate Ranch House.

Plates 4.3–48 and 4.3–49

The Ocean Breeze Ranch Project

Plate 4.3–50

View of the Southwest Façade of the West Wing of the Canfield Estate Ranch House, Circa 1939 to 1941

The Ocean Breeze Ranch Project

(*Photograph courtesy of Special Collections, University of Arkansas Libraries, Lighton Family Papers, MC 779, Box 26, File 5*)

The east façade of the west wing exhibits a rectangular, bay-like projection that the entry door utilizes on its south side (Plate 4.3–51). The east side of the bay has three fixed-pane windows and the north side has two fixed-pane windows. The remainder of the east façade of the west wing has one single-hung window next to the bay and a grouping of three single-hung windows closest to the central portion of the main structure. Another single-hung window is present on the second-story portion of the west wing. In addition, a four-foot privacy fence encloses the space between the single window and the bay.

Plate 4.3–51: View of the east façade of the west wing of the Canfield Estate Ranch House.

The rear façade of the Canfield Estate Ranch House is more or less symmetrical (Plate 4.3–52). A brick chimney is present at the center of another rectangular bay-like projection. A single-hung window is present on each side of the chimney on the second floor, and two smaller fixed-pane, leaded glass windows are present on the first story. An additional fixed-pane, leaded glass window with similar floral designs is present on the east and west sides of the bay at the same height as the south-facing leaded glass windows (Plate 4.3–53). Single-hung windows, one each, are present on either side of the bay-like projection on the second story, while wider, single-hung windows are present on either side at the first story level.

Plate 4.3–52: View of the rear façade of the Canfield Estate Ranch House.

Plate 4.3–53: Close-up view of the leaded glass windows on the rear façade of the Canfield Estate Ranch House.

Plates 4.3–52 and 4.3–53

The Ocean Breeze Ranch Project

Very little appears to have changed on the rear of the structure since the historic photographs were taken of the property between 1939 and 1941. A window was removed from the east façade of the west wing, to the north of the bay-like projection where the privacy fence was added, and a railing was added to the steps leading up to the screen-enclosed porch on the east wing. While the rear of the central portion of the structure did not drastically change, the entire east wing was reconstructed sometime after the historic photographs were taken (Plate 4.3–54).

The east wing of the Canfield Estate Ranch House consists of two separate periods of construction. The portion of the structure with a second story matches the rest of the home in design and materials. There is a small, rectangular, raised, screen-enclosed porch on the first floor of this portion of the home with a set of wood risers and a wood railing. The porch has a hipped tile roof that matches the style and materials used on the main roof of the residence. A firewood box with access doors on the interior of the porch and the southwest exterior of the box is connected to the porch. The porch leads to a 12-light French entry door that allows access to the west façade of the east wing. A single-hung window is present above the porch roof (Plate 4.3–55).

Plate 4.3–54: View of the west façade of the two-story portion of the east wing of the Canfield Estate Ranch House.

Plate 4.3–55

South Façade of the Canfield Estate Ranch House, Circa 1939 to 1941

The Ocean Breeze Ranch Project

Historic photographs of the structure and Assessor's building records indicate that the single-story portion of the east wing was rebuilt in 1968 (Plate 4.3–56). This renovation was completed while the property was being operated by Edgar Dulin. Originally, the east façade matched the remainder of the residence in design and materials. Currently, however, the walls of the east wing are constructed from brick that has been painted white rather than the wood siding that is present on the remainder of the residence. In addition, the windows are aluminum-framed rather than wood and do not exhibit the Craftsman-style decorative window trim. The roof is hipped, covered in tile, and pitched similarly to the remainder of the home; however, while the rafters are extended, they are rounded rather than flared like the rafters on the main portion of the residence (Plate 4.3–56). The spacing between rafters on the east wing is also narrower than the spacing between rafters on the rest of the residence.

Plate 4.3–56: Close-up of the west façade of the two-story and one-story portions of the east wing of the Canfield Estate Ranch House.

The west façade of the east wing exhibits three single-hung, aluminum-framed windows in addition to a triple grouping of single-hung, aluminum-framed windows. The crawl space area below the east wing has small vents with a cinderblock lain on its side. There are four cinderblock vents located along the west façade of the east wing (Plate 4.3–57).

Plate 4.3–57: View of the west façade of the east wing of the Canfield Estate Ranch House.

A wood-paneled entry door, located behind an approximately three-foot-tall brick blind, is present on the south façade. In addition, an in-wall air conditioner has been added to the south façade via a hole cut into the bricks, which has been framed with wood trim (Plate 4.3–58).

The single-story portion of the east façade of the east wing has a set of triple-grouped, single-hung, aluminum-framed windows on each end and two single-hung, aluminum-framed windows in the center. A wood-paneled entry door is present on the northern end of the east façade. The exterior finish of the structure surrounding the entry door is horizontal wood siding and appears to have been constructed at the same time as the remainder of the house. The remainder of the first story of the east wing is constructed of brick (Plate 4.3–59). Three cinderblock crawlspace vents and two crawlspace entry doors are present on the east façade. A cement sidewalk wraps around the east façade to the south façade.

A small wooden porch with wood risers and four-by-four post columns is present in front of the entry door. A shed roof, which is an extension of the main east wing roof, juts out past the porch railing (Plate 4.3–60). A single, wood-framed, single-hung window is present above the shed roof. Because the shed roof matches the rest of the east wing roof in style and materials, it is likely that this entrance was added when the east wing was rebuilt in 1968.

Plate 4.3–58: View of the south façade of the east wing of the Canfield Estate Ranch House.

Plate 4.3–59: View of the east façade of the east wing of the Canfield Estate Ranch House.

Plates 4.3–58 and 4.3–59

The Ocean Breeze Ranch Project

Plate 4.3–60: View of the west façade of the east wing of the Canfield Estate Ranch House.

Guest House

A two-story, Monterey Revival-style residence is located to the east of the Canfield Estate Ranch House (Plate 4.3–61). Historic photographs, aerial imagery, and Assessor's building records indicate that the residence, referred to as the Guest House, was built circa 1937 while under the ownership of the Lightons. Although the Guest House appears in historic photographs taken between 1939 and 1941, it cannot be determined what materials were present on the structure at this time due to the quality of the photographs. However, the general shape and the second-story porch are visible in the photographs (Plate 4.3–62). Currently, the eave style matches that of the rebuilt east wing of the Canfield Estate Ranch House.

Plate 4.3–62: View of the west façade of the Guest House, circa 1939 to 1941.
(Photograph courtesy of Special Collections, University of Arkansas Libraries, Lighton Family Papers, MC779, Box 26, File 5)

As it currently stands, the two-story Guest House residence is an "L"-shaped, two-story, Monterey Revival bunkhouse-style residence with full-length front porches on both the first and second stories and clapboard siding on all façades. A wood railing encloses the porches on both stories. On the second story there is an original, wood-paneled, four-light entry door, which allows access to the porch balcony. In addition, three original, single-hung, wood-framed windows are also present on the second story of the north façade. The first floor exhibits an original wood-paneled, four-light entry door in the center of the façade with a nonoriginal aluminum-framed screen door. To the east of the entry door is a set of two double-grouped, single-hung, wood-framed

windows. To the west of the door are two single-hung, wood-framed windows, with a smaller, fixed-pane, three-light, wood-framed window in between. The Guest House exhibits a medium-pitched, cross-gabled roof covered in red tile. Although it cannot be determined from the historic photograph, the Assessor's building record indicates that the structure originally possessed a shingle roof like the rest of the structures photographed on the property between 1939 and 1941. Also, much like the Canfield Estate Ranch House, the structure is raised to the level of the first-story front porch, which has a set of seven wood risers leading to the front door.

The west façade of the structure exhibits one single-hung, wood-framed window and one single-hung, aluminum-framed window on the second story and a set of three wide, aluminum, horizontal slider windows along the first story. The first story extension on the west façade of the structure is an addition and does not appear on Assessor's building records. This indicates that the addition was likely completed after the last recordation made on the form in 1977. The second-story window openings are very likely original, as the wood-framed window matches materials likely utilized during construction, and in the historic photograph, a window can be discerned in the same location as the single-hung aluminum window. The second story of the Guest House shares the second-story roof with the rest of the structure, while the first story is an extension from the main residence with its own separate roof. A single, aluminum-framed, horizontal slider window is located on the north façade of the extension. The eave style of the extension matches that of the east wing addition on the Canfield Estate Ranch House (Plate 4.3–63).

Plate 4.3–63: View of the west façade of the Guest House.

The south façade of the Guest House consists of the internal portion of the "L" shape, with a north-south-facing gable at the southwest of the structure, and an east-west-facing gable at the southeast of the structure. The southwest façade of the building, under the north-south-facing gable, exhibits two hopper-style, wood-framed windows located symmetrically on the second story and a small, wood-framed bay window with a tile shed roof located on the first story. All three windows appear to be original. The entryway to the first-story extension is also located at the southwest façade. A modern vinyl panel door with nine lights located in the upper half provides entry to the first-story extension (Plate 4.3–64).

Plate 4.3–64: View of the southwest façade of the Guest House.

The southeast façade of the structure possesses two single-hung, wood-framed windows on the second story. Also on the second floor, an additional single-hung, wood-framed window is located on the east façade of the southwest portion of the "L" (Plate 4.3–65). A nonoriginal skylight is also present on the south-facing slope of the roof. On the first story, below the single window, a bay-like projection with a tiled shed roof is present. A single aluminum-framed slider window is located on the south façade of the bay (Plate 4.3–66), while a door is located on the north façade.

Plate 4.3–65: View of the southeast façade of the two-story, bunkhouse-style Guest House.

Plate 4.3–66: View of the aluminum-framed window on the south façade of the bay-like projection on the two-story Guest House.

Plates 4.3–65 and 4.3–66

The Ocean Breeze Ranch Project

Another door is located on the east façade of the southwest portion of the "L" (Plate 4.3–67), sheltered by the shed roof, which extends from the bay to the south façade of the house. A third door and two single-hung, wood-framed windows are also located on the south façade (Plate 4.3–68). A large pergola, which fills in the entirety of the internal portion of the "L" and extends over the concrete paver patio, is attached to the rear of the building and is supported by 4x4 posts in concrete footings. The pergola does not appear to be original to the house. A concrete block retaining wall is located at the edge of the patio.

The east façade of the Guest House exhibits a curved brick chimney that extends from ground level to the roof. A single, wood-framed, single-hung window is located to the north of the chimney on the second floor. Two additional single-hung, wood-framed windows are located on the first floor with one on each side of the chimney (Plate 4.3–69).

Plate 4.3–67: View of the east façade of the Guest House.

The Office

A small bungalow structure with Craftsman-style characteristics is located to the southwest of the Canfield Estate Ranch House. Assessor's building records indicate that the structure was constructed in 1913 and referred to as an office. The building was likely built by Canfield to function as an office for the Canfield Estate Ranch. The Office is visible on 1938 aerial photographs and is also included in the Lighton photographic archives, which span the time period from 1939 to 1941.

Plate 4.3–68: View of the two doors located in the "L" of the southeast façade of the two-story Guest House.

Plate 4.3–69: View of the door and two windows located on the south façade of the two-story Guest House.

Plates 4.3–68 and 4.3–69

The Ocean Breeze Ranch Project

The Office is a small, rectangular structure with a low-pitched, hipped, red tile roof and wide overhanging eaves and exposed rafters (Plate 4.3–70). The structure is clad in narrow clapboard siding and all windows and doors exhibit Craftsman-style decorative framing. The main entrance to the Office is located on the east façade, under a partial-width front porch. The roof of the porch is an extension of the main roof. The floor of the porch is constructed of wood and there is a small railing along the east and north sides. A small, fixed-pane, wood-framed window is located on the south side of the east façade, and a larger, single-hung, wood-framed window is located on the north side (Plate 4.3–71). The entry door is a wood paneled, four-light, exterior door with newer brass hardware (Plate 4.3–72). The door does not appear to be original. An aluminum-framed screen door is also located at the entryway. A lattice wood panel is located to the south of the structure and acts as a privacy fence.

Plate 4.3–70: View of the east façade of the Office.

Plate 4.3–71: View of the original single-hung, wood-framed window on the east façade of the Office.

Plate 4.3–72: View of the nonoriginal entry door on the east façade of the Office.

Plates 4.3–71 and 4.3–72

The Ocean Breeze Ranch Project

The north façade (Plate 4.3–73) of the Office possesses five single-hung, wood-framed windows, and a set of wood-framed, 10-light French doors (Plate 4.3–74). The French doors and all of the windows on the north façade appear to be original. A stucco-clad chimney is also present on the north façade, between the two easternmost windows. A wooden stairway is present where the ground slopes to the west, which allows access to the French doors.

The west façade of the Office consists of two symmetrically-positioned, wood-framed hopper windows. Between the two windows is a rear entry door, accessed from a wooden stairway (Plate 4.3–75).

Plate 4.3–73: View of the west façade of the Office.

Plate 4.3–74: View of the north façade of the Office.

Plate 4.3–75: View of the French doors on the north façade of the Office.

Plates 4.3–74 and 4.3–75

The Ocean Breeze Ranch Project

The north and west façades of the Office have changed only minimally since the 1939 to 1941 photograph was taken (Plate 4.3–76). Much like the Canfield Estate Ranch House and the Guest House, the roof was originally covered with shingles rather than tile; however, the structure has since been reroofed with tile. Additionally, the stairway on the west façade was rebuilt sometime after the historic photograph was taken. Currently, the steps to the rear entry door are accessed from the north instead of the south, as they were originally. The photograph of the Office from the Lighton archives also shows the Mess Hall, located to the east. The grove of trees where the Maid's Quarters would later be constructed, sometime between 1939 and 1953, is visible in the photographs.

Plate 4.3–76: View of the north and west façades of the Office, circa 1939 to 1941. ***(Photograph courtesy of Special Collections, University of Arkansas Libraries, Lighton Family Papers, MC779, Box 26, File 5)***

On the south façade are five single-hung, wood-framed windows (Plate 4.3–77), which all appear to be original, and one single, half-light, wood-panel entry door (Plate 4.3–78), which exhibits Craftsman/Colonial-style door hardware, indicating that it is also likely original.

Plate 4.3–77: View of the south façade of the Office.

Plate 4.3–78: View of the entry door on the south façade of the Office.

Mess Hall

A single-story, pre-railroad-style structure with Craftsman-style elements is located immediately east of the Office. Assessor's building records, which refer to the structure as the Mess Hall, indicate that the structure was constructed in 1934, during the period that the ranch was owned by the Lightons. This structure is present on 1938 aerial photographs and is also included in the Lighton photographic archives of the ranch, which span the time period from 1939 to 1941. The structure is a horizontally-massed, bunkhouse-style residence with a concrete foundation and horizontal clapboard siding. The building exhibits a low-pitched, side-gabled roof with wide overhanging eaves and exposed rafters. Currently, the rafters are rounded at the ends and match the rafters on the east wing of the Canfield Estate Ranch House and the Guest House; however, between 1939 and 1941, the rafters were not rounded and resembled the parallel style that is currently present on the Mess Hall. This change in rafter style indicates that the entire roof on both the Guest House and the Mess Hall was likely completely reconstructed around the time that the east wing of the Canfield Estate Ranch House was rebuilt in 1968.

The north façade of the structure exhibits a nearly full-façade front porch constructed entirely of wood, with a wood railing, wood risers, and lattice wood panels covering the space beneath the porch. A small utility/storage shed has been affixed to the eastern end of the north façade, under a wood-framed, fixed-pane window. The shed has a separate tile roof with

rounded exposed rafters, which match the main roof of the structure. Four single-hung, wood-framed windows are located beneath the porch roof and are accompanied by two entry doors (Plate 4.3–79). All windows and doors exhibit Craftsman-style decorative framing.

Plate 4.3–79: Photograph of the north façade of the Mess Hall taken in 2014.

The door located immediately behind the porch steps is 10-light, wood-framed, and French, while the door to the west is wood-paneled, four-light, and exterior. To the west of the porch, the façade is stepped back approximately 10 feet, creating a small wing off the west of the main structure. The north façade of the west wing exhibits two horizontal wood slider windows (Plate 4.3–80). A single-hung, wood-framed window is located on the west façade of the main structure.

Much like the Office, changes have also been made to the Mess Hall since the Lightons lived on the ranch. Most notable is the roof, which was once composite shingles with parallel-cut exposed rafters. The roof is now tile with rounded rafter tails. The utility/storage shed was also added sometime after the historic photographs were taken, and the single-hung window above the shed was replaced with a fixed-pane-style window. The porch railing, support beams, lattice wood, and steps have also been added or rebuilt (Plate 4.3–81). The steps and supports were rebuilt at least once before 2014, and then again in 2015, while the railing was rebuilt at least once in 2014. The lattice wood was added sometime before 2014.

Plate 4.3–80: View of the north façade of the west wing of the Mess Hall.

Plate 4.3–81: View of the north façade of the Mess Hall, circa 1939 to 1941.
(*Photograph courtesy of Special Collections, University of Arkansas Libraries, Lighton Family Papers, MC779, Box 26, File 5*)

Plates 4.3–80 and 4.3–81

The Ocean Breeze Ranch Project

The west façade of the west wing of the Mess Hall consists solely of a wood-paneled, four-light entry door, which is accessible via a flight of wooden stairs (Plate 4.3–82). While it is likely that the stairs and railing have been replaced since the Lightons owned the property, a railing can be seen in the historic photograph of the Mess Hall, indicating that a similar type of staircase always existed at this location.

Plate 4.3–82: View of the west façade of the west wing of the Mess Hall.

The south façade of the Mess Hall has multiple elevations that appear to include several additions. The southwest portion of the rear façade, which is also the rear of the west wing, contains two wood-framed horizontal slider windows. These windows match the style and materials of the wood slider windows on the north façade of the west wing. A small, north-south gabled wing extends to the south just past the second slider window. A wood-paneled, four-light entry door is present on the west façade of the south-facing wing and encompasses almost the entirety of the façade's wall space (Plate 4.3–83).

Plate 4.3–83: View of the south façade of the Mess Hall.

A set of double-grouped, single-hung, wood-framed windows is located symmetrically under the gable on the south façade of the south-facing wing. This façade extends eastward past the end of the gabled roof and is covered by a slightly north-sloping, yet generally flat roof. There is a structural seam in the façade where the rooflines meet. A wood paneled, half-light entry door is located to the east of the seam. The door and its associated hardware appear to date to the 1930s. The horizontal siding to the east of the door is wider than it is on the rest of the structure (Plate 4.3–84).

Plate 4.3–84: View of the south façade of the south-facing wing of the Mess Hall.

Only one single-hung, wood-framed window and the wider horizontal siding are present on the east façade of the south wing. The eastern portion of the south façade of the main structure, however, includes four single-hung, wood-framed windows, a brick chimney, and a small water heater closet. The chimney is located near the central, rear portion of the main structure with one window to the west and the remaining three to the east. The water heater closet is located at the very southeast corner of the south façade, the eaves of which are parallel-cut like those along the rear of the main structure; however, the roof is composed of composite shingles instead of tile (Plate 4.3–85). Although it appears that the Mess Hall continues to the east past the water heater, the wall is actually a recent addition that connects the Mess Hall with the Maid's Quarters (Plate 4.3–86). The Maid's Quarters is in fact a separate structure located to the east of the Mess Hall.

Plate 4.3–85: View of the east portion of the south façade of the Mess Hall.

Plate 4.3–86: View of the recent addition that connects the Mess Hall and Maid's Quarters structures.

Plates 4.3–85 and 4.3–86

The Ocean Breeze Ranch Project

Maid's Quarters

The Maid's Quarters structure is recorded as having been constructed in 1913; however, it does not appear in historic photographs until 1953. The area where it is currently located was vacant in photographs taken circa 1939 to 1941; however, the structure may be depicted on the 1948 USGS map as an extension of the Mess Hall, which does show the Canfield Estate Ranch House, the Guest House, the Office, and the Mess Hall. Regardless, the structure is visible on a 1953 aerial photograph. Based upon this information, it is likely that the Maid's Quarters structure was either constructed in 1913 and moved to its current location between 1941 and 1953, or it was not built until 1941 to 1953.

The Maid's Quarters structure was constructed to match the style and materials of the Mess Hall. The building is a horizontally-massed, bunkhouse-style residence with a concrete foundation and horizontal clapboard siding. The building exhibits a low-pitched, side-gabled tile roof with wide overhanging eaves and exposed, rounded rafters. Originally, the roof was covered in composite shingles. The north façade of the Maid's Quarters consists of three single-hung, wood-framed windows and a 10-light, wood-framed French entry door. The windows and doors exhibit Craftsman-style decorative trim. The structure possesses a full-length wooden front porch with supports and railings cut in the same manner as those on the front porch of the Mess Hall (Plate 4.3–87).

Plate 4.3–87: Photograph of the north façade of the Maid's Quarters taken in 2014.

Since 2014, the steps of the porch and many of the supports have been replaced. The replacement lumber, however, is cut similarly to the original. The addition, which connects the Mess Hall and the Maid's Quarters, was constructed in 2015 (Plate 4.3–88). No windows are located on the west façade of the Maid's Quarters.

Plate 4.3–88: View of the 2015 addition, which connects the Mess Hall to the Maid's Quarters.

Plate 4.3–89: Photograph of the rear façade of the Maid's Quarters, taken in 2014, prior to the Mess Hall addition.

The rear façade of the Maid's Quarters consists of only three single-hung, wood-framed windows with two on the western half and one on the eastern half. In addition, the exposed rafters on the rear of the structure are parallel-cut rather than rounded (Plate 4.3–89). No windows are located on the east façade of the Maid's Quarters (Plate 4.3–90).

Plate 4.3–90: View of the east façade of the Maid's Quarters.

Folk-Style Residence

Another structure, built in 1952, is located 4,200 feet east of the Canfield Estates Ranch Complex. The structure is a massed-plan, side-gabled, family, folk-style residence with Craftsman-style elements. The structure was originally designed with a standard box frame with a concrete foundation, concrete floor, board and batten siding, and casement windows. At the time of construction, the structure possessed a full-length front porch.

As it currently stands, the structure exhibits a small, asymmetrical footprint with a low-pitched, side-gabled roof (Plate 4.3–91). It also possesses narrow eave overhangs and is finished in horizontal channel wood siding, with vertical wood siding present in the gables. A three-quarter-width front porch with a concrete floor, which is an extension of the main roof, is present on the north façade. Beneath the porch roof is the main entry door to the residence, which has a window on either side of the door near each end of the porch. The wood-paneled, Craftsman-style door has four horizontal lights near the top. All windows on all façades are aluminum-framed sliders; however, they share the same Craftsman-style decorative wood trim that is present on the other Canfield Estate Ranch buildings. The portion of the structure without the porch is likely an addition constructed after 1977, as this section of the residence is not present on the building record. An addition seam can be seen on the north façade of the structure at the edge of the front porch and three aluminum-framed windows are located on the west façade.

Plate 4.3–91: View of the north and west façades of the Folk-Style Residence.

The south façade of the structure possesses another porch, constructed in the same style as the front porch; however, the rear porch appears to have been added at a later date, as the roof does not appear to be an extension of the main roof and there are no shingles present. The rear porch is also not present on the Assessor's building records, indicating that it was likely added after the last update of the form in 1977. Much like the front porch, the rear porch is three-quarters of the width of the house and has a cement floor. The south façade also possesses a rear, wood-paneled, two-light entry door, a small boarded-up window, and another aluminum slider window. A three-foot-tall chain-link fence encloses the backyard of the residence. Two symmetrically placed aluminum slider windows are present on the east façade (Plate 4.3–92).

Plate 4.3–92: View of the south and east façades of the Folk-Style Residence.

Significance Evaluations

Because any major alterations made to the structures would require approval from the County of San Diego as part of the Ocean Breeze Ranch Project, CEQA eligibility criteria were used to evaluate the structures located within the Canfield Estate Ranch property as potentially historic buildings. Therefore, criteria for listing on the CRHR were used to measure the significance of the resources. When evaluating a historic resource, integrity is the authenticity of the resource's physical identity clearly indicated by the retention of characteristics that existed during its period of construction. It is important to note that integrity is not the same as condition. Integrity directly relates to the presence or absence of historic materials and character-defining features, while condition relates to the relative state of physical deterioration of the resource. In most instances, integrity is more relevant to the significance of a resource than condition; however, if a resource is in such poor condition that original materials and features may no longer be salvageable, then the resource's integrity may be adversely impacted. CEQA guidelines (Section 15064.5) address archaeological and historic resources, noting that physical changes that would demolish or materially alter in an adverse manner those characteristics that convey the historic significance of the resource and justify its listing on inventories of historic resources, are typically considered significant impacts.

In order to determine whether or not the structures are eligible for listing, CRHR eligibility criteria were used. Furthermore, BFSA based the review upon the recommended criteria listed in the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (Andrus and Shrimpton 2002). This review is based upon the evaluation of integrity of the structures followed by the assessment of distinctive characteristics.

1. **Integrity of Location** *[refers to] the place where the historic property was constructed or the place where the historic event occurred* (Andrus and Shrimpton 2002). Integrity of location was assessed by reviewing historic records and aerial photographs in order to determine if the structures had always existed at their present locations or if they had been moved, rebuilt, or their footprints significantly altered. Only the Maid's Quarters structure appears to have not retained integrity of location, if it was in fact constructed in 1913. Because historic photographs taken of the ranch between 1939 and 1941 do not depict the Maid's Quarters in its current location, it is possible that the structure was moved there between 1941 and 1953. Historic research revealed that the remaining five structures still occupy the same footprints with no major changes, thereby retaining integrity of location.

2. **Integrity of Design** *[refers to] the combination of elements that create the form, plan, space, structure, and style of a property* (Andrus and Shrimpton 2002). Integrity of design was assessed by evaluating the spatial arrangement of the structures and any architectural features present in the structures. All six structures

were designed as farm structures with Craftsman-style influences. Except for the Folk-Style Residence, the east wing of the Canfield Estate Ranch House, the west addition and pergola on the Guest House, and the replacement of the roofs of all of the structures, the structures appear to have retained a majority of their original design elements. The changes made to the Folk-Style Residence include a large addition on the west façade, replacement of board and batten siding with horizontal siding, a rear porch addition, and replacement of all windows. The alterations made to the Canfield Estate Ranch House are not as extreme, and all changes made to the main structure utilized the same design and materials as the original structure. Only the east wing of the Canfield Estate Ranch House has been adversely impacted, due to the renovations made to the structure in 1968. The addition on the west façade of the Guest House and the pergola addition have only minimally affected the integrity of design of the Guest House structure. Based upon a review of the Assessor's building records and a visual inspection of the structures, no significant exterior alterations have been made to the remaining structures that could be deemed irreversible. Although the Guest House, the Office, the Mess Hall, and the Maid's Quarters have all had their roofs and rafters replaced since the 1940s, these alterations did not permanently impact the design of the original structures. The overall form, plan, space, structure, and style of the five structures located within the Canfield-Lighton Ranch Complex (sans the Folk-Style Residence) have been retained; therefore, the Canfield Estate Ranch House, the Guest House, the Office, the Mess Hall, and the Maid's Quarters all retain integrity of design.

3. **Integrity of Setting** *[refers to] the physical environment of a historic property. Setting includes elements such as topographic features, open space, viewshed, landscape, vegetation, and artificial features* (Andrus and Shrimpton 2002). Integrity of setting was assessed by inspecting the elements of the property, which include topographic features, open space, views, landscape, vegetation, man-made features, and relationships between buildings and other features. Although the ranch now functions as a stallion ranch and is no longer used for raising livestock, the setting surrounding the Canfield-Lighton Ranch Complex has changed very little since the structures' period of construction. Historic photographs from 1939 to 1941 indicate that the grounds surrounding the structures have remained essentially the same. Because the ranch complex still retains the same topographic features, open space, viewshed, landscape, vegetation, roads, and surrounding structures, all structures located within the Canfield-Lighton Ranch Complex retain integrity of setting. Although the Folk-Style Residence is not located within the ranch complex, its setting has also retained topographic features, open space, viewshed, landscape, vegetation, and artificial features such as roads and agricultural uses.

4. **Integrity of Materials** *[refers to] the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property* (Andrus and Shrimpton 2002). Integrity of materials was assessed by determining the presence or absence of original building materials, as well as the possible introduction of materials that may have altered the architectural design of the structures. Since their original construction, no significant alterations, modifications, or replacements could be found other than the replacement roof coverings and rafters, the small structural additions and board repairs made to the Mess Hall and the Maid's Quarters, the rebuilt east wing of the Canfield Estate Ranch House, and the west façade addition, window replacement, and recladding of the Folk-Style Residence. Only those changes to the Folk-Style Residence can be considered major enough to have impacted integrity of materials. The east wing rebuild of the Canfield Estate Ranch House utilized completely different materials than the rest of the structure; however, the rebuild utilized the same footprint and overall massing. Although other changes were made to the Canfield Estate Ranch House, such as window replacement or movement, the materials used for these renovations are the same as the originals, and if it were not for historic photographs of the structure, these changes would have been unnoticeable. For the five structures within the Canfield-Lighton Ranch Complex, because none of the changes impacted the design or footprint of the structures, and they can be reversed, they have not significantly impacted the integrity of the materials present on the original structures. The Canfield Estate Ranch House, the Guest House, the Office, the Mess Hall, and the Maid's Quarters, therefore, retain integrity of materials.

5. **Integrity of Workmanship** *[refers to] the physical evidence of the labor and skill of a particular culture or people during any given period in history* (Andrus and Shrimpton 2002). Integrity of workmanship was assessed by evaluating the quality of the architectural features present in the structures. The original workmanship demonstrated by the construction of the six buildings appears to have been average and they have been sufficiently maintained. No significant modifications have been made to the exterior elements of any of the structures, except for the Folk-Style Residence and the east wing of the Canfield Estate Ranch House, which would impact the original workmanship. The changes made to the Folk-Style Residence (west façade addition, rear porch addition, window replacement, and recladding) were done en masse and affected the entire architectural design of the structure. Therefore, the Folk-Style Residence no longer retains integrity of workmanship. The changes made to the east wing of the Canfield Estate Ranch House were clearly not conducted with the design or the materials of the original structure in mind. While the east wing of the Canfield Estate Ranch House does not retain integrity of workmanship, the

remainder of the residence does. In addition, since the Guest House, the Office, the Mess Hall, and the Maid's Quarters have only undergone minor alterations, they retain integrity of workmanship.

6. **Integrity of Feeling** *[refers to] a property's expression of the aesthetic or historic sense of a particular period of time* (Andrus and Shrimpton 2002). Integrity of feeling was assessed by evaluating whether or not the resources' features, in combination with their setting, conveyed a historic sense of the property during the period of construction. As noted previously, the integrity of setting for all of the structures has been retained. Even though the structures represent a period spanning from 1913 to 1953, the retention of the overall setting has allowed all of the structures except for the Folk-Style Residence to retain integrity of feeling. The changes made to the Folk-Style Residence have altered the overall appearance and character of the building and it does not retain integrity of feeling.

7. **Integrity of Association** *[refers to] the direct link between an important historic event or person and a historic property* (Andrus and Shrimpton 2002). Integrity of association was assessed by evaluating the resources' data or information and their ability to answer any research questions relevant to the history of the Bonsall area or the state of California. Historic research indicates that all of the structures, except for the Folk-Style Residence, are associated with both the Canfield family and Louis and Hope Lighton. It is likely that Charles Canfield constructed the Canfield Estate Ranch House and the Office since both structures were completed in 1913. The Mess Hall (1934) and the Guest House (1937) were likely constructed by the Lightons since the couple acquired the property in 1934 and did not sell the property to Edgar Dulin until 1942. It is unclear when the Maid's Quarters structure was built since the building records state that the structure was completed in 1913, yet it is not visible in historic or aerial photographs until 1953. If the structure were not completed until 1941 to 1953, then it would not be associated with either family; however, if it was constructed in 1913 and moved to its present location at a later date, it would be most closely associated with the Canfield family. While no significant events in the history of the Bonsall area, San Diego County, or the state of California are known to have occurred at any of the structures, the Canfield Estate Ranch House, the Office, the Guest House, and the Mess Hall possess integrity of association due to their association with the two prominent families who operated the ranch. The Folk-Style Residence is not associated with either of the families due to its 1952 date of construction. The residence was likely utilized by an employee of the ranch during the years that it was operated by Edgar Dulin and/or the San Luis Rey Company.

The Canfield Estate Ranch House, the Office, the Mess Hall, and the Guest House structures were determined to meet all seven categories of the integrity analysis, while the Maid's Quarters was determined to meet five, and the Folk-Style Residence only two. The Folk-Style Residence retains only integrity of location and setting, the Maid's Quarters definitively retains only integrity of setting, design, materials, feeling, and workmanship, while the other four structures retain integrity of location, design, setting, materials, workmanship, feeling, and association. Essentially, these elements of the integrity analysis confirm that the Canfield Estate Ranch House, the Office, the Mess Hall, and the Guest House generally remain as they were originally constructed, without any significant alterations. The status of the integrity of the original structures has only been marginally impacted by the additions and modifications that were made over the years. The application of the integrity criteria analysis confirmed that the Maid's Quarters does not definitively retain integrity of feeling or location primarily due to the inability to determine whether or not the structure was built in another location in 1913 and moved circa 1941 to 1953, or if the structure was built in its current location between 1941 and 1953. In addition, the Folk-Style Residence does not retain integrity of materials, design, workmanship, feeling, or association due to the extensive remodeling the structure has undergone, as well as its construction in 1952 away from the rest of the Canfield-Lighton Ranch Complex structures.

Criteria

For a historic resource to be eligible for listing on the CRHR, the resource must be found significant at the local, state, or national level, under one or more of the following criteria:

- **CRHR Criterion 1:**
  It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

- **CRHR Criterion 2:**
  It is associated with the lives of persons important in our past.

- **CRHR Criterion 3:**
  It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.

- **CRHR Criterion 4:**
  It has yielded, or may be likely to yield, information important in prehistory or history.

Evaluation

The evaluation of the historic structures located within the Ocean Breeze Ranch property is provided below and is based upon the significance criteria presented in the CRHR.

- **CRHR Criterion 1:**
  It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

  It was discovered through historic research that no significant events could be associated with the six structures located within the Ocean Breeze Ranch property. Because the property could not be associated with any specific historical event, the structures are not eligible for designation under CRHR Criterion 1.

- **CRHR Criterion 2:**
  It is associated with the lives of persons important in our past.

  Charles Canfield, who purchased the current Ocean Breeze Ranch property from William E. Gird in 1912, was an oilman and real estate developer who also cofounded the city of Beverly Hills. Canfield was also responsible for building one of the first homes in Del Mar in 1910, known as the Canfield-Wright House. In 1913, Canfield constructed the main ranch house (the Canfield Estate Ranch House) and the Office. Assessor's building records also indicate that the Maid's Quarters structure was also built at this time. However, although the structure matches the Mess Hall in design and materials, the Maid's Quarters structure is not visible in its current location in historic or aerial photographs until 1953. Therefore, this structure is potentially associated with Canfield, although more information about the structure is required before its association can be determined.

  Following Canfield's death in August 1913, the property was held in the Canfield Family Trust, which was operated by Canfield's daughters. Ownership was transferred between the heirs over the years and finally in 1934, the ranch was sold to movie writer-producer Louis Lighton and his screenwriter wife, Hope Loring Lighton. Mr. and Mrs. Lighton collaborated on at least 30 films, including "Wings," "Broken Hearts of Broadway," "It," and "The Mine With the Iron Door." The couple used the ranch as a second home and bred cattle there from 1935 until around 1941. The Mess Hall (1934) and the Guest House (1937) were built while the Lightons owned the property. While the structures are not original to the ranch, the Mess Hall and the Guest House are contributors to the Canfield-Lighton Ranch Complex and are associated with the cattle ranching period of the property, which extended into the

1970s.

Because the Canfield Estate Ranch House and the Office were built by Charles Canfield, and the Mess Hall and Guest House were built by the Lightons, all four structures are associated with persons that can be considered significant in the history of the Bonsall area, San Diego County, or the state of California. Although the Maid's Quarters was likely not built in its current location, the Assessor's building record indicates that it was constructed in 1913. The structure is clearly meant to be a part of the ranch complex due to the design and materials used in its construction. Although the construction date and location for the Maid's Quarters cannot be definitively confirmed, the structure is also considered, for the time being, to be associated with the Canfield-Lighton Ranch Complex. Therefore, all five Canfield-Lighton Ranch Complex structures are eligible for designation under CRHR Criterion 2. However, the Folk-Style Residence, built in 1952, is not eligible for designation under CRHR Criterion 2 due to a lack of association with either the Canfields or the Lightons.

- **CRHR Criterion 3:**
  It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.

  Although all six structures located within the Ocean Breeze Ranch property exhibit Craftsman-style elements, none are particularly representative of a specific style, type, period, or method of construction. The Prairie-style Canfield Estate Ranch House has Craftsman-style influences and is the most notable of the six structures; however, because no notice of completion or other documentation providing the name of an architect or builder could be located, it is unknown if the structure represents the work of a master or important creative individual. The remaining structures were built using similar design elements and materials, specifically of a Craftsman-style origin. However, the structures do not match each other closely enough in overall design, materials, and construction period to be considered representative of any specific style, type, period, or method of construction. None of the structures possess high artistic values. Because none of the structures are particularly representative of a style, type, period, or method of construction, and none represent the work of a master or important creative individual, the structures are not eligible for designation under CRHR Criterion 3.

- **CRHR Criterion 4:**
  It has yielded, or may be likely to yield, information important in prehistory or history.

  The research conducted for this study revealed that the five Canfield-Lighton Ranch Complex structures are associated with Charles Canfield and Louis D. and Hope Loring Lighton. The structures are also associated with the use of the area as a livestock ranch. Further research on the Canfield-Lighton Ranch Complex is likely to yield additional information important in the history of the Bonsall area. Because the structures could be associated with both Charles Canfield and the Lightons, additional archival information about the two families may exist that was not accessed during this study. In addition, archaeological deposits from the early period of the Canfield-Lighton Ranch Complex may exist in the area surrounding the structures since modern trash collection did not occur in the Bonsall area until circa the 1930s. Because the Folk-Style Residence is located outside the ranch complex, is not associated with the other five structures, and does not likely have trash deposits or privies nearby, it likely cannot yield any additional information about the history of the Ocean Breeze Ranch property. Therefore, only the five Canfield-Lighton Ranch Complex structures are eligible for designation under CRHR Criterion 4.

Findings and Conclusions

The Canfield Estate Ranch House, the Guest House, the Office, the Mess Hall, and the Maid's Quarters structures, which are located within the Canfield-Lighton Ranch Complex, are evaluated as historically important as defined by CEQA criteria. Because these five structures have been evaluated as historically significant, they are considered eligible for listing on the CRHR. Since there are currently no plans for demolition or remodel of the Canfield-Lighton Ranch Complex structures, no mitigation measures are recommended at this time. Should alterations to or demolition of the five Canfield-Lighton Ranch Complex structures be planned in the future, the plans should be reviewed by a qualified cultural resource manager to determine if the changes would constitute an adverse impact to the structures individually, or to the Canfield-Lighton Ranch Complex overall. The Folk-Style Residence, however, is evaluated as not historically or architecturally significant under any CEQA criteria due to its lack of association with the Canfield-Lighton Ranch Complex, its lack of association with either important family associated with the ranch, and the large number of alterations that the structure has undergone. Because the Folk-Style Residence is not eligible for listing on the CRHR, no mitigation measures are required for any future alterations made to the structure, or in the case of planned demolition.

4.4 Discussion/Summary

The investigation of those elements of SDI-776A and SDI-776B located within the Ocean Breeze Ranch Project identified surface artifacts, 65 bedrock milling features, and the presence of an intact subsurface deposit. The bedrock milling features, lithic tools, and pottery present at the site indicate that activities at this location were focused upon floral resource processing and arrow point manufacture and maintenance. Subsistence appears to have been based upon an intense reliance upon botanical and faunal resources for a larger populous. In addition, the lithic artifacts recovered from the test units and several of the STPs suggest the potential for buried features. A Late Prehistoric occupation of SDI-776A and SDI-776B is suggested by the presence of pottery and arrow points. Previous site record information from Bull (1977) also indicated the presence of human remains, although no human remains were observed at SDI-776A and SDI-776B during the current investigations. Because the testing and evaluation program identified intact subsurface deposits and several bedrock milling features at SDI-776A and SDI-776B, they are recognized to possess additional research potential. Therefore, SDI-776A and SDI-776B are evaluated as important cultural resources according to the criteria listed in CEQA, Section 15064.5, and any impacts to the cultural resources would be considered significant. It is clear based upon the initial testing program, that SDI-776A and SDI-776B qualify as significant sites in accordance with CEQA, Section 15064.5, under Criterion D, as they have yielded, or may be likely to yield, information important in prehistory or history. Therefore, SDI-776A and SDI-776B are eligible for the CRHR and are considered to be RPO-significant under County of San Diego guidelines.

Archaeological investigations at sites SDI-776C through F, SDI-776I, SDI-1083, SDI-12,550, P-37-028134, P-37-028139, and P-37-031762 did not identify any archaeological materials at these locations within the project. The resources previously reported at these sites have likely been moved, buried, or destroyed as a result of the agricultural and equestrian use of the property over time.

Sites SDI-776G, SDI-776H, and SDI-21,874 all contain milling features with minimal grinding elements. The milling features that characterize SDI-776G, SDI-776H, and SDI-21,874 were recorded in detail and sites SDI-776G and SDI-776H were tested for the potential for subsurface deposits. Testing was not conducted at Site SDI-21,874 due to its location within an open space easement. Subsurface testing at sites SDI-776G and SDI-776H did not identify any additional archaeological materials associated with these sites.

Site SDI-8237 was recorded as a single rock art panel recorded in 1980; however, the rock art panel is currently faded and is not detectable to the naked eye. Additional photographic techniques may enable the differentiation of the pictographs from the natural rock surface. Regardless of the status of the rock art images, this feature is considered to be unique and significant as a representation of the prehistoric occupation of this location.

Site SDI-20,174 was recorded as a rectangular, plastic tarp-lined cistern, concrete pipe fence posts, broken concrete water pipe fragments, two linear ditches containing concrete water

pipes, two concrete standpipes, and an oval watering hole. Of the features identified in 2011, the cistern, standpipes, ditches, and miscellaneous concrete fragments were relocated during the current study. Historic aerial photographs indicate the presence of structures at the location of the water conveyance and storage features in 1928. However, these structures are absent by 1938, which is consistent with the historic ranching of the area.

Site SDI-21,875 was recorded as two possible rock shelters; however, upon further investigation, only one was found to be of viable size. Analysis of the interior of the features did not identify any staining or midden generally associated with rock shelters. In addition, no cultural materials were identified in association with the rock features. It is likely that prehistorically, humans never employed these features for shelter.

Site SDI-21,876 was recorded as a historic rock and mortar dam possibly built by the adjacent property owner, A.C. Loveland, based upon etching in the cement cap near the eastern extent of the wall top, which was determined to read "ACL 1928." No cultural materials were observed in association with this feature.

Site P-37-035850 was recorded as the five structures within the Canfield-Lighton Ranch Complex and the Folk-Style Residence located east of the complex. The Canfield Estate Ranch House, the Guest House, the Office, the Mess Hall, and the Maid's Quarters structures are evaluated as historically important as defined by CEQA criteria. Because these five structures have been evaluated as historically significant, they are considered eligible for listing on the CRHR. The Folk-Style Residence, however, is evaluated as not historically or architecturally significant under any CEQA criteria due to its lack of association with the Canfield-Lighton Ranch Complex, its lack of association with either important family associated with the ranch, and the large number of alterations that the structure has undergone.

5.0 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

5.1 Resource Importance

The survey of the Ocean Breeze Ranch Project identified evidence of prehistoric and historic occupation within the project. In total, 20 sites were reviewed as part of the current project, including previously recorded sites SDI-776A through I, SDI-1083, SDI-8237, SDI-12,550, SDI-20,174, P-37-028134, P-37-028139, P-37-031762, and P-37-035850, and newly recorded sites SDI-21,874, SDI-21,875, and SDI-21,876. Of these sites, SDI-776A through I and SDI-1083 were tested for the presence of subsurface cultural resource deposits. The remaining sites are either outside the development envelope or did not require subsurface testing as part of their evaluation. The cultural resources identified within the project have been plotted on the project development map on Figure 5.1–1.

The evaluation of SDI-776A and SDI-776B within the Ocean Breeze Ranch Project identified intact subsurface deposits and several bedrock milling features; therefore, SDI-776A and SDI-776B are recognized as possessing additional research potential and are evaluated as important cultural resources according to the criteria listed in CEQA, Section 15064.5. Any impacts to SDI-776A and SDI-776B would be considered significant. It is clear based upon the initial testing program that SDI-776A and SDI-776B qualify as significant sites in accordance with CEQA, Section 15064.5, under Criterion D, as they have yielded, or may be likely to yield, information important in prehistory or history. Therefore, SDI-776A and SDI-776B are eligible for the CRHR and are considered to be RPO-significant under County of San Diego guidelines.

Archaeological investigations at sites SDI-776C through F, SDI-776I, SDI-1083, SDI-12,550, P-37-031762, and P-37-028139 did not identify any archaeological materials at these locations within the project. The resources previously reported at these sites have likely been moved, buried, or destroyed as a result of the agricultural and equestrian use of the property over time. Based upon an absence of artifacts or features within the mapped site locations, these sites do not qualify as important cultural resources according to the criteria listed in CEQA, Section 15064.5, and any impacts to these resources would not be considered significant. Site P-37-028134 is a historic trail that crosses the property from east to west, and the trail is still visible and used today as a dirt access road.

Figure 5.1–1
Cultural Resources Shown on Project Development Map

(Deleted for Public Review; Bound Separately)

Sites SDI-776G, SDI-776H, and SDI-21,874 all contain milling features with limited grinding elements. These sites do not represent the level of focused prehistoric activity that would correspond to a prehistoric occupation site. Instead, the sites are classified as resource collection and food processing sites with no associated artifacts or indications of a cultural deposit. Testing was not conducted at SDI-21,874 because the site will not be impacted by development, but visual inspection of the ground surrounding the feature did not reveal any indications of a cultural deposit. These three sites are characterized as having reduced integrity due to use of the land, and therefore, no residual research potential following the data collection efforts. Subsurface testing at sites SDI-776G and SDI-776H did not identify any additional archaeological materials associated with these sites. Site SDI-21,874 was not tested due to its location in open space. As subsurface excavations at sites SDI-776G and SDI-776H failed to produce any cultural materials, any further excavations are unlikely to produce buried cultural features. Therefore, these sites lack additional research potential and the recordation of the bedrock milling features at the sites constitutes mitigation. As a result, these sites do not qualify as important cultural resources according to the criteria listed in CEQA, Section 15064.5, and any impacts to these resources would not be considered significant.

Site SDI-8237 was recorded as a rock art panel in 1980. The pictographs are still visible and recent wildfires through this area of the property do not appear to have adversely affected the pictographs. The pictographs at SDI-8237 are considered significant (a Historical Resource) under CEQA, Section 15064.5. The site will also be considered to be an RPO-significant site because all rock art locations exhibit unique individual traits related to the person or persons responsible for the illustration, which are assumed to have religious or ceremonial implications. This rock art site is located in an open space area and will not be adversely impacted by the project.

Site SDI-20,174 was recorded as a rectangular, plastic tarp-lined cistern, concrete pipe fence posts, broken concrete water pipe fragments, two linear ditches containing concrete water pipes, two concrete standpipes, and an oval watering hole. Of the features identified in 2011, the cistern, standpipes, ditches, and miscellaneous concrete fragments were relocated during the current study. Historic aerial photographs indicate the presence of structures at the location of the water conveyance and storage features in 1928. However, these structures were absent by 1938, which is consistent with the historic ranching of the area. Given the lack of association of this site with any prehistoric or historic activity, this site and the features associated with it do not qualify as important cultural resources according to the criteria listed in CEQA, Section 15064.5, and any impacts to this resource would not be considered significant.

Site SDI-21,875 was recorded as two possible rock shelters; however, upon further investigation, only one was found to be of viable size. Analysis of the interior of the features did not identify any staining or midden generally associated with rock shelters. In addition, no cultural materials were identified in association with the rock features. It is likely that prehistorically, humans never employed these features for shelter. Given a lack of association with any prehistoric or historic activity, this site and the features associated with it do not qualify as important cultural resources according to the criteria listed in CEQA, Section 15064.5, and any impacts to this

resource would not be considered significant.

Site SDI-21,876 was recorded as a historic rock and mortar dam possibly built by the adjacent property owner, A.C. Loveland, based upon etching in the cement cap near the eastern extent of the wall top, which was determined to read "ACL 1928." No cultural materials were observed in association with this feature. Given a lack of association with any prehistoric or historic activity, this site and the features associated with it do not qualify as important cultural resources according to the criteria listed in CEQA, Section 15064.5, and any impacts to this resource would not be considered significant.

Site P-37-035850 was recorded as the five structures within the Canfield-Lighton Ranch Complex and the Folk-Style Residence located east of the complex. The Canfield Estate Ranch House, the Guest House, the Office, the Mess Hall, and the Maid's Quarters structures are evaluated as historically important as defined by CEQA criteria. Because these five structures have been evaluated as historically significant, they are considered eligible for listing on the CRHR. The Folk-Style Residence, however, is evaluated as not historically or architecturally significant under any CEQA criteria due to its lack of association with the Canfield-Lighton Ranch Complex, its lack of association with either important family associated with the ranch, and the large number of alterations that the structure has undergone. Preservation of the historic ranch structures through a Use, Maintenance, and Repair Easement is recommended and will allow for continued use of the structures. All future exterior repairs, restoration, or rehabilitation would need to be conducted in accordance with the SOI's "Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings" (Grimmer 2017). Any modifications made to the structures should be designed by a qualified historical architect and approved by the Director of PDS. The easement would not apply to the interior of the structures. Because the Folk-Style Residence is not eligible for listing on the CRHR, no mitigation measures are required for any future alterations made to the structure or in the case of planned demolition.

The 20 cultural resources present within the Ocean Breeze Ranch Project represent prehistoric and historic sites that constitute resources that must be evaluated under CEQA criteria to evaluate the potential impacts of the proposed development (Table 5.1–1). The information gathered during the investigations discussed in Section 4.0 of this report has been employed to form the basis for the CEQA evaluation. Based upon these criteria and the requirements for resource assessments presented in the County of San Diego's guidelines, four sites have been determined to be Historical Resources as defined by CEQA. These four sites, SDI-776A, SDI-776B, SDI-8237, and P-37-035850 (the Canfield-Lighton Ranch Complex), are considered to be potentially eligible for the CRHR. For SDI-776A and SDI-776B, the basis for the finding of potential eligibility is the research potential represented within the cultural deposits. The rock art at SDI-8237 is considered to be a significant expression of prehistoric images, and therefore, is unique. The historic structures at P-37-035850 are excellent examples of the evolution of the Anglo-American farming and ranching operations in rural northern San Diego County after the

1960s. The age, architecture, integrity, and association with the Canfield-Lighton Ranch are cited as the basis for a finding of significance for these structures.

Table 5.1–1
Site Significance Summary and Impact Evaluations
The Ocean Breeze Ranch Project

Site	Significance Evaluation	Impact Evaluation	Mitigation Measures
SDI-776A	Eligible for CRHR; Historical Resource; RPO-significant	May be impacted by secondary access road	Preservation. Capping may be used to allow for the secondary access road and all improvements will be limited to the existing width of Dulin Road, which has historically crossed SDI-776A.
SDI-776B	Eligible for CRHR; Historical Resource; RPO-significant	No adverse impacts	Open space easement
SDI-776C	Not eligible for CRHR; limited significance		None
SDI-776D			
SDI-776E			
SDI-776F			
SDI-776G			
SDI-776H			
SDI-776I			
SDI-1083			
SDI-8237	Eligible for CRHR; RPO-significant site		Open space easement
SDI-12,550	Not eligible for CRHR; limited significance		None
SDI-20,174			
P-37-028134			
P-37-028139			
P-37-031762			
P-37-035850	Eligible for CRHR; Historical Resource		Preservation of Historical Resources required
SDI-21,874	Not eligible for CRHR; limited significance		None
SDI-21,875			
SDI-21,876			

5.2 Impact Identification

As part of the 1,402.52-acre development, approximately 322.05 acres will be directly impacted by grading and approximately 847.10 acres will be placed in open space. The remaining acreage includes 203.15 acres that will remain as the equestrian operation that has existed on this property for several decades and 30.22 acres that will potentially be sold to Sullivan Middle School in the future. As a result of the current project design, all of the sites identified as eligible, or potentially eligible, for the CRHR, including SDI-776A, SDI-776B, SDI-8237, and P-37-035850, will not be directly impacted by the proposed project. However, the location of a proposed secondary access road across a portion of SDI-776A could result in impacts to the resource unless mitigation measures are implemented.

The historic structures listed for P-37-035850 represent elements of the Canfield-Lighton Ranch Complex. These structures are still in use as part of the equestrian operation at the ranch. These structures will not be directly impacted by the proposed development and will be preserved. Future maintenance activities should be anticipated as part of the ongoing operations, but no substantial changes to the exterior of the buildings should be conducted without authorization from the Director of PDS.

For SDI-776C through I and SDI-1083, intensive archaeological investigations of the site areas and the excavation of multiple STPs across these sites produced no surface artifacts and no subsurface cultural material. The research potential of these sites has essentially been exhausted through the testing program, including documentation of the sites. Sites SDI-776C through I and SDI-1083 are not significant resources under CEQA or County of San Diego guidelines. Any impacts to these resources will not be considered adverse given the evaluation of these sites as not significant.

Sites SDI-12,550 (a rock ring/hearth feature), SDI-21,874 (a bedrock milling feature), and SDI-21,875 (rock shelter features) are recorded outside of the proposed impact area, and as a result, will not be impacted by the current development. Therefore, no further work is recommended for these sites.

Site P-37-028139 was recorded as a single, isolated historic can located in the northeastern portion of the current project APE. The isolate (and isolates in general) is not considered a significant historic resource. No significant impact will occur to P-37-028139 as a result of the current project.

Sites SDI-20,174, P-37-031762, and SDI-21,876 have been evaluated as lacking any further research potential and have only limited significance. These sites will not be affected by the development. No direct impacts to these three sites are anticipated as part of this project.

Within the subject property, a linear site has been recorded as P-37-028134. This resource is the alignment or path of a road or route that historically followed the path of the San Luis Rey River. The precise location of the actual trail cannot be confirmed given the extent of historical land use associated with the farming and grazing on the property. This resource is not considered significant, as it is not associated with any historic features, nor can the exact location be validated.

Mitigation measures are not required for any impacts to the general vicinity of the linear feature.

5.2.1 Native American Heritage Values

Based upon the Sacred Lands File search conducted in 2016 by the NAHC, no sacred sites, TCRs, or Traditional Cultural Landscapes (TCLs) are known to exist within the project; however, the NAHC did indicate the presence of positive results in the *Bonsall* Quadrangle. During the current archaeological evaluation, no artifacts or remains were identified or recovered that could be reasonably associated with such practices. The County of San Diego is engaged in Native American consultation through the CEQA AB 52 process. Following Native American consultation by the County of San Diego and based upon on-site meetings with tribal representatives, the areas of SDI-776A and SDI-776B and the pictograph site at SDI-8237 are considered to be TCRs by the Luiseño groups.

6.0 MANAGEMENT CONSIDERATIONS – MITIGATION MEASURES AND DESIGN CONSIDERATIONS

6.1 Mitigable Impacts

The development footprint for the Ocean Breeze Ranch Project will impact, either completely or partially, five of the 20 cultural resources recorded on the project. Of the five sites that will be impacted, one is significant (Historical Resource) according to criteria listed in CEQA, Section 15064.5, or under County of San Diego guidelines, while the remaining sites are not Historical Resources and are not eligible for the CRHR. The CEQA-significant Historical Resource that may be impacted by the current project design is SDI-776A. This site meets the criteria under County of San Diego guidelines to qualify as an RPO-significant resource. The remaining four sites that will be impacted (SDI-776C, SDI-776I, SDI-1083, and P-37-028134) have only limited significance and are determined to not be Historical Resources. Any impacts to the recorded cultural resources that are not eligible for listing on the CRHR (SDI-776C, SDI-776I, SDI-1083, and P-37-028134) associated with the development of the property are not significant. Any impacts to SDI-776A associated with the proposed secondary access road would be adverse and would require mitigation.

6.2 Recommended Mitigation Measures

No site-specific mitigation measures will be recommended for non-CRHR-eligible sites SDI-776C, SDI-776I, SDI-1083, and P-37-028134. For significant Site SDI-776A, which is RPO-significant, the project would have a potential adverse effect to the site if construction of the secondary access road would intrude into the cultural deposit (Figure 6.2–1). Following consultation between the tribal representatives, the County of San Diego, and the applicant, all parties have agreed that no excavation will take place where the secondary access road passes over the area of cultural significance. Placement of geotextile fabrics over existing soils shall be allowed, and additional fill placed over existing soil can be worked with conventional machinery to address geotechnical concerns such as compaction to limit settlement and distress to surface improvements. By employing a road construction process that would not intrude into the cultural deposit at SDI-776A and following a mitigation monitoring program that would include monitoring of all work in the area of SDI-776A by Native American representatives and archaeologists, adverse impacts to the Native American site can be avoided.

Figure 6.2–1
Impact Map
Secondary Access Road Alignment Across SDI-776A

(Deleted for Public Review; Bound Separately)

The grading of this project may impact cultural resources that have not been previously identified. Because the potential exists that inadvertent discoveries could be made during grading or earthwork, an archaeological monitoring program is recommended. The monitoring of earth-disturbing activities by a qualified archaeologist and a Luiseño Native American representative will facilitate the identification of inadvertent discoveries and the subsequent evaluation of any archaeological sites. All discoveries must be reported to the County of San Diego and any proposed significance testing shall be approved in advance by the County of San Diego. Any inadvertent discoveries that are subsequently evaluated as CEQA-significant may require additional mitigation measures to reduce the adverse effect of grading.

Sites SDI-776A, SDI-776B, SDI-8237, SDI-21,874, and P-37-031762 will be placed in open space, which will provide for the preservation of these resources. A Use, Maintenance, and Repair Easement will be placed over the Canfield-Lighton Ranch Complex. This easement provides the requirements that must be complied with for the use, repair, and maintenance of the buildings that have been identified as historically significant.

6.3 Significant Adverse Effects

The proposed development of the Ocean Breeze Ranch Project will represent a source of potential significant adverse impacts to one Historical Resource: SDI-776A. Significant adverse impacts to SDI-776A would be avoided by constructing the secondary access road on fill soil supported by geotextile fabrics.

6.4 Native American Heritage Resources/Traditional Properties

BFSA requested a review of the Sacred Lands Files by the NAHC, which was positive for results in the *Bonsall* Quadrangle. In accordance with the recommendations of the NAHC, BFSA contacted all Native American consultants listed in the NAHC response letter. Responses have been provided in Appendix D (see Confidential Appendix).

The County of San Diego has also conducted outreach with local tribes. Tribes were contacted pursuant to AB 52. Responses to the County's outreach efforts were received from the Rincon Band of Luiseño Indians, the Pala Band of Mission Indians, the Pechanga Band of Luiseño Mission Indians, and San Luis Rey Band of Mission Indians. Consultation is ongoing and the tribes have requested additional mitigation, which requires that a Pre-Grade Survey, a Cultural Resources Treatment Agreement and Preservation Plan, a Dust Control Plan for the protection of Site SDI-8237, and a Fair Share Contribution to a Regional Ethnography be included in the project conditions.

6.5 Mitigation Measures

6.5.1 Open Space Easement

Prior to the Approval of Any Plan and Issuance of Any Permit

The County of San Diego shall be granted a Cultural Resource Open Space Easement over portions of Major Use Permit PDS2018-MUP-18-023, as shown on the approved Open Space Exhibit. This easement is for the protection of biological resources and includes archaeological sites SDI-776A, SDI-776B, and SDI-8237 and prohibits all of the following on any portion of the land subject to said easement: grading; excavation; placement of soil, sand, rock, gravel, or other material; clearing of vegetation; construction, erection, or placement of any building or structure; vehicular activities; trash dumping; or use for any purpose other than as open space. The sole exceptions to this prohibition are:

1. Selective clearing of vegetation by hand to the extent required by written order of the fire authorities for the express purpose of reducing an identified fire hazard. While clearing for fire management is not anticipated with the creation of this easement, such clearing may be deemed necessary in the future for the safety of lives and property. All fire clearing shall be pursuant to the applicable fire code of the Fire Authority Having Jurisdiction and the Memorandum of Understanding (MOU), dated February 26, 1997 (http://www.sdcounty.ca.gov/PDS/docs/MemoofUnder.pdf), between the wildlife agencies, the fire districts, and any subsequent amendments thereto.
2. Activities conducted pursuant to a revegetation or habitat management plan approved by the Director of PDS, the County of San Diego Department of Public Works (DPW), or the County of San Diego DPR.
3. Vegetation removal or application of chemicals for vector control purposes where expressly required by written order of the County of San Diego Department of Environmental Health.
4. Construction, use, and maintenance of the access road on Lot RR in the location shown on Tentative Map PDS2016-TM-5615.
5. Construction, use, and maintenance of multi-use, non-motorized trails.
6. Access to cultural sites shall be provided to culturally affiliated tribes.

6.5.2 Site Capping – Site SDI-776A

Prior to any construction within 100 feet of archaeological Site SDI-776A, the Site Capping Plan shall be implemented pursuant to the County of San Diego Guidelines for Determining Significance for Cultural Resources and CEQA Section 15064.5. The capping plan is only required for the portion of the site that would be impacted by the access road and associated trail, including the fence. A County-approved principal investigator, known as the "Project Archaeologist," shall be contracted to prepare and implement a site capping plan. The capping plan shall include, but is not limited to, the following:

- A MOU between the Project Archaeologist and the County of San Diego shall be executed.
- A Luiseño Native American monitor(s) shall provide Native American monitoring of the capping.
- Prior to placing the cap, a letter shall be submitted to PDS that a County-approved archaeologist (Project Archaeologist) has been retained to supervise and monitor the capping of the portion of the archaeological site that is required to avoid impacts.
- Capping of the archaeological site shall be conducted by first placing construction fabric (*e.g.,* Amoco) or a minimum of six inches of sterile sand over the entire area of the archaeological site area to be capped. The sand layer shall be covered with 1.5 to 2.0 feet of clean fill soil. This layer shall be "feathered" out to 10 feet beyond the defined boundary of the capping area to create a buffer. The materials to be used for capping shall be stockpiled and spread by hand.
- After capping, the soil layer shall be landscaped with drought-resistant, shallow-rooted species. The species selected shall be selected in consultation with a landscape architect and shall conform to the County of San Diego Water Conservation in Landscaping Ordinance (10032). Temporary irrigation shall be a drip system and shall be removed as soon as the vegetation has been established.
- After the cap has been completed and the landscaping installed, the Project Archaeologist shall prepare a final letter report that details how the capping procedure and landscaping were completed.
- After capping, the only activities allowed on top of the cap are the construction and use of the access road and a trail including fencing.

6.5.3 Pre-Grade Survey and Data Recovery

Pre-Construction

A pre-grade survey shall be implemented due to the sensitivity of the area. The pre-grade and data recovery program shall include the following:

- Upon completion of grubbing and vegetation removal, and prior to grading, a pre-grade survey shall be conducted in areas identified for development. The pre-grade survey shall include both an archaeological monitor and a Luiseño Native American monitor.
- In the event that cultural resources are identified:
    - Both the Project Archaeologist and the Luiseño Native American monitor(s) have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery.
    - The Project Archaeologist shall contact the County Archaeologist.
    - The Project Archaeologist, in consultation with the County Archaeologist and

the Luiseño Native American monitor(s), shall determine the significance of any discovered resources.

- Isolates and non-significant deposits shall be minimally documented in the field. Should the isolates and non-significant deposits not be collected by the Project Archaeologist, the Luiseño Native American monitor(s) may collect the cultural material for transfer to a tribal curation facility or repatriation program.
- If cultural resources are determined to be significant, a Research Design and Data Recovery Program shall be prepared by the Project Archaeologist in consultation with the Luiseño Native American monitor(s) and approved by the County Archaeologist. The program shall include: reasonable efforts to preserve (avoid) unique cultural resources or sacred sites; capping of identified sacred sites or unique cultural resources; placement of development over the cap if avoidance is infeasible; and data recovery for non-unique cultural resources. The preferred option is preservation (avoidance).

- In the event that human remains are identified:

  - The property owner or their representative shall contact the San Diego County Medical Examiner's Office and the County of San Diego.
  - Upon identification of human remains, no further disturbance shall occur in the area of the find until the medical examiner has made the necessary findings as to origin. Should the human remains need to be taken off-site for evaluation, they shall be accompanied by a Luiseño Native American monitor.
  - If the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the NAHC, shall be contacted by the property owner or their representative in order to determine proper treatment and disposition of the remains.
  - The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations, as required by Public Resources Code Section 5097.98, has been conducted.
  - Public Resources Code Section 5097.98, CEQA Section 15064.5, and Health and Safety Code Section 7050.5 shall be followed in the event that human remains are discovered.

- Upon completion of grubbing and vegetation removal, a monitoring report shall be prepared identifying whether resources were encountered. A copy of the monitoring report shall be provided to any culturally-affiliated tribe who requests a copy. If resources were encountered, the analysis shall be included in the final archaeological

monitoring report and shall comply with all requirements of that condition.

6.5.4 Archaeological Monitoring

Prior to Construction

A preconstruction meeting shall be attended by the Project Archaeologist and the Luiseño Native American monitor(s) to explain the monitoring requirements.

During Construction

- Both the Project Archaeologist and the Luiseño Native American monitor(s) are to be on-site during earth-disturbing activities. The frequency and location of monitoring of native soils will be determined by the Project Archaeologist in consultation with the Luiseño Native American monitor(s). Both the Project Archaeologist and the Luiseño Native American monitor(s) will evaluate fill soils to ensure that they are negative for cultural resources. Within the area of SDI-776A, all construction work shall be closely monitored by the Luiseño Native American monitor(s) and the Project Archaeologist due to the high sensitivity of the site. Any inadvertent discoveries of artifacts or exposure of cultural soil shall be considered a potential impact and subsequent mitigation shall be implemented following consultation with the County of San Diego and the Luiseño Native American monitor(s).
- If cultural resources are identified:

    - Both the Project Archaeologist and the Luiseño Native American monitor(s) have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery.
    - The Project Archaeologist shall contact the County Archaeologist.
    - The Project Archaeologist, in consultation with the County Archaeologist and the Luiseño Native American monitor(s), shall determine the significance of discovered resources.
    - Construction activities will be allowed to resume after the County Archaeologist has concurred with the significance evaluation.
    - Isolates and non-significant deposits shall be minimally documented in the field. Should the isolates and non-significant deposits not be collected by the Project Archaeologist, the Luiseño Native American monitor(s) may collect the cultural material for transfer to a tribal curation facility or repatriation program.
    - If cultural resources are determined to be significant, a Research Design and Data Recovery Program shall be prepared by the Project Archaeologist in consultation with the Luiseño Native American monitor(s) and approved by the County Archaeologist. The program shall include: reasonable efforts to preserve (avoid) unique cultural resources or sacred sites; capping of identified

sacred sites or unique cultural resources; placement of development over the cap if avoidance is infeasible; and data recovery for non-unique cultural resources. The preferred option is preservation (avoidance).

- If human remains are identified:

    - The property owner or their representative shall contact the San Diego County Medical Examiner's Office and the County of San Diego.
    - Upon identification of human remains, no further disturbance shall occur in the area of the find until the medical examiner has made the necessary findings as to origin. Should the human remains need to be taken off-site for evaluation, they shall be accompanied by a Luiseño Native American monitor.
    - If the remains are determined to be of Native American origin, the MLD, as identified by the NAHC, shall be contacted by the property owner or their representative to determine proper treatment and disposition of the remains.
    - The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations, as required by Public Resources Code Section 5097.98, has been conducted.
    - Public Resources Code Section 5097.98, CEQA Section 15064.5, and Health and Safety Code Section 7050.5 shall be followed in the event that human remains are discovered.

- Upon completion of rough grading, a monitoring report shall be prepared identifying whether resources were encountered. A copy of the monitoring report shall be provided to any culturally-affiliated tribe who requests a copy.
- A final report shall be prepared substantiating that earth-disturbing activities are completed and whether cultural resources were encountered. A copy of the final report shall be submitted to the SCIC, the Pala Band of Mission Indians, the Rincon Band of Luiseño Indians, the San Luis Rey Band of Mission Indians, and any culturally-affiliated tribe who requests a copy.

Cultural Material Conveyance

- The final report shall include evidence that all prehistoric materials have been curated at a San Diego curation facility, curated at a tribal curation facility that meets federal standards per 36 CFR Part 79, or alternatively, have been repatriated to a culturally affiliated tribe.
- The final report shall include evidence that all historic materials have been curated at a San Diego curation facility that meets federal standards per 36 CFR Part 79.

6.5.5 Dust Control Plan

Prior to Construction

A dust control plan shall be prepared and implemented for the protection of the pictograph at Site SDI-8237 during project construction. The dust control plan shall be prepared and implemented by the contractor in consultation with the project archaeologist and Luiseño Native American monitor(s) and shall include the following requirements:

- Prior to placing protective material to shield the pictograph, photo-document the condition of the existing pictograph.
- Place appropriate cloth or material to shield the pictograph and mitigate impacts from dust. The covering must be of a material that will not cause damage to the pictograph.
- Periodic inspections of the pictograph shall be conducted to evaluate the status of the protective covering and to determine whether maintenance of the covering or replacement is necessary.
- Upon conclusion of construction, the protective cover may be removed and the pictograph shall be photo-documented to determine the status of the resource.
- After construction has concluded, the project archaeologist shall prepare a final letter report that details how the dust control plan was implemented and the condition of the pictograph at the beginning and end phases of construction.

6.5.6 Cultural Resources Treatment Agreement and Preservation Plan

Prior to the Approval of Any Plan and Issuance of Any Permit

- Enter into a Cultural Resources Treatment Agreement and Preservation Plan with the culturally affiliated tribe(s).
- A single Cultural Resources Treatment Agreement and Preservation Plan shall be developed between the applicant or their representative and the culturally affiliated Native American tribe(s). The Cultural Resources Treatment Agreement and Preservation Plan shall be reviewed and agreed to by the County prior to final signature and authorization. The Cultural Resources Treatment Agreement and Preservation Plan shall include, but is not limited to, the following:

    - Parties entering into the agreement and contact information.
    - Responsibilities of the property owner or their representative, the Project Archaeologist, archaeological monitors, Luiseño Native American monitors, and consulting tribes.
    - Requirements of the archaeological monitoring program and pre-grade survey program, including unanticipated discoveries. The requirements shall address grading and grubbing requirements including controlled grading and controlled vegetation removal in areas of cultural sensitivity, analysis of identified cultural

materials, and on-site storage of cultural materials.
- Requirements of the Dust Control Plan.
- Treatment of identified Native American cultural materials.
- Treatment of Native American human remains and associated grave goods.
- Requirements for temporary fencing (SDI-776A and SDI-776B).
- Confidentiality of cultural information including location and data.
- Negotiation of disagreements should they arise during the implementation of the Cultural Resources Treatment Agreement and Preservation Plan.
- Regulations that apply to cultural resources that have been identified or may be identified during project construction.

6.5.7 Fair Share Contribution Toward a Regional Ethnohistoric Study

Prior to the Approval of Any Plan and Issuance of Any Permit

A fair share contribution in the amount of $50,000 shall be made into an account held in trust by a third-party manager. The fund shall include the following:

- An agreement for the preparation of a regional study for the Morro Hill area when funding is 100.00 percent available. The agreement must identify the entity responsible for the management of the fund, rate of return, and annual management fees. The agreement must be reviewed and approved by the County of San Diego prior to implementation.
- Annual reporting to the County of San Diego on the status of the fund is required. The annual report shall include the balance of the fund and an accounting of projects that have contributed to the fund. Project information shall include the project name, project number, condition number, and when fair share contributions were made.

6.5.8 Use, Maintenance, and Repair Easement

Grant to the County of San Diego a Use, Maintenance, and Repair Easement over the Canfield-Lighton Ranch Complex. This easement is for the protection of the historic Ranch Complex and prohibits demolition or alteration of the structures. The sole exception to this prohibition is any future exterior repairs, restoration, or rehabilitation, which would need to be conducted in accordance with the SOI's "Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings," (Grimmer 2017) or the SOI's "Standards for Rehabilitation" (Weeks and Grimmer 1992a) and "Guidelines for Rehabilitating Historic Buildings" (Weeks and Grimmer 1992b). Any plan for such activities shall be designed by a qualified historical architect, approved by the Director of PDS, and implemented by a building contractor with demonstrated experience in the renovation and rehabilitation of historic buildings. The easement would not apply to the interior of the structures.

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Whitaker, James E.

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Whitehouse, John and Dayle M. Cheever

1990 Cultural Resource Constraints Study of the Pankey Ranch Property County of San Diego, California. John Whitehouse and Dayle M. Cheever. Submitted to Rick Engineering Company. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Wlodarski, Robert J.

2006a Record Search and Field Reconnaissance for Telecommunications Site CA5162A (Bonsall-Vessels Property) Located at 75820 West Lilac Road, Bonsall, San Diego County, California 92003. C.A.R.E. Submitted to ATC Associates. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

2006b Record Search and Field Reconnaissance for Nextel Wireless Telecommunications Site CA7903A (Via Ararat – Vessels Property) Located at 7903 Via Ararat, City of Bonsall, San Diego County, California 92003. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Woods, James C.

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Wright, Gail

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2005 Cultural Resources Survey Report for TPM 20727, Log No. 03-02-008, Dressen Minor Subdivision APN 1127-250-00, Negative Findings. Gail Wright. Submitted to Department of Planning and Land Use: San Diego. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

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8.0 LIST OF PREPARERS AND ORGANIZATIONS CONTACTED

The archaeological survey program for the Ocean Breeze Ranch Project was directed by Principal Investigator Brian F. Smith. The archaeological fieldwork was conducted by Project Archaeologist Tracy A. Stropes, M.A., RPA, Archaeological Field Director Clarence Hoff, and field archaeologists James Shrieve David Grabski, Kyle Coulter, Richard Savitch, Kirstie McPeek, and Eric Rodriguez with assistance from Banning Taylor, Ray Mojado, Shelly Nelson, John Chavez, and P.J. Stoneburner, Luiseño Native American representatives from Saving Sacred Sites. The report text was prepared by Tracy Stropes, Jennifer Stropes, and Brian Smith. Report graphics were provided by Tracy Stropes, Kris Reinicke, and Eric Rodriguez. Technical editing and report production were conducted by Elena Goralogia with assistance from Courtney Accardy and Kristen Caldwell. The SCIC at SDSU provided the archaeological records search information.

9.0 LIST OF MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Resource	Mitigation Measures	Design Considerations
SDI-776A	Preservation will be required to mitigate potential impacts to the significant cultural deposit identified within SDI-776A. The secondary access road will be constructed across the site without excavation into the cultural deposit. Data recovery mitigation is not anticipated because the impacts to SDI-776A will be avoided. As this site is an RPO-significant site, data recovery would not typically be available as a means to mitigate impacts; however, if any cultural deposits are inadvertently disturbed during road construction, then data recovery measures may be necessary, following consultation with the tribal representatives and the County.	Engineers will design the road across SDI-776A to be placed on fill dirt and geotextile to avoid any disturbance of the cultural deposit. Archaeological and Native American monitors must be present during all work on this road project.
SDI-776B	In order to ensure the preservation of SDI-776B, the site will be placed in a biological open space easement.	Not required
SDI-776C	Not required	
SDI-776D		
SDI-776E		
SDI-776F		
SDI-776G		
SDI-776H		
SDI-776I		
SDI-1083		
SDI-8237	Preservation in open space	Not required – this location is within a biological open space area
SDI-12,550	Not required	Not required
SDI-20,174		
P-37-028134		
P-37-028139		
P-37-031762		

Resource	Mitigation Measures	Design Considerations
P-37-035850	Preservation of historic structures	The complex of historic structures will not be directly affected by the proposed development. The sites will be placed in a deed restriction area that will limit any future alterations to the exteriors of the structures to standard maintenance. Any substantial alterations to the structures must be approved by the County in advance.
SDI-21,874	Not required	Not required
SDI-21,875		
SDI-21,876		
General Property	The potential exists that unrecorded cultural resources could be encountered during grading. As a condition of approval, a MMRP should be required to mitigate impacts to cultural resources uncovered during grading.	

APPENDIX A

Resumes of Key Personnel

Brian F. Smith, MA

Owner, Principal Investigator

Brian F. Smith and Associates, Inc.
14010 Poway Road • Suite A •
Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: bsmith@bfsa-ca.com

Education

Master of Arts, History, University of San Diego, California	1982
Bachelor of Arts, History, and Anthropology, University of San Diego, California	1975

Professional Memberships

Society for California Archaeology

Experience

Principal Investigator — 1977–Present
Brian F. Smith and Associates, Inc. — Poway, California

Brian F. Smith is the owner and principal historical and archaeological consultant for Brian F. Smith and Associates. Over the past 32 years, he has conducted over 2,500 cultural resource studies in California, Arizona, Nevada, Montana, and Texas. These studies include every possible aspect of archaeology from literature searches and large-scale surveys to intensive data recovery excavations. Reports prepared by Mr. Smith have been submitted to all facets of local, state, and federal review agencies, including the US Army Crops of Engineers, the Bureau of Land Management, the Bureau of Reclamation, the Department of Defense, and the Department of Homeland Security. In addition, Mr. Smith has conducted studies for utility companies (Sempra Energy) and state highway departments (CalTrans).

Professional Accomplishments

These selected major professional accomplishments represent research efforts that have added significantly to the body of knowledge concerning the prehistoric life ways of cultures once present in the Southern California area and historic settlement since the late 18th century. Mr. Smith has been principal investigator on the following select projects, except where noted.

Downtown San Diego Mitigation and Monitoring Reporting Programs: Large numbers of downtown San Diego mitigation and monitoring projects submitted to the Centre City Development Corporation, some of which included Strata (2008), Hotel Indigo (2008), Lofts at 707 10th Avenue Project (2007), Breeza (2007), Bayside at the Embarcadero (2007), Aria (2007), Icon (2007), Vantage Pointe (2007), Aperture (2007), Sapphire Tower (2007), Lofts at 655 Sixth Avenue (2007), Metrowork (2007), The Legend (2006), The Mark (2006), Smart Corner (2006), Lofts at 677 7th Avenue (2005), Aloft on Cortez Hill (2005), Front and

Beech Apartments (2003), Bella Via Condominiums (2003), Acqua Vista Residential Tower (2003), Northblock Lofts (2003), Westin Park Place Hotel (2001), Parkloft Apartment Complex (2001), Renaissance Park (2001), and Laurel Bay Apartments (2001).

Archaeology at the Padres Ballpark: Involved the analysis of historic resources within a seven-block area of the "East Village" area of San Diego, where occupation spanned a period from the 1870s to the 1940s. Over a period of two years, BFSA recovered over 200,000 artifacts and hundreds of pounds of metal, construction debris, unidentified broken glass, and wood. Collectively, the Ballpark Project and the other downtown mitigation and monitoring projects represent the largest historical archaeological program anywhere in the country in the past decade (2000-2007).

4S Ranch Archaeological and Historical Cultural Resources Study: Data recovery program consisted of the excavation of over 2,000 square meters of archaeological deposits that produced over one million artifacts, containing primarily prehistoric materials. The archaeological program at 4S Ranch is the largest archaeological study ever undertaken in the San Diego County area and has produced data that has exceeded expectations regarding the resolution of long-standing research questions and regional prehistoric settlement patterns.

Charles H. Brown Site: Attracted international attention to the discovery of evidence of the antiquity of man in North America. Site located in Mission Valley, in the city of San Diego.

Del Mar Man Site: Study of the now famous Early Man Site in Del Mar, California, for the San Diego Science Foundation and the San Diego Museum of Man, under the direction of Dr. Spencer Rogers and Dr. James R. Moriarty.

Old Town State Park Projects: Consulting Historical Archaeologist. Projects completed in the Old Town State Park involved development of individual lots for commercial enterprises. The projects completed in Old Town include Archaeological and Historical Site Assessment for the Great Wall Cafe (1992), Archaeological Study for the Old Town Commercial Project (1991), and Cultural Resources Site Survey at the Old San Diego Inn (1988).

Site W-20, Del Mar, California: A two-year-long investigation of a major prehistoric site in the Del Mar area of the city of San Diego. This research effort documented the earliest practice of religious/ceremonial activities in San Diego County (circa 6,000 years ago), facilitated the projection of major non-material aspects of the La Jolla Complex, and revealed the pattern of civilization at this site over a continuous period of 5,000 years. The report for the investigation included over 600 pages, with nearly 500,000 words of text, illustrations, maps, and photographs documenting this major study.

City of San Diego Reclaimed Water Distribution System: A cultural resource study of nearly 400 miles of pipeline in the city and county of San Diego.

Master Environmental Assessment Project, City of Poway: Conducted for the City of Poway to produce a complete inventory of all recorded historic and prehistoric properties within the city. The information was used in conjunction with the City's General Plan Update to produce a map matrix of the city showing areas of high, moderate, and low potential for the presence of cultural resources. The effort also included the development of the City's Cultural Resource Guidelines, which were adopted as City policy.

Draft of the City of Carlsbad Historical and Archaeological Guidelines: Contracted by the City of Carlsbad to produce the draft of the City's historical and archaeological guidelines for use by the Planning Department of the City.

The Mid-Bayfront Project for the City of Chula Vista: Involved a large expanse of undeveloped agricultural land situated between the railroad and San Diego Bay in the northwestern portion of the city. The study included the analysis of some potentially historic features and numerous prehistoric sites.

Cultural Resources Survey and Test of Sites Within the Proposed Development of the Audie Murphy Ranch, Riverside County, California: Project manager/director of the investigation of 1,113.4 acres and 43 sites, both prehistoric and historic—included project coordination; direction of field crews; evaluation of sites for significance based on County of Riverside and CEQA guidelines; assessment of cupule, pictograph, and rock shelter sites, co-authoring of cultural resources project report. February-September 2002.

Cultural Resources Evaluation of Sites Within the Proposed Development of the Otay Ranch Village 13 Project, San Diego County, California: Project manager/director of the investigation of 1,947 acres and 76 sites, both prehistoric and historic—included project coordination and budgeting; direction of field crews; assessment of sites for significance based on County of San Diego and CEQA guidelines; co-authoring of cultural resources project report. May-November 2002.

Cultural Resources Survey for the Remote Video Surveillance Project, El Centro Sector, Imperial County: Project manager/director for a survey of 29 individual sites near the U.S./Mexico Border for proposed video surveillance camera locations associated with the San Diego Border barrier Project—project coordination and budgeting; direction of field crews; site identification and recordation; assessment of potential impacts to cultural resources; meeting and coordinating with U.S. Army Corps of Engineers, U.S. Border Patrol, and other government agencies involved; co-authoring of cultural resources project report. January, February, and July 2002.

Cultural Resources Survey and Test of Sites Within the Proposed Development of the Menifee West GPA, Riverside County, California: Project manager/director of the investigation of nine sites, both prehistoric and historic—included project coordination and budgeting; direction of field crews; assessment of sites for significance based on County of Riverside and CEQA guidelines; historic research; co-authoring of cultural resources project report. January-March 2002.

Mitigation of An Archaic Cultural Resource for the Eastlake III Woods Project for the City of Chula Vista, California: Project archaeologist/ director—included direction of field crews; development and completion of data recovery program including collection of material for specialized faunal and botanical analyses; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; co-authoring of cultural resources project report, in prep. September 2001-March 2002.

Cultural Resources Survey and Test of Sites Within the Proposed French Valley Specific Plan/EIR, Riverside County, California: Project manager/director of the investigation of two prehistoric and three historic sites—included project coordination and budgeting; survey of project area; Native American consultation; direction of field crews; assessment of sites for significance based on CEQA guidelines; cultural resources project report in prep. July-August 2000.

Cultural Resources Survey and Test of Sites Within the Proposed Lawson Valley Project, San Diego County, California: Project manager/director of the investigation of 28 prehistoric and two historic sites—included project coordination; direction of field crews; assessment of sites for significance based on CEQA guidelines; cultural resources project report in prep. July-August 2000.

Cultural Resource Survey and Geotechnical Monitoring for the Mohyi Residence Project, La Jolla, California: Project manager/director of the investigation of a single-dwelling parcel—included project coordination; field survey; assessment of parcel for potentially buried cultural deposits; monitoring of geotechnichal borings; authoring of cultural resources project report. Brian F. Smith and Associates, San Diego, California. June 2000.

Enhanced Cultural Resource Survey and Evaluation for the Prewitt/Schmucker/Cavadias Project, La Jolla, California: Project manager/director of the investigation of a single-dwelling parcel—included project coordination; direction of field crews; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. June 2000.

Cultural Resources Survey and Test of Sites Within the Proposed Development of the Menifee Ranch, Riverside County, California: Project manager/director of the investigation of one prehistoric and five historic sites—included project coordination and budgeting; direction of field crews; feature recordation; historic structure assessments; assessment of sites for significance based on CEQA guidelines; historic research; co-authoring of cultural resources project report. February-June 2000.

Salvage Mitigation of a Portion of the San Diego Presidio Identified During Water Pipe Construction for the City of San Diego, California: Project archaeologist/director—included direction of field crews; development and completion of data recovery program; management of artifact collections cataloging and curation; data synthesis and authoring of cultural resources project report in prep. April 2000.

Enhanced Cultural Resource Survey and Evaluation for the Tyrian 3 Project, La Jolla, California: Project manager/director of the investigation of a single-dwelling parcel—included project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. April 2000.

Enhanced Cultural Resource Survey and Evaluation for the Lamont 5 Project, Pacific Beach, California: Project manager/director of the investigation of a single-dwelling parcel—included project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. April 2000.

Enhanced Cultural Resource Survey and Evaluation for the Reiss Residence Project, La Jolla, California: Project manager/director of the investigation of a single-dwelling parcel—included project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. March-April 2000.

Salvage Mitigation of a Portion of Site SDM-W-95 (CA-SDI-211) for the Poinsettia Shores Santalina Development Project and Caltrans, Carlsbad, California: Project achaeologist/ director—included direction of field crews; development and completion of data recovery program; management of artifact collections cataloging and curation; data synthesis and authoring of cultural resources project report in prep. December 1999-January 2000.

Survey and Testing of Two Prehistoric Cultural Resources for the Airway Truck Parking Project, Otay Mesa, California: Project archaeologist/director—included direction of field crews; development and completion of testing recovery program; assessment of site for significance based on CEQA guidelines; authoring of cultural resources project report, in prep. December 1999-January 2000.

Cultural Resources Phase I and II Investigations for the Tin Can Hill Segment of the Immigration and Naturalization Services Triple Fence Project Along the International Border, San Diego County, California: Project manager/director for a survey and testing of a prehistoric quarry site along the border—NRHP eligibility assessment; project coordination and budgeting; direction of field crews; feature recordation; meeting and coordinating with U.S. Army Corps of Engineers; co-authoring of cultural resources project report. December 1999-January 2000.

Mitigation of a Prehistoric Cultural Resource for the Westview High School Project for the City of San Diego, California: Project archaeologist/ director—included direction of field crews; development and completion of data recovery program including collection of material for specialized faunal and botanical analyses; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; co-authoring of cultural resources project report, in prep. October 1999-January 2000.

Mitigation of a Prehistoric Cultural Resource for the Otay Ranch SPA-One West Project for the City of Chula Vista, California: Project archaeologist/director—included direction of field crews; development of data recovery program; management of artifact collections cataloging and curation; assessment of

site for significance based on CEQA guidelines; data synthesis; authoring of cultural resources project report, in prep. September 1999-January 2000.

Monitoring of Grading for the Herschel Place Project, La Jolla, California: Project archaeologist/ monitor—included monitoring of grading activities associated with the development of a single-dwelling parcel. September 1999.

Survey and Testing of a Historic Resource for the Osterkamp Development Project, Valley Center, California: Project archaeologist/ director—included direction of field crews; development and completion of data recovery program; budget development; assessment of site for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report. July-August 1999.

Survey and Testing of a Prehistoric Cultural Resource for the Proposed College Boulevard Alignment Project, Carlsbad, California: Project manager/director —included direction of field crews; development and completion of testing recovery program; assessment of site for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report, in prep. July-August 1999.

Survey and Evaluation of Cultural Resources for the Palomar Christian Conference Center Project, Palomar Mountain, California: Project archaeologist—included direction of field crews; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report. July-August 1999.

Survey and Evaluation of Cultural Resources at the Village 2 High School Site, Otay Ranch, City of Chula Vista, California: Project manager/director —management of artifact collections cataloging and curation; assessment of site for significance based on CEQA guidelines; data synthesis; authoring of cultural resources project report. July 1999.

Cultural Resources Phase I, II, and III Investigations for the Immigration and Naturalization Services Triple Fence Project Along the International Border, San Diego County, California: Project manager/director for the survey, testing, and mitigation of sites along border—supervision of multiple field crews, NRHP eligibility assessments, Native American consultation, contribution to Environmental Assessment document, lithic and marine shell analysis, authoring of cultural resources project report. August 1997-January 2000.

Phase I, II, and II Investigations for the Scripps Poway Parkway East Project, Poway California: Project archaeologist/project director—included recordation and assessment of multicomponent prehistoric and historic sites; direction of Phase II and III investigations; direction of laboratory analyses including prehistoric and historic collections; curation of collections; data synthesis; coauthorship of final cultural resources report. February 1994; March-September 1994; September-December 1995.

Archaeological Evaluation of Cultural Resources Within the Proposed Corridor for the San Elijo Water Reclamation System Project, San Elijo, California: Project manager/director —test excavations; direction of artifact identification and analysis; graphics production; coauthorship of final cultural resources report. December 1994-July 1995.

Evaluation of Cultural Resources for the Environmental Impact Report for the Rose Canyon Trunk Sewer Project, San Diego, California: Project manager/Director —direction of test excavations; identification and analysis of prehistoric and historic artifact collections; data synthesis; co-authorship of final cultural resources report, San Diego, California. June 1991-March 1992.

Reports/Papers

Author, coauthor, or contributor to over 2,500 cultural resources management publications, a selection of which are presented below.

2015 An Archaeological/Historical Study for the Safari Highlands Ranch Project, City of Escondido, County of San Diego.

2015 A Phase I and II Cultural Resources Assessment for the Decker Parcels II Project, Planning Case No. 36962, Riverside County, California.

2015 A Phase I and II Cultural Resources Assessment for the Decker Parcels I Project, Planning Case No. 36950, Riverside County, California.

2015 Cultural Resource Data Recovery and Mitigation Monitoring Program for Site SDI-10,237 Locus F, Everly Subdivision Project, El Cajon, California.

2015 Phase I Cultural Resource Survey for the Woodward Street Senior Housing Project, City of San Marcos, California (APN 218-120-31).

2015 An Updated Cultural Resource Survey for the Box Springs Project (TR 33410), APNs 255-230-010, 255-240-005, 255-240-006, and Portions of 257-180-004, 257-180-005, and 257-180-006.

2015 A Phase I and II Cultural Resource Report for the Lake Ranch Project, TR 36730, Riverside County, California.

2015 A Phase II Cultural Resource Assessment for the Munro Valley Solar Project, Inyo County, California.

2014 Cultural Resources Monitoring Report for the Diamond Valley Solar Project, Community of Winchester, County of Riverside.

2014 National Historic Preservation Act Section 106 Compliance for the Proposed Saddleback Estates Project, Riverside County, California.

2014 A Phase II Cultural Resource Evaluation Report for RIV-8137 at the Toscana Project, TR 36593, Riverside County, California.

2014 Cultural Resources Study for the Estates at Del Mar Project, City of Del Mar, San Diego, California (TTM 14-001).

2014 Cultural Resources Study for the Aliso Canyon Major Subdivision Project, Rancho Santa Fe, San Diego County, California.

2014 Cultural Resources Due Diligence Assessment of the Ocean Colony Project, City of Encinitas.

2014 A Phase I and Phase II Cultural Resource Assessment for the Citrus Heights II Project, TTM 36475, Riverside County, California.

2013 A Phase I Cultural Resource Assessment for the Modular Logistics Center, Moreno Valley, Riverside County, California.

2013 A Phase I Cultural Resources Survey of the Ivey Ranch Project, Thousand Palms, Riverside County, California.

2013 Cultural Resources Report for the Emerald Acres Project, Riverside County, California.

2013 A Cultural Resources Records Search and Review for the Pala Del Norte Conservation Bank Project, San Diego County, California.

2013 An Updated Phase I Cultural Resources Assessment for Tentative Tract Maps 36484 and 36485, Audie Murphy Ranch, City of Menifee, County of Riverside.

2013 El Centro Town Center Industrial Development Project (EDA Grant No. 07-01-06386); Result of Cultural Resource Monitoring.

2013 Cultural Resources Survey Report for the Renda Residence Project, 9521 La Jolla Farms Road, La Jolla, California.

2013 A Phase I Cultural Resource Study for the Ballpark Village Project, San Diego, California.

2013 Archaeological Monitoring and Mitigation Program, San Clemente Senior Housing Project, 2350 South El Camino Real, City of San Clemente, Orange County, California (CUP No. 06-065; APN-060-032-04).

2012 Mitigation Monitoring Report for the Los Peñasquitos Recycled Water Pipeline.

2012 Cultural Resources Report for Menifee Heights (Tract 32277).

2012 A Phase I Cultural Resource Study for the Altman Residence at 9696 La Jolla Farms Road, La Jolla, California 92037.

2012 Mission Ranch Project (TM 5290-1/MUP P87-036W3): Results of Cultural Resources Monitoring During Mass Grading.

2012 A Phase I Cultural Resource Study for the Payan Property Project, San Diego, California.

2012 Phase I Archaeological Survey of the Rieger Residence, 13707 Durango Drive, Del Mar, California 92014, APN 300-369-49.

2011 Mission Ranch Project (TM 5290-1/MUP P87-036W3): Results of Cultural Resources Monitoring During Mass Grading.

2011 Mitigation Monitoring Report for the 1887 Viking Way Project, La Jolla, California.

2011 Cultural Resource Monitoring Report for the Sewer Group 714 Project.

2011 Results of Archaeological Monitoring at the 10th Avenue Parking Lot Project, City of San Diego, California (APNs 534-194-02 and 03).

2011 Archaeological Survey of the Pelberg Residence for a Bulletin 560 Permit Application; 8335 Camino Del Oro; La Jolla, California 92037 APN 346-162-01-00 .

2011 A Cultural Resources Survey Update and Evaluation for the Robertson Ranch West Project and an Evaluation of National Register Eligibility of Archaeological sites for Sites for Section 106 Review (NHPA).

2011 Mitigation Monitoring Report for the 43rd and Logan Project.

2011 Mitigation Monitoring Report for the Sewer Group 682 M Project, City of San Diego Project #174116.

2011 A Phase I Cultural Resource Study for the Nooren Residence Project, 8001 Calle de la Plata, La Jolla, California, Project No. 226965.

2011 A Phase I Cultural Resource Study for the Keating Residence Project, 9633 La Jolla Farms Road, La Jolla, California 92037.

2010 Mitigation Monitoring Report for the 15th & Island Project, City of San Diego; APNs 535-365-01, 535-365-02 and 535-392-05 through 535-392-07.

2010 Archaeological Resource Report Form: Mitigation Monitoring of the Sewer and Water Group 772 Project, San Diego, California, W.O. Nos. 187861 and 178351.

2010 Pottery Canyon Site Archaeological Evaluation Project, City of San Diego, California, Contract No. H105126.

2010 Archaeological Resource Report Form: Mitigation Monitoring of the Racetrack View Drive Project, San Diego, California; Project No. 163216.

2010 A Historical Evaluation of Structures on the Butterfield Trails Property.

2010 Historic Archaeological Significance Evaluation of 1761 Haydn Drive, Encinitas, California (APN 260-276-07-00).

2010 Results of Archaeological Monitoring of the Heller/Nguyen Project, TPM 06-01, Poway, California.

2010 Cultural Resource Survey and Evaluation Program for the Sunday Drive Parcel Project, San Diego County, California, APN 189-281-14.

2010 Archaeological Resource Report Form: Mitigation Monitoring of the Emergency Garnet Avenue Storm Drain Replacement Project, San Diego, California, Project No. B10062

2010 An Archaeological Study for the 1912 Spindrift Drive Project

2009 Cultural Resource Assessment of the North Ocean Beach Gateway Project City of San Diego #64A-003A; Project #154116.

2009 Archaeological Constraints Study of the Morgan Valley Wind Assessment Project, Lake County, California.

2008 Results of an Archaeological Review of the Helen Park Lane 3.1-acre Property (APN 314-561-31), Poway, California.

2008 Archaeological Letter Report for a Phase I Archaeological Assessment of the Valley Park Condominium Project, Ramona, California; APN 282-262-75-00.

2007 Archaeology at the Ballpark. Brian F. Smith and Associates, San Diego, California. Submitted to the Centre City Development Corporation.

2007 Result of an Archaeological Survey for the Villages at Promenade Project (APNs 115-180-007-3,115-180-049-1, 115-180-042-4, 115-180-047-9) in the City of Corona, Riverside County.

2007 Monitoring Results for the Capping of Site CA-SDI-6038/SDM-W-5517 within the Katzer Jamul Center Project; P00-017.

2006 Archaeological Assessment for The Johnson Project (APN 322-011-10), Poway, California.

2005 Results of Archaeological Monitoring at the El Camino Del Teatro Accelerated Sewer Replacement Project (Bid No. K041364; WO # 177741; CIP # 46-610.6.

2005 Results of Archaeological Monitoring at the Baltazar Draper Avenue Project (Project No. 15857; APN: 351-040-09).

2004 TM 5325 ER #03-14-043 Cultural Resources.

2004 An Archaeological Survey and an Evaluation of Cultural Resources at the Salt Creek Project. Report on file at Brian F. Smith and Associates.

2003 An Archaeological Assessment for the Hidden Meadows Project, San Diego County, TM 5174, Log No. 99-08-033. Report on file at Brian F. Smith and Associates.

2003 An Archaeological Survey for the Manchester Estates Project, Coastal Development Permit #02-009, Encinitas, California. Report on file at Brian F. Smith and Associates.

2003 Archaeological Investigations at the Manchester Estates Project, Coastal Development Permit #02-009, Encinitas, California. Report on file at Brian F. Smith and Associates.

2003 Archaeological Monitoring of Geological Testing Cores at the Pacific Beach Christian Church Project. Report on file at Brian F. Smith and Associates.

2003 San Juan Creek Drilling Archaeological Monitoring. Report on file at Brian F. Smith and Associates.

2003 Evaluation of Archaeological Resources Within the Spring Canyon Biological Mitigation Area, Otay Mesa, San Diego County, California. Brian F. Smith and Associates, San Diego, California.

2002 An Archaeological/Historical Study for the Otay Ranch Village 13 Project (et al.). Brian F. Smith and Associates, San Diego, California.

2002 An Archaeological/Historical Study for the Audie Murphy Ranch Project (et al.). Brian F. Smith and Associates, San Diego, California.

2002 Results of an Archaeological Survey for the Remote Video Surveillance Project, El Centro Sector, Imperial County, California. Brian F. Smith and Associates, San Diego, California.

2002 A Cultural Resources Survey and Evaluation for the Proposed Robertson Ranch Project, City of Carlsbad. Brian F. Smith and Associates, San Diego, California.

2002 Archaeological Mitigation of Impacts to Prehistoric Site SDI-7976 for the Eastlake III Woods Project, Chula Vista, California. Brian F. Smith and Associates, San Diego, California.

2002 An Archaeological/Historical Study for Tract No. 29777, Menifee West GPA Project, Perris Valley, Riverside County. Brian F. Smith and Associates, San Diego, California.

2002 An Archaeological/Historical Study for Tract No. 29835, Menifee West GPA Project, Perris Valley, Riverside County. Brian F. Smith and Associates, San Diego, California.

2001 An Archaeological Survey and Evaluation of a Cultural Resource for the Moore Property, Poway. Brian F. Smith and Associates, San Diego, California.

2001 An Archaeological Report for the Mitigation, Monitoring, and Reporting Program at the Water and Sewer Group Job 530A, Old Town San Diego. Brian F. Smith and Associates, San Diego, California.

2001 A Cultural Resources Impact Survey for the High Desert Water District Recharge Site 6 Project, Yucca Valley. Brian F. Smith and Associates, San Diego, California.

2001 Archaeological Mitigation of Impacts to Prehistoric Site SDI-13,864 at the Otay Ranch SPA-One West Project. Brian F. Smith and Associates, San Diego, California.

2001 A Cultural Resources Survey and Site Evaluations at the Stewart Subdivision Project, Moreno Valley, County of San Diego. Brian F. Smith and Associates, San Diego, California.

2000 An Archaeological/Historical Study for the French Valley Specific Plan/EIR, French Valley, County of Riverside. Brian F. Smith and Associates, San Diego, California.

2000 Results of an Archaeological Survey and the Evaluation of Cultural Resources at The TPM#24003–Lawson Valley Project. Brian F. Smith and Associates, San Diego, California.

2000 Archaeological Mitigation of Impacts to Prehistoric Site SDI-5326 at the Westview High School Project for the Poway Unified School District. Brian F. Smith and Associates, San Diego, California.

2000 An Archaeological/Historical Study for the Menifee Ranch Project. Brian F. Smith and Associates, San Diego, California.

2000 An Archaeological Survey and Evaluation of Cultural Resources for the Bernardo Mountain Project, Escondido, California. Brian F. Smith and Associates, San Diego, California.

2000 A Cultural Resources Impact Survey for the Nextel Black Mountain Road Project, San Diego, California. Brian F. Smith and Associates, San Diego, California.

2000 A Cultural Resources Impact Survey for the Rancho Vista Project, 740 Hilltop Drive, Chula Vista, California. Brian F. Smith and Associates, San Diego, California.

2000 A Cultural Resources Impact Survey for the Poway Creek Project, Poway, California. Brian F. Smith and Associates, San Diego, California.

2000 Cultural Resource Survey and Geotechnical Monitoring for the Mohyi Residence Project. Brian F. Smith and Associates, San Diego, California.

2000 Enhanced Cultural Resource Survey and Evaluation for the Prewitt/Schmucker/ Cavadias Project. Brian F. Smith and Associates, San Diego, California.

2000 Enhanced Cultural Resource Survey and Evaluation for the Lamont 5 Project. Brian F. Smith and Associates, San Diego, California.

2000 Salvage Excavations at Site SDM-W-95 (CA-SDI-211) for the Poinsettia Shores Santalina Development Project, Carlsbad, California. Brian F. Smith and Associates, San Diego, California.

2000 Enhanced Cultural Resource Survey and Evaluation for the Reiss Residence Project, La Jolla, California. Brian F. Smith and Associates, San Diego, California.

2000 Enhanced Cultural Resource Survey and Evaluation for the Tyrian 3 Project, La Jolla, California. Brian F. Smith and Associates, San Diego, California.

2000 A Report for an Archaeological Evaluation of Cultural Resources at the Otay Ranch Village Two SPA, Chula Vista, California. Brian F. Smith and Associates, San Diego, California.

2000 An Archaeological Evaluation of Cultural Resources for the Airway Truck Parking Project, Otay Mesa, County of San Diego. Brian F. Smith and Associates, San Diego, California.

2000 Results of an Archaeological Survey and Evaluation of a Resource for the Tin Can Hill Segment of the Immigration and Naturalization and Immigration Service Border Road, Fence, and Lighting Project, San Diego County, California. Brian F. Smith and Associates, San Diego, California.

1999 An Archaeological Survey of the Home Creek Village Project, 4600 Block of Home Avenue, San Diego, California. Brian F. Smith and Associates, San Diego, California.

1999 An Archaeological Survey for the Sgobassi Lot Split, San Diego County, California. Brian F. Smith and Associates, San Diego, California.

1999 An Evaluation of Cultural Resources at the Otay Ranch Village 11 Project. Brian F. Smith and Associates, San Diego, California.

1999 An Archaeological/Historical Survey and Evaluation of a Cultural Resource for The Osterkamp Development Project, Valley Center, California. Brian F. Smith and Associates, San Diego, California.

1999 An Archaeological Survey and Evaluation of Cultural Resources for the Palomar Christian Conference Center Project, Palomar Mountain, California. Brian F. Smith and Associates, San Diego, California.

1999 An Archaeological Survey and Evaluation of a Cultural Resource for the Proposed College Boulevard Alignment Project. Brian F. Smith and Associates, San Diego, California.

1999 Results of an Archaeological Evaluation for the Anthony's Pizza Acquisition Project in Ocean Beach, City of San Diego (with L. Pierson and B. Smith). Brian F. Smith and Associates, San Diego, California.

1996 An Archaeological Testing Program for the Scripps Poway Parkway East Project. Brian F. Smith and Associates, San Diego, California.

1995 Results of a Cultural Resources Study for the 4S Ranch. Brian F. Smith and Associates, San Diego, California.

1995 Results of an Archaeological Evaluation of Cultural Resources Within the Proposed Corridor for the San Elijo Water Reclamation System. Brian F. Smith and Associates, San Diego, California.

1994 Results of the Cultural Resources Mitigation Programs at Sites SDI-11,044/H and SDI-12,038 at the Salt Creek Ranch Project . Brian F. Smith and Associates, San Diego, California.

1993 Results of an Archaeological Survey and Evaluation of Cultural Resources at the Stallion Oaks Ranch Project. Brian F. Smith and Associates, San Diego, California.

1992 Results of an Archaeological Survey and the Evaluation of Cultural Resources at the Ely Lot Split Project. Brian F. Smith and Associates, San Diego, California.

1991 The Results of an Archaeological Study for the Walton Development Group Project. Brian F. Smith and Associates, San Diego, California.

Tracy A. Stropes, MA, RPA

Senior Project Archaeologist

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Education

Master of Arts, Anthropology, San Diego State University, California	2007
Bachelor of Science, Anthropology, University of California, Riverside	2000

Professional Memberships

Register of Professional Archaeologists
Society for California Archaeology
Archaeological Institute of America

Experience

Project Archaeologist — March 2009–Present
Brian F. Smith and Associates, Inc. — Poway, California

Project Management of all phases of archaeological investigations for local, state, and federal agencies, field supervision, lithic analysis, National Register of Historic Places (NRHP) and California Environmental Quality Act (CEQA) site evaluations, and authoring/coauthoring of cultural resource management reports.

Archaeological Principal Investigator — June 2008–February 2009
TRC Solutions — Irvine, California

Cultural resource segment of Natural Sciences and Permitting Division; management of archaeological investigations for private companies and local, state, and federal agencies, personnel management, field and laboratory supervision, lithic analysis, Native American consultation and reporting, MRHP and CEQA site evaluations, and authoring/coauthoring cultural resource management reports.

Principal Investigator and Project Archaeologist — June 2006–May 2008
Archaeological Resource Analysts — Oceanside, California

As a sub consultant, served as Principal Investigator and Project Archaeologist for several projects for SRS Inc., including field direction, project and personnel management, lab analysis, and authorship of company reports.

Project Archaeologist — September 1996–June 2006
Gallegos & Associates — Carlsbad, California

Project management, laboratory management, lithic analysis, field direction, Native American consultation, report authorship/technical editing, and composition of several data recovery/preservation programs for both CEQA and NEPA level compliance.

Project Archaeologist — September 1993–September 1996
Macko Inc. — Santa Ana, California

Project management, laboratory management, lithic analysis, field supervision, and report authorship/technical editing.

Archaeological Field Technician — January 1993–September 1993
Chambers Group Inc. — Irvine, California

Archaeological excavation, surveying, monitoring, wet screen facilities management, and project logistics.

Archaeological Field Technician — May 1992–September 1992
John Minch and Associates — San Juan Capistrano, California

Archaeological excavation, surveying, monitoring, wet screen facilities management, and project logistics.

Reports/Papers

Principal Author

2012 A Class III Cultural Resources Study for the USGS Creepmeter Project; July 20, 2012; Tracy Stropes and Brian Smith.

2011 Results of the Mitigation Monitoring Program for the Mission Brewery Villas Project City of San Diego (Project No. 52078) / April 9, 2012 / Tracy A. Stropes.

2011 Mitigation Monitoring Report for the 43rd and Logan Project; June 7, 2012; Tracy A. Stropes and Brian F. Smith.

2011 Mitigation Monitoring Report for the Sewer and Water Group 768 Project; April 10, 2012; Tracy A. Storpes and Brian F. Smith.

2010 A Phase I Cultural Resource Study for the Butterfield Residence Project, La Jolla, California / January 17, 2011 / Tracy A. Stropes and Brian F. Smith.

2010 A Cultural Resources Literature Review for the 11099 North Torrey Pines Road Project, San Diego, California; November 17, 2010; Tracy A. Stropes and Brian F. Smith.

2010 A Cultural Resource Monitoring Report for the Eichen Residence Project, San Diego, California, Project No. 191775 / August 17, 2011 / Tracy A. Stropes.

2010 Phase I Cultural Resources Survey for the San Jacinto Poultry Ranch Storage Building Project; November 11, 2010; Tracy Stropes and Brian Smith.

2010 Cultural Resource Monitoring Report for the Salvation Army Vehicle Storage Area Project; 1015 West 12th Street, City of San Diego; Project #217113; December 5, 2011, Tracy A. Stropes, Principal Investigator.

2010 Cultural Resource Monitoring Report for the Sunset Cliffs Trunk Sewer Project, City of San Diego, Project No. 178901, January 5, 2012, Tracy A. Stropes.

2010 Mitigation Monitoring Report for the Sewer Group 682 Project; April 16, 2012; Tracy A. Stropes and Brian F. Smith.

2010 A Phase III Cultural Resource Data Recovery Program for CA-SDI-16986, Hidden Meadows, San Diego County, California (TPM 20794) Tracy A. Stropes and Brian F. Smith.

2010 Research Design, Data Recovery Program, and Mitigation, Monitoring, and Reporting Program for 1900 Spindrift Drive La Jolla, California; APN 346-44-05; January 26, 2011; Tracy Stropes and Brian F. Smith.

2010 An Archaeological Study for the 1912 Spindrift Drive Project La Jolla California, Project No. 214654; L64A-003A; APN 346-44-04; January 26, 2011; Tracy Stropes and Brian F. Smith.

2009 An Archaeological Assessment for the Rivera-Placentia Project, City of Riverside, California. Prepared for Riverside Construction Company.

2009 Cultural Resource Data Recovery Plan for the North Ocean Beach Gateway Project. Prepared for the City of San Diego and KTU+A.

2009 Cultural Resource Letter Report for the Borrego Substation Feasibility Study, Borrego Springs, California. Prepared for RBF Consulting.

2009 A Cultural Resource Study for the Gatto Residence Project, La Jolla, California. Prepared for Marengo Martin Architects Inc.

2008 Phase I Cultural Resource Survey for the 28220 Highridge Road Development Project, Rancho Palos Verdes, California. Prepared for REC Development.

2008 Wild Goose Expansion 3 Project Butte County, California Colusa County, California. Prepared for Niska Gas Storage LLC.

2008 Class III Cultural Resource Survey for the Burlington Northern Santa Fe Four Railway Bridge Renewal Project San Bernardino County, California. Prepared for BNSF Railway Company.

2008 I-80 Colfax Site Cultural Resource Records Search Report, Placer County California. Prepared for Granite Construction Company.

2008 I-80 Gold Run Site Cultural Resource Records Search Report, Placer County California. Prepared for Granite Construction Company.

2008 Cultural Resource Monitoring at 31431 Camino Capistrano, San Juan Capistrano California. Prepared for Herman Weissker, Inc.

2008 Cultural Resource Inventory for the Snow White Pumice Mine, Hinkley California. Prepared for U.S. Mining and Minerals Corporation.

2007 Nodule Industries of North Coastal San Diego: Change and Stasis in 10,000 Years of Lithic Technology. Masters Thesis on file, San Diego State University.

2007 Cultural Resource Inventory for Empire Homes (APN 104-180-04), Lake Forest, California. Prepared for Empire Homes.

2007 Phase I Archaeological Assessment for APN 104-200-09, Beumont, California. Prepared for Mary Chan.

2007 Cultural Resource Inventory for Empire Homes (APN 104-180-04), Lake Forest, California. Prepared for Empire Homes.

2006 Carlsbad Municipal Golf Course Data Recovery Program for CA-SDI-8694, and Indexing and Preservation Program Study for CA-SDI-8303 and CA-SDI-8797 Locus C, City of Carlsbad, CA. Prepared for City of Carlsbad.

2005 Grand Pacific Resorts Data Recovery and Index Sample Program for CA-SDI-8797, Area A, City of Carlsbad, CA. Prepared for Grand Pacific Resorts Inc.

2004 "Near the Harris Site Quarry" Cultural Resource Data Recovery and Preservation Program for CA-SDI-13028, San Diego County, California. Prepared for Harbrecht Development, L.P.

2004 Cultural Resource Survey and Boundary Test Report for the Lilac Ranch Project, San Diego County, California. Prepared for Empire Companies.

2003 Cultural Resource Data Recovery and Preservation Program for CA-SDI-12027, San Diego County, California. Prepared for Harbrecht Development Inc.

2002 Data Recovery Program for the Pacbell Site CA-SDI-5633, San Marcos, California. Prepared for Joseph Wong Design Associates.

2001 McCrink Ranch Cultural Resource Test Program Additional Information for Selected Sites, San Diego County, California. Prepared for Shapouri & Associates.

2001 The Quail Ridge Project Cultural Resource Test Program, San Diego County, California. Prepared for Helix Environmental Planning, Inc.

2000 Cultural Resource Survey and Evaluation for the North Sand Sheet Full Buildout Program, Owens Lake, California. Prepared for CH2MHill.

1995 Final Report: Archaeological Investigations Conducted for the Abalone Cove Dewatering Wells, City of Rancho Palos Verdes Los Angeles County, California. Prepared for the City of Rancho Palos Verdes, Environmental Services.

1995 Final Report: A Class III Intensive Survey of a 100-Acre Sand and Gravel Mining Area, Imperial County, California. Prepared for the Lilburn Corporation.

1994 Final Report: Data Recovery Excavations at Five Late Prehistoric Archaeological Sites Along the Los Trancos Access Road, Newport Coast Planned Community, Orange County, California. Prepared for the Coastal Community Builders, a division of The Irvine Company.

Contributing Author

2008 Lithic Analysis for Thirteen Sites Along the Transwestern Phoenix Expansion Project, Loops A and B. Prepared for Transwestern Pipeline Company, LLC.

2005 Cultural Resource Survey and Testing for the Star Ranch Property, San Diego, California.

2004 Cultural Resource Test Report for the Palomar Point Project: Site CA-SDI-16205, Carlsbad, California. Prepared for Lanikai Management Corp.

2004 Cultural Resource Survey and Test Report for the Canyon View Project, Carlsbad, California. Prepared for Shapouri & Associates.

2004 Cultural Resource Test Report for the Yamamoto Property: Site SDM-W-2046, Carlsbad, California. Prepared for Cunningham Consultants, Inc.

2004 Historical Resources Report for the Kuta and Mascari Properties, Otay Mesa, California. Prepared for Centex Homes.

2004 Cultural Resource Monitor and Test Report for the Encina Power Plant Project, Carlsbad, California. Prepared for Haley & Aldrich, Inc.

2004 Cultural Resource Test Report for Site CA-SDI-16788, Otay Mesa, California. Prepared for Otay Mesa Property, L.P.

2004 Cultural Resource Survey and Test Report for the Lonestar Project, Otay Mesa, San Diego County, California. Prepared for Otay Mesa Property, L.P.

2003 Cultural Resource Mitigation Program for the Torrey Ranch Site CA-SDI-5325, San Diego, California. Prepared for Garden Communities.

2003 Cultural Resource Survey and Test Report for the Johnson Canyon Parcel, Otay Mesa, San Diego County, California. Prepared for Otay Mesa Property, L.P.

2002 Cultural Resource Data Recovery Plan for the Shaw Project: Sites CA-SDI-13025 and CA-SDI-13067, San Diego County, California. Prepared for Shapouri & Associates.

2001 Archaeological Test Program for CA-SDI-14112 Mesa Norte Project, San Diego, California. Prepared for Hunsaker & Associates.

2001 The Vista-Oceanside Cultural Resource Survey and Test Program, Vista, California. Prepared for Shapouri & Associates.

2001 Cultural Resource Test Program for the Wilson Property, Carlsbad, California. Prepared for the City of Carlsbad.

2001 Cultural Resource Test Plan for the Oceanside-Escondido Project, County of San Diego, California. Prepared for Dudek & Associates.

2001 Cultural Resource Test Program for the Kramer Junction Expansion Project Adelanto, California. Prepared for AMEC.

2001 Cultural Resource Test Program for CA-SDI-12508 San Diego, California (LDR. No. 99-1331). Prepared for Garden Communities.

2000 Archaeological Testing of Prehistoric Sites CASDI-14115 and CA-SDI-14116 for The Mesa Grande Project, San Diego, California. Prepared for Solana Mesa Partners, LLC.

2000 Cultural Resource Survey and Test Report for the Wetmore Property, Otay Mesa, San Diego County, California. Prepared for Mr. Andy Campbell.

2000 The Torrey Ranch Cultural Resource Test Program, San Diego County, California. Prepared for Garden Communities.

2000 Cultural Resource Test Results for the Otay Mesa Generating Project. Prepared for the California Energy Commission and Otay Mesa Generating Company, LCC.

2000 The Eternal Hills Cultural Resource Survey and Test Program, City of Oceanside, California. Prepared for Eternal Hills Memorial Park.

2000 The Quail Ridge Cultural Resource Test Program, San Diego County, California. Prepared for Helix Environmental Planning Inc.

2000 Cultural Resource Testing Program for CA-SDI-5652/H and CA-SDI-9474H SR 78/Rancho Del Oro Interchange Project, Oceanside, California. Prepared for Tetratech Inc.

2000 Cultural Resource Test Results for a Portion of CA-SDI-8654 (Kuebler Ranch) Otay Mesa, San Diego County, California. Prepared for Shapouri & Associates.

2000 Historical/Archaeological Monitoring and Data Recovery Program for Prehistoric Site CA-SDI-48, Locus C Naval Base Point Loma, San Diego, California. Prepared for Department of the Navy, Southwest Division.

2000 Cultural Resource Evaluation Report for the Palomar College Science Building Project San Marcos, California. Prepared for Parsons Engineering Science Inc.

1999 Cultural Resource Monitoring Report for the Village of Ystagua Water Main Break City of San Diego, California. Prepared for the City of San Diego Water Department.

1999 The Effect of Projectile Point Size on Atlatl Dart Efficiency in Lithic Technology Vol. 24, No 1 p (27-37).

1999 Cultural Resource Evaluation Report for the Oceanside-Escondido Bikeway Project, San Marcos, California. Prepared for City of San Marcos.

1999 5000 Years of Occupation: Cultural Resource Inventory and Assessment Program for the Carlsbad Municipal Golf Course Project City of Carlsbad, California. Prepared or Cotton/Beland/Associates, Inc.

1999 Silver Oaks Estates Cultural Resource Enhanced Survey and Test Report for a Portion of CA-SDI-7202 San Diego, California. Prepared for Helix Environmental Planning Inc.

1999 Historical Archaeological Test of a portion of CA-SDI-8303 for the Faraday Road Extension Carlsbad, California. Prepared for the City of Carlsbad.

1999 Cultural Resource Literature Review for the North Coast Transportation Study Arterial Streets Alternative San Diego County, California. Prepared for MLF/San Diego Association of Govt.

1998 Archaeological Test Report for a Portion of CA-SDI-9115/SDM-W-122 Carlsbad, California. Prepared for Industrial Developments International.

1998 Rainforest Ranch Cultural Resource Survey and Significance Test for Prehistoric Sites CA-SDI-14932, CA-SDI-14937, CA-SDI-14938, and CA-SDI-14946 County of San Diego, California. Prepared for Boys and Girls Club of Inland North County.

1998 Cultural Resource Evaluation Report for the Oceanside-Escondido Bikeway Project San Marcos, California.

1998 Final Report: Cultural Resource Survey Report for the Sterling Property, Carlsbad, California. Prepared for SPT Holdings LCC.

1996 Final Report: Archaeological Survey and Test for the Huber Property Carlsbad, California. Prepared for Gene Huber.

1996 Final Report: Results of Phase II Test Excavations and Phase III Data Recovery Excavations at Nine Archaeological Sites Within the Newport Coast Planned Community Phase III Entitlement Area, San Joaquin Hills, Orange County, California. Prepared for Coastal Community Builders, a division of The Irvine Company.

1995 Preliminary Report: Phase II Test Results From Nine Prehistoric Archaeological Sites Within The Proposed Upper Newport Bay Regional County Park. Prepared for EDAW, Inc.

1995 Final Report: A Phase II Test Excavation at CA-ORA-136, Block 800 City of Newport Beach, Orange County California. Prepared for the Irvine Apartment Communities, a division of The Irvine Company.

Presentations

2004 Guest Lecturer and Flintknapping Demonstration Mission San Luis Rey Band of Mission Indians Annual Inter-tribal Pow-Wow. Mark Mojado, Tribal Contact.

2003 Steep Edge Unifacial Tools of Otay Mesa: An Analysis of Edge Types from CA SDI-7215 SCA Southern California Data Sharing Meetings

2001 Identification of Late Period Behavior Patterns in Elfin Forest: Three Sites in Northern San Diego County.

2001 Society for California Archaeology Data Sharing Meetings, San Luis Obispo, California.

1996 Trans-Tehachapian Lithic Trade at the Canebreak/Sawtooth Transition. Thirteenth Annual Meeting, Society of California Archaeology, Bakersfield, California.

1994 Point Size and Atlatl Dart Efficiency. Twenty Fourth Annual Meeting, Great Basin Anthropological Conference, Elko, Nevada.

1994/96 Guest Lecturer and Flint Knapping Instruction - Archaeological Field Class Fall Semester ,Cypress College, Cypress, California. Paul Langenwalter/Henry C. Koerper, Directors.

1994/95 Annual Guest Lecturer - "Living History Days" at the Mission, Mission San Juan Capistrano, San Juan Capistrano, California.

Jennifer R.K. Stropes, MS, RPA

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Education

Master of Science, Cultural Resource Management Archaeology **2016**

St. Cloud State University, St. Cloud, Minnesota

Bachelor of Arts, Anthropology **2004**

University of California, Santa Cruz

Specialized Education/Training

Archaeological Field School **2014**

Pimu Catalina Island Archaeology Project

Research Interests

California Coastal / Inland Archaeology

Historic Structure Significance Eligibility

Human Behavioral Ecology

Zooarchaeology

Historical Archaeology

Taphonomic Studies

Experience

Project Archaeologist / Historian **November 2006–Present**
Brian F. Smith and Associates, Inc.

Duties include report writing, editing and production; recordation and evaluation of historic resources; construction monitoring management; coordination of field survey and excavation crews; laboratory and office management. Currently conducts faunal, prehistoric, and historic laboratory analysis and has conducted such analysis for over 500 projects over the past 10 years. Knowledgeable in the most recent archaeological and paleontological monitoring requirements for all Southern California lead agencies, as well as Native American monitoring requirements.

UC Santa Cruz Monterey Bay Archaeology Archives Supervisor **December 2003–March 2004**
Santa Cruz, California

Supervising intern for archaeological collections housed at UC Santa Cruz. Supervised undergraduate interns and maintained curated archaeological materials recovered from the greater Monterey Bay region.

Faunal Analyst, Research Assistant **June 2003–December 2003**
University of California, Santa Cruz

Intern assisting in laboratory analysis and cataloging for faunal remains collected from CA-MNT-234. Analysis included detailed zoological identification and taphonomic analysis of prehistoric marine and terrestrial mammals, birds, and fish inhabiting the greater Monterey Bay region.

Archaeological Technician, Office Manager **January 2000-December 2001**
Archaeological Resource Management

Conducted construction monitoring, field survey, excavation, report editing, report production, monitoring coordination and office management.

Certifications

City of San Diego Certified Archaeological and Paleontological Monitor

40-Hour Hazardous Waste/Emergency Response OSHA 29 CFR 1910.120 (e)

Scholarly Works

Big Game, Small Game: A Comprehensive Analysis of Faunal Remains Recovered from CA-SDI-11,521, 2016, Master's thesis on file at St. Cloud University, St. Cloud, Minnesota.

Technical Reports

Buday, Tracy M., Jennifer R. **Kraft**, and Brian F. Smith

2014 *Mitigation Monitoring Report for the Park and G Project, City of San Diego.* Prepared for Oliver McMillan. Report on file at the California South Coastal Information Center.

Kennedy, George L., Todd A. Wirths and Jennifer R. **Kraft**

2014 *Negative Paleontological, Archaeological, and Native American Monitoring and Mitigation Report, 2303 Ocean Street Residences Project, City of Carlsbad, San Diego County, California (CT 05-12; CP 05-11; CDP 05-28).* Prepared for Zephyr Partners. Report on file at the California South Coastal Information Center.

2013 *Negative Paleontological, Archaeological, and Native American Monitoring and Mitigation Report, Tri-City Christian High School, 302 North Emerald Drive, Vista, San Diego County,*

California (APN 166-411-75). Prepared for Tri-City Christian School. Report on file at the California South Coastal Information Center.

Kraft, Jennifer R.

2012 *Cultural Resources Monitoring Report for the Pottery Court Project (TPM 36193) City of Lake Elsinore*. Prepared for BRIDGE Housing Corporation. Report on file at the California Eastern Information Center.

Kraft, Jennifer R., David K. Grabski, and Brian F. Smith

2014 *Phase I Cultural Resource Survey for the Amineh Project, City of San Diego.* Prepared for Nakhshab Development and Design. Report on file at the California South Coastal Information Center.

Kraft, Jennifer R. and Brian F. Smith

2016 *Cultural Resources Survey and Archaeological Test Plan for the 1492 K Street Project City of San Diego.* Prepared for Trestle Development, LLC. Report on file at the California South Coastal Information Center.

2016 *Focused Historic Structure Assessment for the Fredericka Manor Retirement Community City of Chula Vista, San Diego County, California APN 566-240-27.* Prepared for Front Porch Communities and Services – Fredericka Manor, LLC. Report on file at the City of Chula Vista Planning Department.

2016 *Historic Structure Assessment for 8585 La Mesa Boulevard City of La Mesa, San Diego County, California. APN 494-300-11.* Prepared for Siilvergate Development. Report on file at the City of La Mesa Planning Department.

2016 *Phase I Cultural Resource Survey for the 9036 La Jolla Shores Lane Project City of San Diego Project No. 471873 APN 344-030-20.* Prepared for Eliza and Stuart Stedman. Report on file at the California South Coastal Information Center.

2016 *Phase I Cultural Resources Survey for the Beacon Apartments Project City of San Diego Civic San Diego Development Permit #2016-19 APN 534-210-12.* Prepared for Wakeland Housing & Development Corporation. Report on file at the California South Coastal Information Center.

2016 *A Phase I Cultural Resources Study for the State/Columbia/Ash/A Block Project San Diego, California.* Prepared for Bomel San Diego Equities, LLC. Report on file at the California South Coastal Information Center.

2015 *Cultural Resource Monitoring Report for the Sewer and Water Group 687B Project, City of San Diego.* Prepared for Ortiz Corporation. Report on file at the California South Coastal Information Center.

2015 *Cultural Resource Testing Results for the Broadway and Pacific Project, City of San Diego.* Prepared for BOSA Development California, Inc. Report on file at the California South Coastal Information Center.

2015 *Cultural Resource Study for the Hatfield Plaza Project, Valley Center, San Diego County, California.* Prepared for JG Consulting & Engineering. Report on file at the California South Coastal Information Center.

2015 *Cultural Resources Study for the Hedrick Residence Project, Encinitas, San Diego County, California.* Prepared for WNC General Contractors, Inc. Report on file at the California South Coastal Information Center.

2015 *Historic Structure Assessment for the StorQuest Project, City of La Mesa, (APN 494-101-14-00)*. Prepared for Real Estate Development and Entitlement. Report on file at the City of La Mesa.

2015 *Mitigation Monitoring Report for the 1905 Spindrift Remodel Project, La Jolla, California.* Prepared for Brian Malk and Nancy Heitel. Report on file at the California South Coastal Information Center.

2015 *Mitigation Monitoring Report for the Cisterra Sempra Office Tower Project, City of San Diego.* Prepared for SDG-Left Field, LLC. Report on file at the California South Coastal Information Center.

2015 *A Phase I Cultural Resource Study for the Marlow Project, Poway, California.* Prepared for Peter Marlow. Report on file at the California South Coastal Information Center.

2015 *Phase I Cultural Resource Survey for the Paseo Grande Project, City of San Diego.* Prepared for Joe Gatto. Report on file at the California South Coastal Information Center.

2015 *Results of a Cultural Resources Testing Program for the 15th and Island Project City of San Diego.* Prepared for Lennar Multifamily Communities. Report on file at the City of San Diego Development Services Department.

2014 *Cultural Resource Monitoring Report for the ActivCare at Mission Bay Project, San Diego, California.* Prepared for ActivCare Living, Inc. Report on file at the California South Coastal Information Center.

2014 *Cultural Resource Monitoring Report for the Cesar Chavez Community College Project.* Prepared for San Diego Community College District. Report on file at the California South Coastal Information Center.

2014 *Cultural Resource Monitoring Report for the Grantville Trunk Sewer Project, City of San Diego.* Prepared for Cass Construction, Inc. Report on file at the California South Coastal Information Center.

2014 *Cultural Resource Monitoring Report for the Pacific Beach Row Homes Project, San Diego, California.* Prepared for Armstrong Builders, Inc. Report on file at the California South Coastal Information Center.

2014 *Cultural Resource Monitoring Report for the Poway Lowe's Project, City of Poway.* Prepared for CSI Construction Company. Report on file at the California South Coastal Information Center.

2014 *Cultural Resource Monitoring Report for the Sewer and Water Group 761 Project, City of San Diego.* Prepared for Burtech Pipeline. Report on file at the California South Coastal Information Center.

2014 *Cultural Resource Monitoring Report for the Sewer and Water Group 770 Project (Part of Group 3014), City of San Diego.* Prepared for Ortiz Corporation. Report on file at the California South Coastal Information Center.

2014 *Cultural Resource Monitoring Report for the Sewer and Water Group 788 Project, City of San Diego.* Prepared for Ortiz Corporation. Report on file at the California South Coastal Information Center.

2014 *Historic Structure Assessment, 11950 El Hermano Road, Riverside County.* Prepared for Forestar Toscana, LLC. Report on file at the California Eastern Information Center.

2014 *Historic Structure Assessment, 161 West San Ysidro Boulevard, San Diego, California (Project No. 342196; APN 666-030-09)*. Prepared for Blue Key Realty. Report on file at the California South Coastal Information Center.

2014 *Historic Structure Assessment for 8055 La Mesa Boulevard, City of La Mesa (APN 470-582-11-00).* Prepared for Lee Machado. Report on file at the City of La Mesa.

2014 *Historic Structure Inventory and Assessment Program for the Watson Corporate Center, San Bernardino County, California.* Prepared for Watson Land Company. Report on file at the San Bernardino Archaeological Information Center.

2014 *Mitigation Monitoring Report for the Celadon (9th and Broadway) Project.* Prepared for BRIDGE Housing Corporation. Report on file at the California South Coastal Information Center.

2014 *Mitigation Monitoring Report for the Comm 22 Project, City of San Diego.* Prepared for BRIDGE Housing Corporation. Report on file at the California South Coastal Information Center.

2014 *Mitigation Monitoring Report for the Pinnacle 15th & Island Project, City of San Diego.* Prepared for Pinnacle International Development, Inc. Report on file at the California South Coastal Information Center.

2014 *A Phase I and II Cultural Resource Study for the Perris Residential Project, Perris, California.* Prepared for Groundwurk, Inc. Report on file at the California Eastern Information Center.

2014 *Phase I Cultural Resource Survey for the Siempre Viva Warehouse Project, City of San Diego.* Prepared for Terrazas Construction. Report on file at the California South Coastal Information Center.

2014 *Phase I Cultural Resource Survey for the Silver Street Village Homes Project, City of San Diego.* Prepared for EHOF La Jolla, LLC. Report on file at the California South Coastal Information Center.

2014 *Phase I Cultural Resources Study for the 915 Grape Street Project.* Prepared for Bay View SD, LLC. Report on file at the California South Coastal Information Center.

2014 *Phase I Cultural Resource Study for the Altman Residence Project, 9696 La Jolla Farms Road, La Jolla, California 92037.* Prepared for Steve Altman. Report on file at the California South Coastal Information Center.

2014 *Phase I Cultural Resources Survey for the Clay Street Parcel Project, City of Jurupa Valley, County of Riverside.* Prepared for CV Communities, LLC. Report on file at the California Eastern Information Center.

2014 *Phase I Cultural Resources Survey for the Ecos Diamond Valley Project, Community of Winchester, County of Riverside.* Prepared for Ecos Energy, LLC. Report on file at the California Eastern Information Center.

2014 *Phase I Cultural Resources Survey for the Highland 44 Project.* Prepared for 29300 Baseline Partners, LLC. Report on file at the San Bernardino Archaeological Information Center.

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2013 *Archaeological Monitoring Report for the Webster Residence, La Jolla, California.* Prepared for KW Building and Development. Report on file at the California South Coastal Information Center.

2013 *Cultural Resource Monitoring Report for the Alvarado Trunk Sewer Phase III Project, City of San Diego.* Prepared for Ortiz Corporation General Engineering Contractors. Report on file at the California South Coastal Information Center.

2013 *Cultural Resource Monitoring Report for the Alvarado Trunk Sewer Phase IIIA Project, City of San Diego.* Prepared for TC Construction, Inc. Report on file at the California South Coastal Information Center.

2013 *Cultural Resource Monitoring Report for the Coral Mountain Apartments Project, City of La Quinta, California*. Prepared for Coral Mountain Apartments, LP. Report on file at the California Eastern Information Center.

2013 *Cultural Resource Monitoring Report for the F Street Emergency Water Main Replacement Project, City of San Diego*. Prepared for Orion Construction. Report on file at the California South Coastal Information Center.

2013 *Cultural Resource Monitoring Report for the Harbor Drive Trunk Sewer Project, City of San Diego*. Prepared for Burtech Pipeline. Report on file at the California South Coastal Information Center.

2013 *Cultural Resource Monitoring Report for the Hyde Residence.* Prepared for Dr. Paul Hyde. Report on file at the California South Coastal Information Center.

2013 *Cultural Resource Monitoring Report for the Juniper Street Sidewalk Project, City of San Diego*. Prepared for Palm Engineering Construction Company, Inc. Report on file at the California South Coastal Information Center.

2013 *Cultural Resource Monitoring Report for the Kates Residence Project.* Prepared for Brad and Shannon Kates. Report on file at the California South Coastal Information Center.

2013 *Cultural Resource Monitoring Report for the Pump Station 84 Upgrade and Pump Station 62 Abandonment Project.* Prepared for TC Construction, Inc. Report on file at the California South Coastal Information Center.

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2013 *Mitigation Monitoring Report for the 7th and F Street Parking Project, City of San Diego*. Prepared for DZI Construction. Report on file at the California South Coastal Information Center.

2013 *Mitigation Monitoring Report for the 1919 Spindrift Drive Project*. Prepared for V.J. and Uma Joshi. Report on file at the California South Coastal Information Center.

2013 *Mitigation Monitoring Report for the Knight Residence Project, 7970 Roseland Avenue, La Jolla, California*. Prepared for Mr. Dennis Knight. Report on file at the California South Coastal Information Center.

2013 *Mitigation Monitoring Report for the Sewer Group 799-750 Project.* Prepared for Burtech Pipeline. Report on file at the California South Coastal Information Center.

2013 *Negative Cultural Resource Monitoring Report for the Citywide Pump Station Upgrades Group II Project.* Prepared for Ortiz Corporation General Engineering Contractors. Report on file at the California South Coastal Information Center.

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2013 *Phase I Cultural Resource Study for the 3364 Randy Lane Project, Chula Vista, California*. Prepared for H&M Construction. Report on file at the California South Coastal Information Center.

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2012 *Cultural Resource Monitoring Report for the Sewer and Water Group 754 Project, City of San Diego (Project No. 177711/187301)*. Prepared for S.C. Valley Engineering, Inc. Report on file at the California South Coastal Information Center

2012 *Cultural Resource Monitoring Report for the Sewer Group 714 Project.* Prepared for Burtech Pipeline. Report on file at the California South Coastal Information Center.

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2012 *Mitigation Monitoring of the 47th Street Warehouse Project, San Diego, California.* Prepared for Aardema Development. Report on file at the California South Coastal Information Center.

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2013 *Phase I Cultural Resources Survey for the Orange Street Project.* Prepared for Mike Lesle. Report on file at the California Eastern Information Center.

2012 *Mitigation Monitoring Report for the 13th & Market Project*. Prepared for The Hanover Company. Report on file at the California South Coastal Information Center.

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2015 *Historic Resource Technical Report for 1111 Golden Gate Drive San Diego, California.* Prepared for Alexis and Shawna Volen. Report on file at the California South Coastal Information Center.

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2016 *Historical Resource Research Report for 2001 Fourth Avenue, San Diego, California Project No. 523694.* Prepared for H.G. Fenton Company. Report on file at the City of San Diego Development Services Department.

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2016 *Phase I Cultural Resource Survey for the 2499 Pacific Highway Project City of San Diego CCDP/CCPDP/CDP/CUP No. 2016-30 APN 533-021-01.* Prepared for Gary Mansour. Report on file at the California South Coastal Information Center.

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Contributing Author /Analyst

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2011 Faunal Analysis and Report Section for *A Cultural Resource Data Recovery Program for SDI-4606 Locus B for St. Gabriel's Catholic Church, Poway, California* by Brian F. Smith and Tracy A. Stropes. Prepared for St. Gabriel's Catholic Church. Report on file at the California South Coastal Information Center.

2010 Faunal Analysis and Report Section for *An Archaeological Study for the 1912 Spindrift Drive Project, La Jolla, California* by Brian F. Smith and Tracy A. Stropes. Prepared for Island Architects. Report on file at the California South Coastal Information Center.

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APPENDIX B

Updated and New Site Record Forms

(Deleted for Public Review; Bound Separately)

APPENDIX C

Archaeological Records Search Results

(Deleted for Public Review; Bound Separately)

APPENDIX D

NAHC Sacred Lands File Search Results

(Deleted for Public Review; Bound Separately)

APPENDIX E

Confidential Maps

(Deleted for Public Review; Bound Separately)

APPENDIX F

Confidential Plates

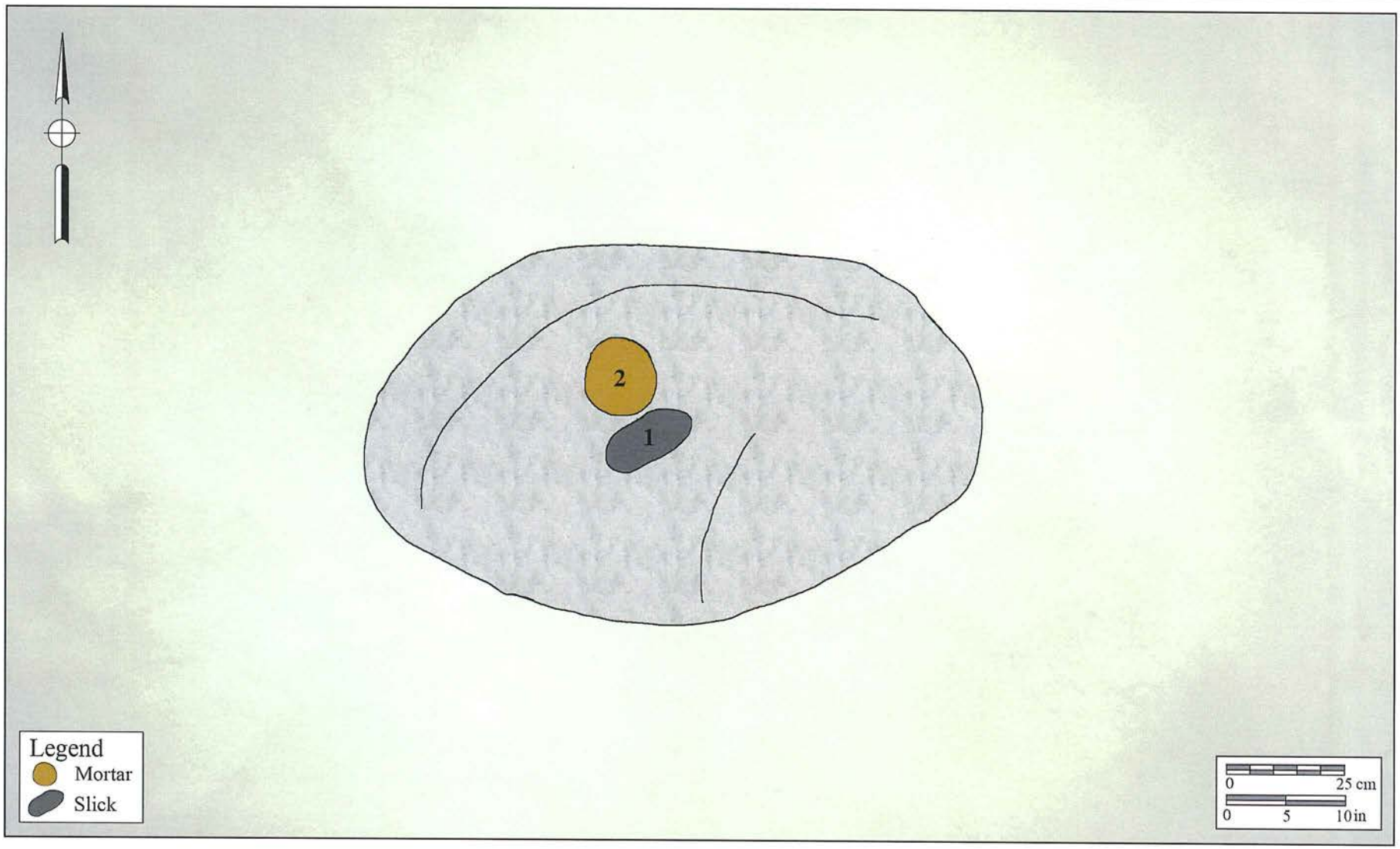
(Deleted for Public Review; Bound Separately)

APPENDIX G

Bedrock Milling Feature Photographs and Sketches: Site SDI-776A and B

Bedrock Milling Feature A at Site SDI-776A and B, facing south.

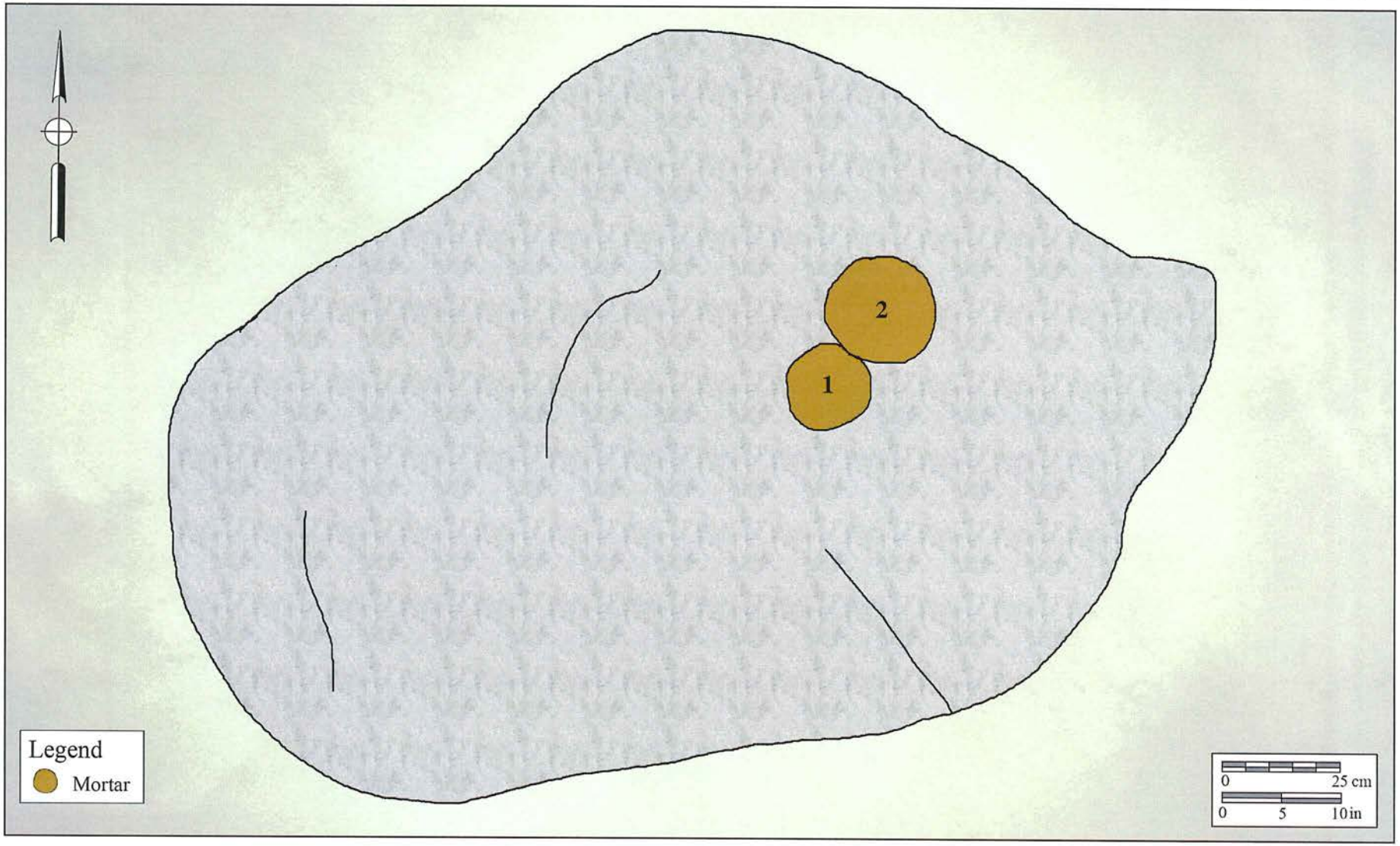
Bedrock Milling Feature B at Site SDI-776A and B, facing west.



Bedrock Milling Feature A

Site SDI-776A and B

The Ocean Breeze Ranch Project



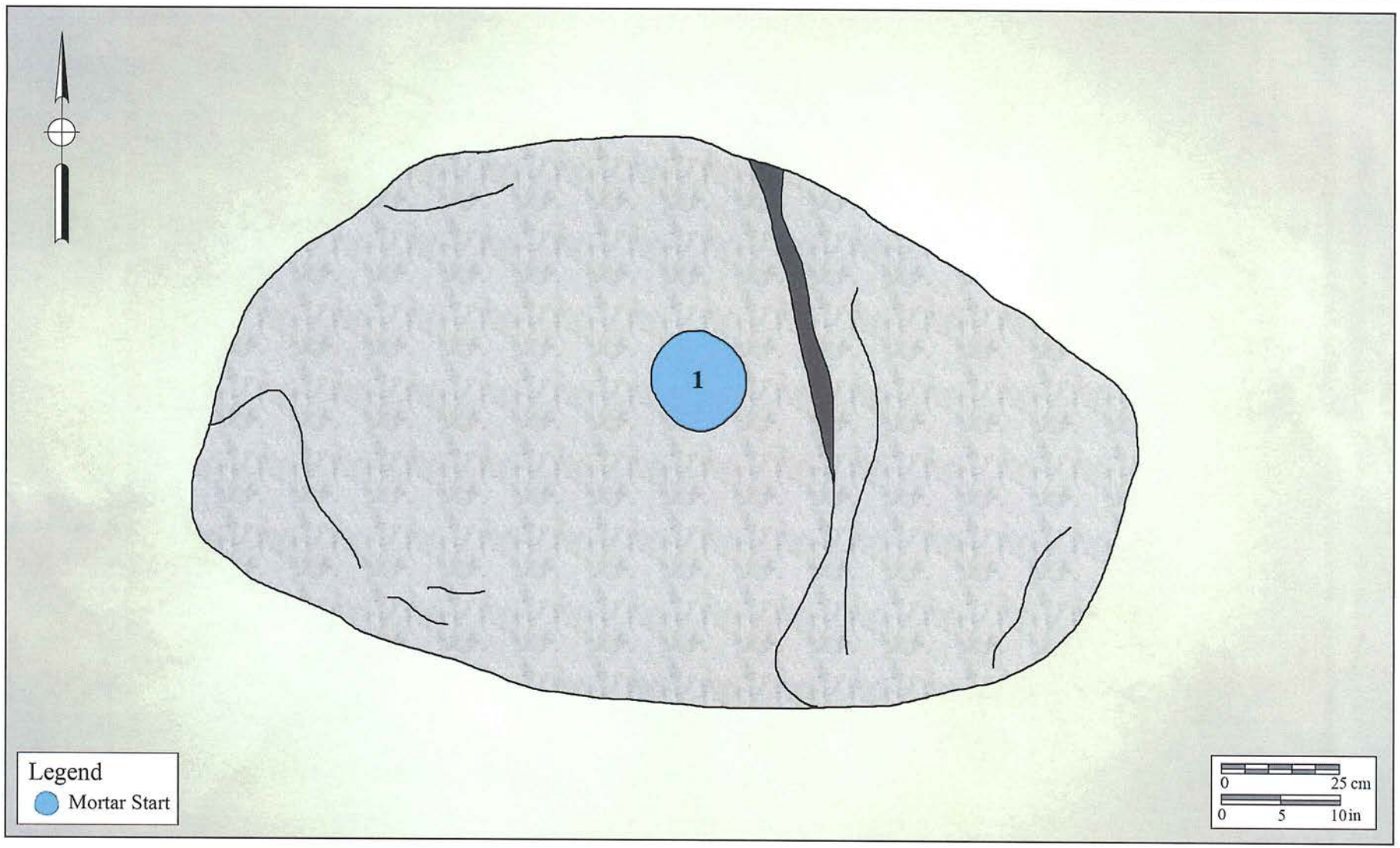
Bedrock Milling Feature B

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature C at Site SDI-776A and B, facing southeast.

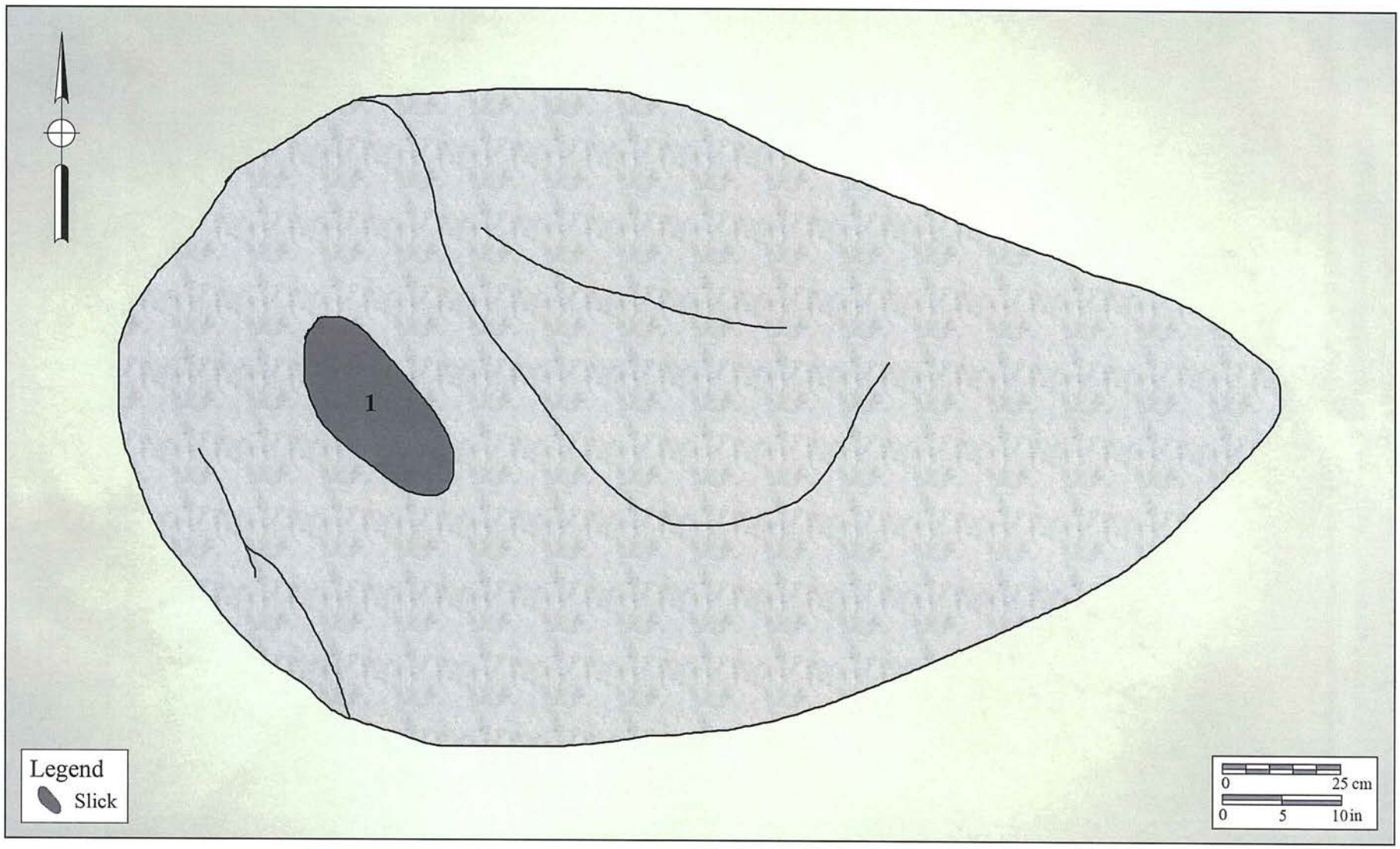
Bedrock Milling Feature D at Site SDI-776A and B, facing west.



Bedrock Milling Feature C

Site SDI-776A and B

The Ocean Breeze Ranch Project



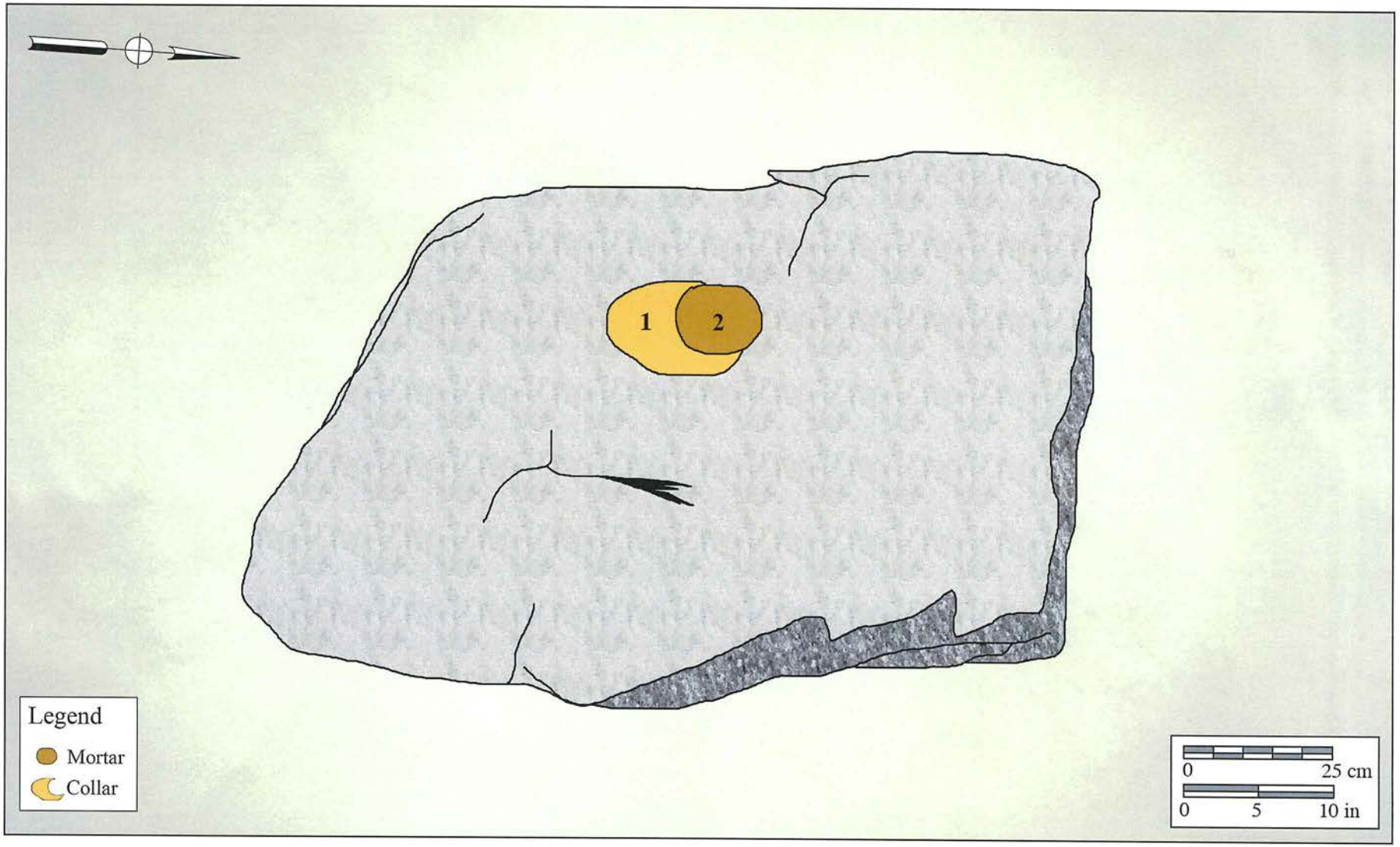
Bedrock Milling Feature D

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature E at Site SDI-776A and B, facing west.

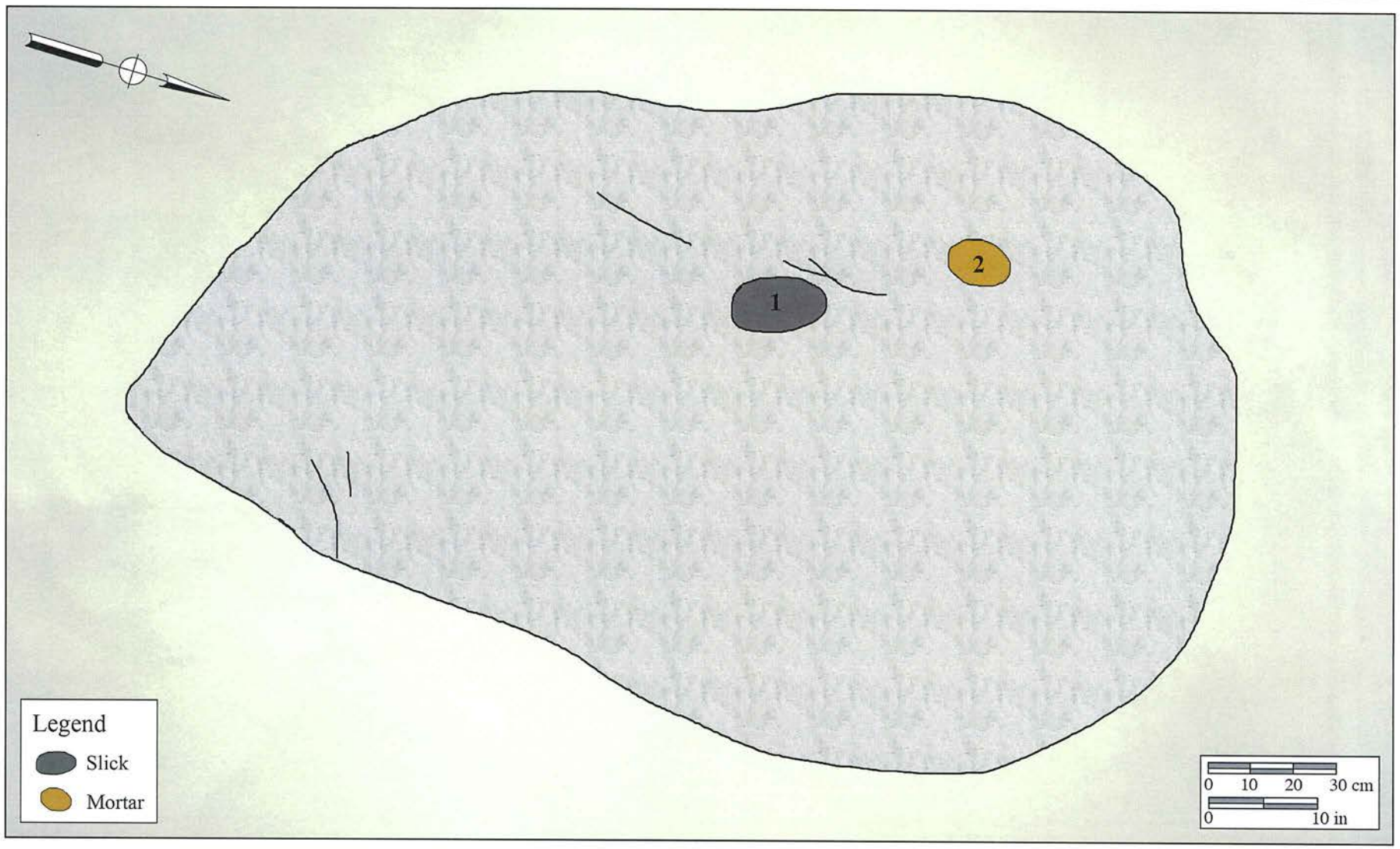
Bedrock Milling Feature F at Site SDI-776A and B, facing southwest.



Bedrock Milling Feature E

Site SDI-776A and B

The Ocean Breeze Ranch Project



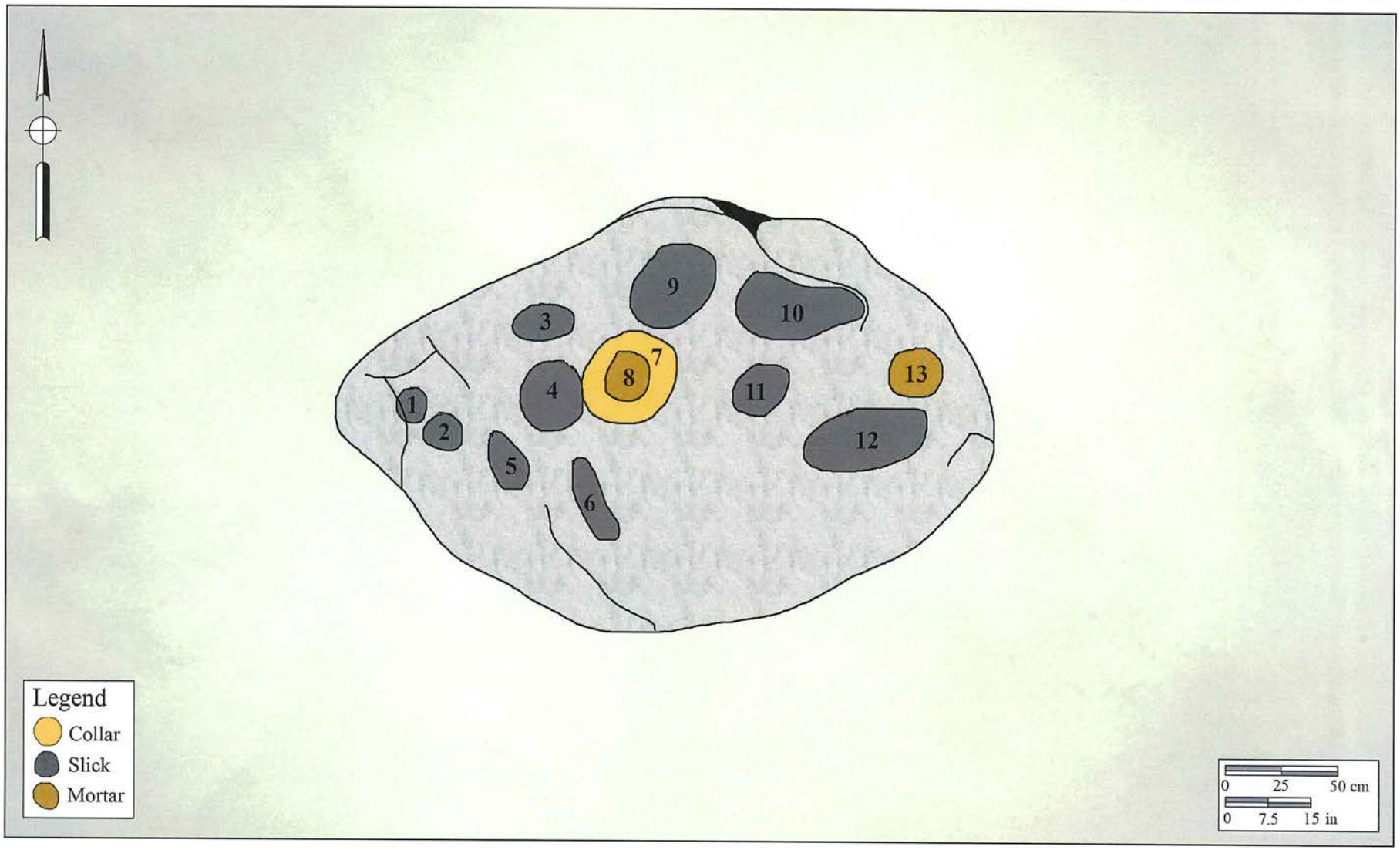
Bedrock Milling Feature F

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature G at Site SDI-776A and B, facing north.

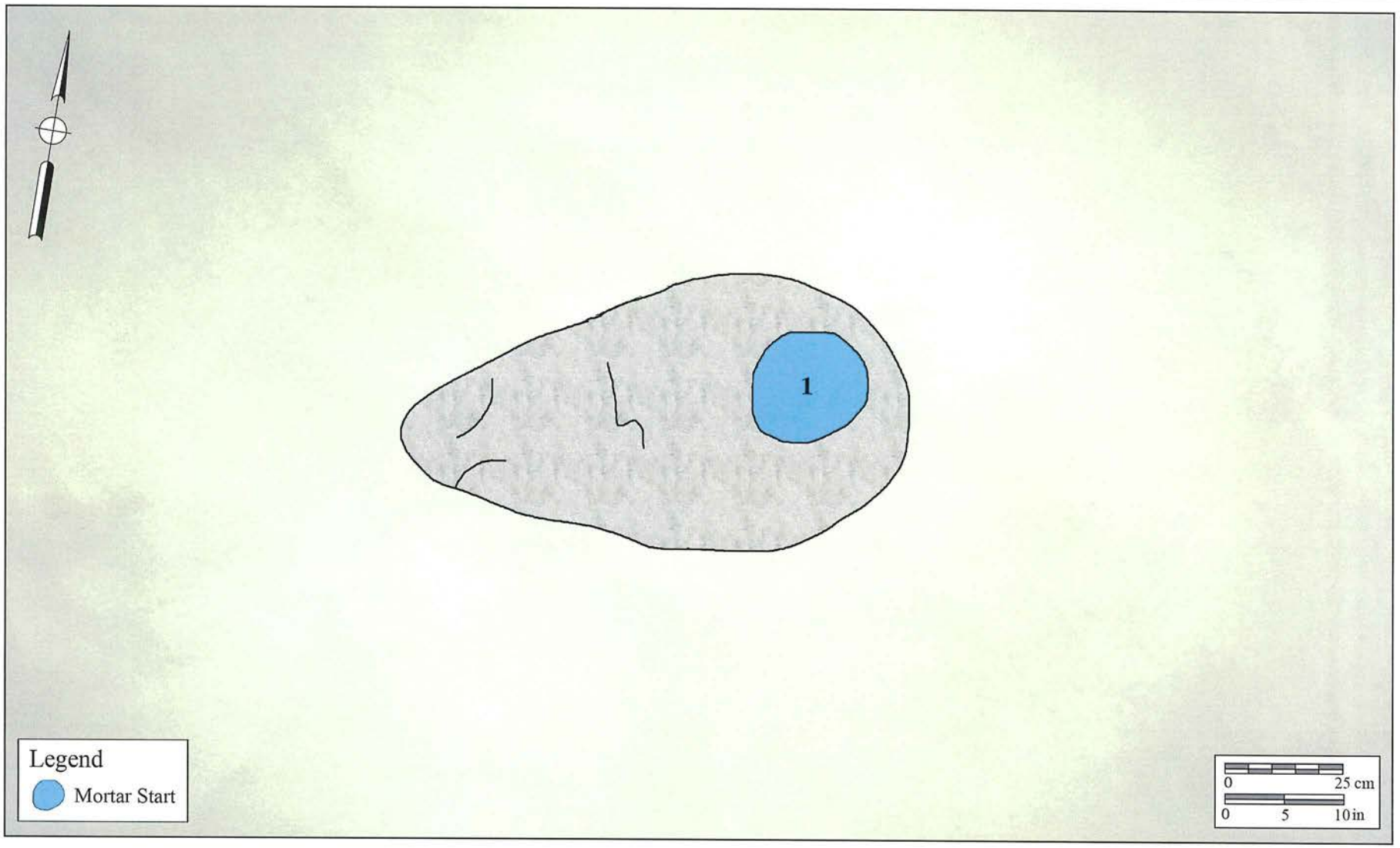
Bedrock Milling Feature H at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature G

Site SDI-776A and B

The Ocean Breeze Ranch Project



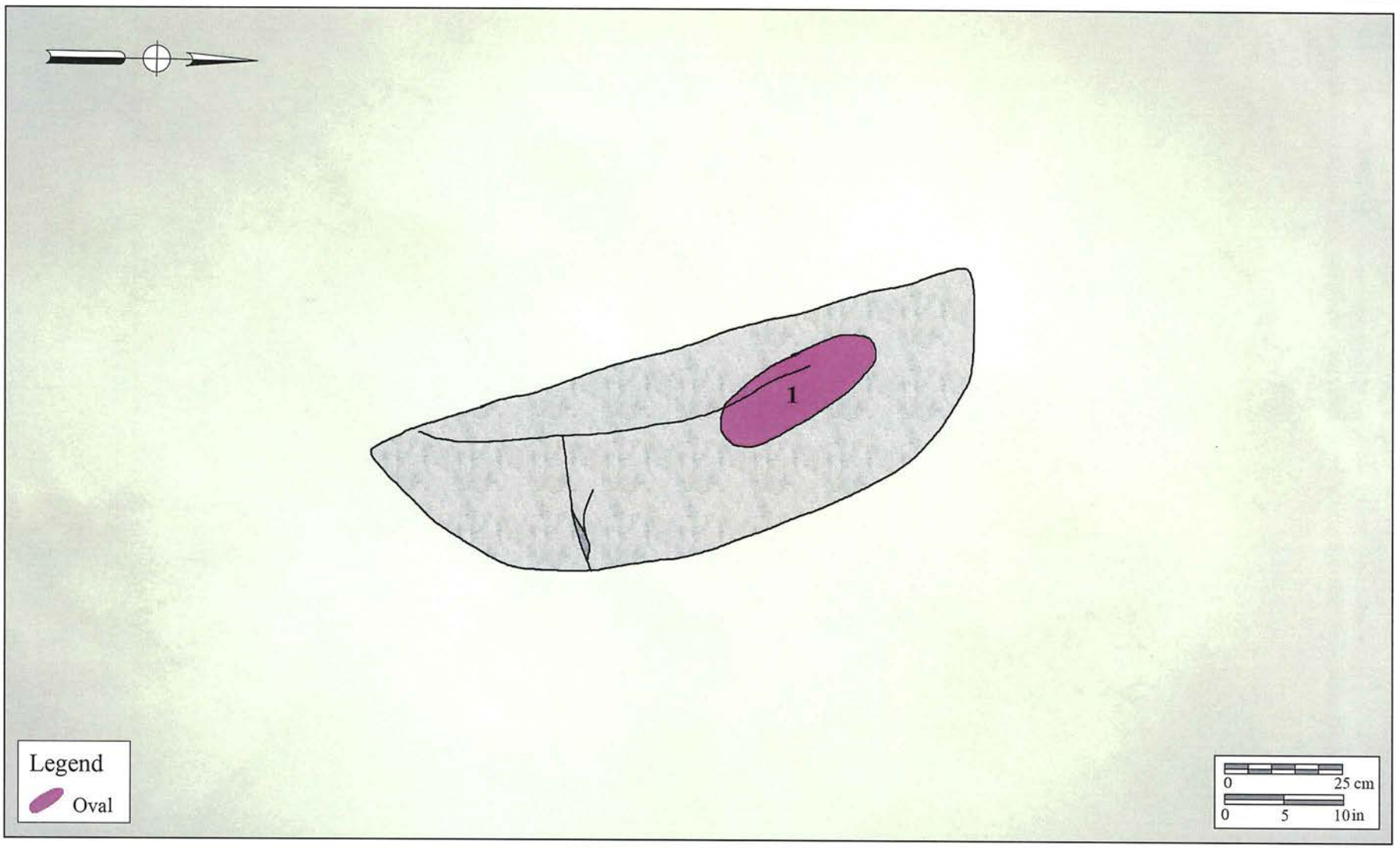
Bedrock Milling Feature H

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature I at Site SDI-776A and B, facing north.

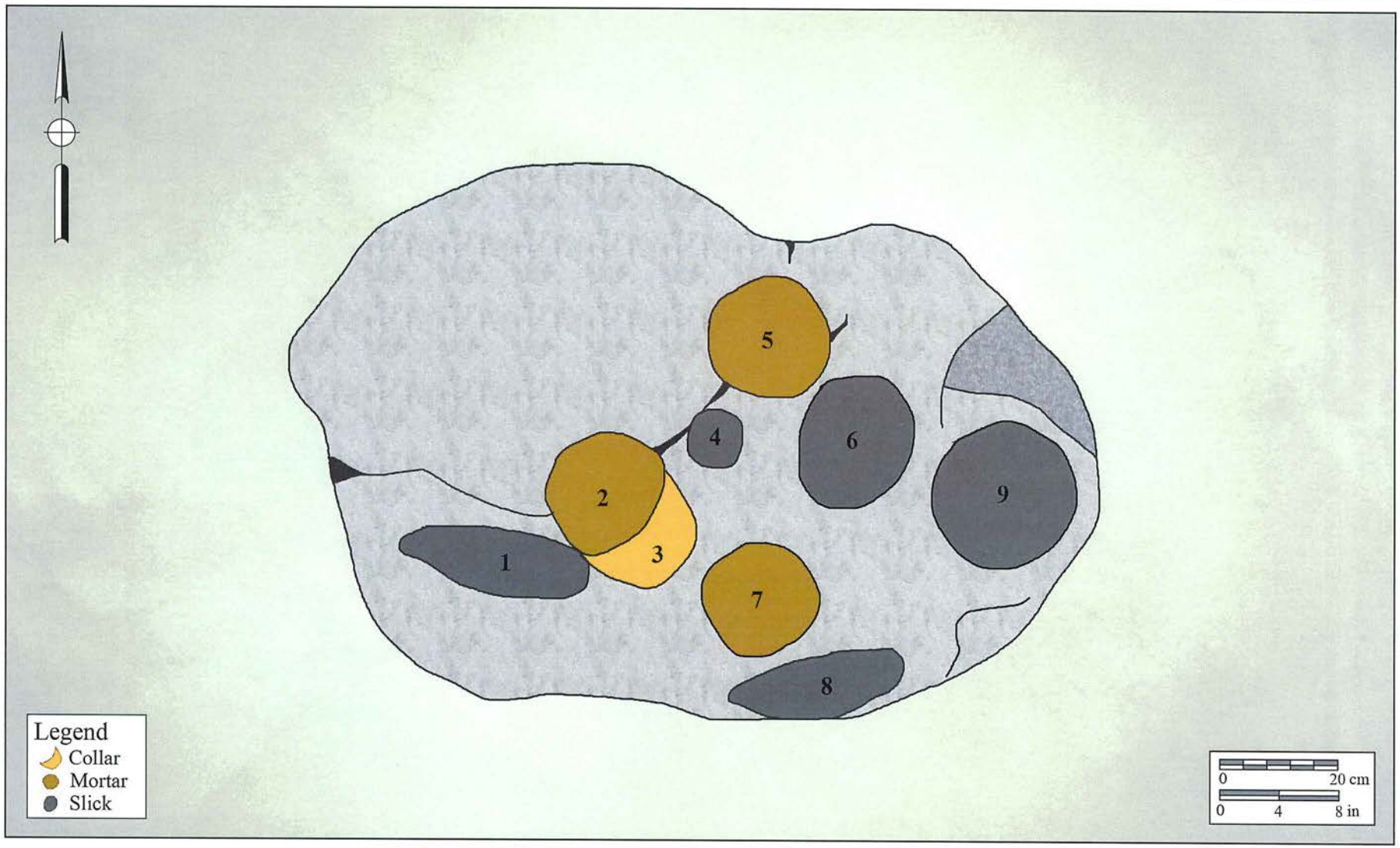
Bedrock Milling Feature J at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature I

Site SDI-776A and B

The Ocean Breeze Ranch Project



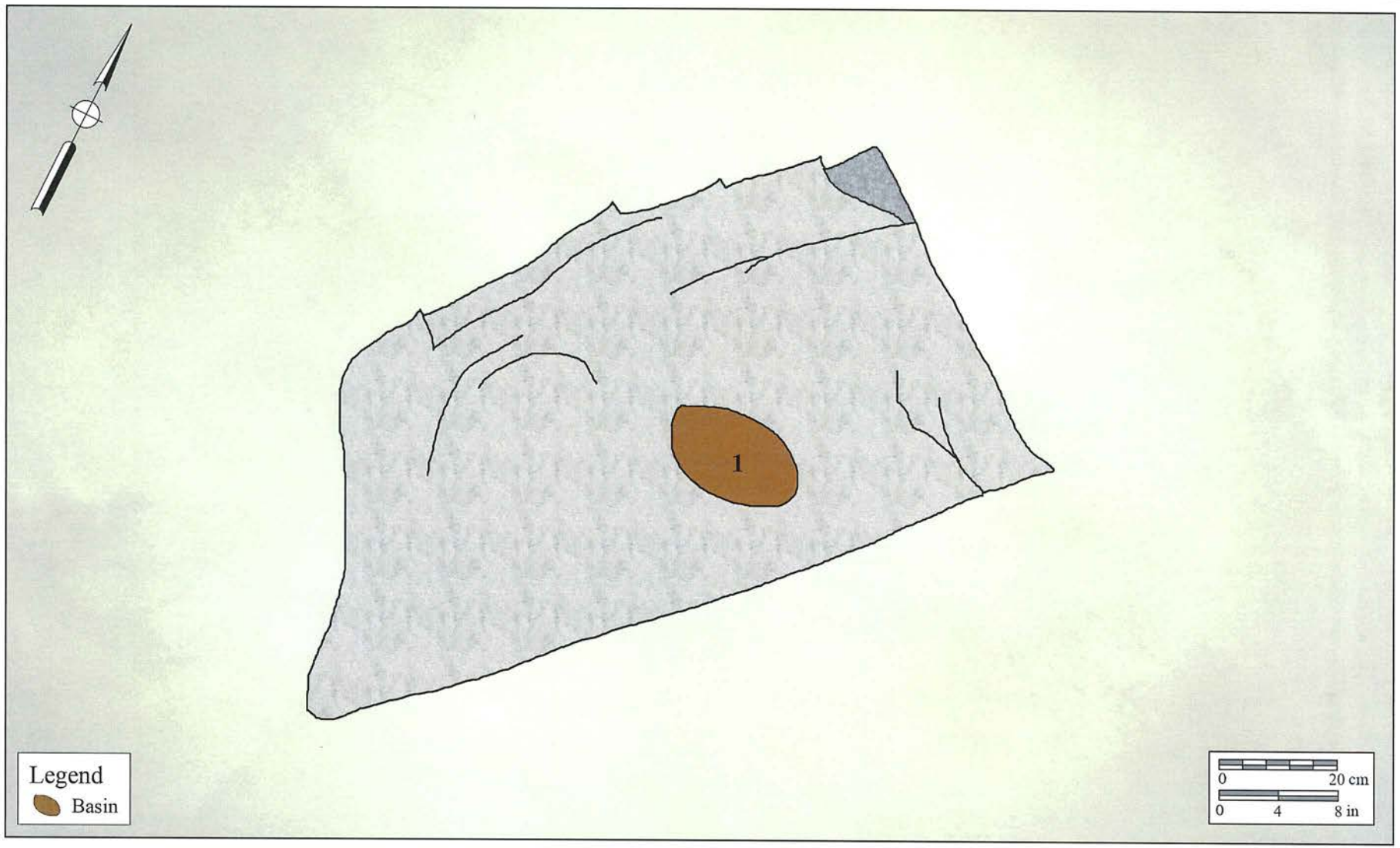
Bedrock Milling Feature J

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature K at Site SDI-776A and B, facing northwest.

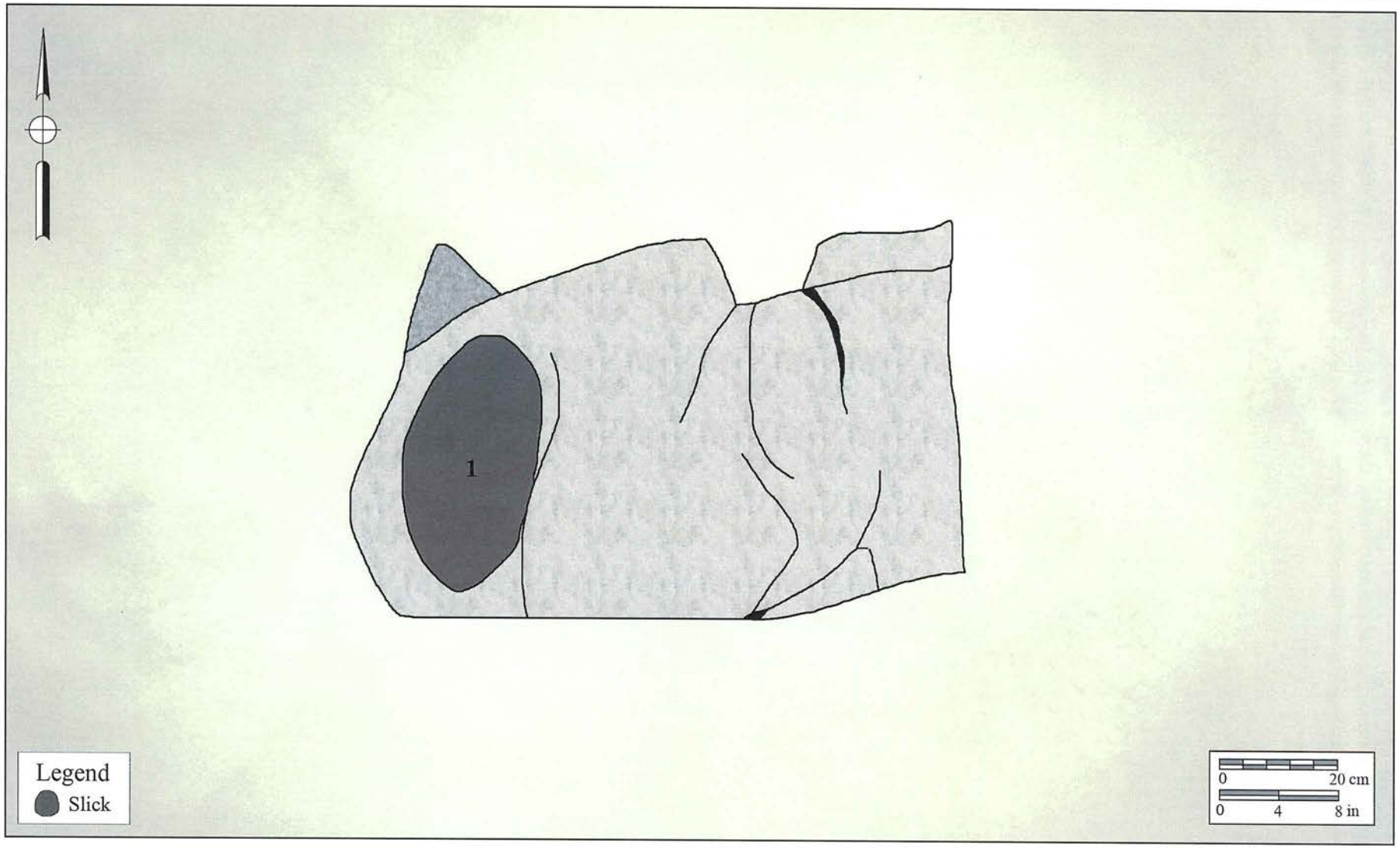
Bedrock Milling Feature L at Site SDI-776A and B, facing north.



Bedrock Milling Feature K

Site SDI-776A and B

The Ocean Breeze Ranch Project



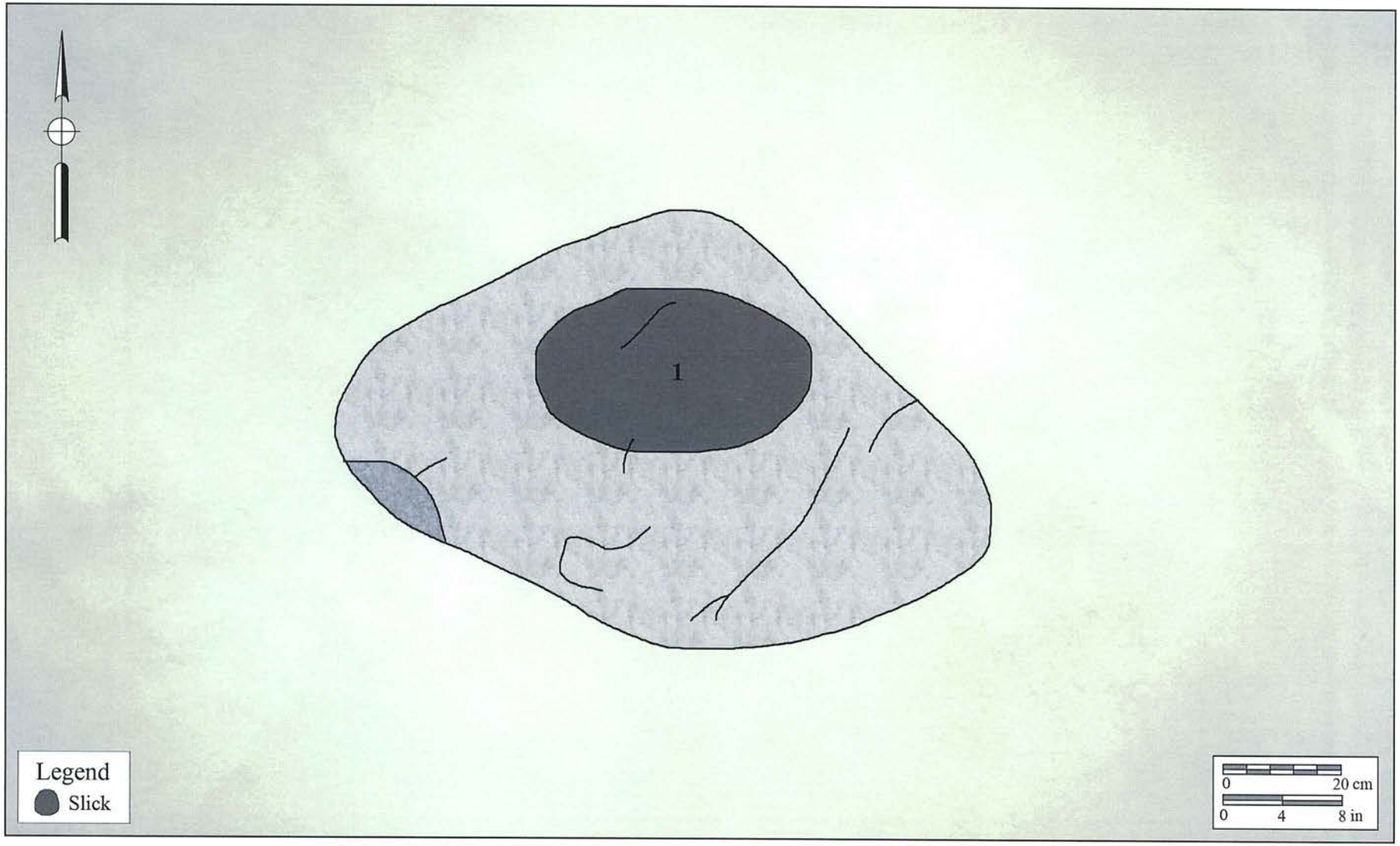
Bedrock Milling Feature L

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature M at Site SDI-776A and B, facing northwest.

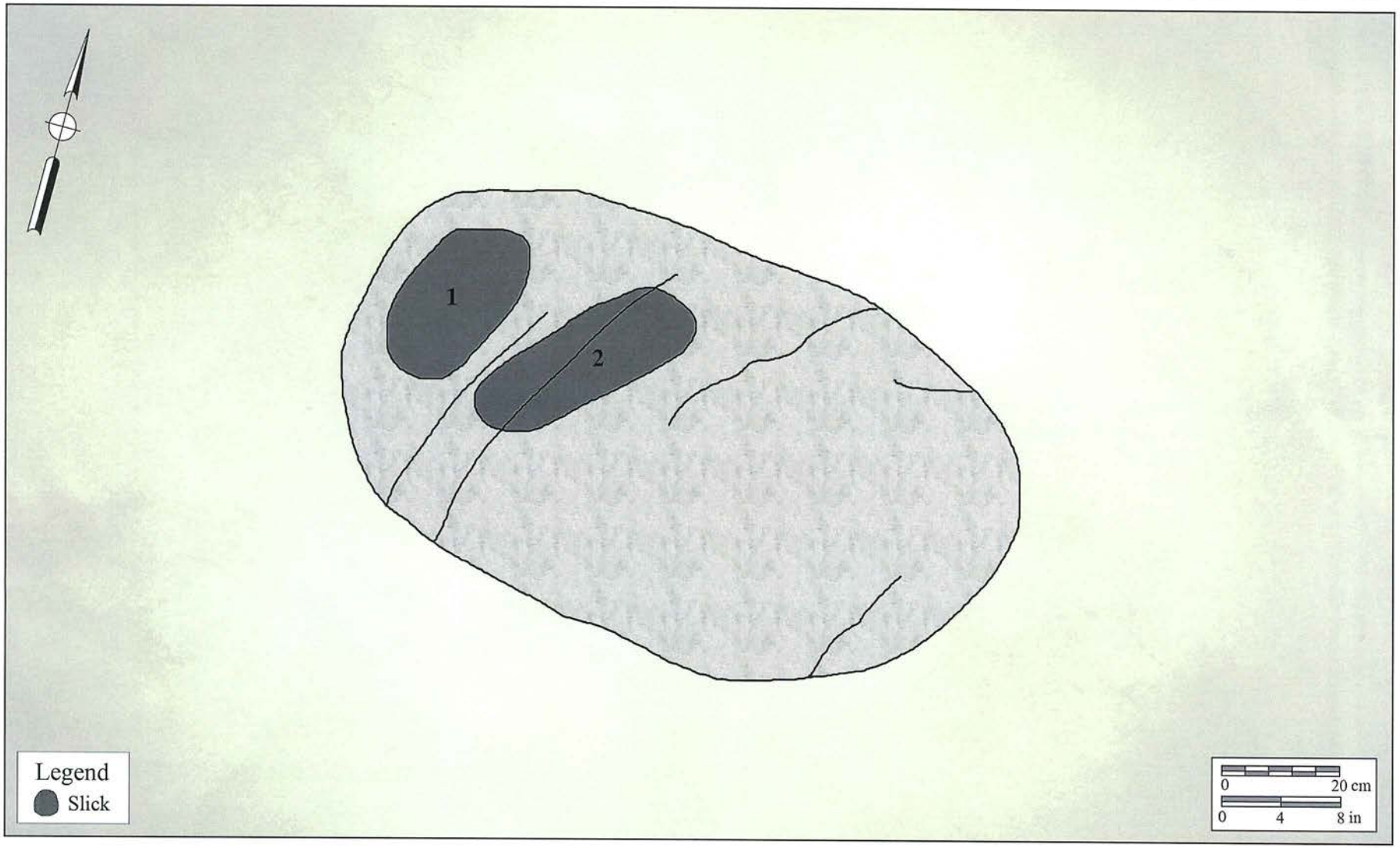
Bedrock Milling Feature N at Site SDI-776A and B, facing north.



Bedrock Milling Feature M

Site SDI-776A and B

The Ocean Breeze Ranch Project



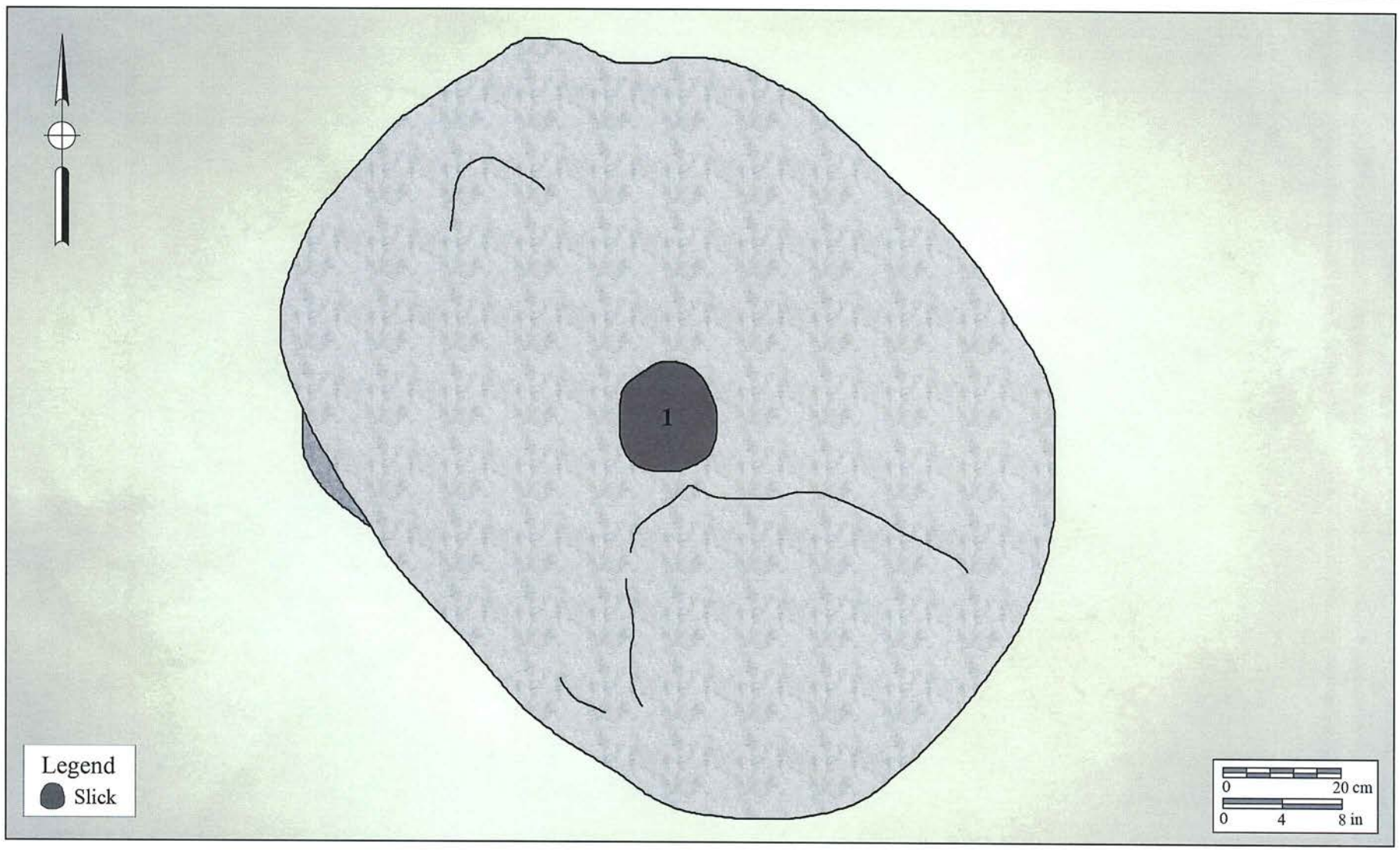
Bedrock Milling Feature N

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature O at Site SDI-776A and B, facing north.

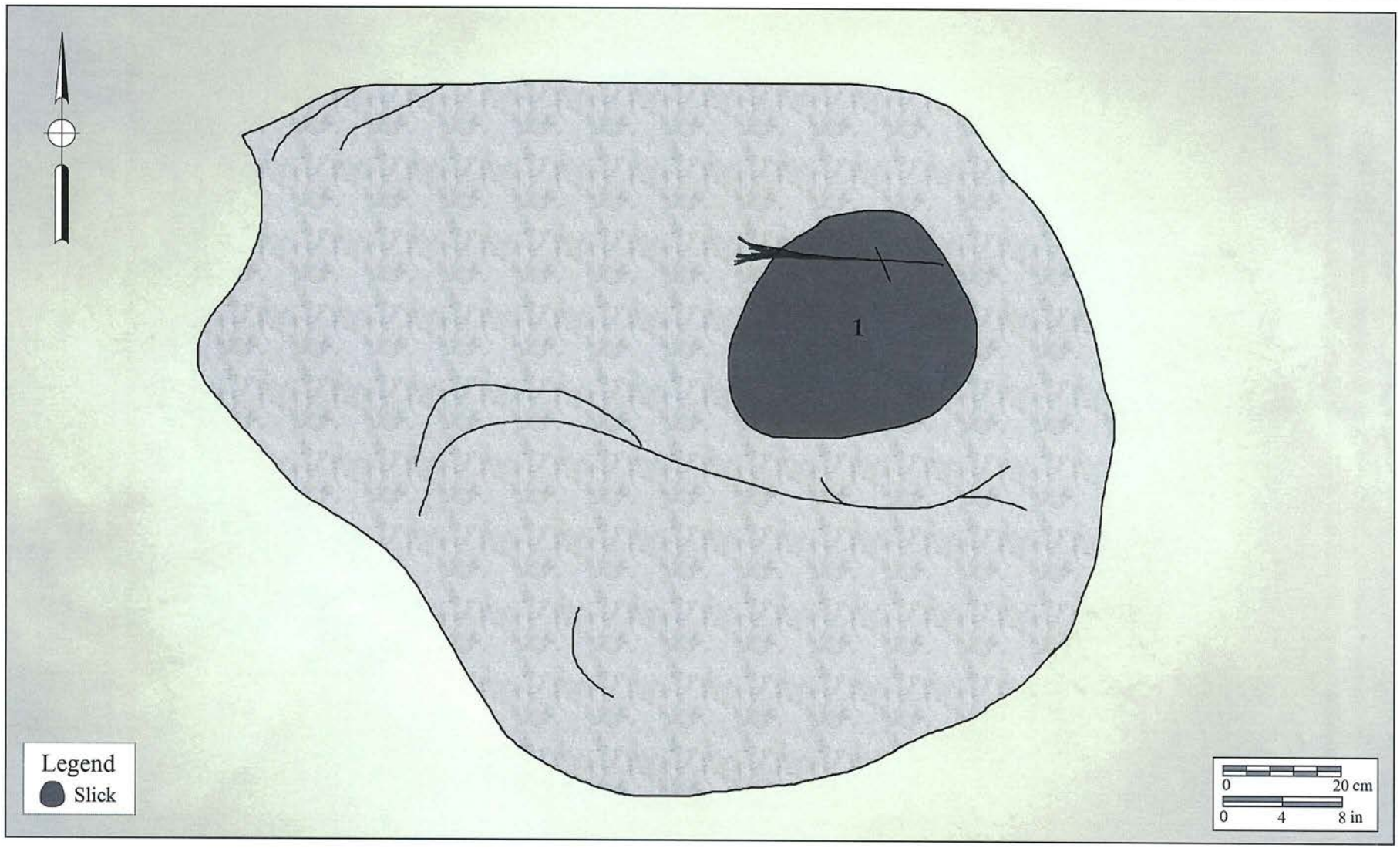
Bedrock Milling Feature P at Site SDI-776A and B, facing north.



Bedrock Milling Feature O

Site SDI-776A and B

The Ocean Breeze Ranch Project



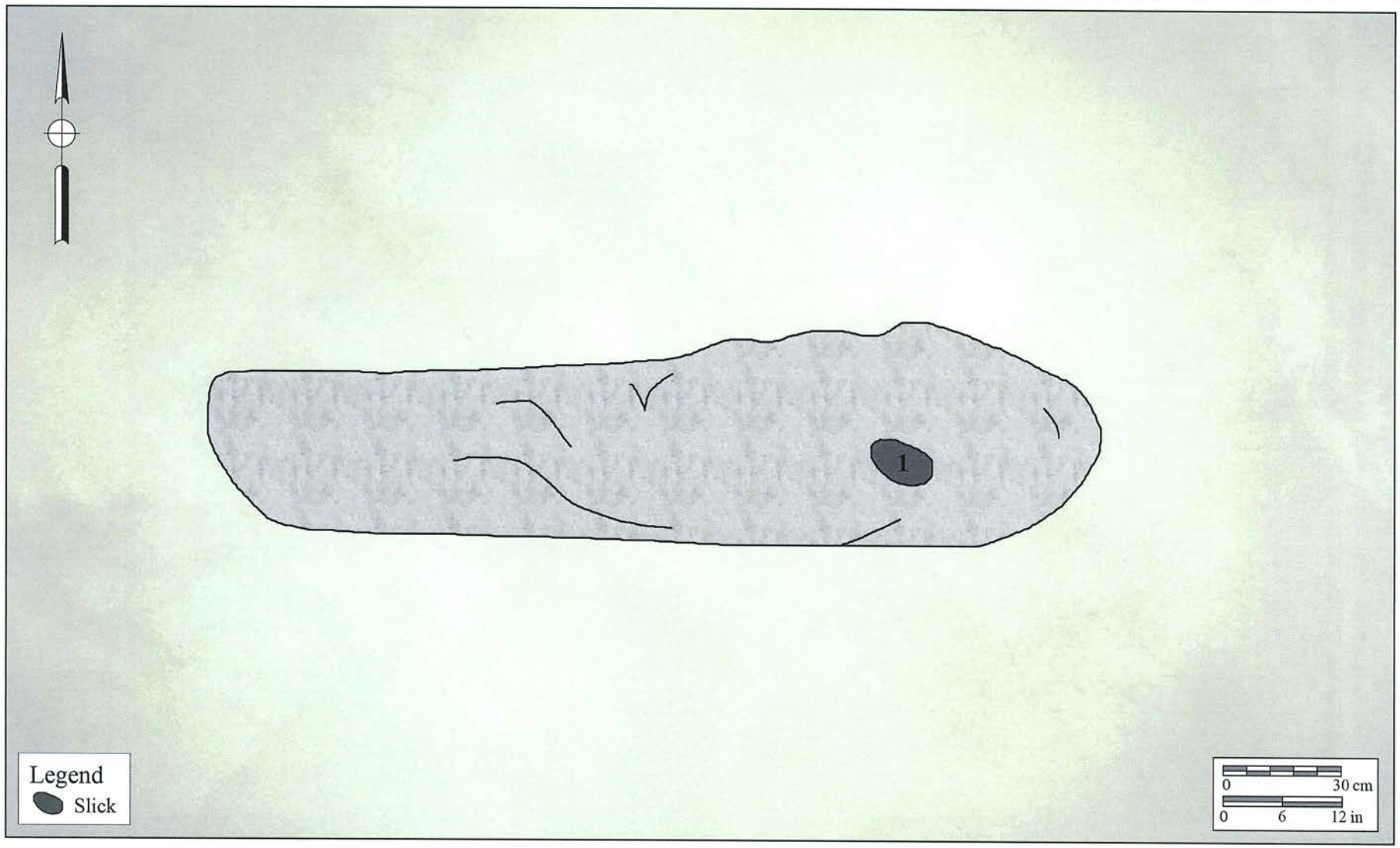
Bedrock Milling Feature P

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature Q at Site SDI-776A and B, facing north.

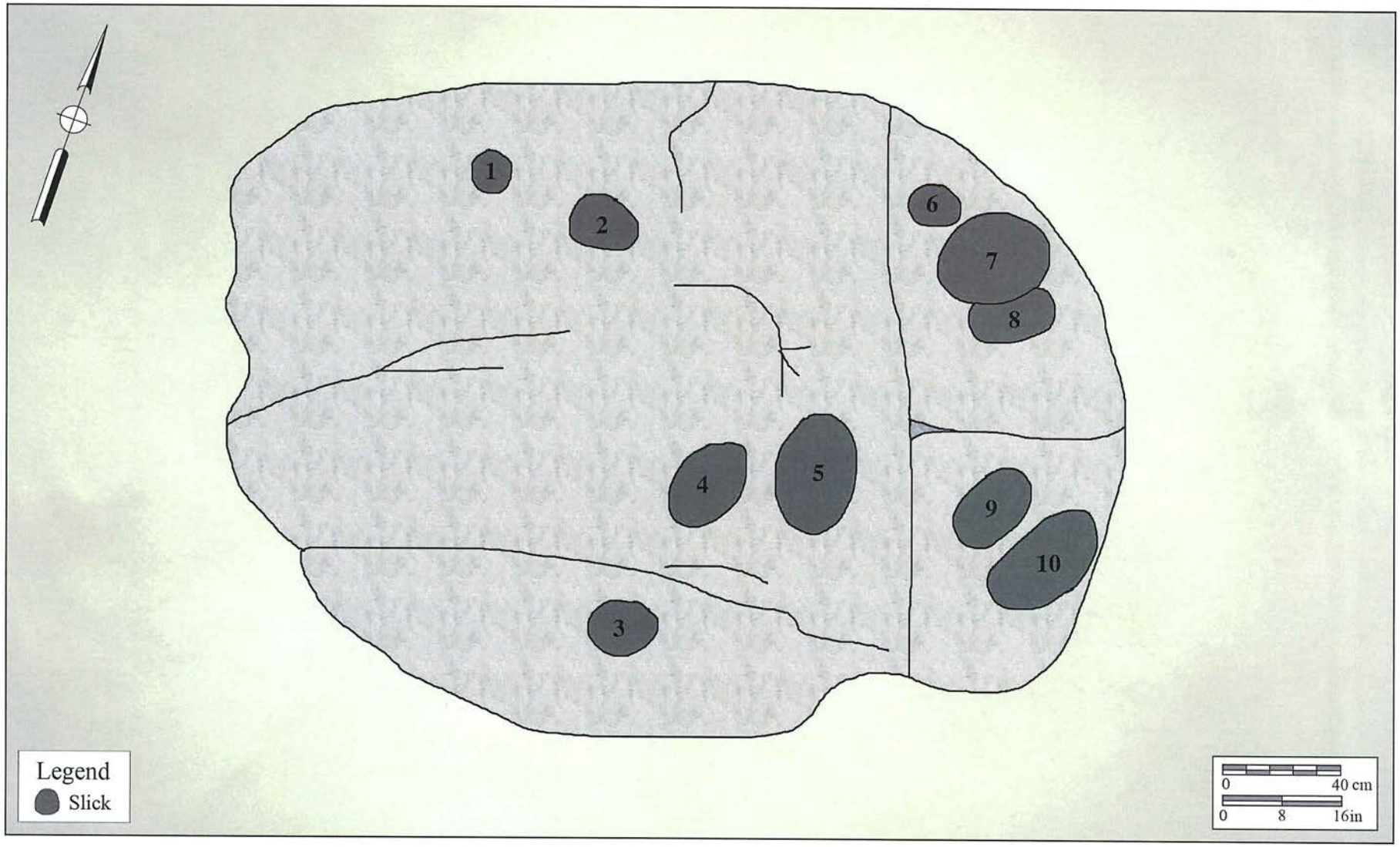
Bedrock Milling Feature R at Site SDI-776A and B, facing north.



Bedrock Milling Feature Q

Site SDI-776A and B

The Ocean Breeze Ranch Project



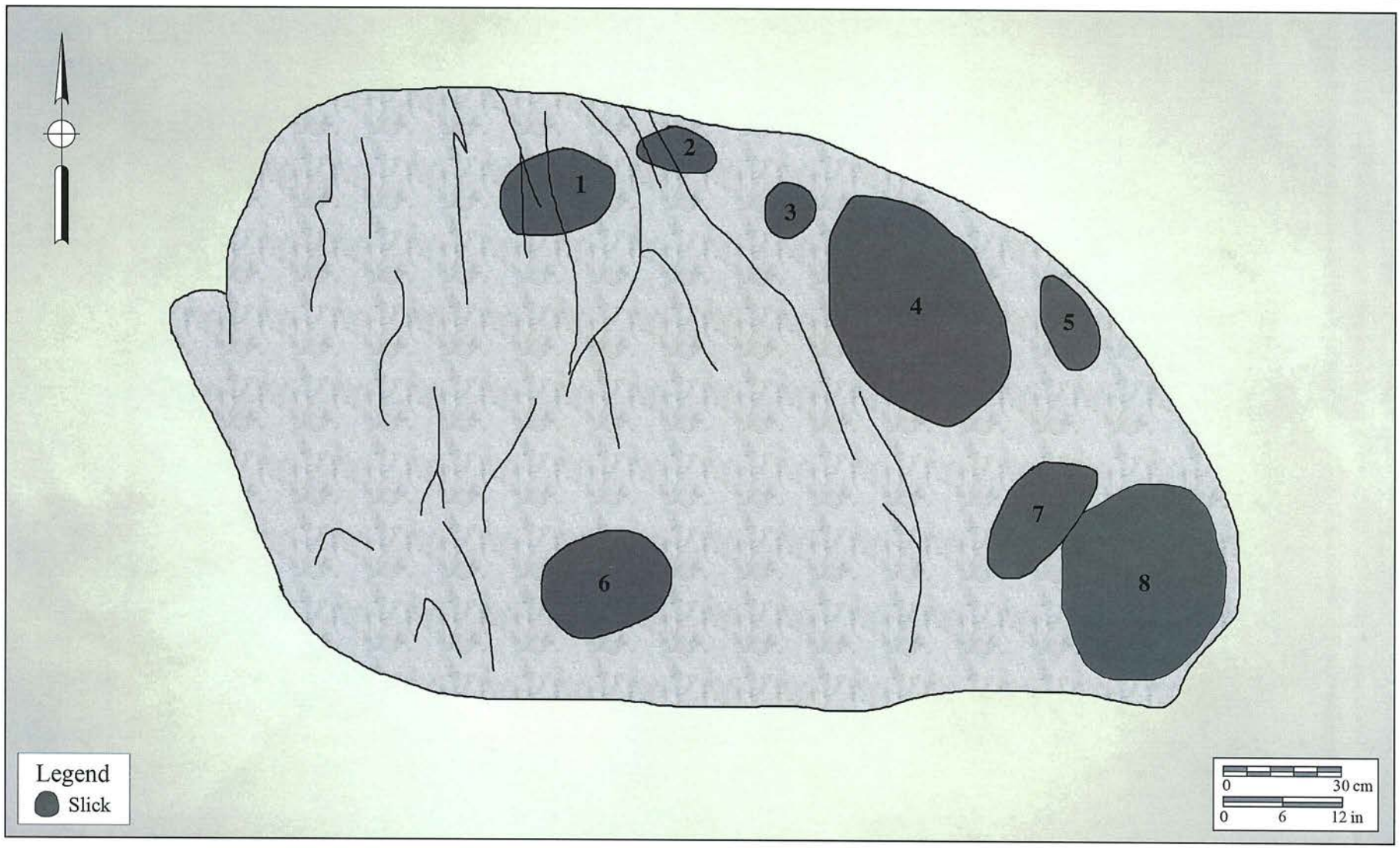
Bedrock Milling Feature R

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature S at Site SDI-776A and B, facing northwest.

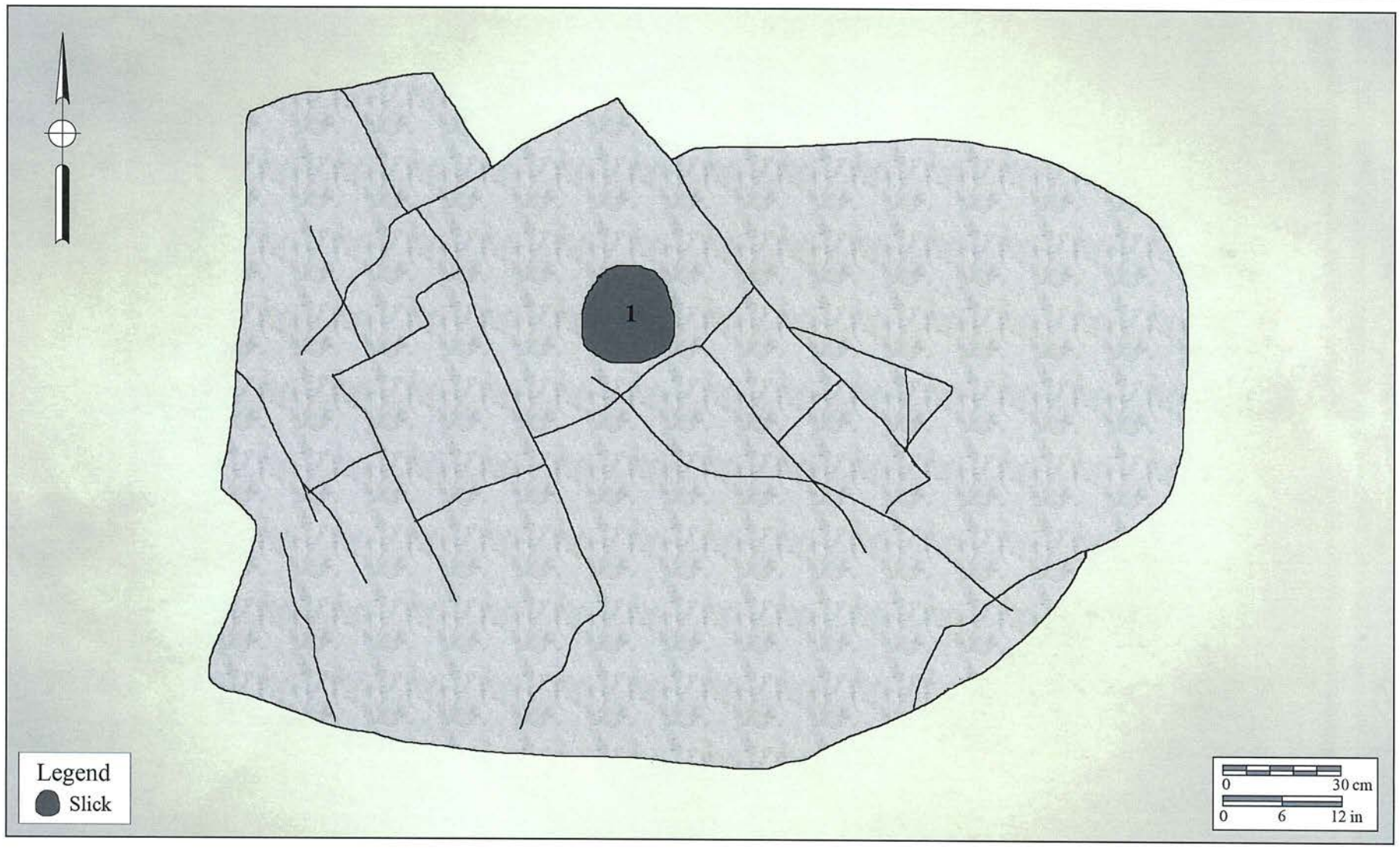
Bedrock Milling Feature T at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature S

Site SDI-776A and B

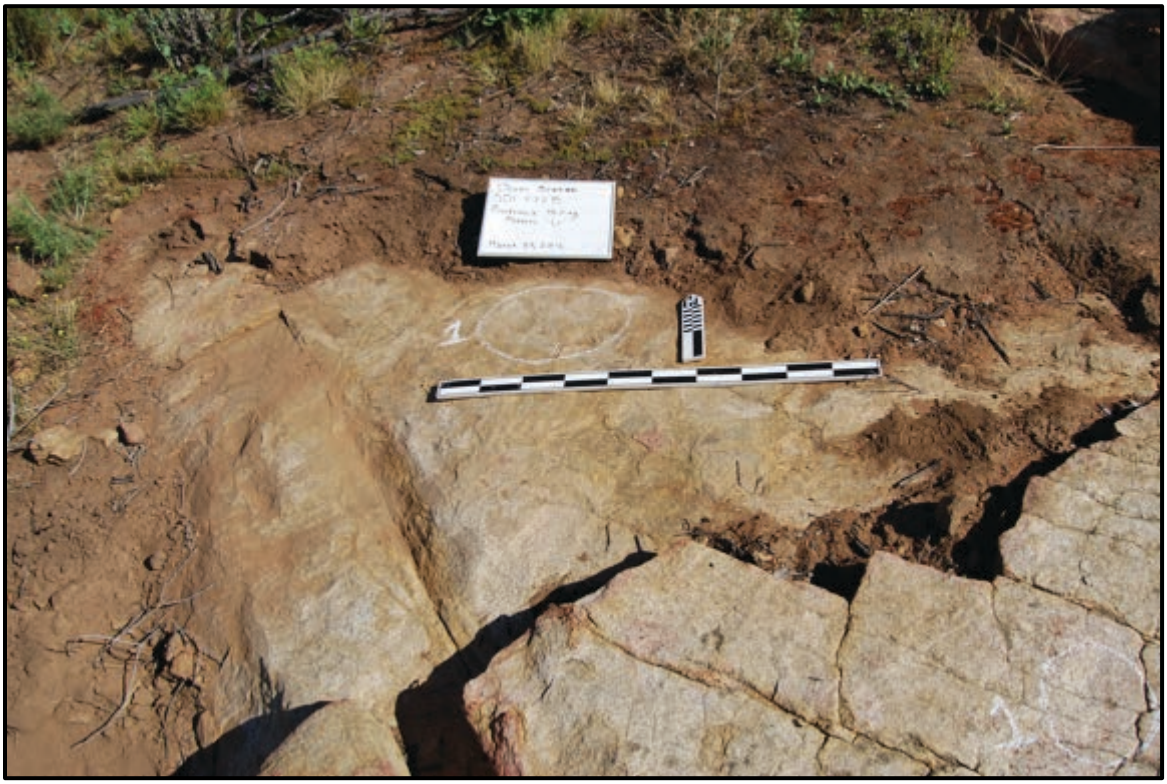
The Ocean Breeze Ranch Project



Bedrock Milling Feature T

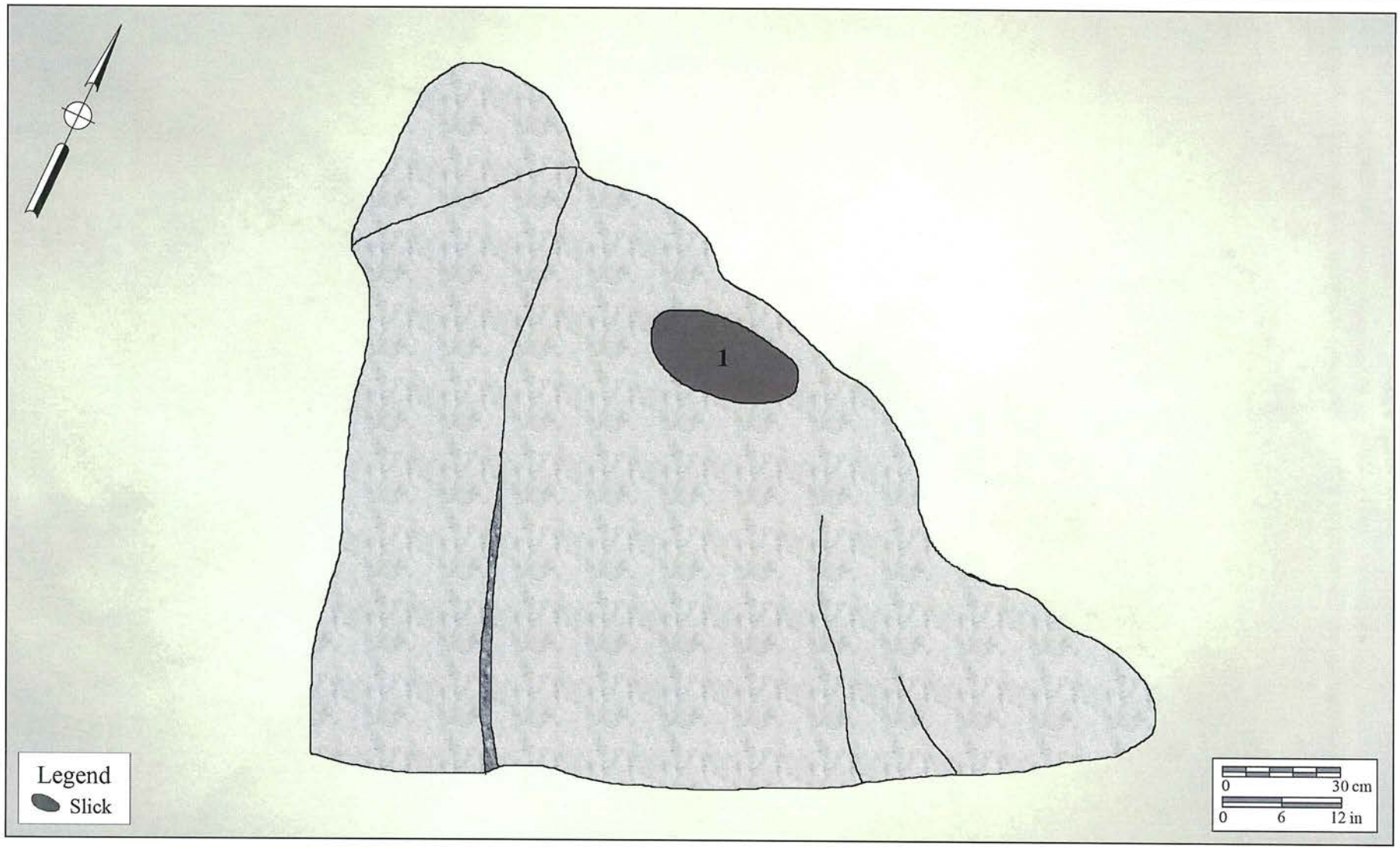
Site SDI-776A and B

The Ocean Breeze Ranch Project



Bedrock Milling Feature U at Site SDI-776A and B, facing north.

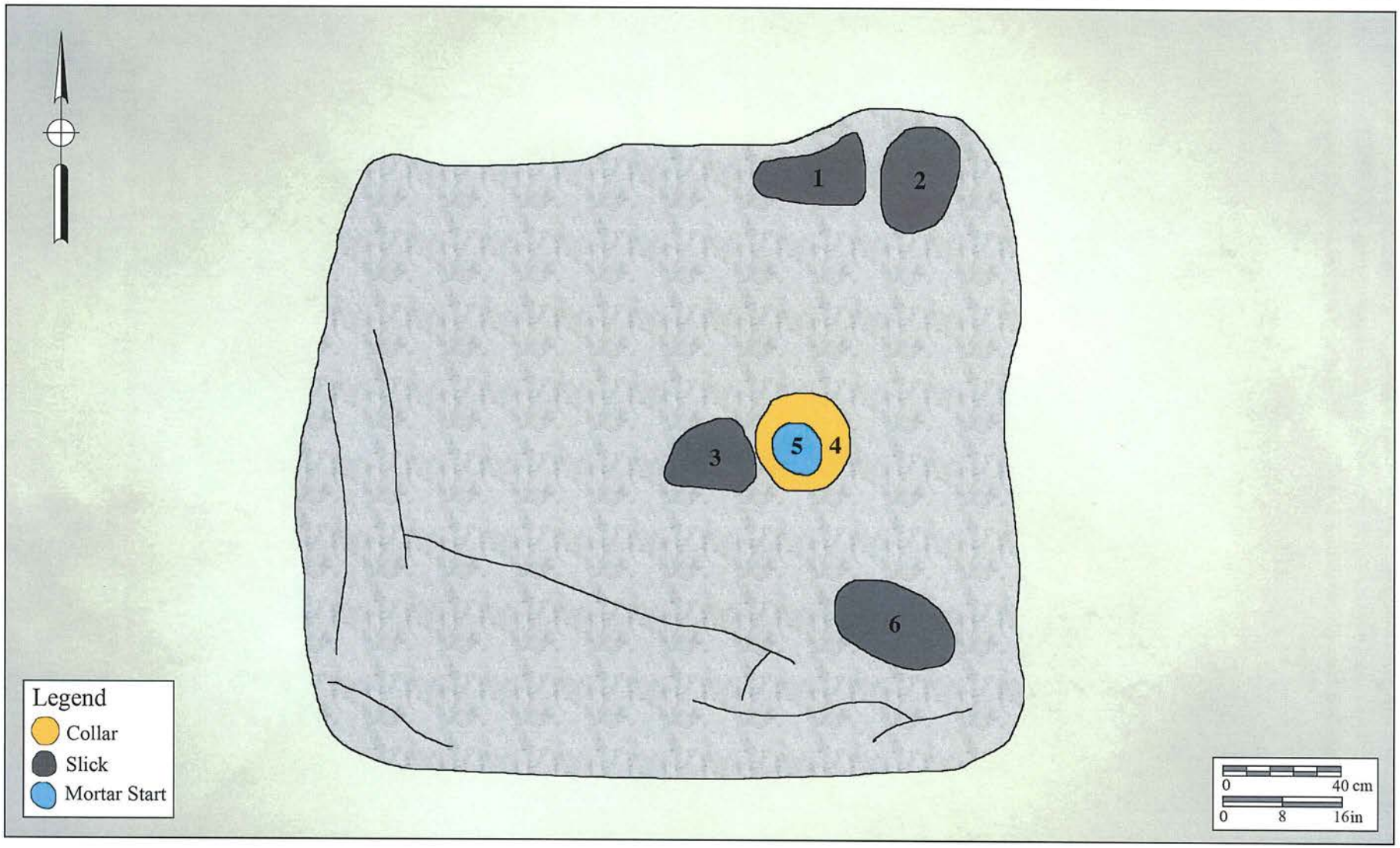
Bedrock Milling Feature V at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature U

Site SDI-776A and B

The Ocean Breeze Ranch Project



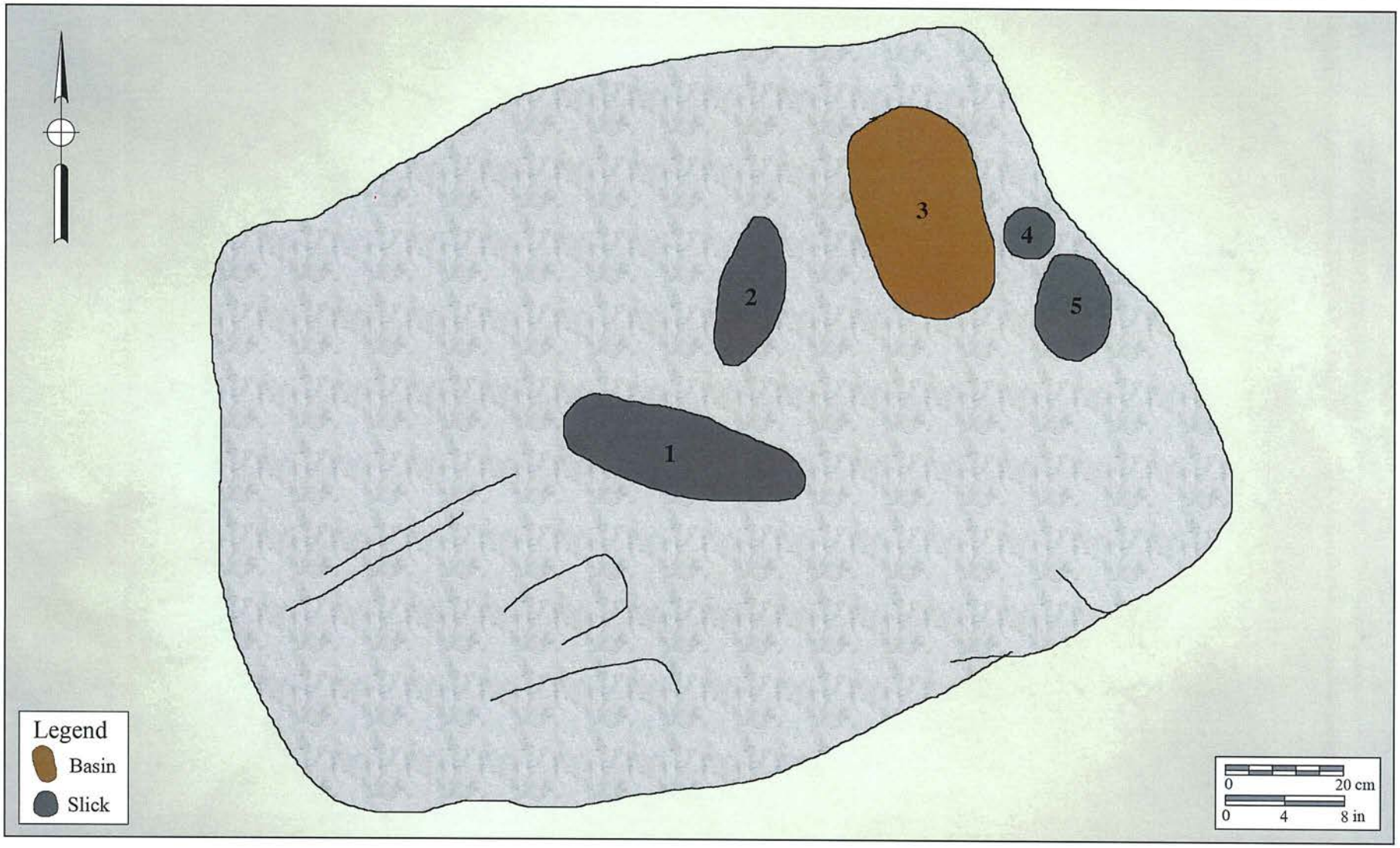
Bedrock Milling Feature V

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature W at Site SDI-776A and B, facing north.

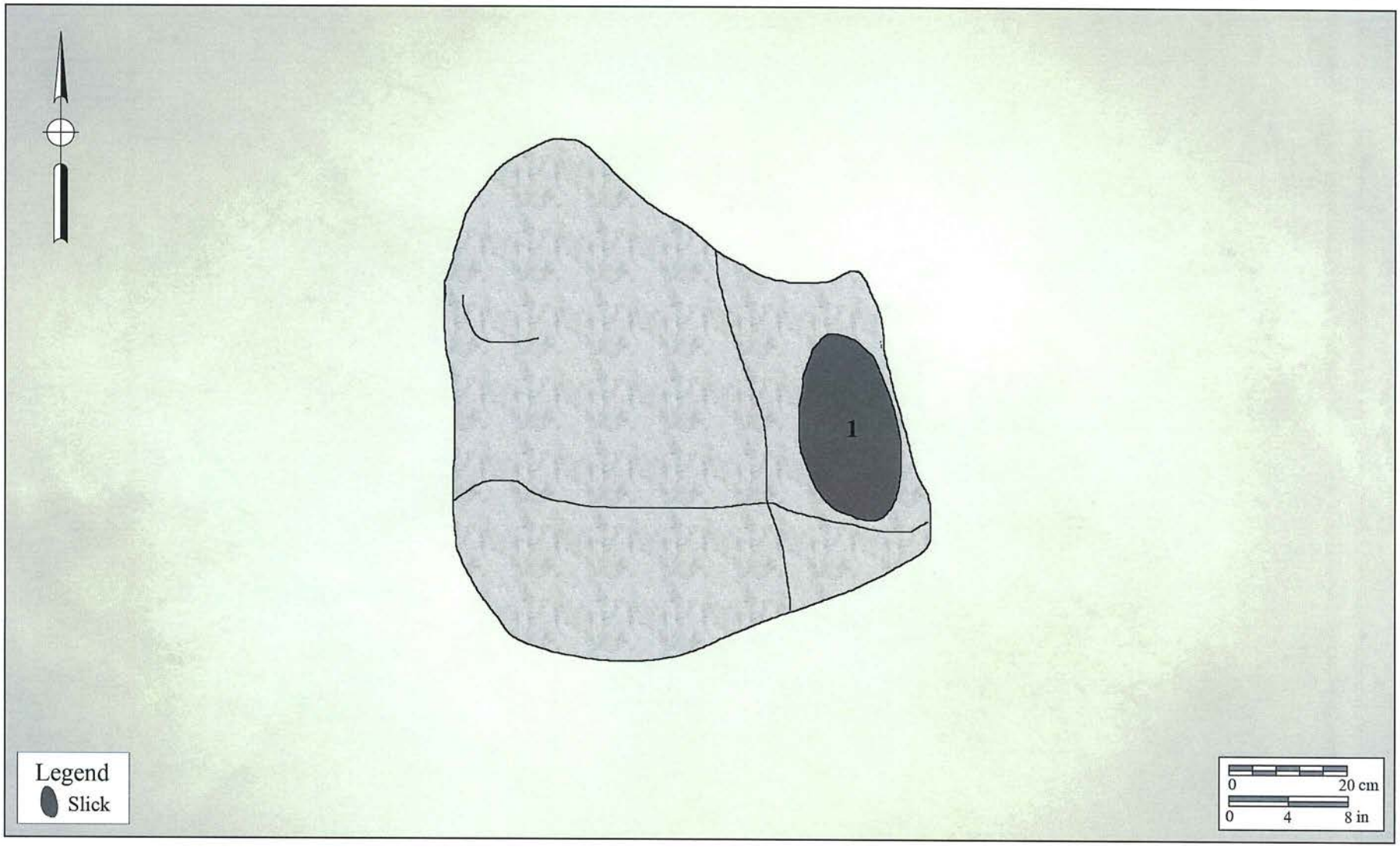
Bedrock Milling Feature X at Site SDI-776A and B, facing north.



Bedrock Milling Feature W

Site SDI-776A and B

The Ocean Breeze Ranch Project



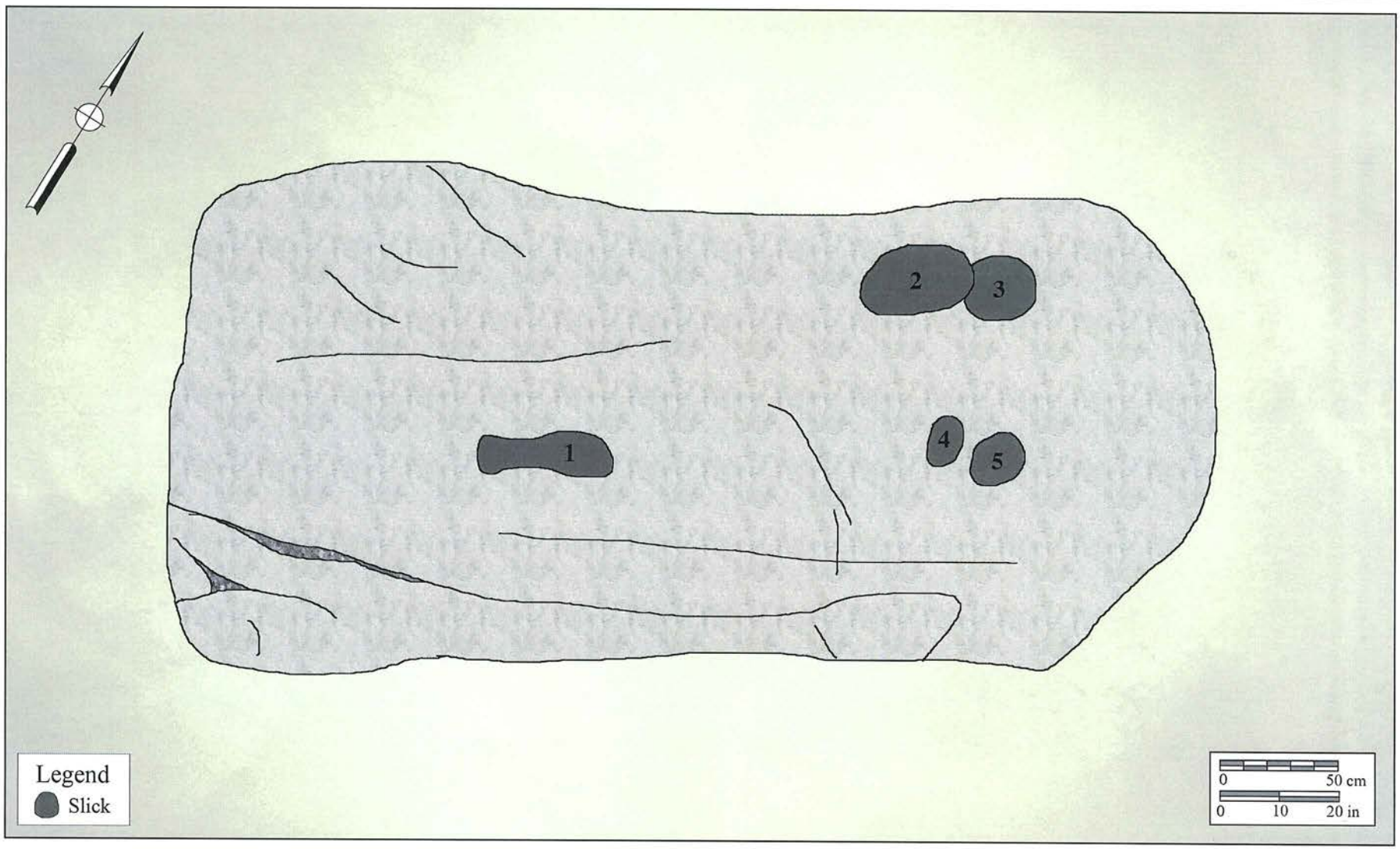
Bedrock Milling Feature X

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature Y at Site SDI-776A and B, facing west.

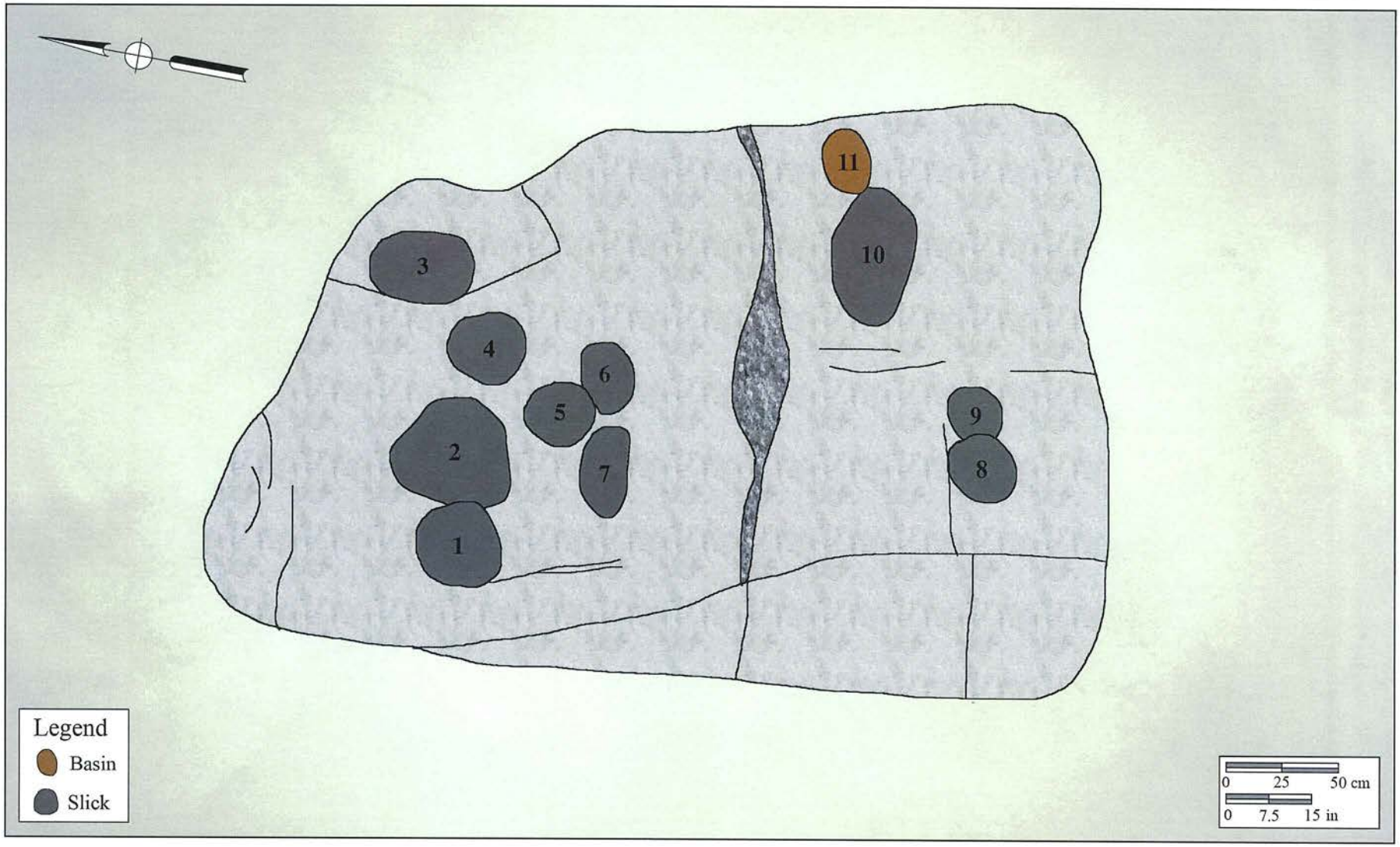
Bedrock Milling Feature Z at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature Y

Site SDI-776A and B

The Ocean Breeze Ranch Project



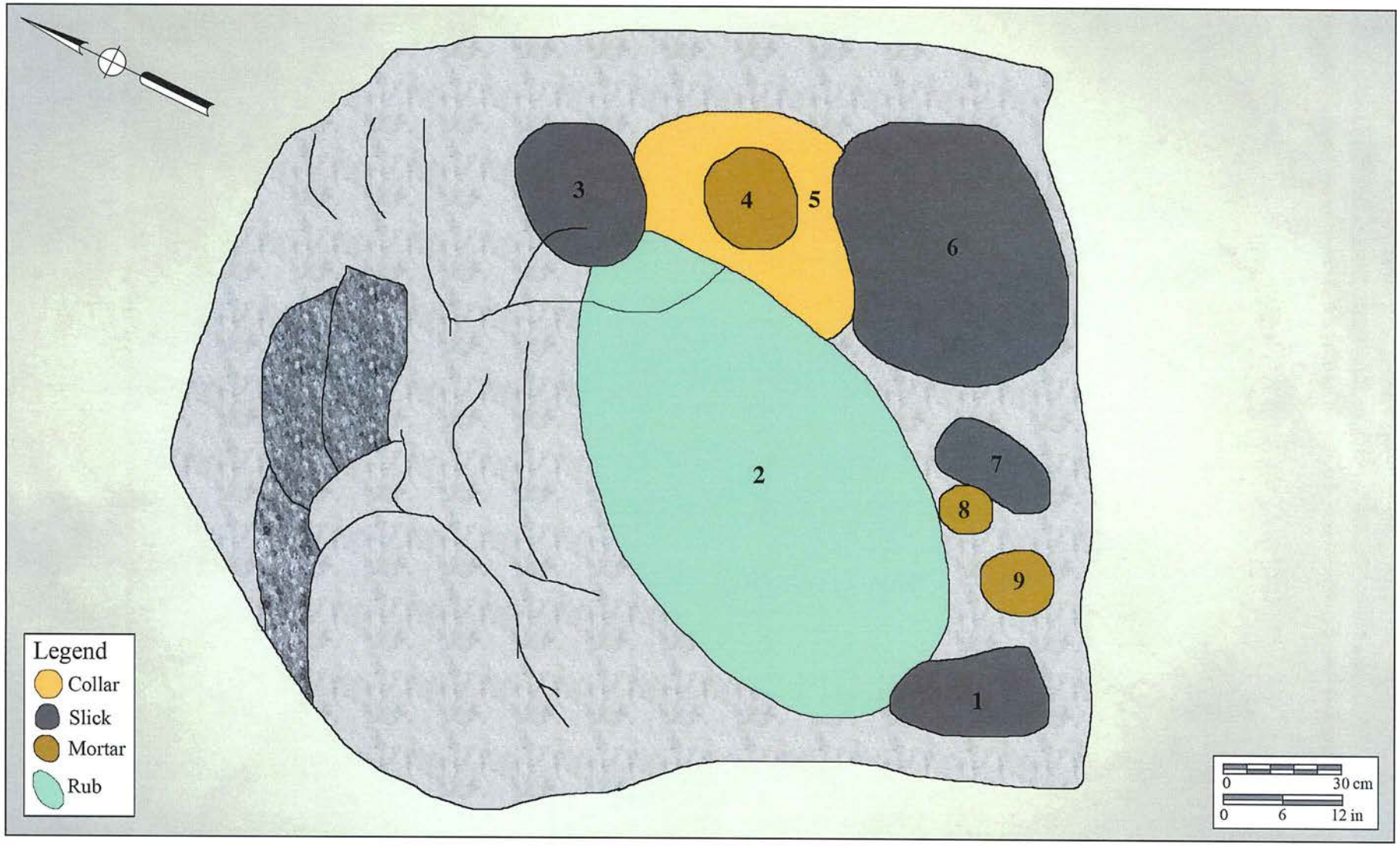
Bedrock Milling Feature Z

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature AA at Site SDI-776A and B, facing northwest.

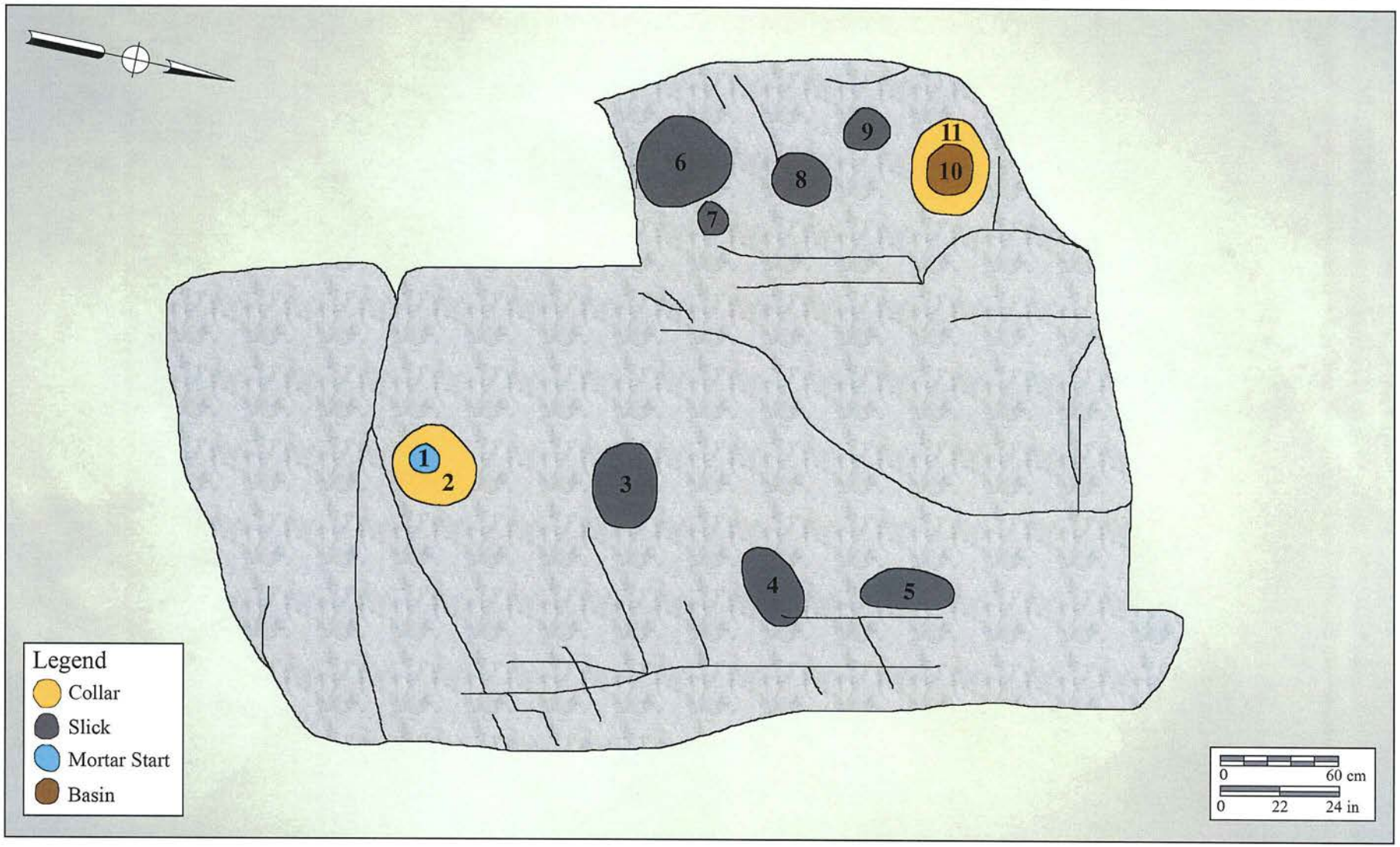
Bedrock Milling Feature BB at Site SDI-776A and B, facing west.



Bedrock Milling Feature AA

Site SDI-776A and B

The Ocean Breeze Ranch Project



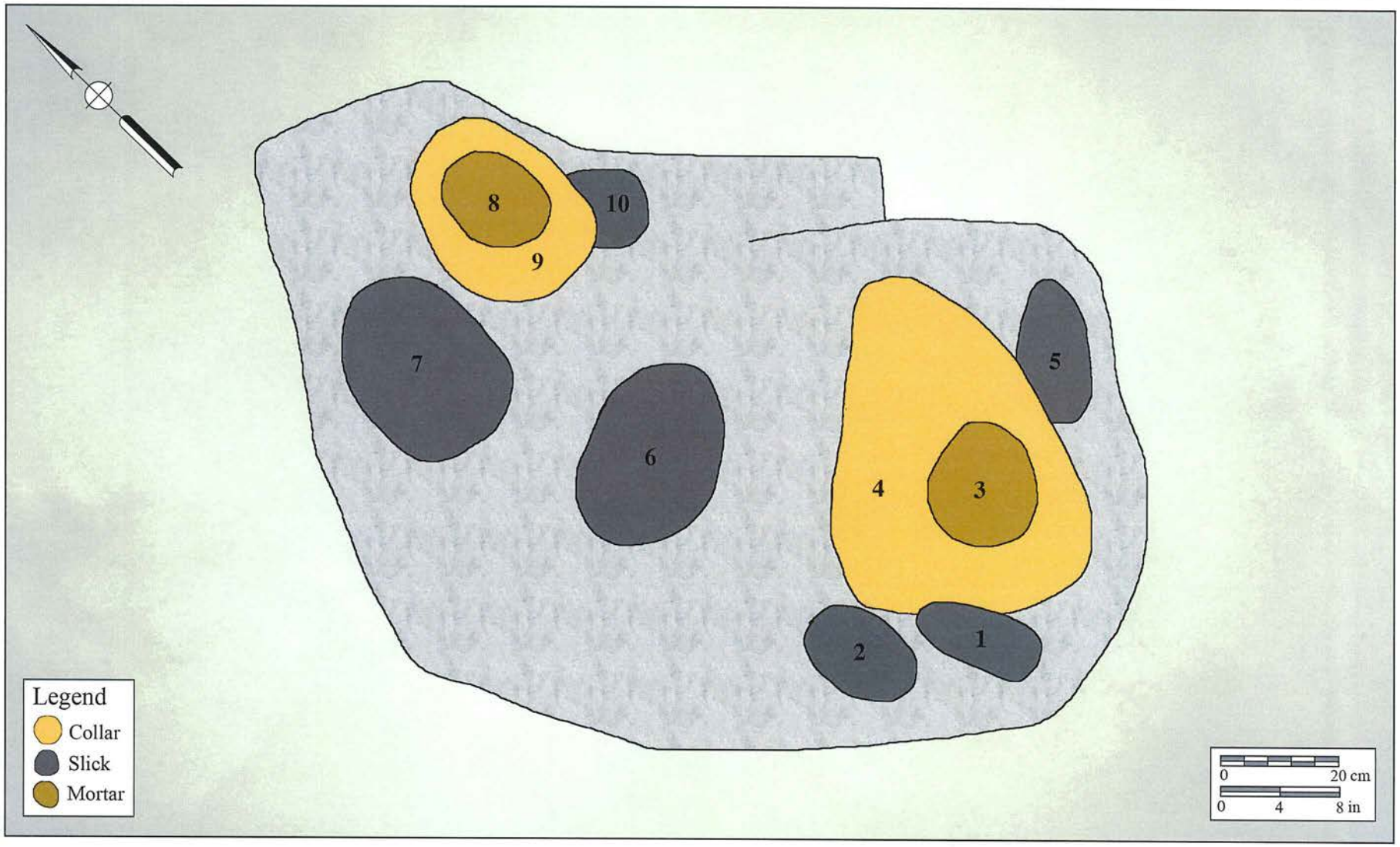
Bedrock Milling Feature BB

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature CC at Site SDI-776A and B, facing northeast.

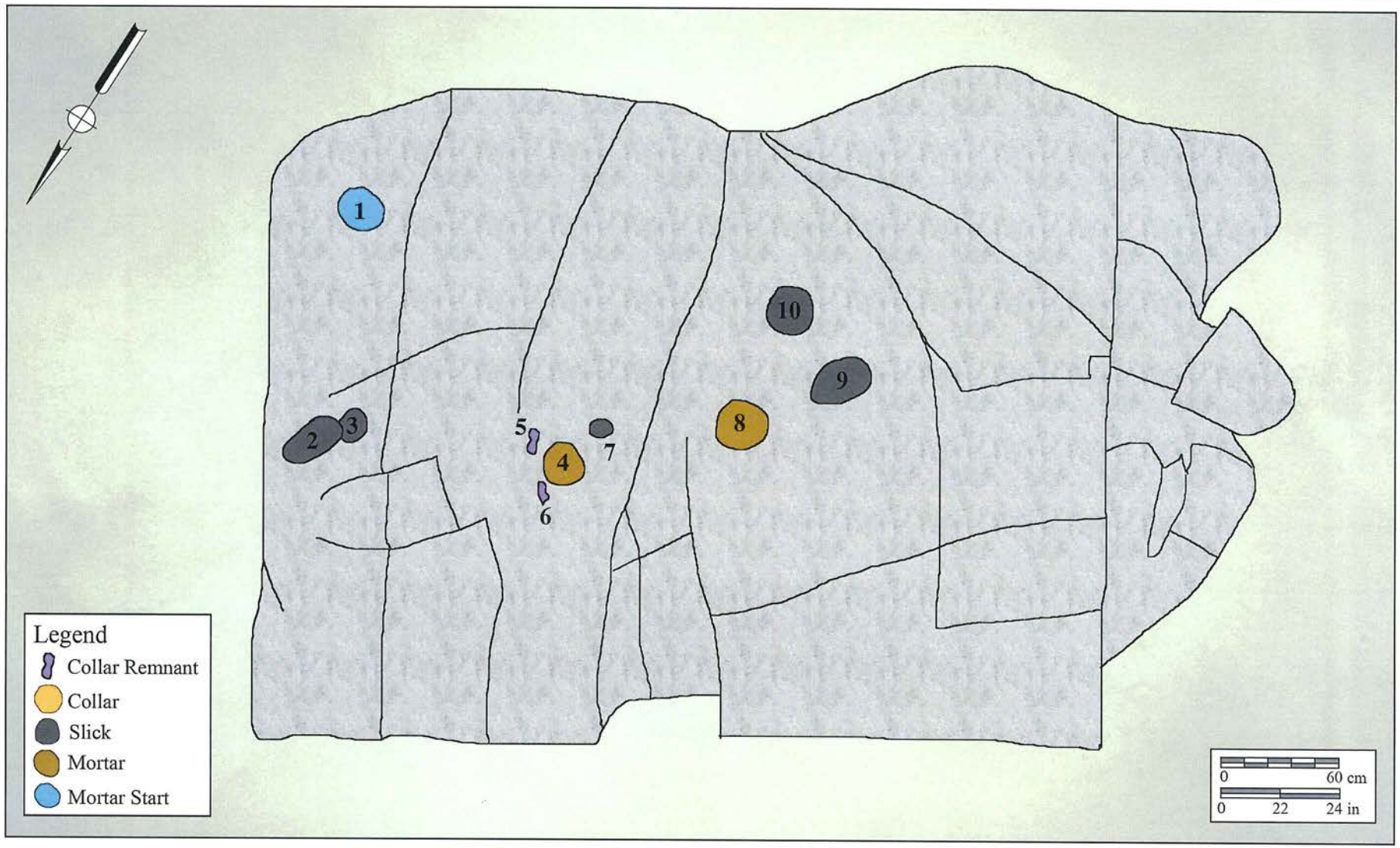
Bedrock Milling Feature DD at Site SDI-776A and B, facing south.



Bedrock Milling Feature CC

Site SDI-776A and B

The Ocean Breeze Ranch Project



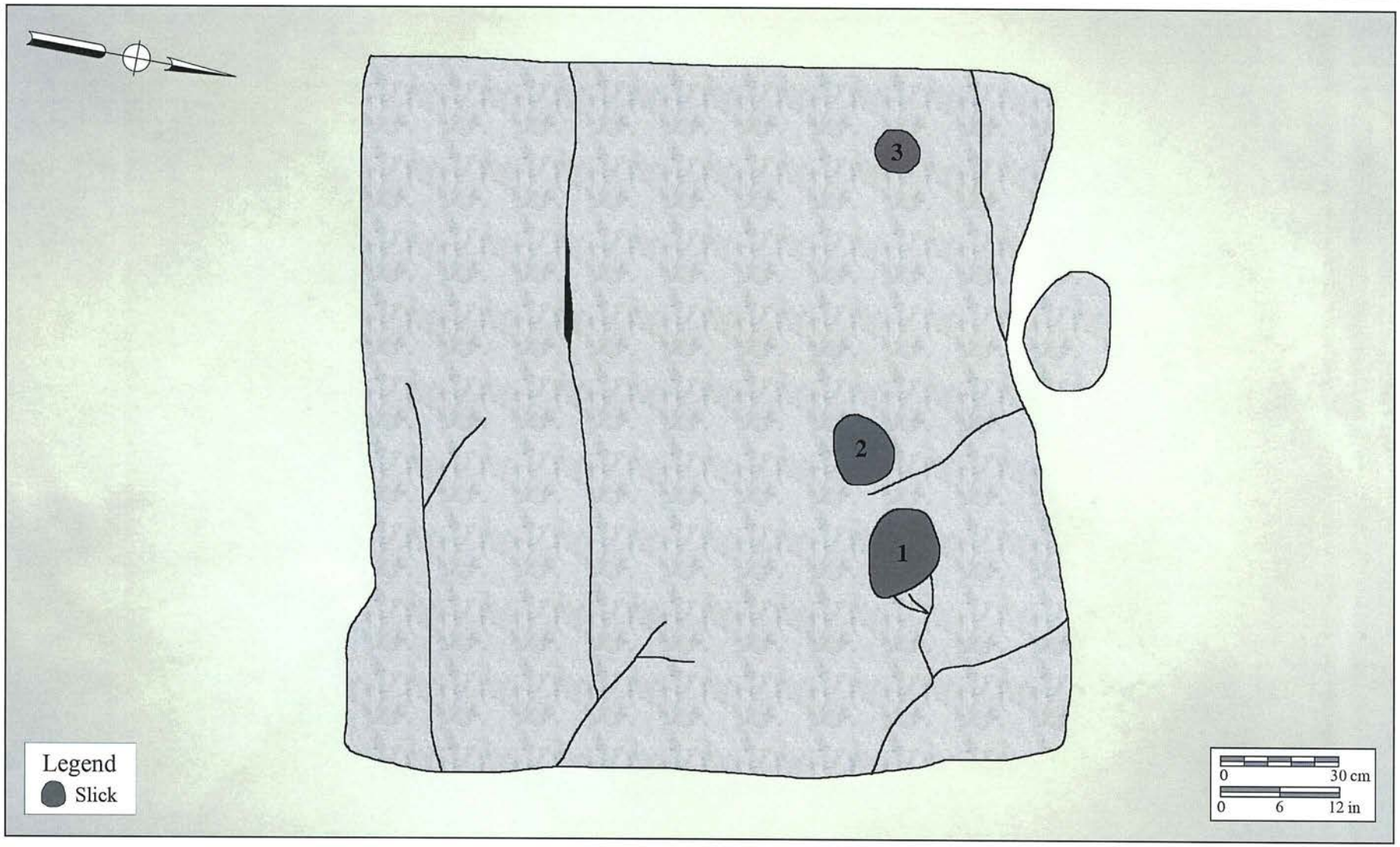
Bedrock Milling Feature DD

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature EE at Site SDI-776A and B, facing west.

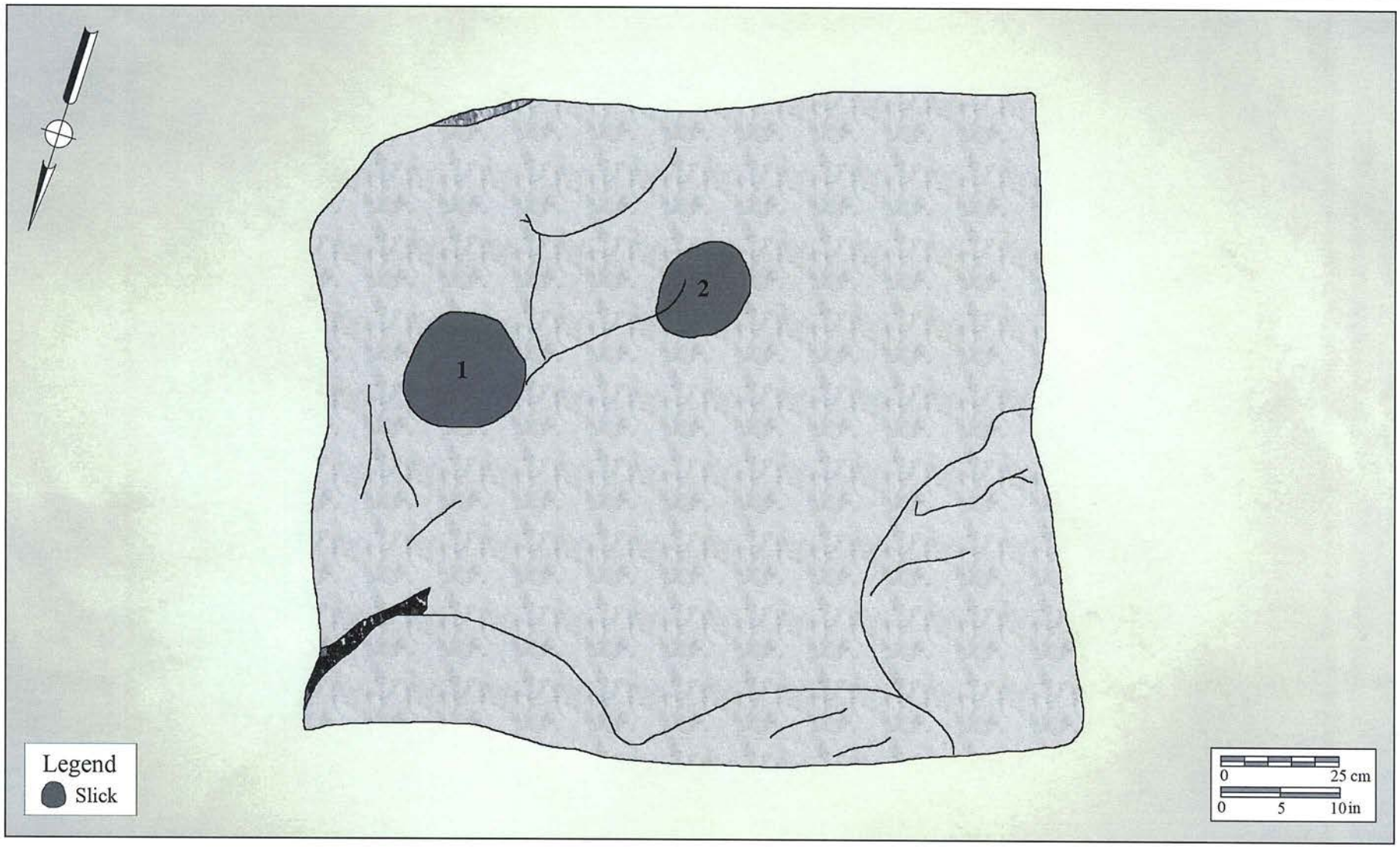
Bedrock Milling Feature FF at Site SDI-776A and B, facing south.



Bedrock Milling Feature EE

Site SDI-776A and B

The Ocean Breeze Ranch Project



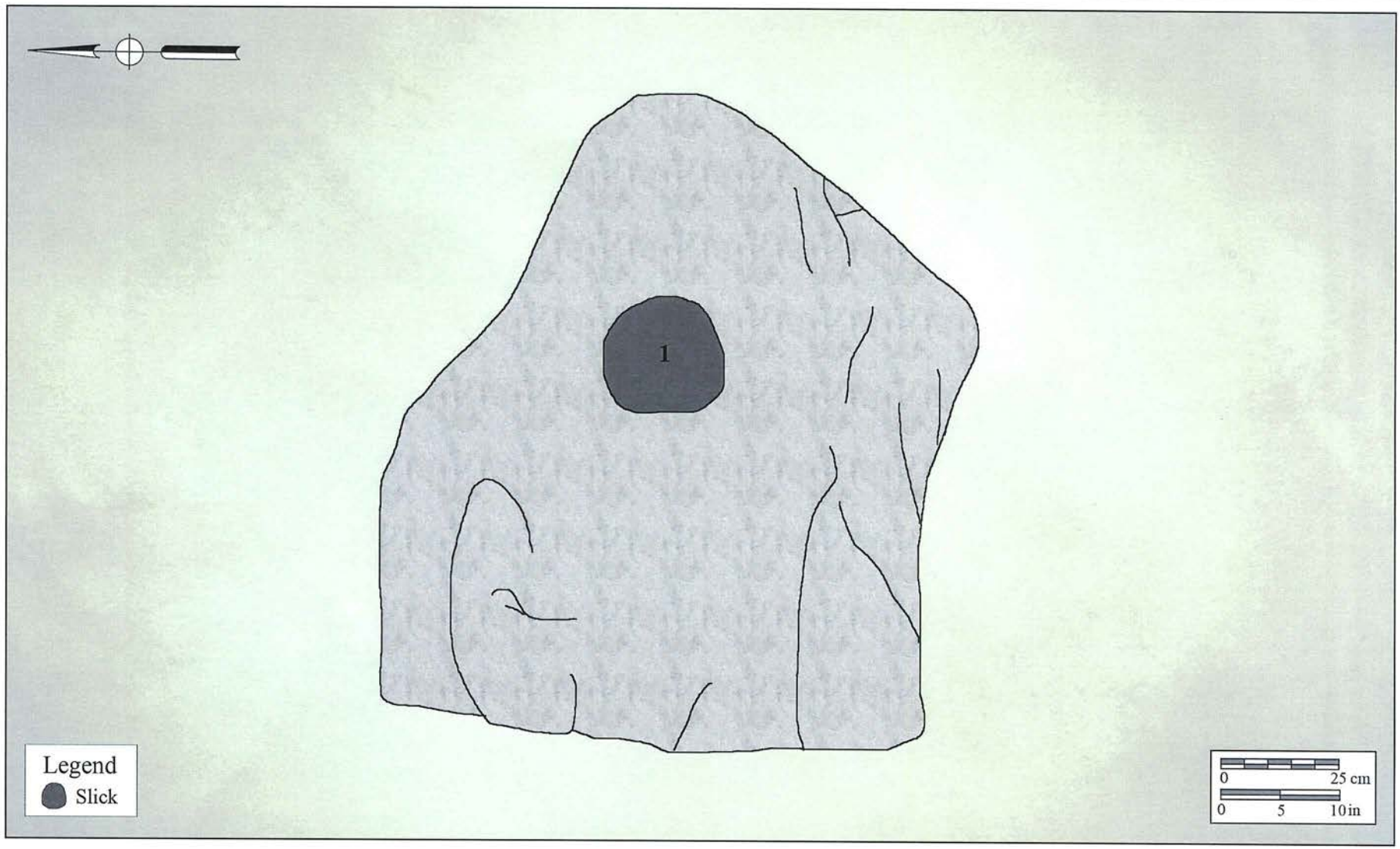
Bedrock Milling Feature FF

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature GG at Site SDI-776A and B, facing east.

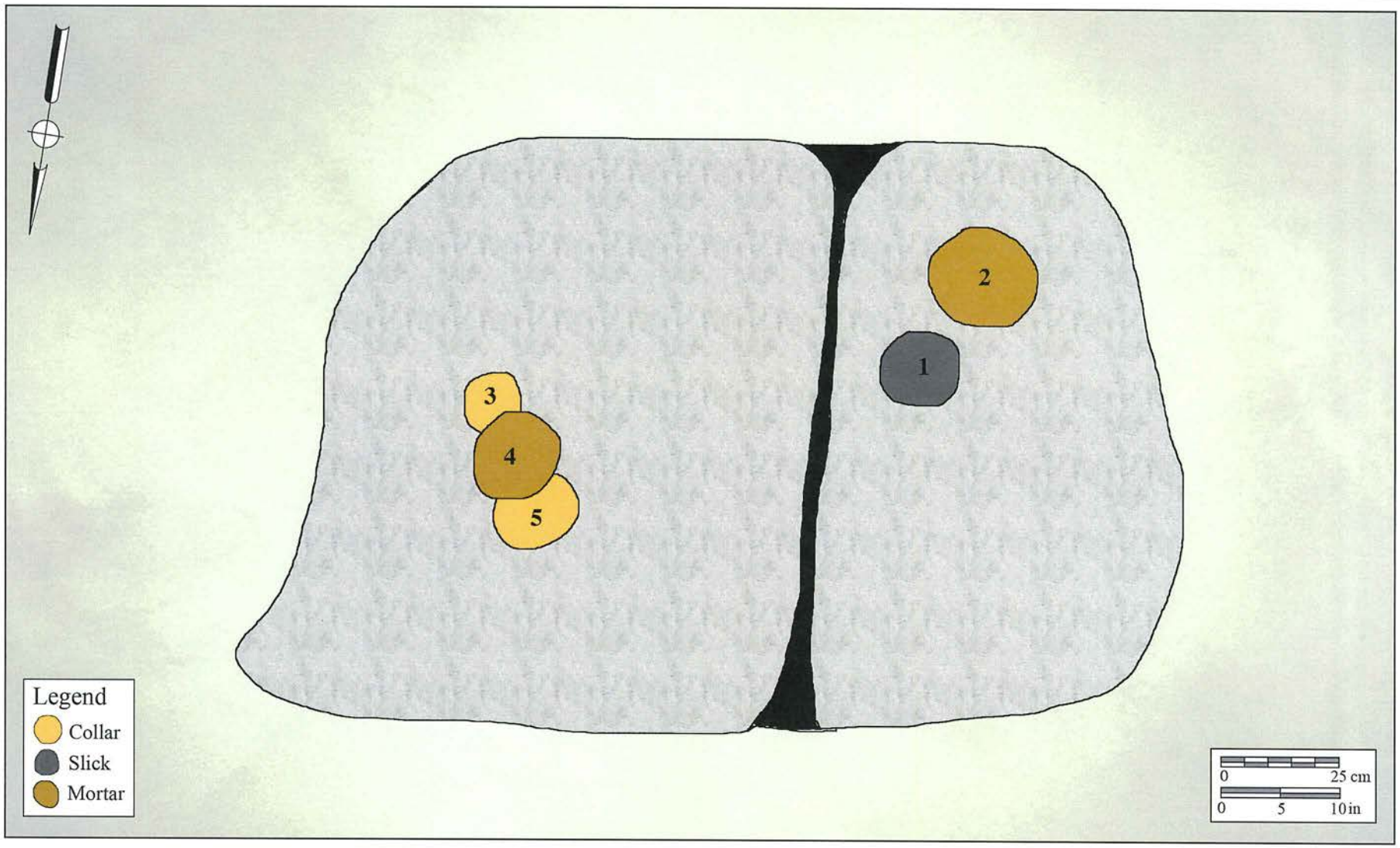
Bedrock Milling Feature HH at Site SDI-776A and B, facing southwest.



Bedrock Milling Feature GG

Site SDI-776A and B

The Ocean Breeze Ranch Project



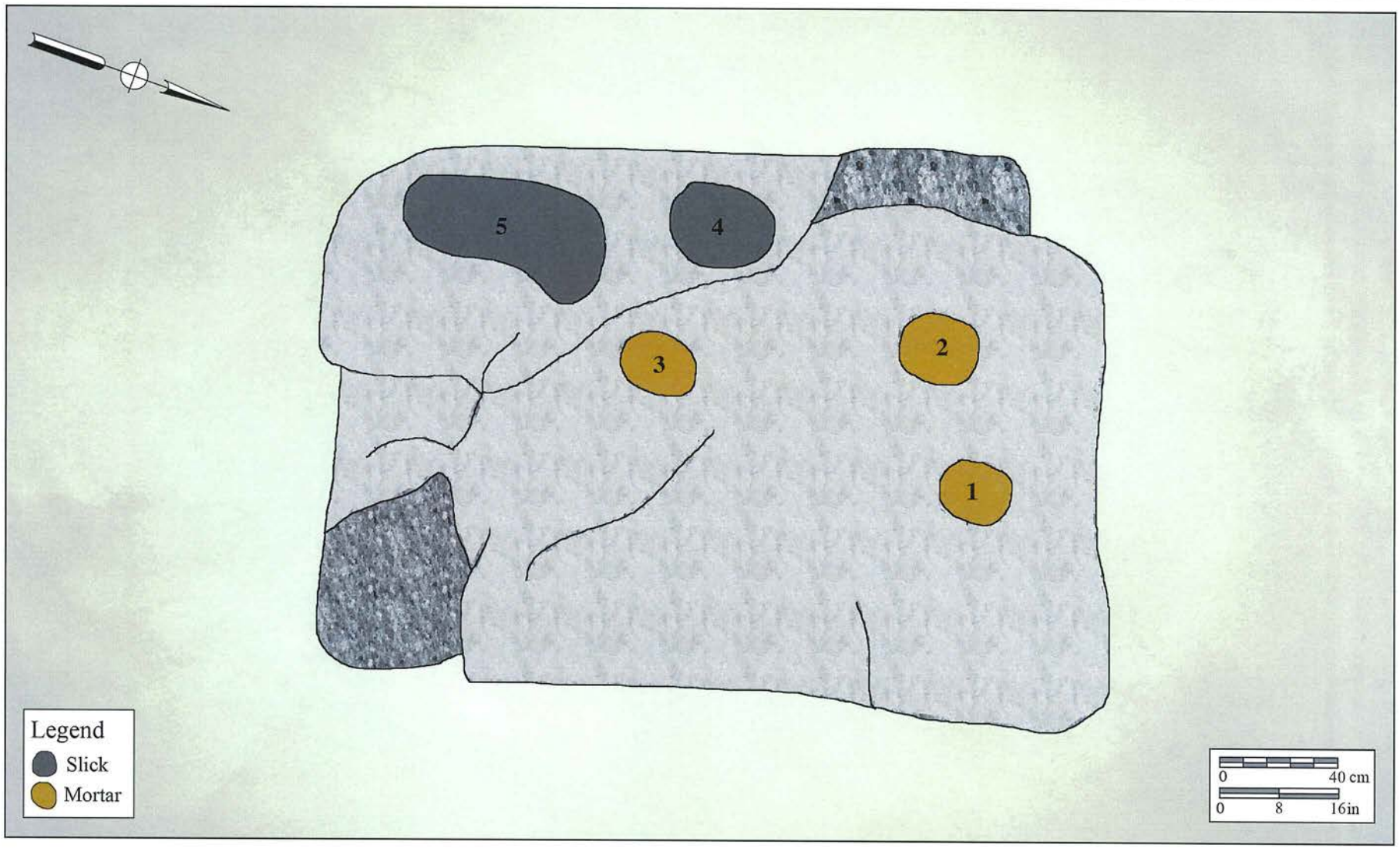
Bedrock Milling Feature HH

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature II at Site SDI-776A and B, facing southwest.

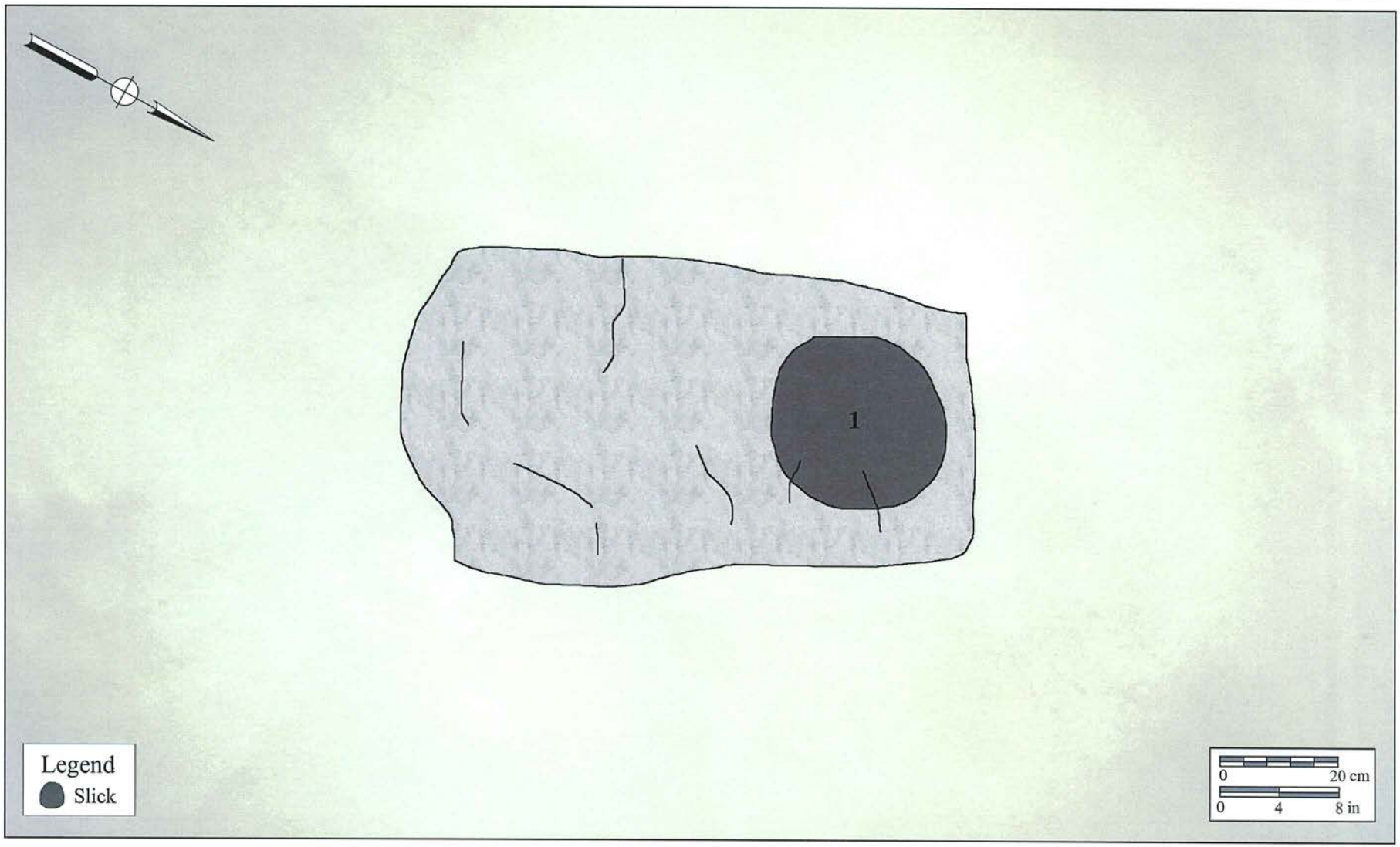
Bedrock Milling Feature JJ at Site SDI-776A and B, facing southwest.



Bedrock Milling Feature II

Site SDI-776A and B

The Ocean Breeze Ranch Project



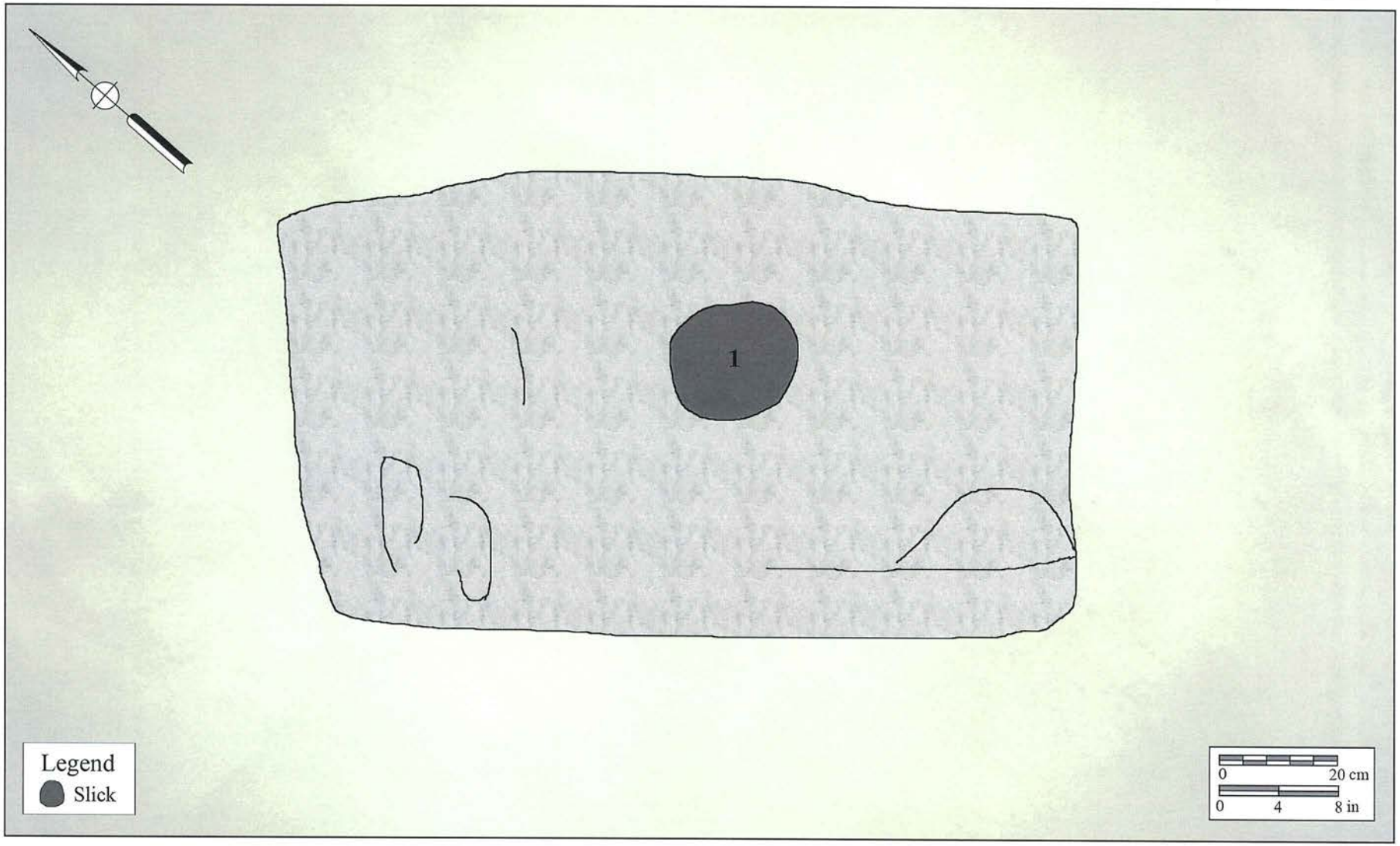
Bedrock Milling Feature JJ

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature KK at Site SDI-776A and B, facing northeast.

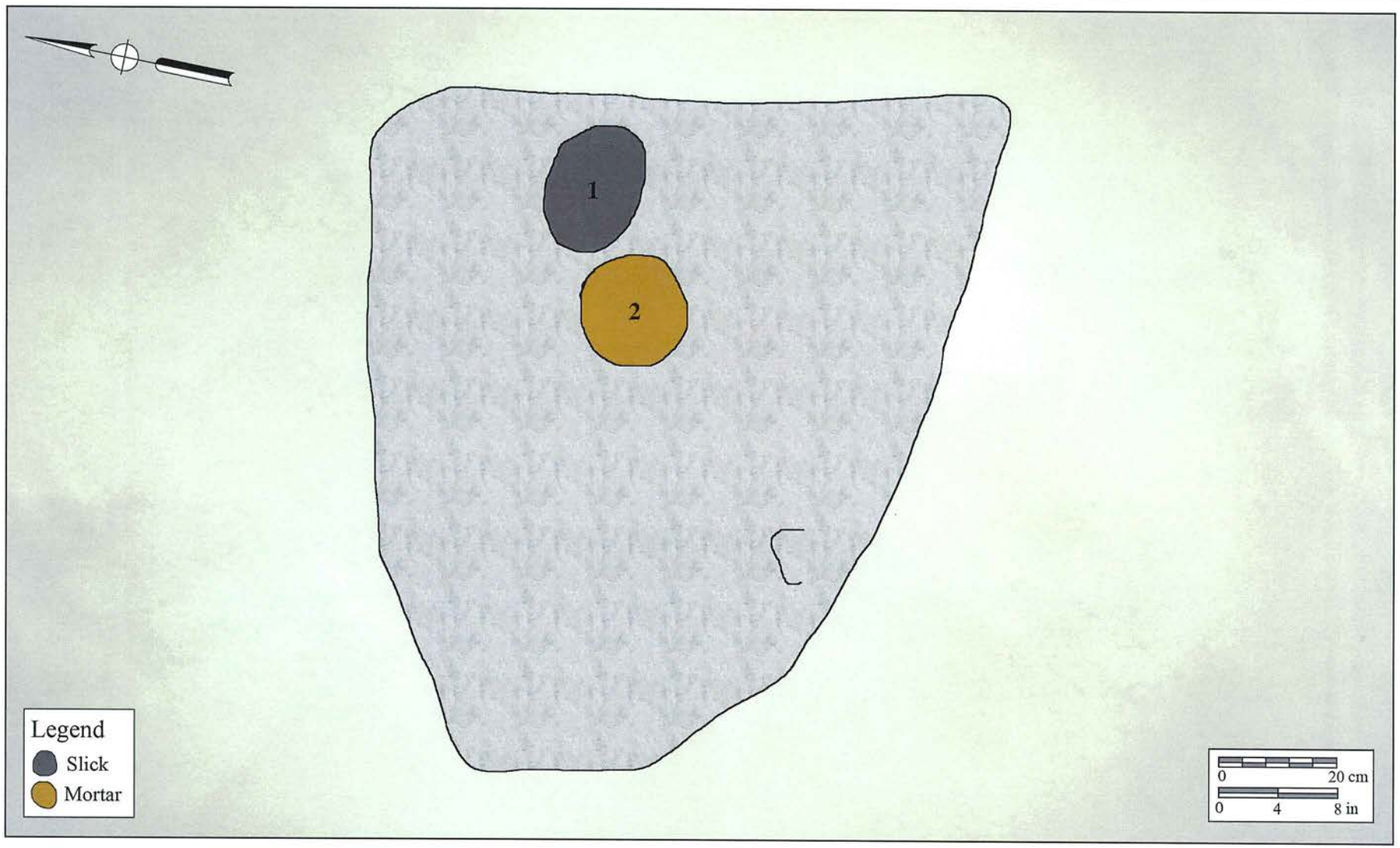
Bedrock Milling Feature LL at Site SDI-776A and B, facing northeast.



Bedrock Milling Feature KK

Site SDI-776A and B

The Ocean Breeze Ranch Project



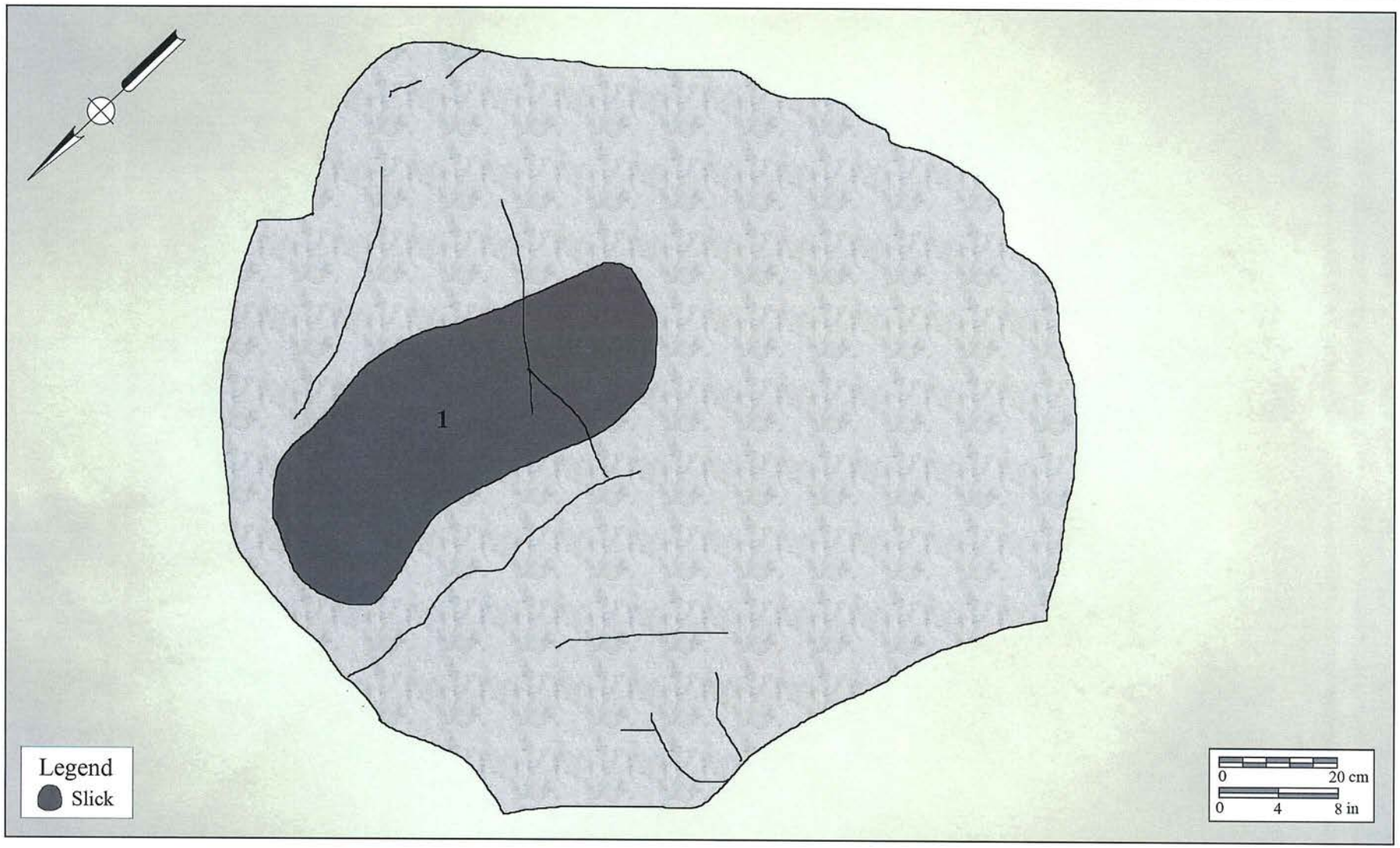
Bedrock Milling Feature LL

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature MM at Site SDI-776A and B, facing northeast.

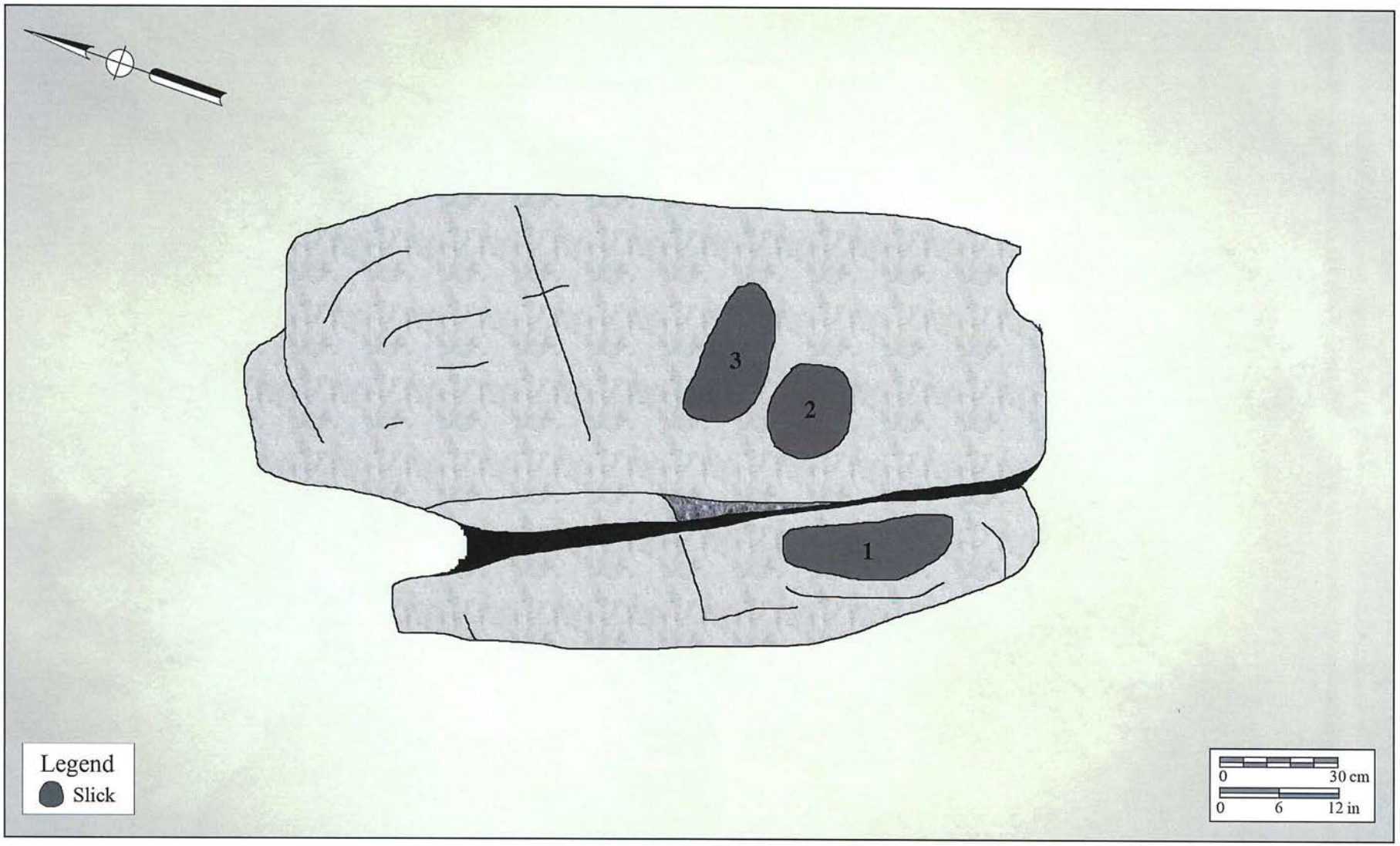
Bedrock Milling Feature NN at Site SDI-776A and B, facing northeast.



Bedrock Milling Feature MM

Site SDI-776A and B

The Ocean Breeze Ranch Project



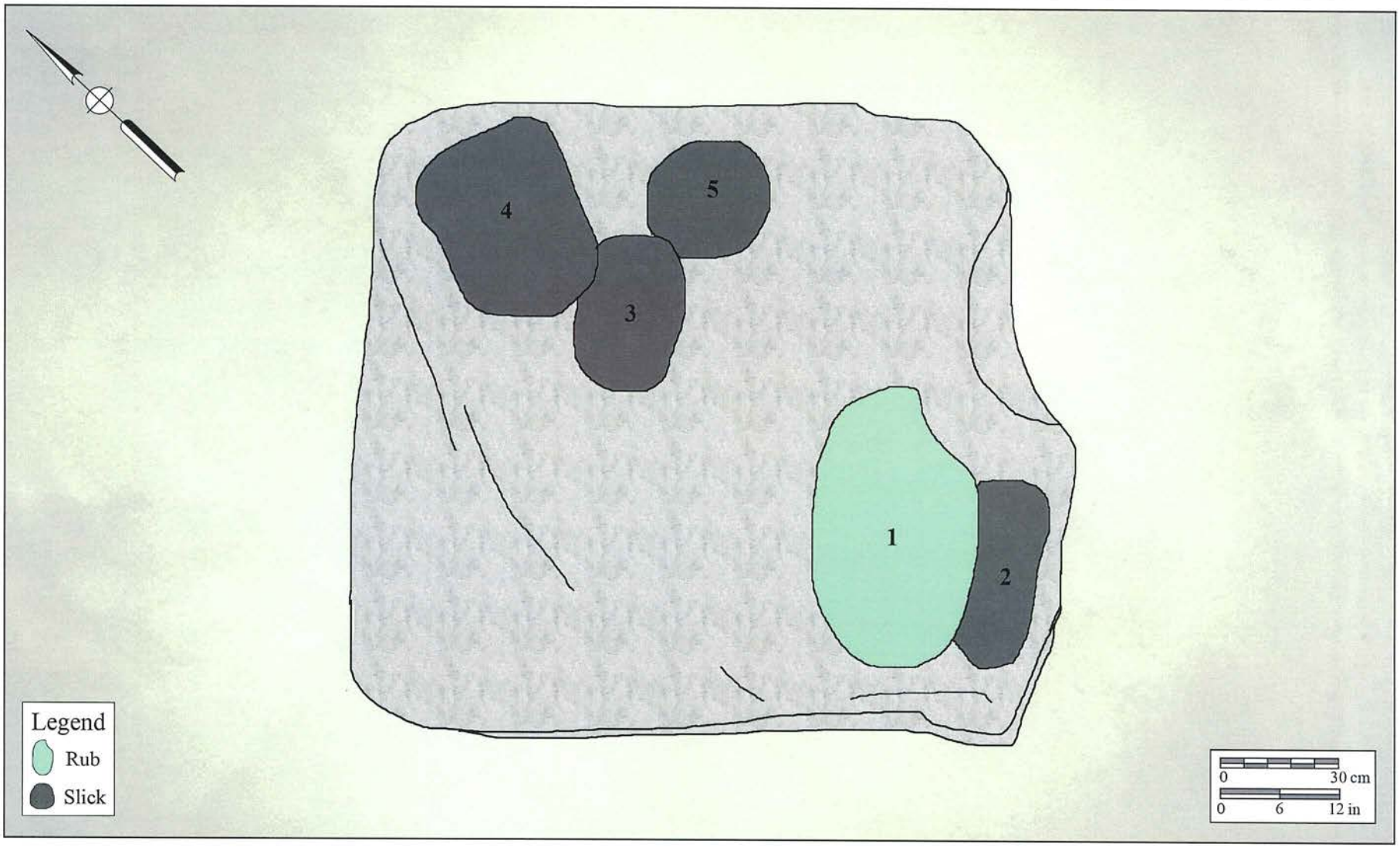
Bedrock Milling Feature NN

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature OO at Site SDI-776A and B, facing northeast.

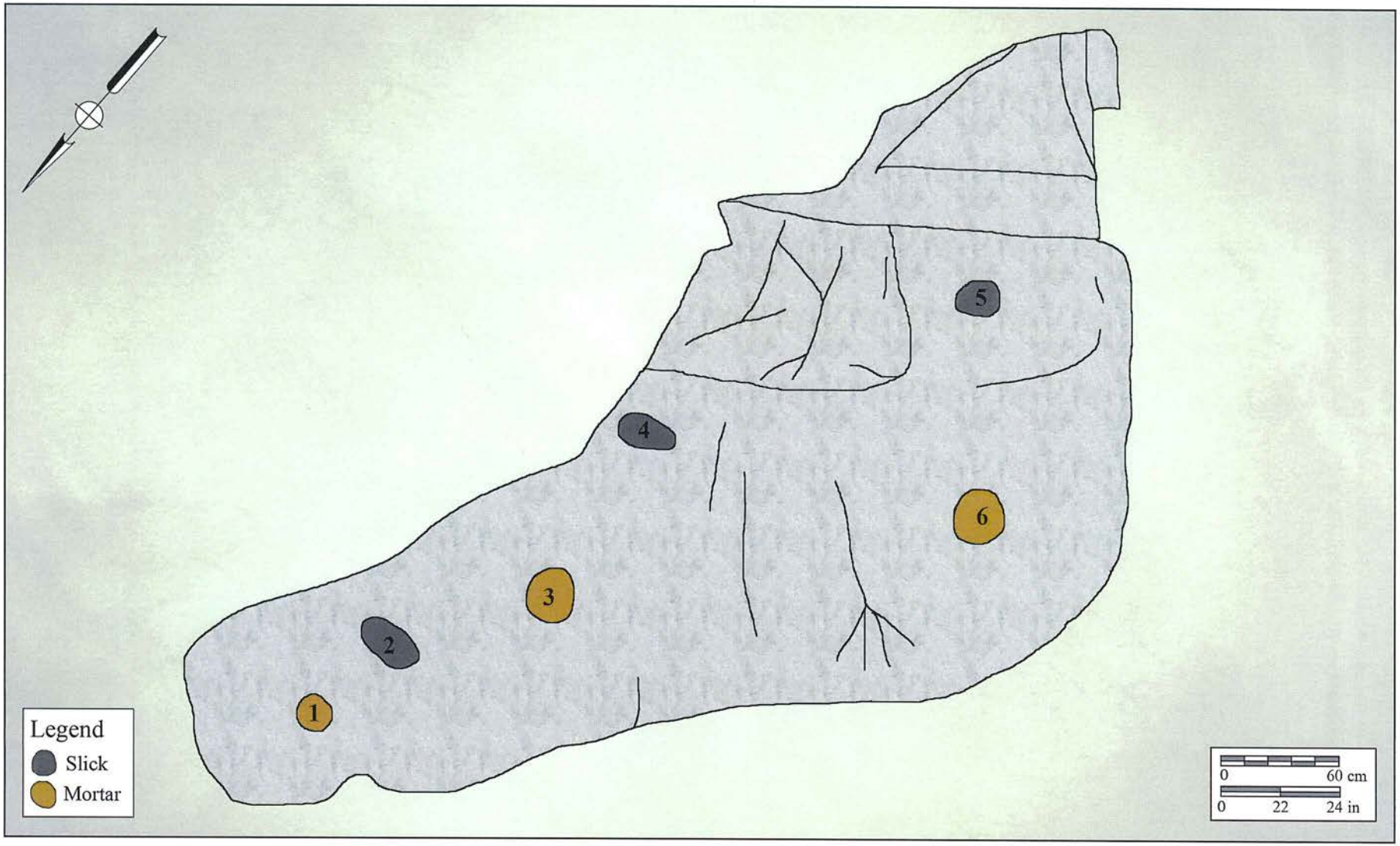
Bedrock Milling Feature PP at Site SDI-776A and B, facing south.



Bedrock Milling Feature OO

Site SDI-776A and B

The Ocean Breeze Ranch Project



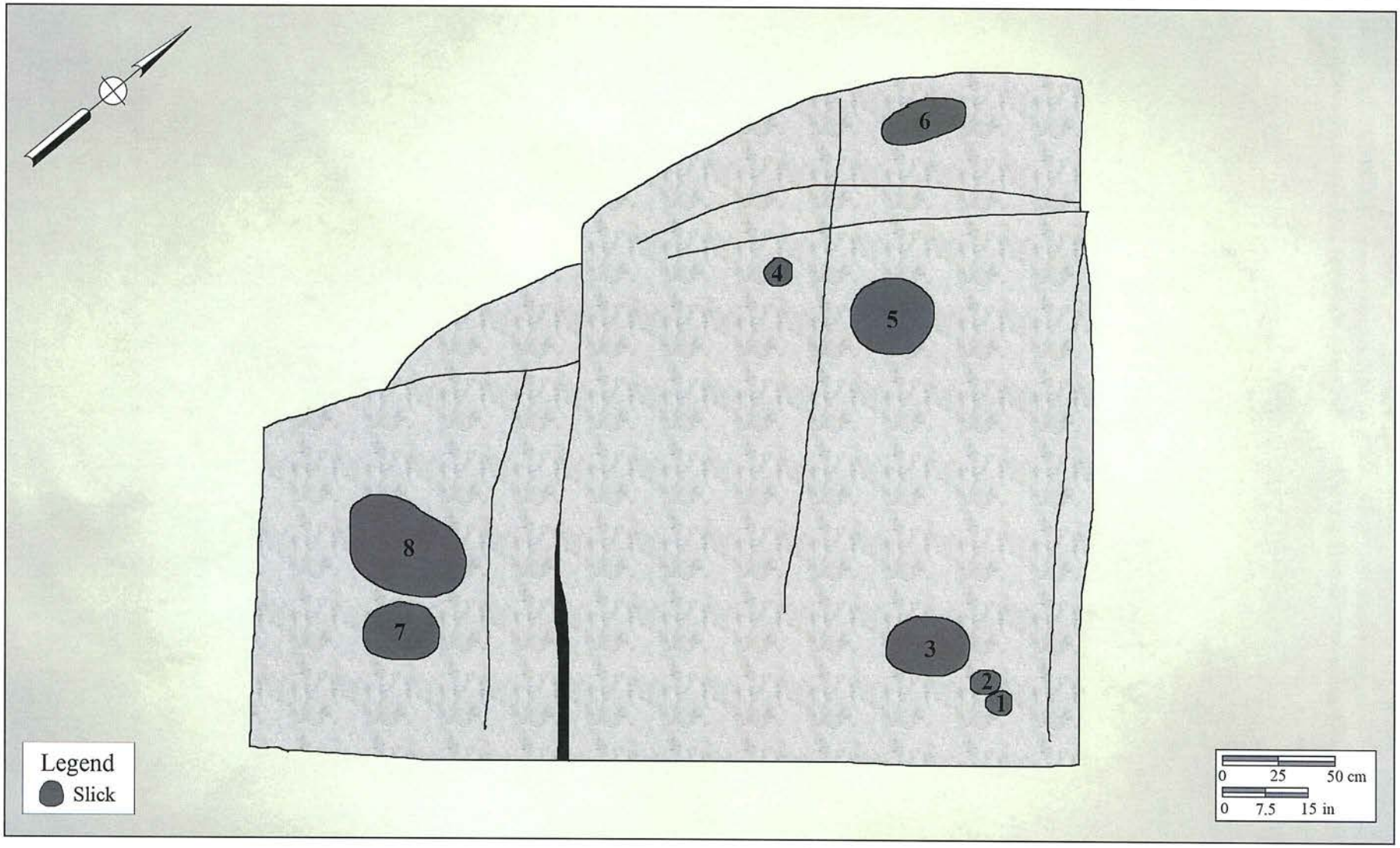
Bedrock Milling Feature PP

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature QQ at Site SDI-776A and B, facing west.

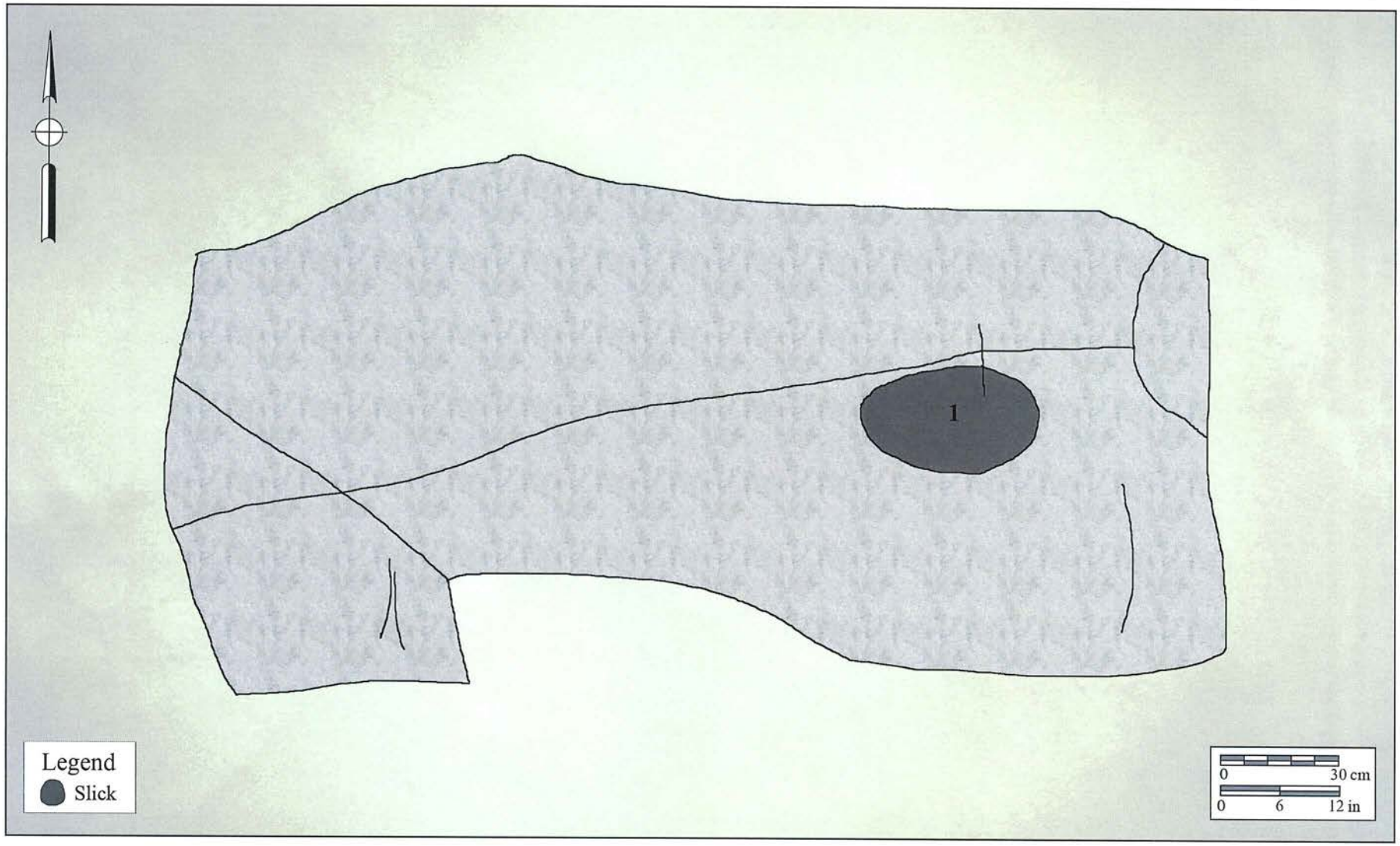
Bedrock Milling Feature RR at Site SDI-776A and B, facing northeast.



Bedrock Milling Feature QQ

Site SDI-776A and B

The Ocean Breeze Ranch Project



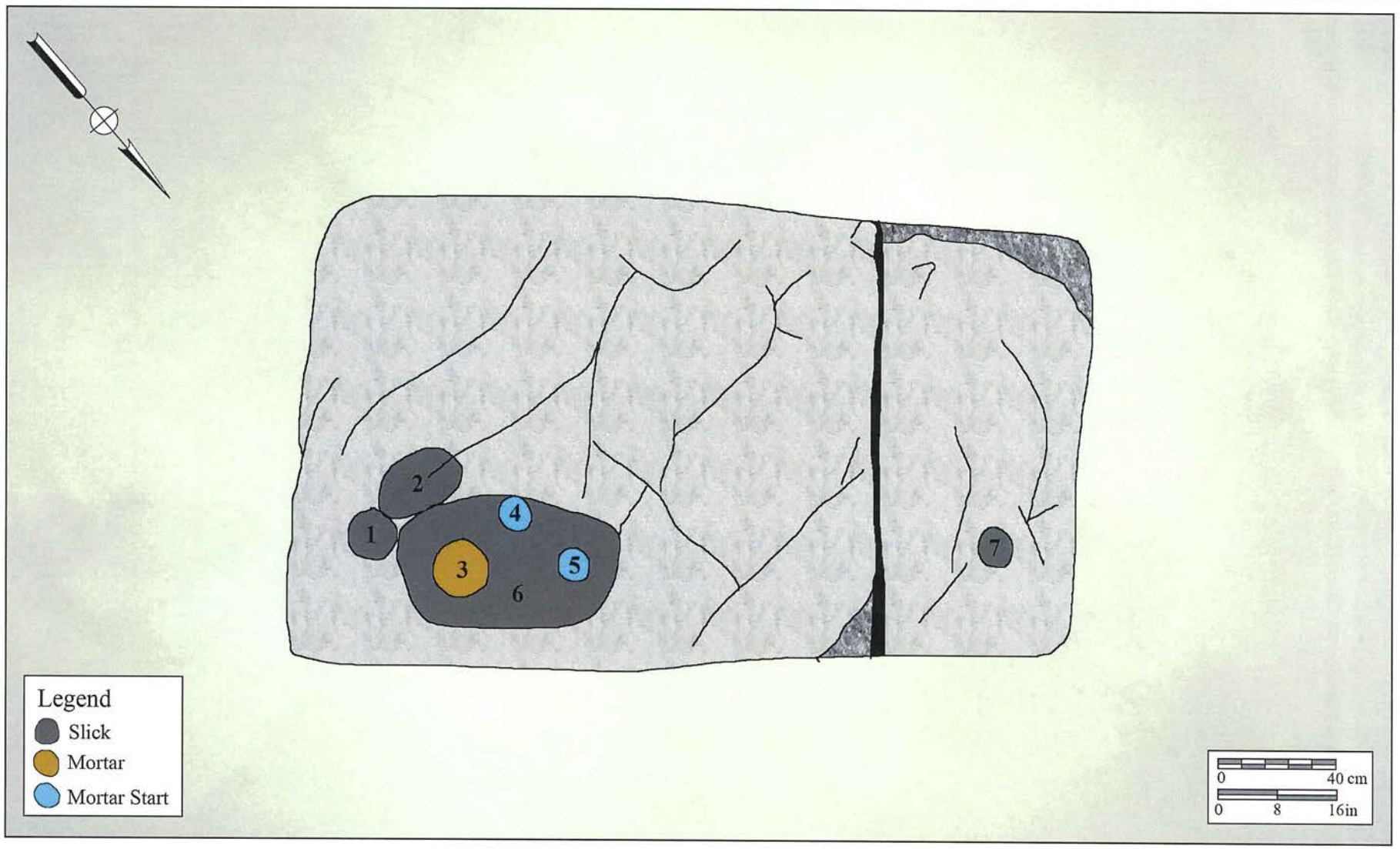
Bedrock Milling Feature RR

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature SS at Site SDI-776A and B, facing southeast.

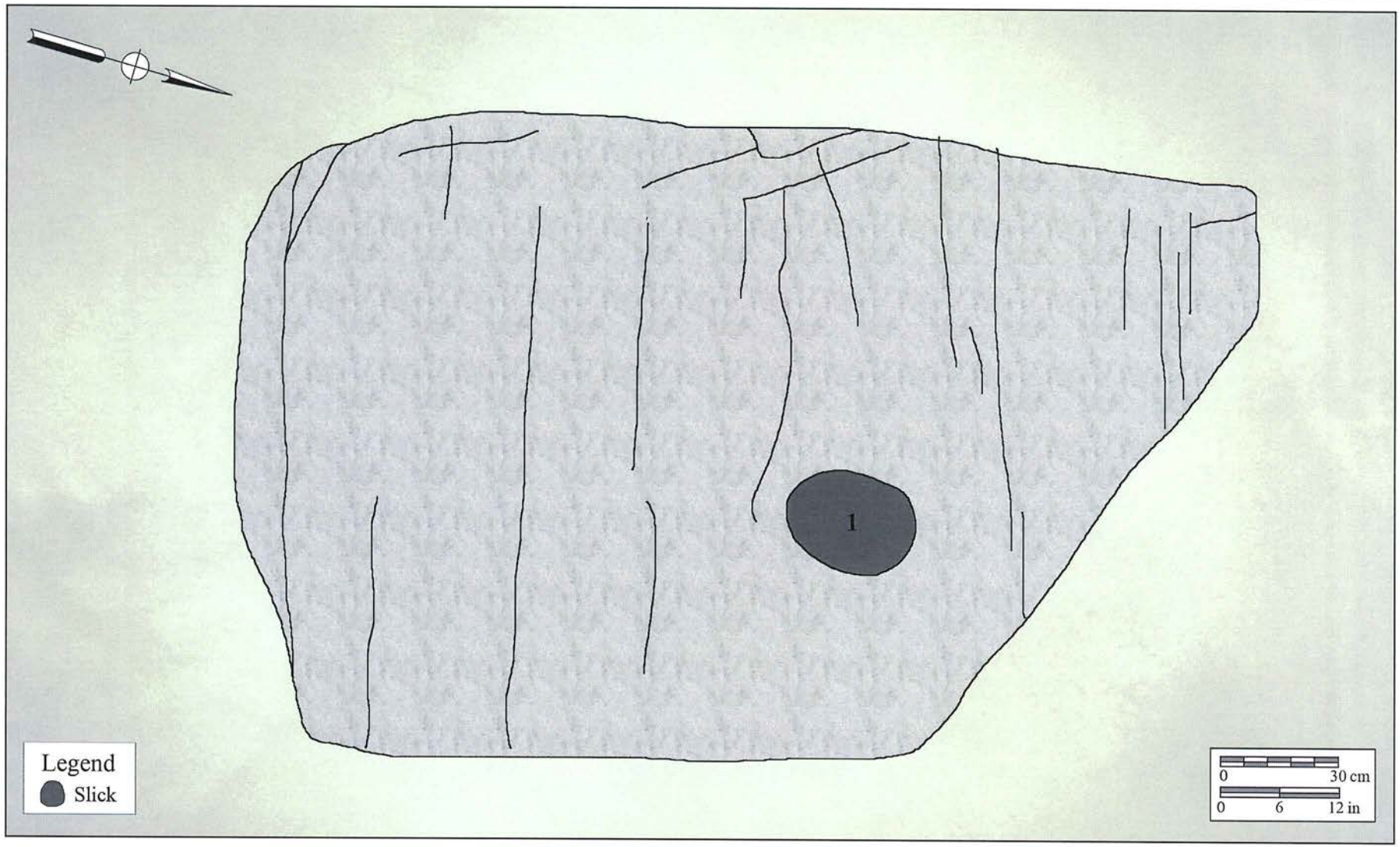
Bedrock Milling Feature TT at Site SDI-776A and B, facing southeast.



Bedrock Milling Feature SS

Site SDI-776A and B

The Ocean Breeze Ranch Project



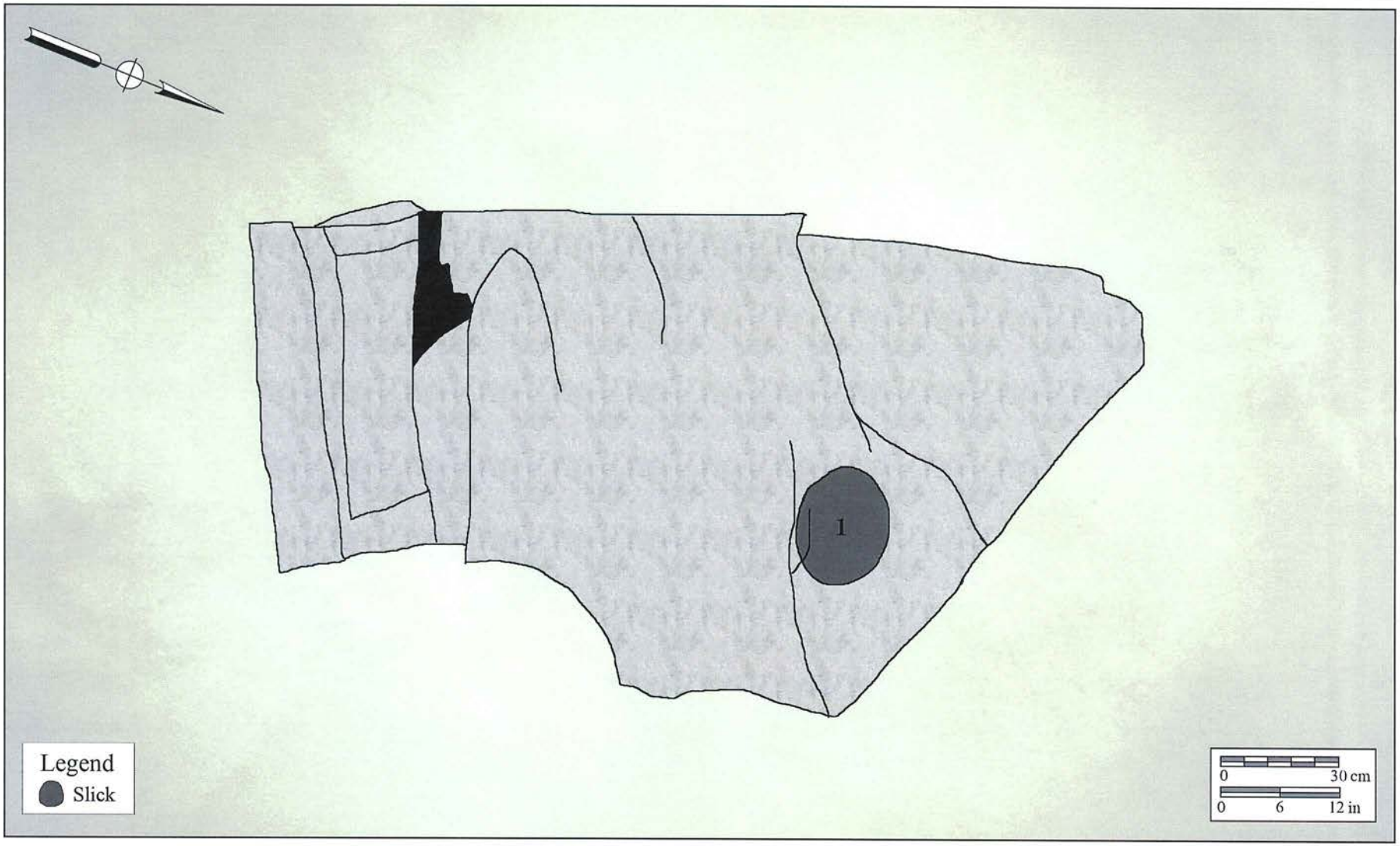
Bedrock Milling Feature TT

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature UU at Site SDI-776A and B, facing southeast.

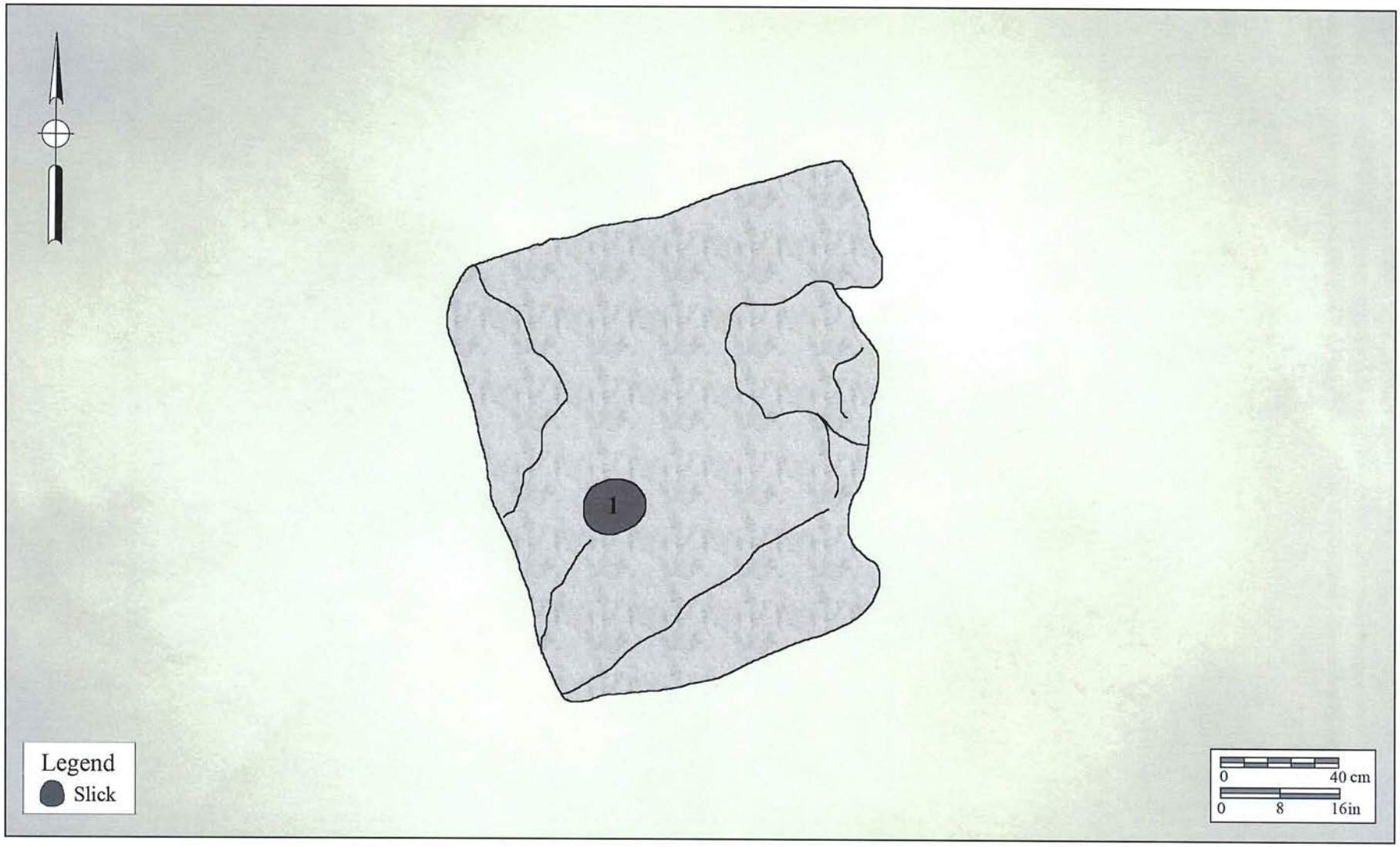
Bedrock Milling Feature VV at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature UU

Site SDI-776A and B

The Ocean Breeze Ranch Project



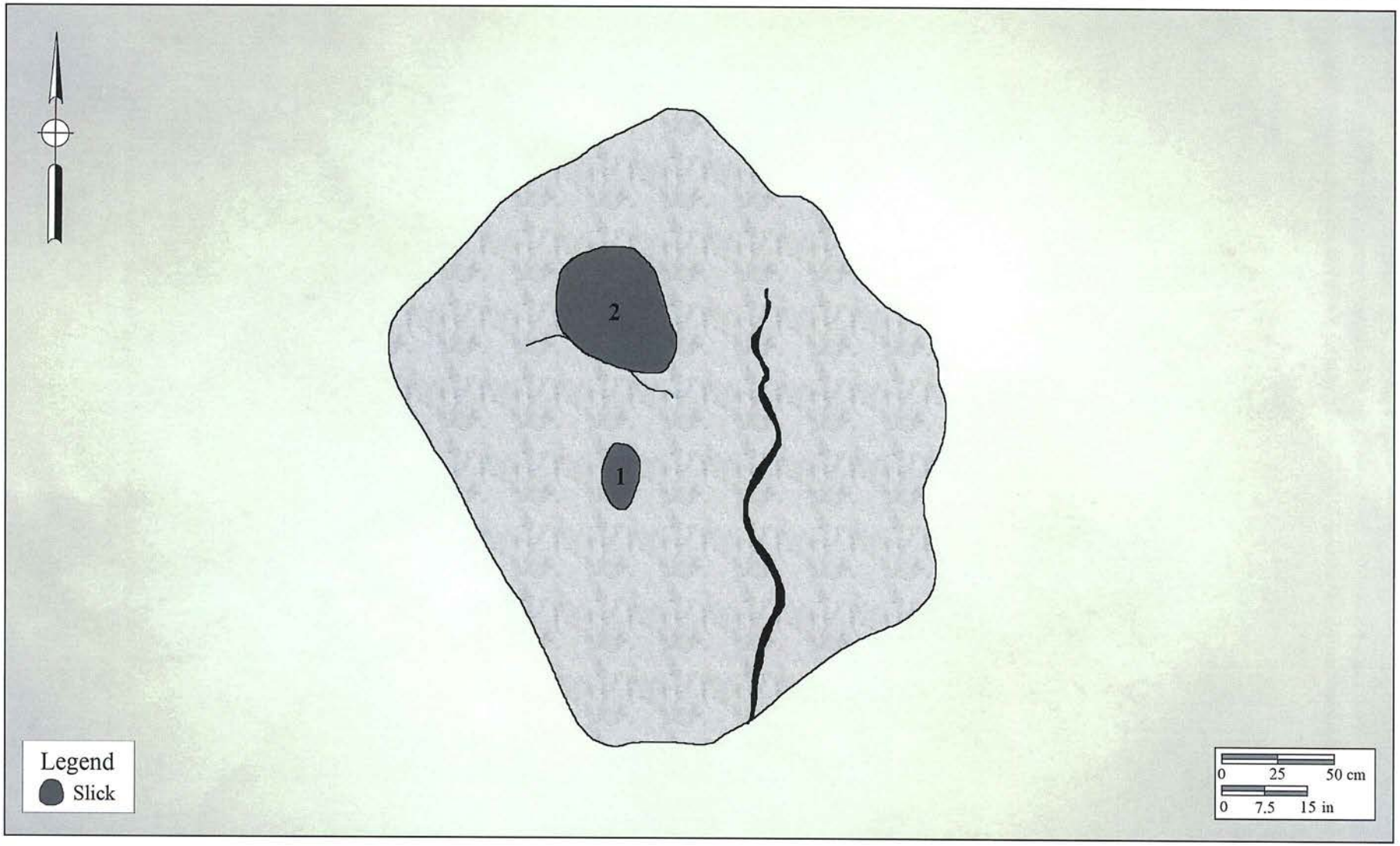
Bedrock Milling Feature VV

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature WW at Site SDI-776A and B, facing north.

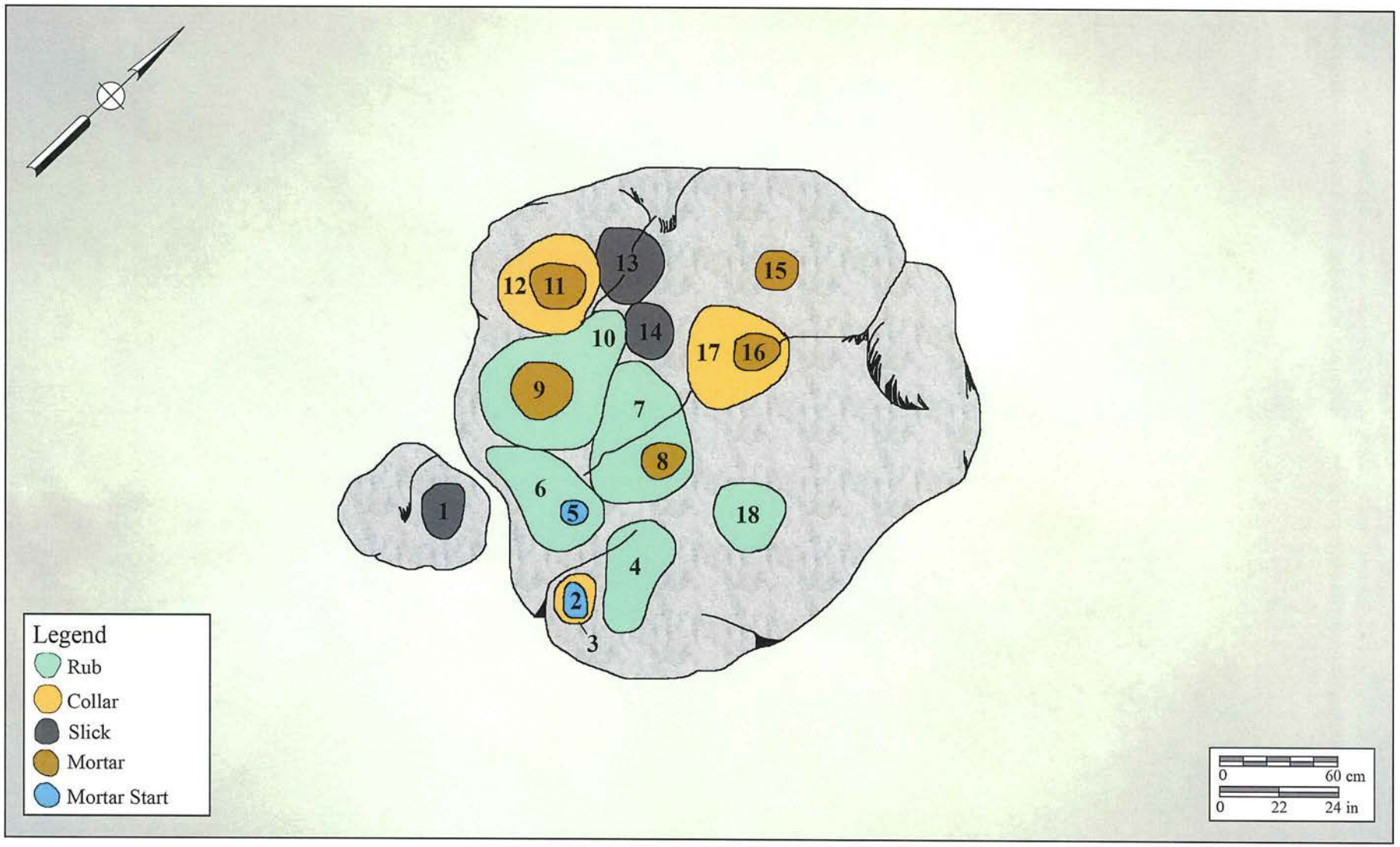
Bedrock Milling Feature XX at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature WW

Site SDI-776A and B

The Ocean Breeze Ranch Project



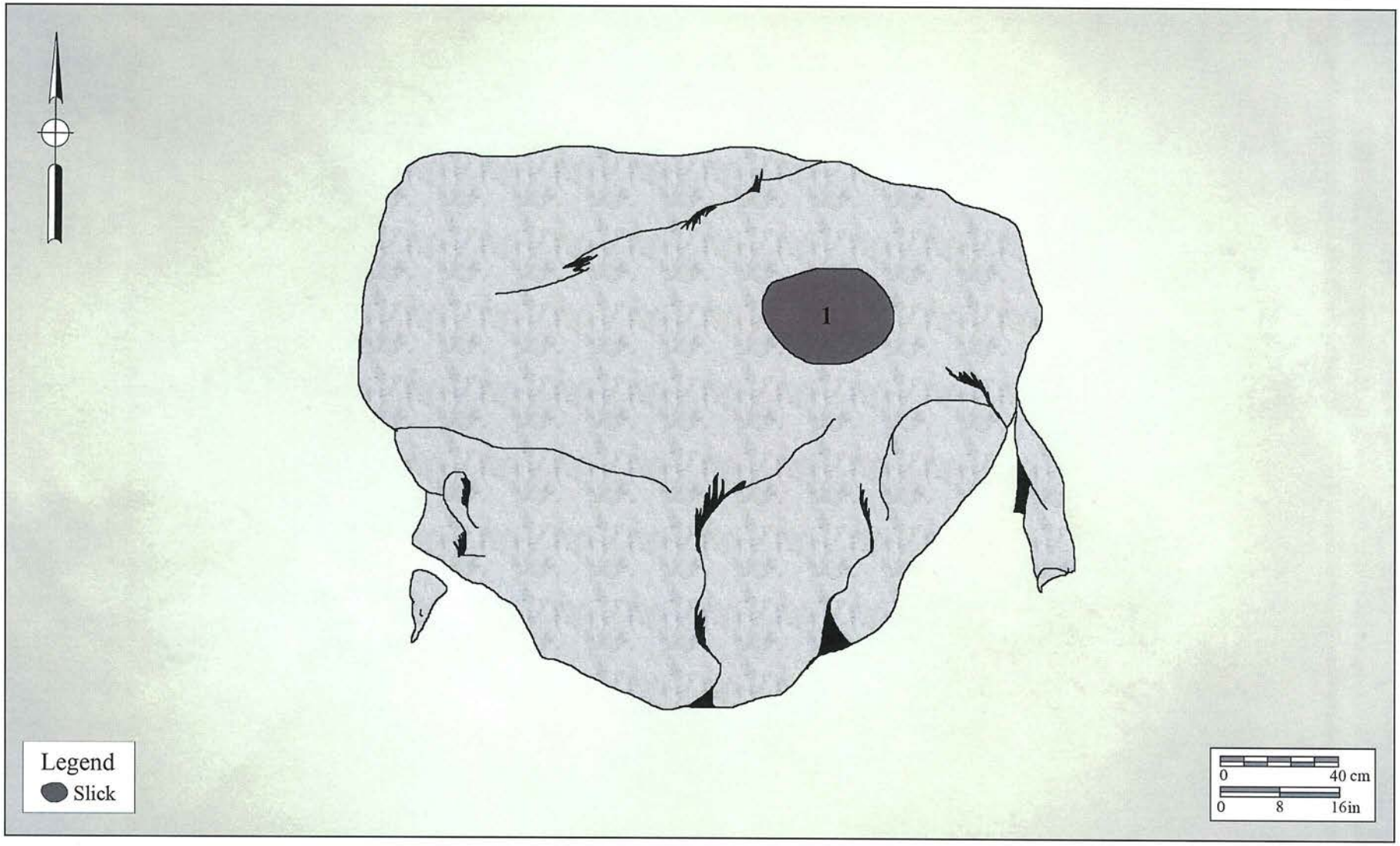
Bedrock Milling Feature XX

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature YY at Site SDI-776A and B, facing northwest.

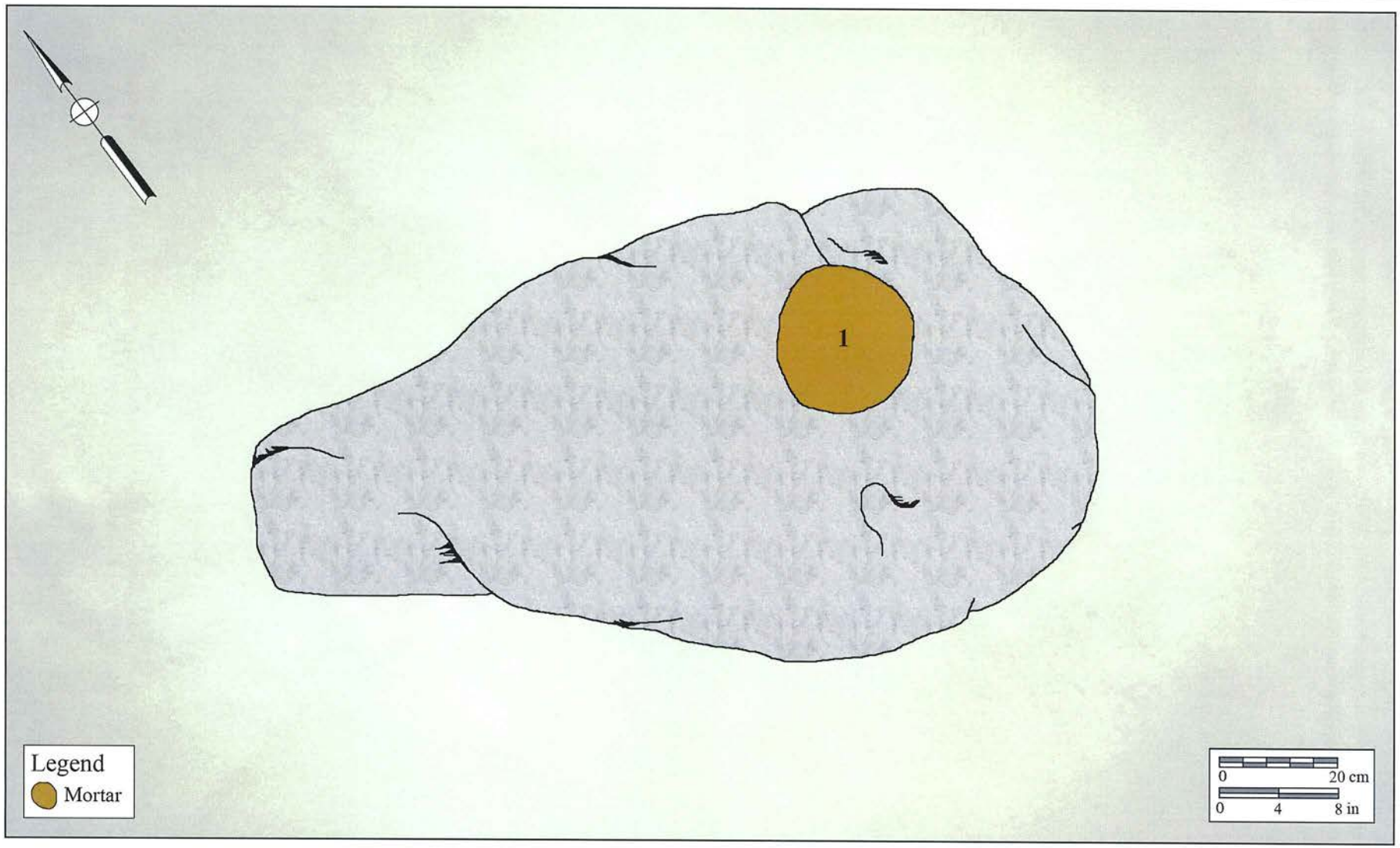
Bedrock Milling Feature ZZ at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature YY

Site SDI-776A and B

The Ocean Breeze Ranch Project



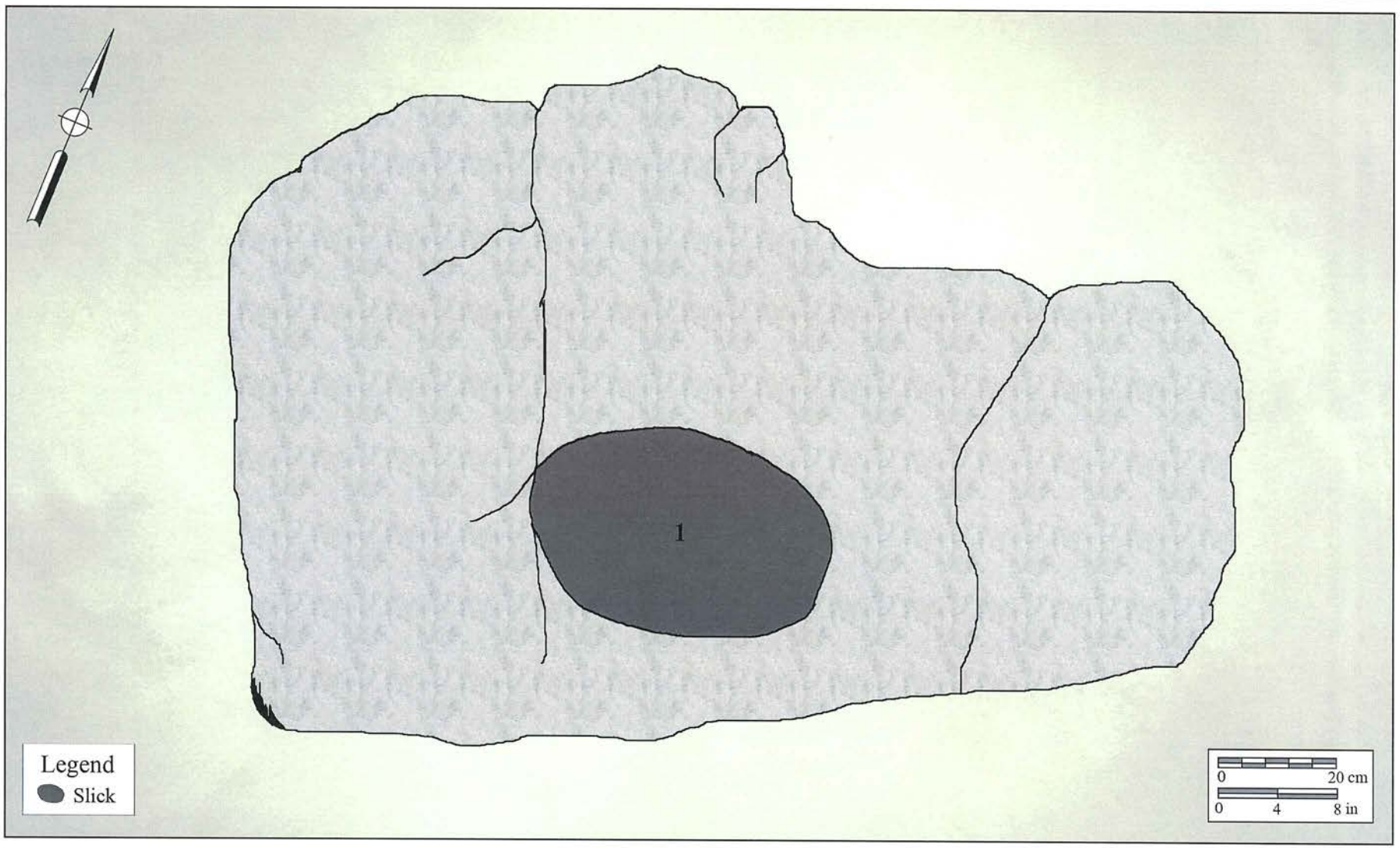
Bedrock Milling Feature ZZ

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature AAA at Site SDI-776A and B, facing northwest.

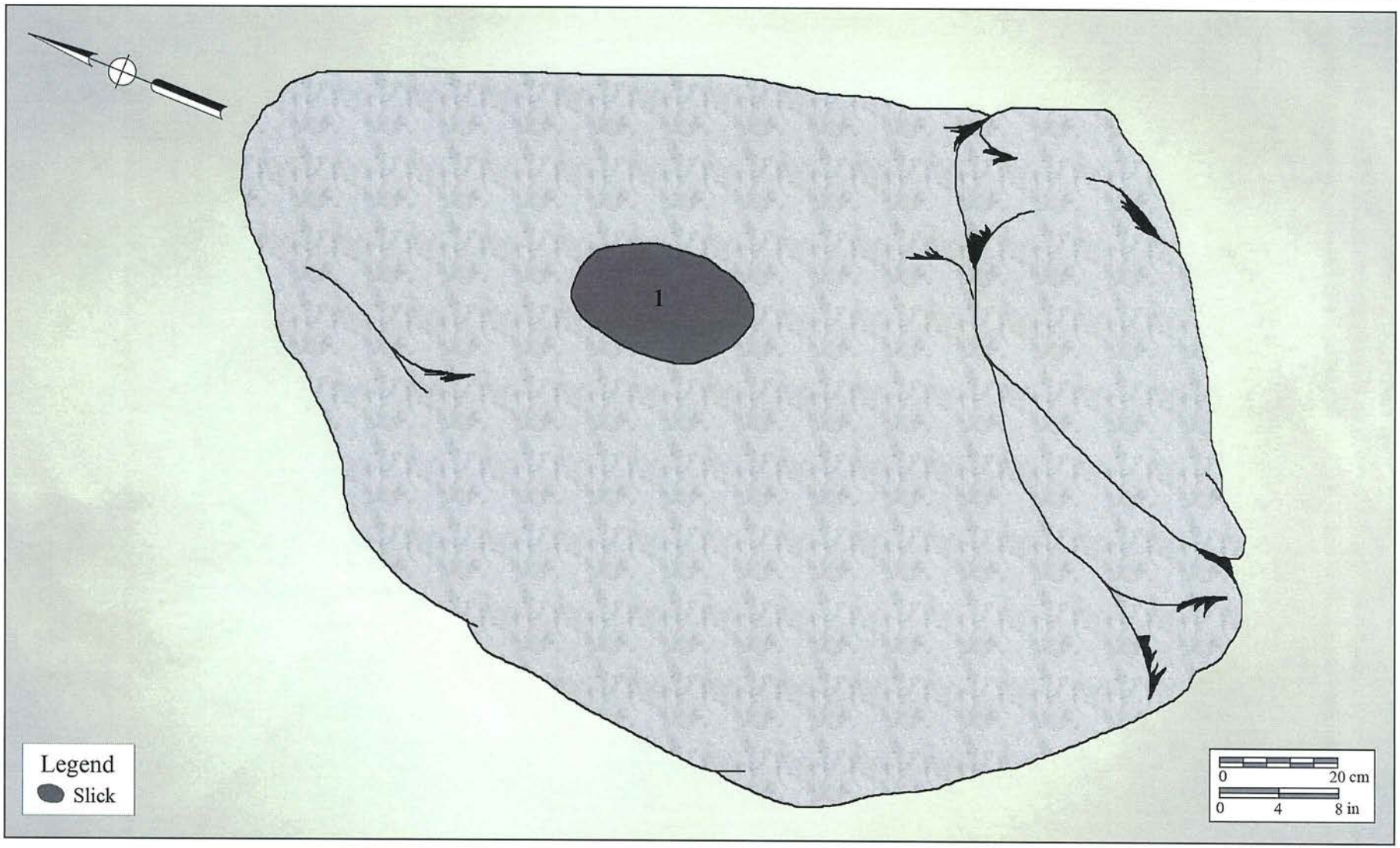
Bedrock Milling Feature BBB at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature AAA

Site SDI-776A and B

The Ocean Breeze Ranch Project



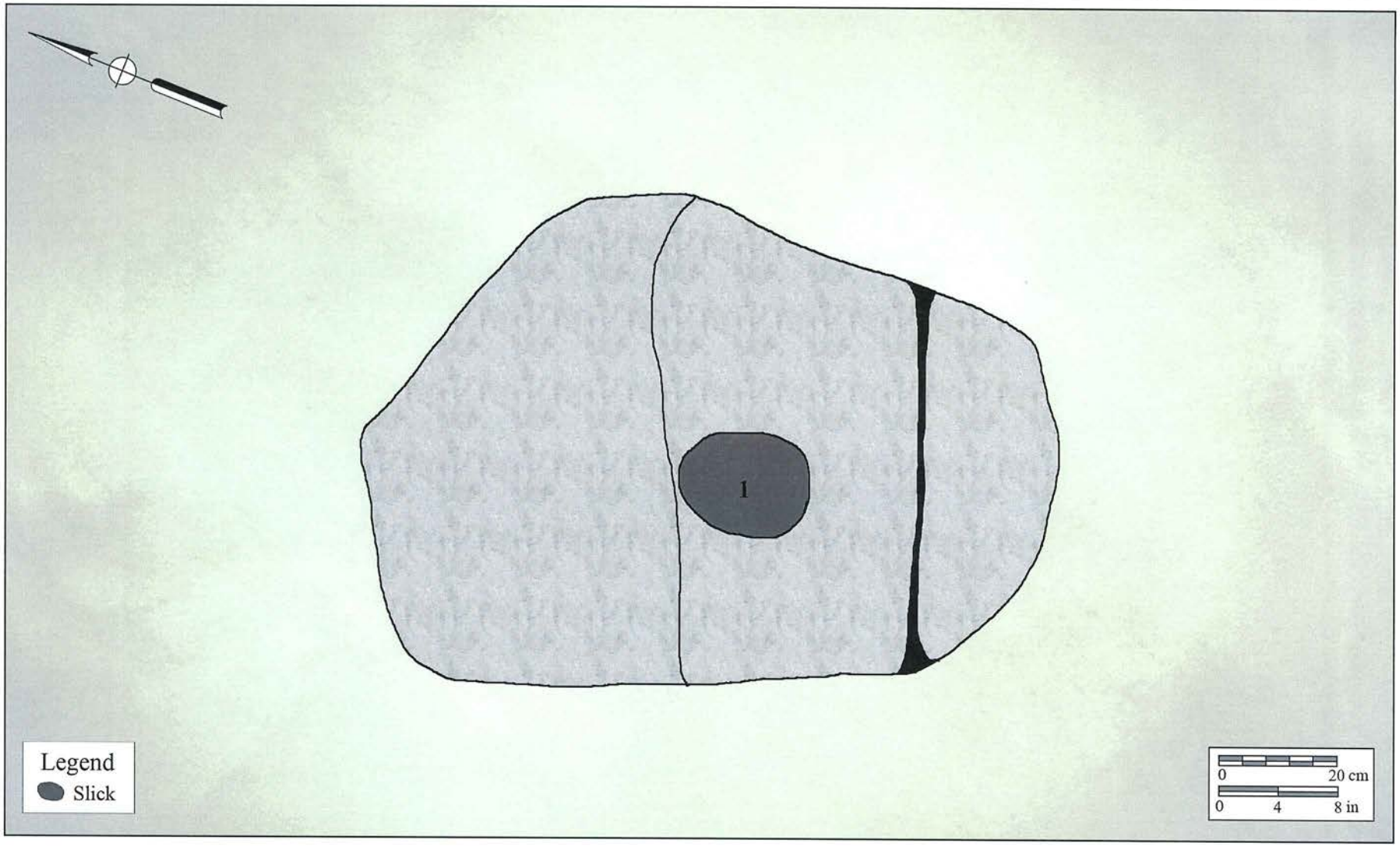
Bedrock Milling Feature BBB

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature CCC at Site SDI-776A and B, facing northwest.

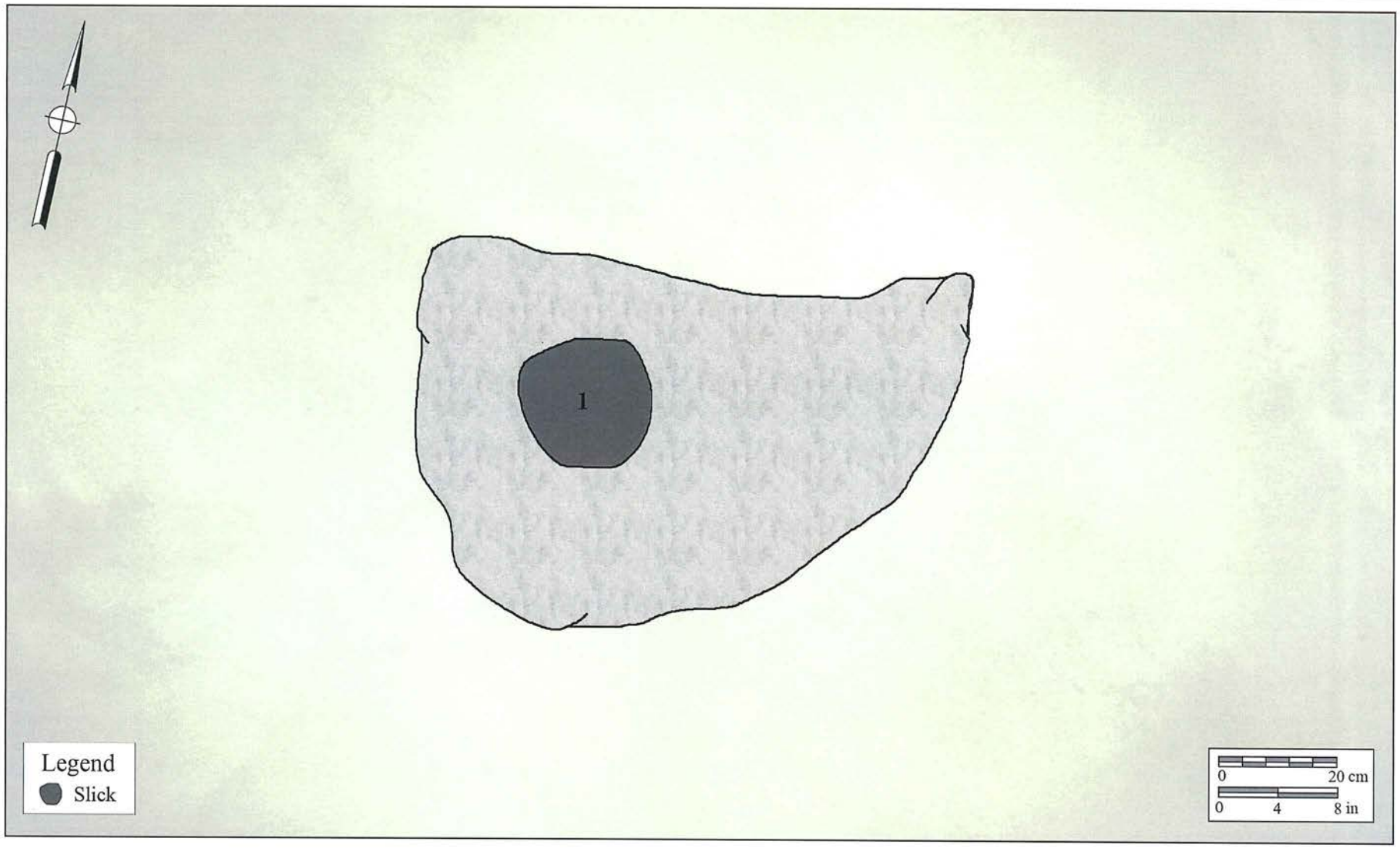
Bedrock Milling Feature DDD at Site SDI-776A and B, facing north.



Bedrock Milling Feature CCC

Site SDI-776A and B

The Ocean Breeze Ranch Project



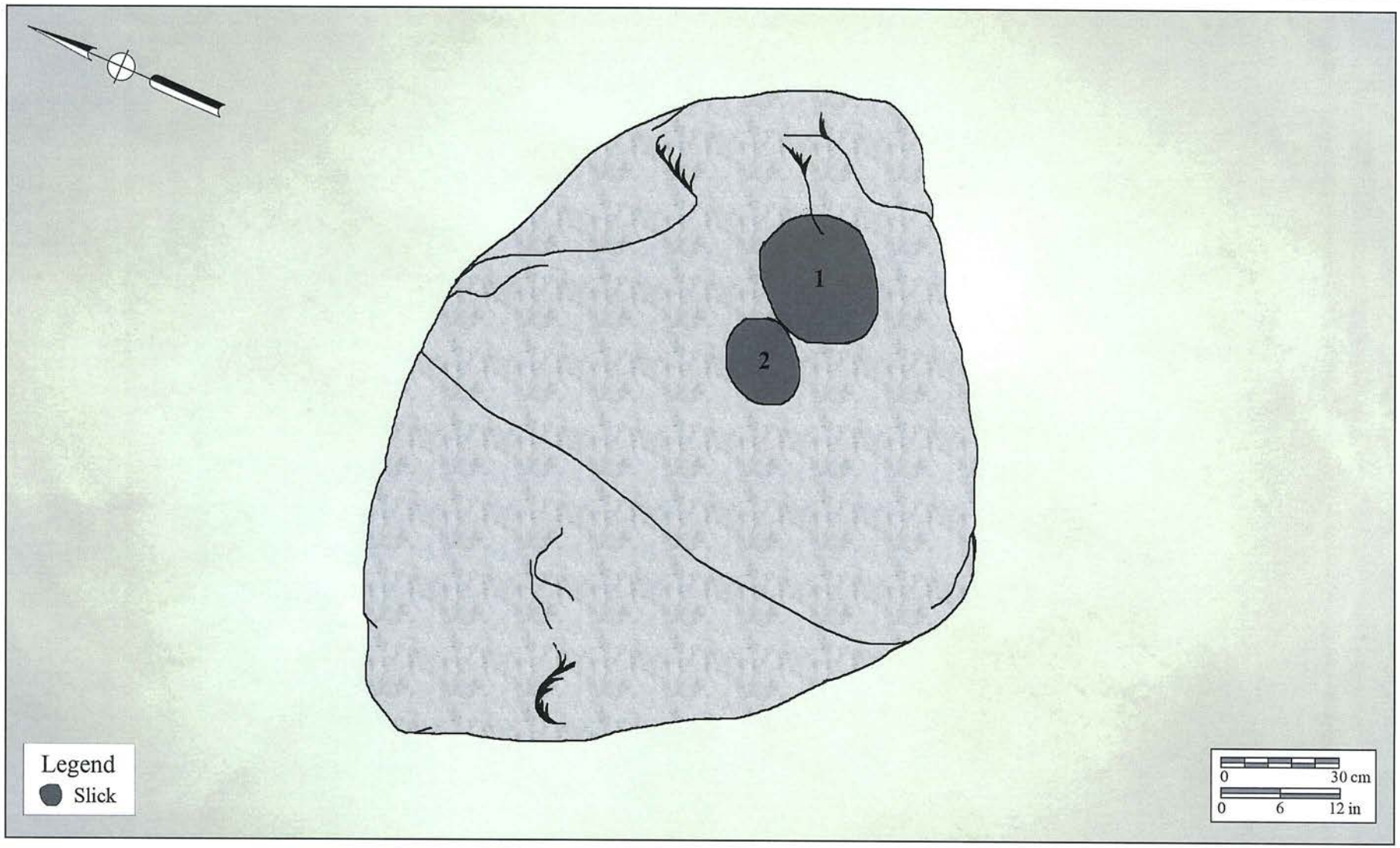
Bedrock Milling Feature DDD

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature EEE at Site SDI-776A and B, facing northeast.

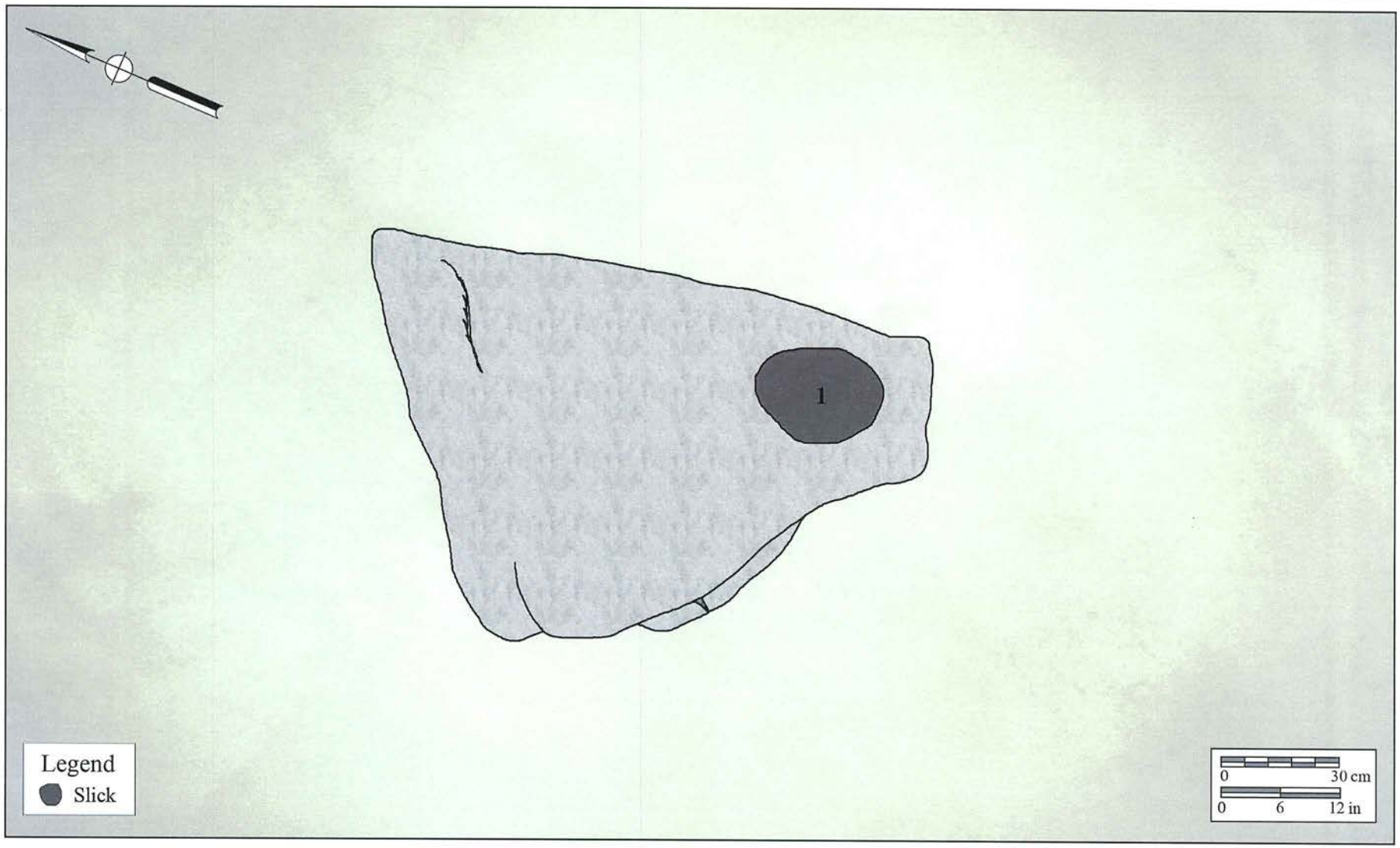
Bedrock Milling Feature FFF at Site SDI-776A and B, facing northeast.



Bedrock Milling Feature EEE

Site SDI-776A and B

The Ocean Breeze Ranch Project



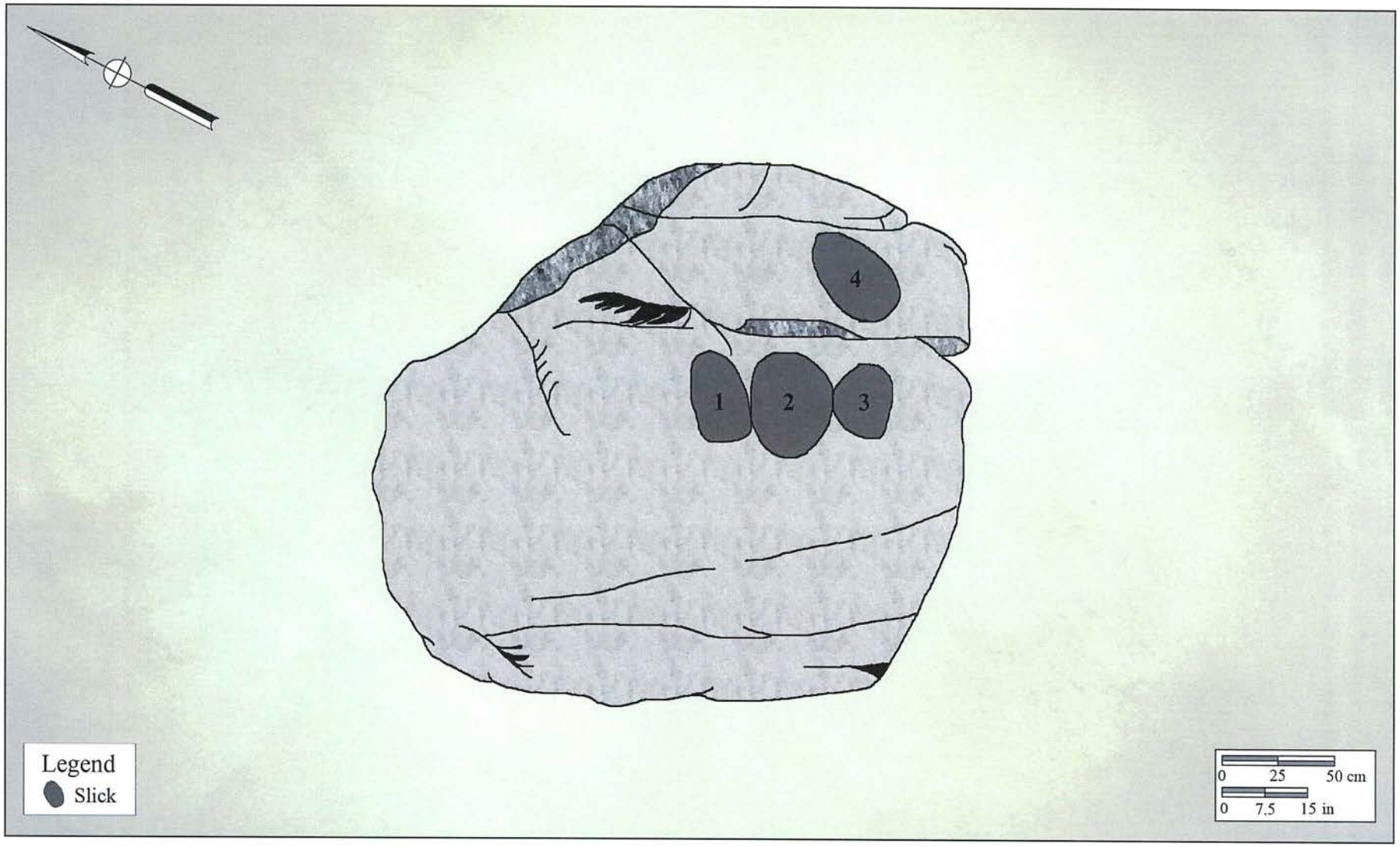
Bedrock Milling Feature FFF

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature GGG at Site SDI-776A and B, facing southwest.

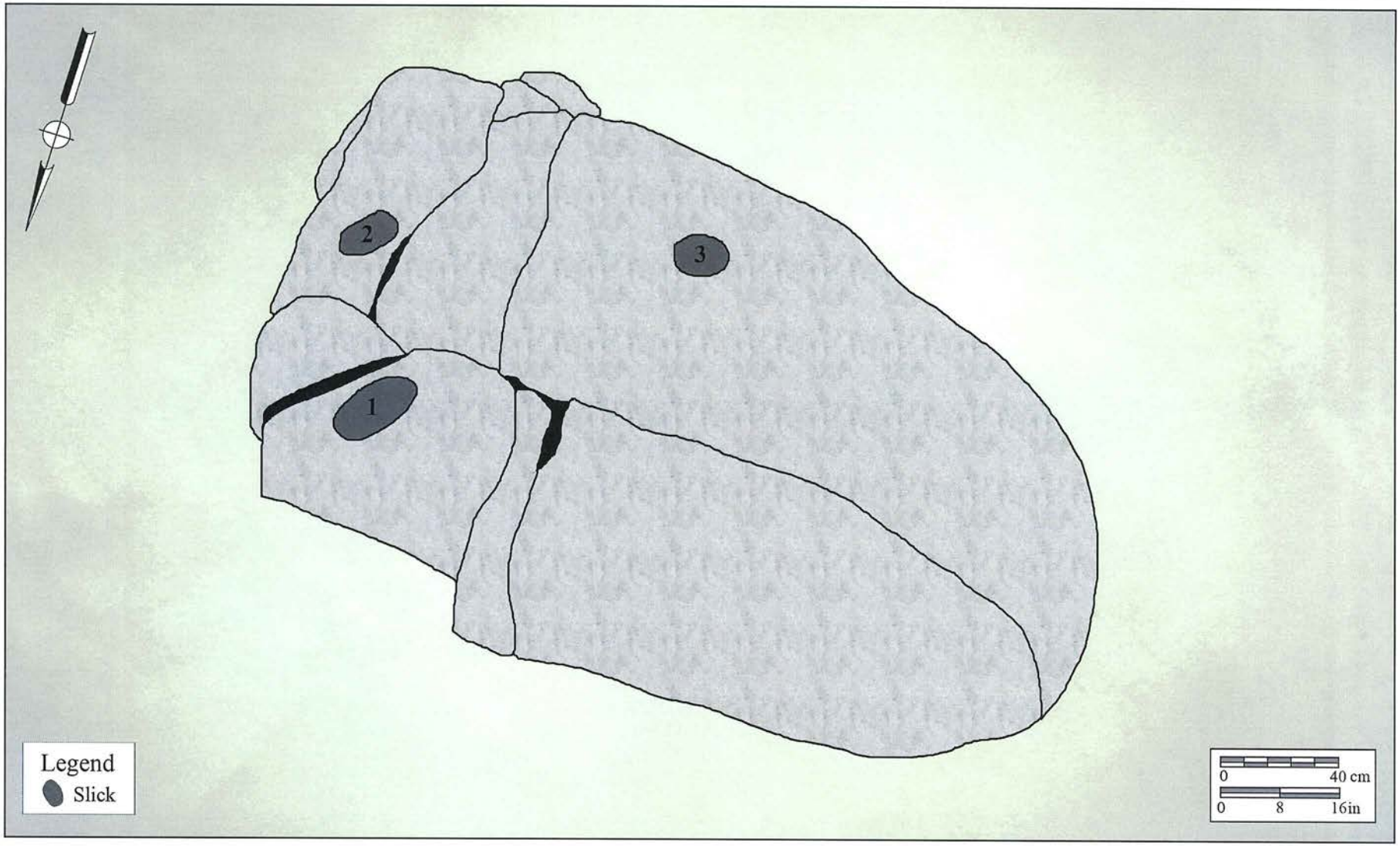
Bedrock Milling Feature HHH at Site SDI-776A and B, facing southwest.



Bedrock Milling Feature GGG

Site SDI-776A and B

The Ocean Breeze Ranch Project



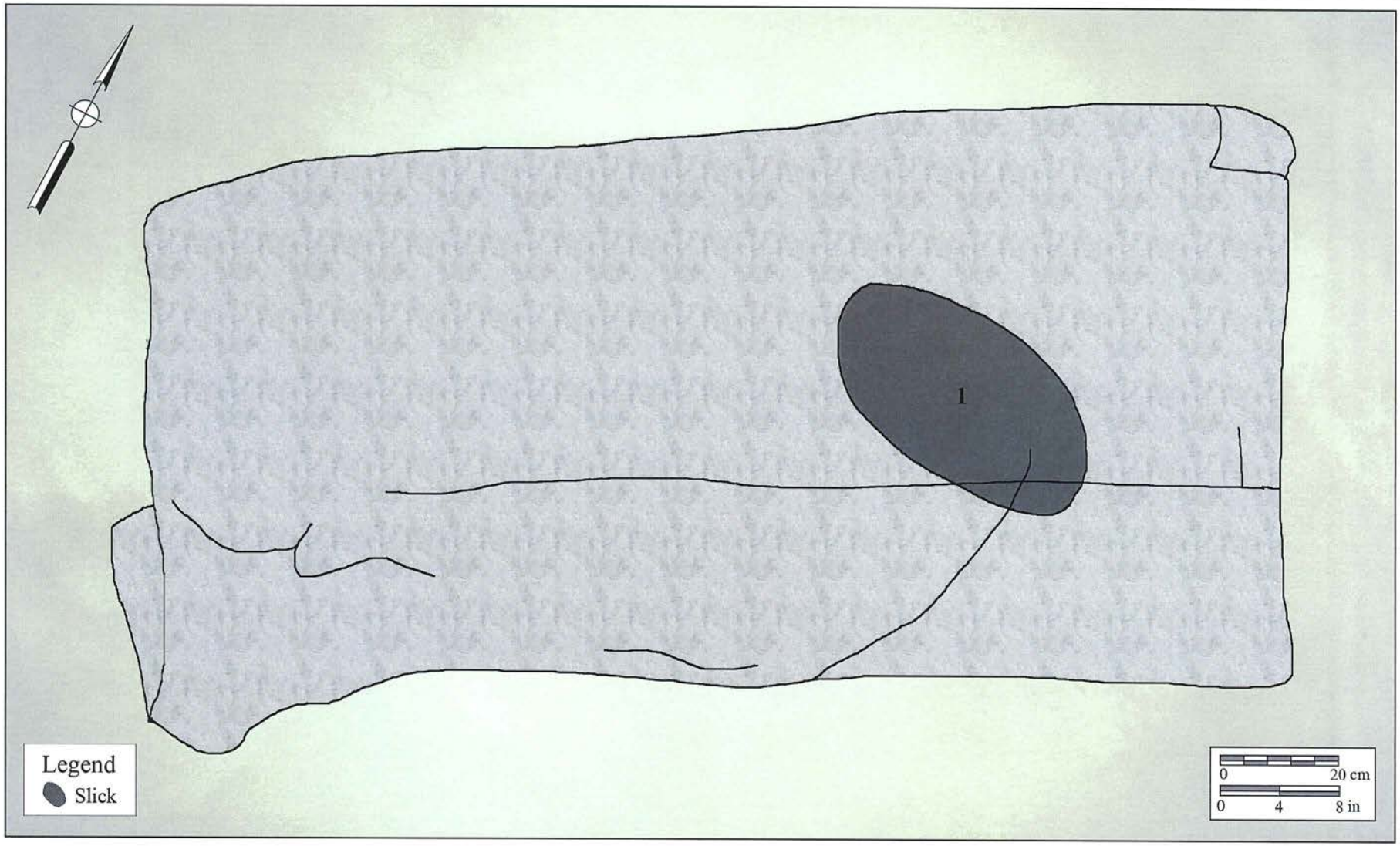
Bedrock Milling Feature HHH

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature III at Site SDI-776A and B, facing north.

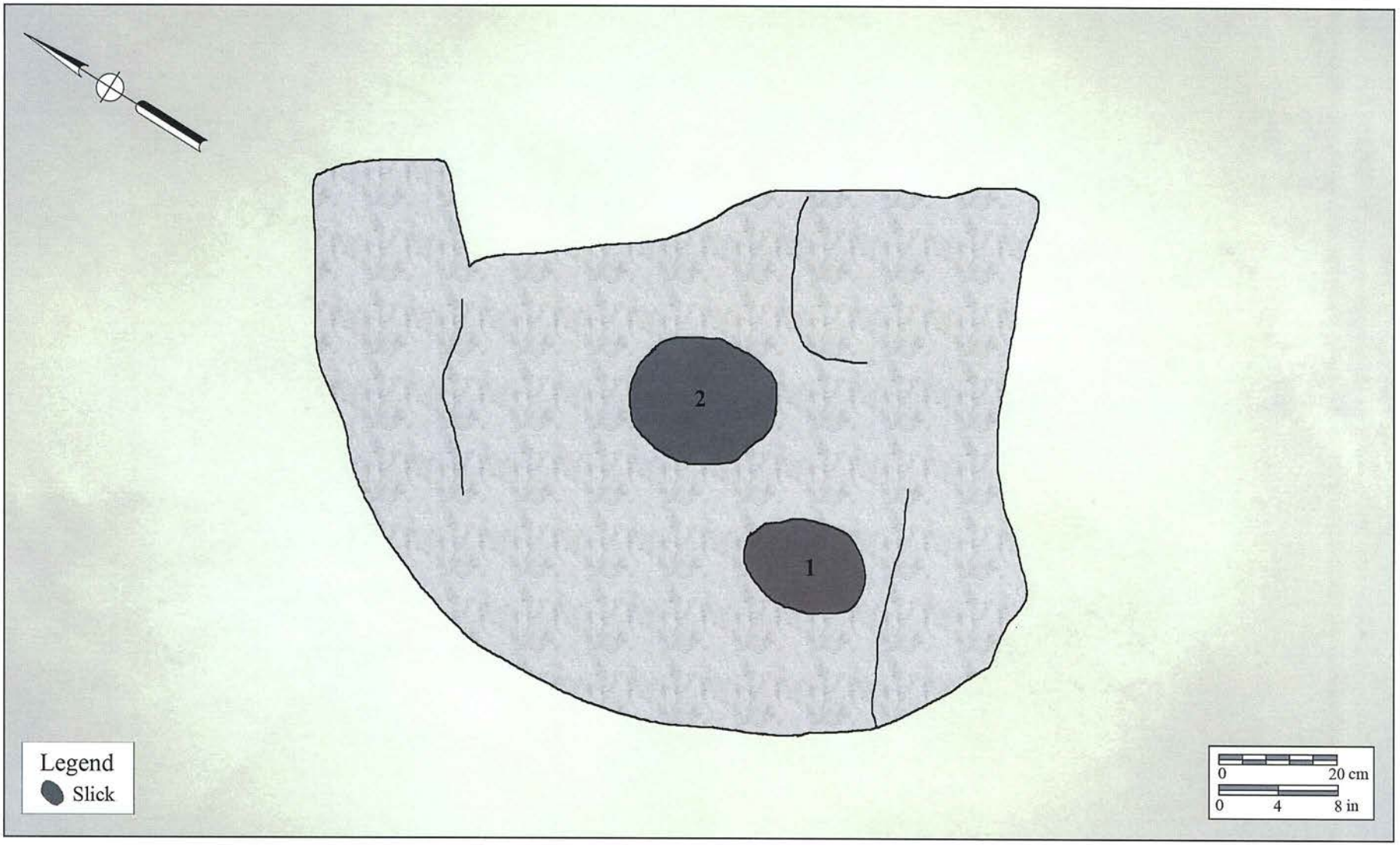
Bedrock Milling Feature JJJ at Site SDI-776A and B, facing northeast.



Bedrock Milling Feature III

Site SDI-776A and B

The Ocean Breeze Ranch Project



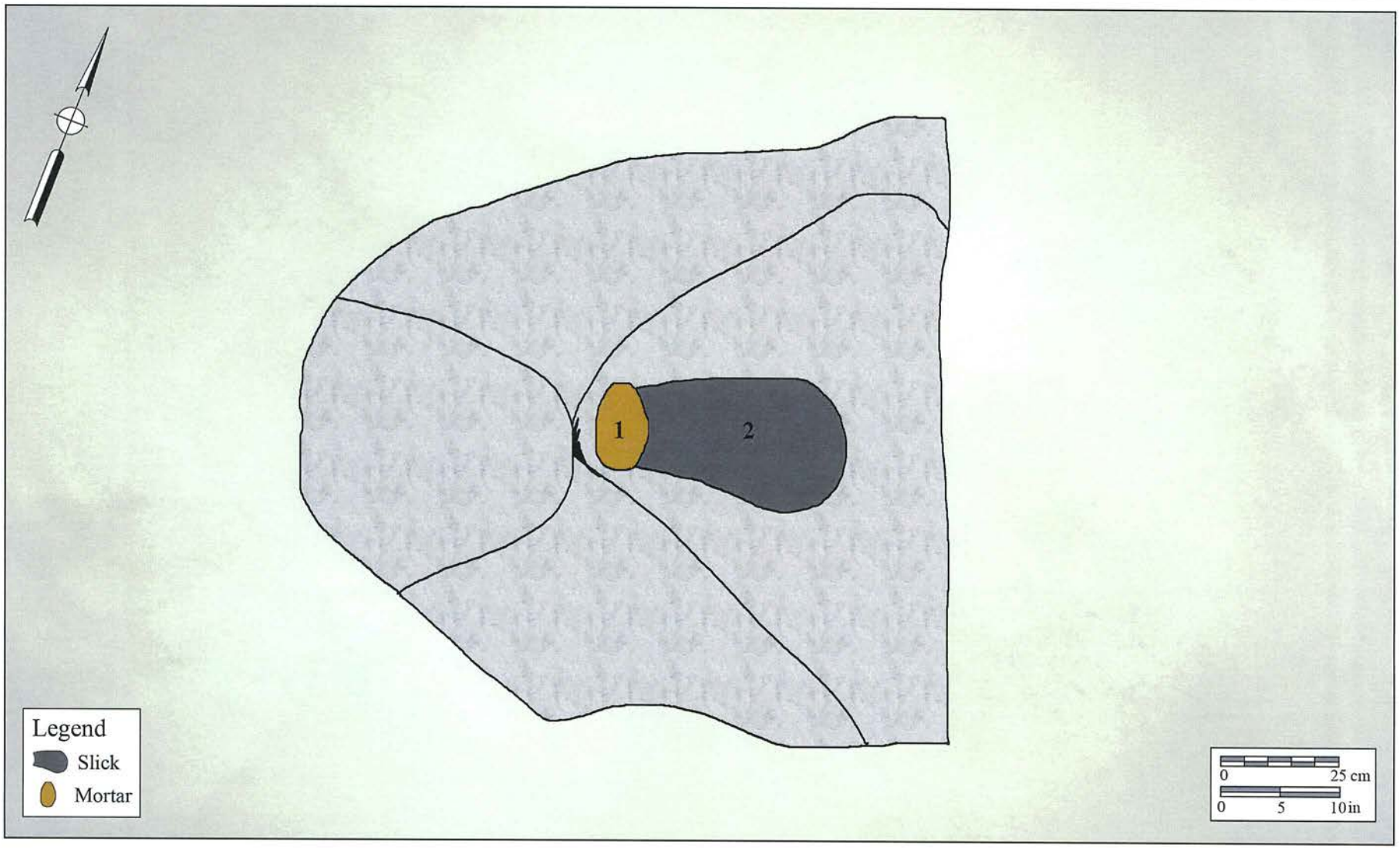
Bedrock Milling Feature JJJ

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature KKK at Site SDI-776A and B, facing northeast.

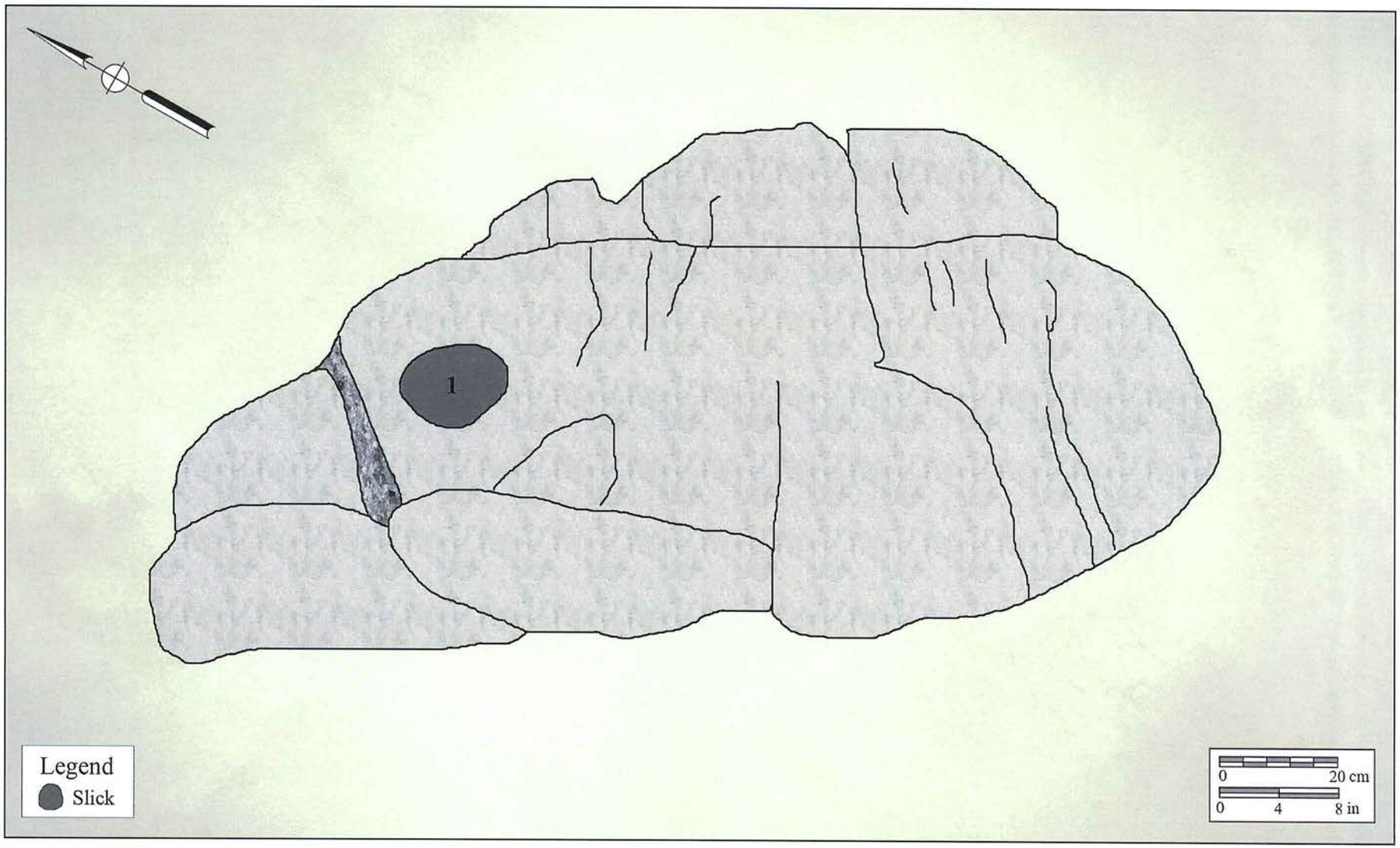
Bedrock Milling Feature LLL at Site SDI-776A and B, facing northwest.



Bedrock Milling Feature KKK

Site SDI-776A and B

The Ocean Breeze Ranch Project

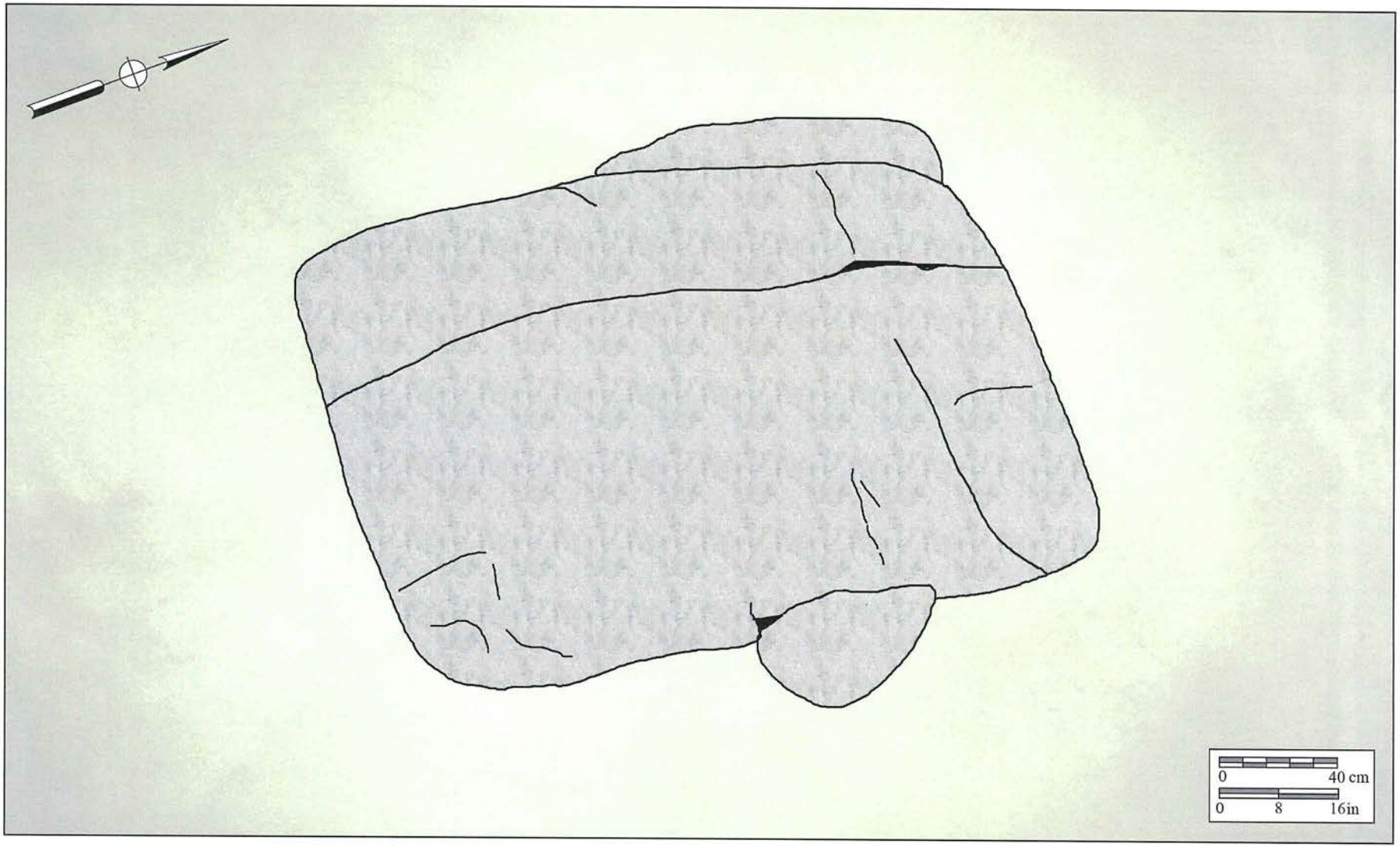


Bedrock Milling Feature LLL

Site SDI-776A and B

The Ocean Breeze Ranch Project

Bedrock Milling Feature MMM at Site SDI-776A and B, facing west. Due to the presence of an active beehive in the vicinity of BMF MMM, no milling surfaces were drawn or measured.



Bedrock Milling Feature MMM

Site SDI-776A and B

The Ocean Breeze Ranch Project

APPENDIX H

Artifact Catalog: Site SDI-776A and B

Site SDI-776A and B
The Ocean Breeze Ranch Project (15-162)
Master Artifact Catalog
2016 Field Year

Site Number	Cat No	Unit Type	Unit No	Depth	Provenience	Artifact Class	Object Type	Object Subtype	Material Type	Modification	Heat-Altered	Condition	Portion	L (mm)	W (mm)	Th (mm)	Qty	Weight (g)	Box	Comments
SDI-776	1	STP	2	20-30	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.9	1	
SDI-776	2	STP	2	20-30	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.4	1	
SDI-776	3	STP	3	0-10	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					1	0.2	1	
SDI-776	4	STP	4	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware	Ext: red, Int: brown		Fragment	Body				1	1.9	1	
SDI-776	5	STP	4	0-10	Locus A	Flaked Stone	Debitage		PDL Chert			Fragment					2	1	1	
SDI-776	6	STP	4	10-20	Locus A	Fire Altered Rock	Fire Altered Rock		Granite		X	Fragment					1	299.2	1	
SDI-776	7	STP	4	20-30	Locus A, 20-28 cm	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.7	1	
SDI-776	8	STP	4	20-30	Locus A, 20-28 cm	Flaked Stone	Debitage		Volcanic			Complete					1	0.136	1	
SDI-776	9	STP	4	0-10	Locus A	Ground Stone	Metate		Granite		X	Fragment		116.61	167.85	108.72	1	2321	1	
SDI-776	10	STP	5	0-10	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.488	1	
SDI-776	11	STP	5	0-10	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					4	1.234	1	
SDI-776	12	STP	5	0-10	Locus A	Flaked Stone	Debitage		Quartz			Complete					3	0.286	1	
SDI-776	13	STP	5	0-10	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					5	8.466	1	
SDI-776	14	STP	5	10-20	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	18.3	1	
SDI-776	15	STP	5	10-20	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						3.918	1	
SDI-776	16	STP	5	10-20	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					8	3.302	1	
SDI-776	17	STP	5	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					4	0.932	1	
SDI-776	18	STP	5	10-20	Locus A	Flaked Stone	Debitage		Volcanic			Complete					1	0.224	1	
SDI-776	19	STP	5	20-30	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.334	1	
SDI-776	20	STP	5	20-30	Locus A	Fauna	Shell	Unmodified	Donax sp., Indeterminate			Fragment						0.314	1	Donax (1), Ind. (1)
SDI-776	21	STP	5	20-30	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					2	2.104	1	
SDI-776	22	STP	5	20-30	Locus A	Flaked Stone	Debitage		Quartz			Complete					4	0.44	1	
SDI-776	23	STP	5	20-30	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					1	0.886	1	
SDI-776	24	STP	5	30-40	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.476	1	
SDI-776	25	STP	5	30-40	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					1	3.346	1	
SDI-776	26	STP	5	30-40	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.296	1	
SDI-776	27	STP	5	30-40	Locus A	Flaked Stone	Debitage		Volcanic			Complete					2	0.104	1	
SDI-776	28	STP	6	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				3	2.124	1	
SDI-776	29	STP	6	0-10	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.206	1	
SDI-776	30	STP	6	0-10	Locus A	Flaked Stone	Debitage		Metavolcanic		X	Complete					3	0.34	1	
SDI-776	31	STP	6	10-20	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.298	1	
SDI-776	32	STP	6	10-20	Locus A	Fauna	Shell	Unmodified	Chione sp.			Fragment						2.41	1	Chione (3)
SDI-776	33	STP	6	10-20	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					2	5.504	1	
SDI-776	34	STP	6	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					4	0.448	1	
SDI-776	35	STP	6	20-30	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.986	1	
SDI-776	36	STP	6	20-30	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					1	0.06	1	
SDI-776	37	STP	6	20-30	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	1.52	1	
SDI-776	38	STP	6	20-30	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					4	8.396	1	
SDI-776	39	STP	6	30-40	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						2.226	1	
SDI-776	40	STP	6	30-40	Locus A	Fauna	Shell	Unmodified	Chione sp., Indeterminate			Fragment						0.93	1	Chione (1), Indeterminate (2)
SDI-776	41	STP	6	30-40	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	0.294	1	
SDI-776	42	STP	6	30-40	Locus A	Flaked Stone	Debitage		Chert			Complete					1	0.288	1	
SDI-776	43	STP	6	30-40	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					2	0.548	1	
SDI-776	44	STP	6	40-50	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						1.934	1	
SDI-776	45	STP	6	40-50	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				7	6.002	1	
SDI-776	46	STP	6	50-60	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						1.574	1	
SDI-776	47	STP	6	50-60	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	3.378	1	
SDI-776	48	STP	6	50-60	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					1	0.054	1	
SDI-776	49	STP	6	60-70	Locus A	Fire Altered Rock	Fire Altered Rock		Granite		X	Fragment					1	32	1	
SDI-776	50	STP	7	0-10	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.694	1	
SDI-776	51	STP	7	20-30	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					1	0.082	1	
SDI-776	52	STP	8	0-10	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					2	0.646	1	
SDI-776	53	STP	8	0-10	Locus A	Flaked Stone	Debitage		Quartz			Complete					3	1.592	1	
SDI-776	54	STP	8	10-20	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.568	1	
SDI-776	55	STP	8	10-20	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					2	2.292	1	
SDI-776	56	STP	8	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					5	0.914	1	
SDI-776	57	STP	8	20-30	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.672	1	
SDI-776	58	STP	8	20-30	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment					1	0.412	1	
SDI-776	59	STP	8	20-30	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					2	0.48	1	
SDI-776	60	STP	8	20-30	Locus A	Flaked Stone	Debitage		Quartz			Complete					6	2.658	1	
SDI-776	61	STP	8	20-30	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					1	0.18	1	
SDI-776	62	STP	8	30-40	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.378	1	
SDI-776	63	STP	8	30-40	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					2	0.596	1	
SDI-776	64	STP	8	30-40	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	0.168	1	
SDI-776	65	STP	8	40-50	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.568	1	
SDI-776	66	STP	8	40-50	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					1	0.102	1	
SDI-776	67	STP	8	40-50	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	0.222	1	
SDI-776	68	STP	8	40-50	Locus A	Flaked Stone	Biface	Preform	PDL Chert		X	Fragment	Base				1	1.946	1	
SDI-776	69	STP	8	60-70	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.542	1	
SDI-776	70	STP	8	60-70	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.126	1	
SDI-776	71	STP	8	60-70	Locus A	Flaked Stone	Debitage		Volcanic			Complete					1	0.12	1	
SDI-776	72	STP	8	60-70	Locus A	Fire Altered Rock	Fire Altered Rock		Granite		X	Fragment					3	91.7	1	
SDI-776	73	STP	8	70-80	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.164	1	
SDI-776	74	STP	8	70-80	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	0.982	1	
SDI-776	75	STP	8	70-80	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					1	0.54	1	
SDI-776	76	STP	8	70-80	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	1.378	1	
SDI-776	77	STP	8	70-80	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					1	0.422	1	
SDI-776	78	STP	8	80-90	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.3	1	
SDI-776	79	STP	8	80-90	Locus A	Flaked Stone	Debitage		Chert			Complete					2	0.05	1	
SDI-776	80	STP	8	80-90	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.058	1	
SDI-776	81	STP	8	80-90	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					1	0.446	1	
SDI-776	82	STP	8	90-100	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.102	1	
SDI-776	83	STP	9	0-10	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.078	1	

Site Number	Cat No	Unit Type	Unit No	Depth	Provenience	Artifact Class	Object Type	Object Subtype	Material Type	Modification	Heat-Altered	Condition	Portion	L (mm)	W (mm)	Th (mm)	Qty	Weight (g)	Box	Comments
SDI-776	84	STP	9	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.412	1	
SDI-776	85	STP	9	0-10	Locus A	Flaked Stone	Debitage		Quartz			Complete					3	0.552	1	
SDI-776	86	STP	9	10-20	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	0.918	1	
SDI-776	87	STP	9	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.408	1	
SDI-776	88	STP	9	20-30	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.35	1	
SDI-776	89	STP	9	30-40	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						2.458	1	
SDI-776	90	STP	9	30-40	Locus A	Flaked Stone	Debitage		Volcanic			Complete					1	0.154	1	
SDI-776	91	STP	9	40-50	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.544	1	
SDI-776	92	STP	9	40-50	Locus A	Fire Altered Rock	Fire Altered Rock		Granite		X	Fragment					1	75.6	1	
SDI-776	93	STP	9	50-60	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.378	1	
SDI-776	94	STP	9	60-70	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.174	1	
SDI-776	95	STP	9	60-70	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.204	1	
SDI-776	96	STP	9	60-70	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					1	0.028	1	
SDI-776	97	STP	9	70-80	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.942	1	
SDI-776	98	STP	9	70-80	Locus A	Flaked Stone	Debitage		Quartzite			Complete					1	29.3	1	
SDI-776	99	STP	9	70-80	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	1.03	1	
SDI-776	100	STP	9	80-90	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.11	1	
SDI-776	101	STP	9	90-100	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.79	1	
SDI-776	102	STP	9	100-110	Locus A	Fauna	Bone	Unmodified	Mammal	Cut		Fragment						7.692	1	
SDI-776	103	STP	9	100-110	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.716	1	
SDI-776	104	STP	9	100-110	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					1	0.318	1	
SDI-776	105	STP	9	100-110	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	2.85	1	
SDI-776	106	STP	10	0-10	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.322	1	
SDI-776	107	STP	10	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	0.87	1	
SDI-776	108	STP	10	0-10	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					5	13.56	1	
SDI-776	109	STP	10	0-10	Locus A	Flaked Stone	Debitage		Quartz			Complete					3	1.206	1	
SDI-776	110	STP	10	0-10	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					1	0.184	1	
SDI-776	111	STP	10	10-20	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.092	1	
SDI-776	112	STP	10	10-20	Locus A	Fauna	Shell	Unmodified	Chione sp.			Fragment						0.288	1	Chione (1)
SDI-776	113	STP	10	10-20	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					3	2.476	1	
SDI-776	114	STP	10	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.362	1	
SDI-776	115	STP	10	20-30	Locus A	Fauna	Bone	Unmodified	Mammal			Complete						1.602	1	
SDI-776	116	STP	10	20-30	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.5	1	
SDI-776	117	STP	10	20-30	Locus A	Flaked Stone	Debitage		Obsidian			Complete					1	0.042	1	
SDI-776	118	STP	10	20-30	Locus A	Flaked Stone	Debitage		Quartz			Complete					5	1.512	1	
SDI-776	119	STP	10	20-30	Locus A	Paraphrenalia	Bead	Disc	Shell			Complete		4.2	4.14	1.09	1	0.022	1	
SDI-776	120	STP	10	30-40	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.318	1	
SDI-776	121	STP	10	30-40	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.642	1	
SDI-776	122	STP	10	30-40	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	1.476	1	
SDI-776	123	STP	11	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.39	1	
SDI-776	124	STP	11	10-20	Locus A	Flaked Stone	Debitage		Quartzite			Complete					1	4.628	1	
SDI-776	125	STP	12	0-10	Locus A	Fauna	Shell	Unmodified	Chione californiensis, Pectinidae, Indeterminate			Fragment						0.628	1	Chione (1), Pectin (1), Indeterminate (1)
SDI-776	126	STP	12	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				2	6.996	1	
SDI-776	127	STP	12	0-10	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	2.314	1	
SDI-776	128	STP	12	10-20	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.418	1	
SDI-776	129	STP	12	10-20	Locus A	Fauna	Shell	Unmodified	Chione californiensis, Pectinidae, Indeterminate			Fragment						3.49	1	Chione (2), Pectinidae (1), Indeterminate (1)
SDI-776	130	STP	12	10-20	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.94	1	
SDI-776	131	STP	12	10-20	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					1	0.334	1	
SDI-776	132	STP	12	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	0.178	1	
SDI-776	133	STP	12	10-20	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					1	0.338	1	
SDI-776	134	STP	12	20-30	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.196	1	
SDI-776	135	STP	12	20-30	Locus A	Fauna	Shell	Unmodified	Chione sp., Pectinidae, Indeterminate			Fragment						0.418	1	Chione (1), Pectinidae (1), Indeterminate (3)
SDI-776	136	STP	12	20-30	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.818	1	
SDI-776	137	STP	12	20-30	Locus A	Flaked Stone	Debitage		Quartz			Complete					5	1.274	1	
SDI-776	138	STP	12	30-40	Locus A	Fauna	Shell	Unmodified	Indeterminate			Fragment						0.036	1	Indeterminate (1)
SDI-776	139	STP	12	40-50	Locus A	Fauna	Shell	Unmodified	Chione sp.			Fragment						0.568	1	Chione (1)
SDI-776	140	STP	13	0-10	Locus A	Flaked Stone	Projectile Point	Arrow Point	PDL Chert		X	Fragment	Mid	12.29	7.01	2.56	1	0.222	1	
SDI-776	141	STP	16	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.03	1	
SDI-776	142	STP	16	20-30	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	10.586	1	
SDI-776	143	STP	17	10-20	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						1.06	1	
SDI-776	144	STP	17	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					4	0.53	1	
SDI-776	145	STP	17	10-20	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					1	1.268	1	
SDI-776	146	STP	17	10-20	Locus A	Flaked Stone	Projectile Point	Arrow Point	Quartz		X	Fragment	Tip	9.48	8.26	3.84	1	0.214	1	
SDI-776	147	STP	17	20-30	Locus A	Fauna	Shell	Unmodified	Gastropod			Fragment						0.042	1	Gastropod (1)
SDI-776	148	STP	17	20-30	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				2	2.72	1	
SDI-776	149	STP	17	20-30	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	1.268	1	
SDI-776	150	STP	17	20-30	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					1	1.058	1	
SDI-776	151	STP	17	20-30	Locus A	Flaked Stone	Core	Bipolar	PDL Chert		X	Complete		34.95	34.79	13.34	1	20.3	1	
SDI-776	152	STP	17	30-40	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Rim, Body				2	2.48	1	1 rim, 1 body fragment
SDI-776	153	STP	17	40-50	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	0.992	1	
SDI-776	154	STP	17	40-50	Locus A	Flaked Stone	Debitage		Quartz			Fragment					1	0.624	1	
SDI-776	155	STP	17	50-60	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.126	1	
SDI-776	156	STP	17	50-60	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Rim				1	3.338	1	
SDI-776	157	STP	17	50-60	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					1	0.432	1	
SDI-776	158	STP	17	50-60	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.196	1	
SDI-776	159	STP	17	50-60	Locus A	Fauna	Bone	Modified	Mammal	Polished, shaped		Fragment		29.42	14.74	3.89	1	1.094	1	
SDI-776	160	STP	19	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	2.29	1	
SDI-776	161	STP	19	20-30	Locus A	Flaked Stone	Debitage		Quartz			Fragment					1	0.262	1	
SDI-776	162	STP	20	0-10	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					1	0.94	1	
SDI-776	163	STP	20	0-10	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.766	1	
SDI-776	164	STP	22	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				2	4.422	1	
SDI-776	165	STP	22	10-20	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	4.654	1	

Site Number	Cat No	Unit Type	Unit No	Depth	Provenience	Artifact Class	Object Type	Object Subtype	Material Type	Modification	Heat-Altered	Condition	Portion	L (mm)	W (mm)	Th (mm)	Qty	Weight (g)	Box	Comments
SDI-776	166	STP	27	0-10	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					1	0.576	1	
SDI-776	167	STP	27	0-10	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.348	1	
SDI-776	168	STP	27	10-20	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					6	0.84	1	
SDI-776	169	STP	27	20-30	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					7	0.892	1	
SDI-776	170	STP	27	30-40	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					2	0.262	1	
SDI-776	171	STP	30	0-10	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.05	1	
SDI-776	172	STP	30	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	0.212	1	
SDI-776	173	STP	30	0-10	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					1	0.156	1	
SDI-776	174	STP	30	0-10	Locus A	Prehistoric Ceramic	Smoking Pipe		Tizon Brown Ware		X	Fragment	Bore	33.12	15.38	4.09	1	2.498	1	
SDI-776	175	STP	30	10-20	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.154	1	
SDI-776	176	STP	30	10-20	Locus A	Flaked Stone	Debitage		PDL Chert			Fragment					4	0.402	1	
SDI-776	177	STP	50	0-10	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.088	1	
SDI-776	178	STP	50	0-10	Locus A	Prehistoric Ceramic	Vessel		Tizon Brown Ware		X	Fragment	Body				2	1.622	1	
SDI-776	179	STP	50	10-20	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	0.162	1	
SDI-776	180	STP	51	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	0.986	1	
SDI-776	181	STP	51	10-20	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.398	1	
SDI-776	182	STP	51	20-30	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.936	1	
SDI-776	183	STP	51	20-30	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.154	1	
SDI-776	184	STP	51	20-30	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	0.93	1	
SDI-776	185	STP	51	20-30	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					1	0.078	1	
SDI-776	186	STP	51	30-40	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					1	0.288	1	
SDI-776	187	STP	41	20-30	Locus B	Fauna	Bone	Unmodified	Mammal			Fragment						0.089	1	
SDI-776	188	STP	41	20-30	Locus B	Flaked Stone	Debitage		Quartzite			Complete					1	2.098	1	
SDI-776	189	STP	41	20-30	Locus B	Flaked Stone	Debitage		Chert			Complete					1	0.134	1	
SDI-776	190	STP	41	30-40	Locus B	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.88	1	
SDI-776	191	STP	42	10-20	Locus B	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.288	1	
SDI-776	192	STP	42	10-20	Locus B	Flaked Stone	Debitage		PDL Chert			Complete					1	0.418	1	
SDI-776	193	STP	42	10-20	Locus B	Flaked Stone	Debitage		Quartz			Complete					1	0.036	1	
SDI-776	194	STP	42	20-30	Locus B	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.316	1	
SDI-776	195	TU	1	0-10	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						6.874	1	
SDI-776	196	TU	1	0-10	Locus A	Fauna	Shell	Unmodified	Chione sp., Indeterminate			Fragment						1.036	1	Chione (2), Indeterminate (1)
SDI-776	197	TU	1	0-10	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				9	7.508	1	
SDI-776	198	TU	1	0-10	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					4	3.536	1	
SDI-776	199	TU	1	0-10	Locus A	Flaked Stone	Debitage		Obsidian			Complete					1	0.228	1	
SDI-776	200	TU	1	0-10	Locus A	Flaked Stone	Debitage		Quartz		X	Complete					8	6.36	1	
SDI-776	201	TU	1	0-10	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					6	2.148	1	
SDI-776	202	TU	1	0-10	Locus A	Fauna	Bone	Modified	Mammal	Lateral cut marks	X	Fragment		13.87	5.39	3.46	1	0.254	1	
SDI-776	203	TU	1	10-20	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						29.358	1	
SDI-776	204	TU	1	10-20	Locus A	Fauna	Shell	Unmodified	Chione sp.			Fragment						0.478	1	Chione (1)
SDI-776	205	TU	1	10-20	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				30	53.744	1	
SDI-776	206	TU	1	10-20	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					22	5.562	1	
SDI-776	207	TU	1	10-20	Locus A	Flaked Stone	Debitage		Quartz		X	Complete					17	10.364	1	
SDI-776	208	TU	1	10-20	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					6	25.528	1	
SDI-776	209	TU	1	10-20	Locus A	Flaked Stone	Debitage		Metavolcanic		X	Complete					14	2.338	1	
SDI-776	210	TU	1	10-20	Locus A	Flaked Stone	Flake Tool		Quartz		X	Fragment		13.38	12.28	5.46	1	0.786	1	
SDI-776	211	TU	1	10-20	Locus A	Flaked Stone	Core	Bipolar	PDL Chert		X	Fragment		15.1	11.98	9.9	1	1.448	1	
SDI-776	212	TU	1	10-20	Locus A	Flaked Stone	Projectile Point	Arrow Point	Obsidian			Fragment	Mid	6.48	6.96	2.8	1	0.142	1	
SDI-776	213	TU	1	10-20	Locus A	Fauna	Bone	Modified	Mammal	Ground along sides, polished	X	Fragment	Mid	16.87	10.09	5.03	1	1.022	1	
SDI-776	214	TU	1	10-20	Locus A	Fire Altered Rock	Fire Altered Rock		Granite		X	Fragment					5	248.6	1	
SDI-776	215	TU	1	20-30	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						15.846	1	
SDI-776	216	TU	1	20-30	Locus A	Fauna	Bone	Modified	Mammal	Lateral cut marks	X	Fragment	Mid	24.07	10.56	3.45	1	1.138	1	
SDI-776	217	TU	1	20-30	Locus A	Fauna	Bone	Modified	Mammal	Cutmarks on exterior surface, polished	X	Fragment	Mid	13.91	7.4	3.74	1	0.432	1	
SDI-776	218	TU	1	20-30	Locus A	Fauna	Shell	Unmodified	Chione sp., Indeterminate			Fragment						0.322	1	Chione (1), Indeterminate (1)
SDI-776	219	TU	1	20-30	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				7	14.414	1	
SDI-776	220	TU	1	20-30	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					11	5.07	1	
SDI-776	221	TU	1	20-30	Locus A	Flaked Stone	Debitage		Quartz		X	Complete					15	37.692	1	
SDI-776	222	TU	1	20-30	Locus A	Flaked Stone	Debitage		Obsidian		X	Complete					2	0.194	1	
SDI-776	223	TU	1	20-30	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					5	1.456	1	
SDI-776	224	TU	1	20-30	Locus A	Flaked Stone	Debitage		Metavolcanic		X	Complete					10	3.134	1	
SDI-776	225	TU	1	20-30	Locus A	Flaked Stone	Projectile Point	Arrow Point	Quartz			Fragment	Mid	12.52	10.89	3.52	1	0.562	1	
SDI-776	226	TU	1	20-30	Locus A	Flaked Stone	Projectile Point	Arrow Point	PDL Chert	Cottonwood Triangular		Fragment	Base	11.89	15.99	4.3	1	0.8	1	
SDI-776	227	TU	1	20-30	Locus A	Flaked Stone	Projectile Point	Arrow Point	Metavolcanic			Fragment	Tip	20.77	9.76	2.77	1	0.448	1	
SDI-776	228	TU	1	20-30	Locus A	Flaked Stone	Projectile Point	Arrow Point	Volcanic	Cottonwood Triangular		Complete		33.19	16.19	3.58	1	1.248	1	
SDI-776	229	TU	1	20-30	Locus A	Prehistoric Ceramic	Smoking Pipe		Tizon Brown Ware		X	Fragment	Handle	17.95	27.81	7.79	1	2.466	1	
SDI-776	230	TU	1	20-30	Locus A	Ground Stone	Mano	Bifacial	Granite		X	Fragment		63.01	49.85	56.58	1	160	1	
SDI-776	231	TU	1	30-40	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						8.2	1	
SDI-776	232	TU	1	30-40	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				3	5.308	1	
SDI-776	233	TU	1	30-40	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					7	10.912	1	
SDI-776	234	TU	1	30-40	Locus A	Flaked Stone	Debitage		Quartz		X	Complete					12	10.462	1	
SDI-776	235	TU	1	30-40	Locus A	Flaked Stone	Debitage		Obsidian			Complete					1	0.014	1	
SDI-776	236	TU	1	30-40	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					3	0.934	1	
SDI-776	237	TU	1	30-40	Locus A	Ground Stone	Mano		Granite		X	Fragment		44.68	44.89	27.41	1	53.4	1	
SDI-776	238	TU	1	40-50	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						13.396	1	
SDI-776	239	TU	1	40-50	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body					8.098	1	
SDI-776	240	TU	1	40-50	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					7	1.658	1	
SDI-776	241	TU	1	40-50	Locus A	Flaked Stone	Debitage		Quartz		X	Complete					3	0.276	1	
SDI-776	242	TU	1	40-50	Locus A	Flaked Stone	Debitage		Volcanic		X	Complete					2	0.672	1	
SDI-776	243	TU	1	40-50	Locus A	Flaked Stone	Projectile Point	Arrow Point	PDL Chert		X	Fragment	Tip	23.25	11.36	4.24	1	0.834	1	
SDI-776	244	TU	1	40-50	Locus A	Prehistoric Ceramic	Smoking Pipe		Tizon Brown Ware		X	Fragment	Mouthpiece	32.99	15.78	15.7	1	6.036	1	
SDI-776	245	TU	2	0-10	Locus B	Flaked Stone	Debitage		PDL Chert		X	Complete					3	3.706	1	
SDI-776	246	TU	2	10-20	Locus B	Flaked Stone	Debitage		Quartz		X	Complete					3	3.772	1	
SDI-776	247	TU	2	20-30	Locus B	Fauna	Bone	Unmodified	Mammal		X	Fragment						3.444	1	
SDI-776	248	TU	2	20-30	Locus B	Flaked Stone	Debitage		Quartz		X	Complete					1	0.474	1	

Site Number	Cat No	Unit Type	Unit No	Depth	Provenience	Artifact Class	Object Type	Object Subtype	Material Type	Modification	Heat-Altered	Condition	Portion	L (mm)	W (mm)	Th (mm)	Qty	Weight (g)	Box	Comments
SDI-776	249	TU	2	30-40	Locus B	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.084	1	
SDI-776	250	TU	2	30-40	Locus B	Flaked Stone	Debitage		PDL Chert		X	Complete					1	0.574	1	
SDI-776	251	TU	2	30-40	Locus B	Flaked Stone	Debitage		Chert			Complete					1	0.05	1	
SDI-776	252	TU	2	30-40	Locus B	Flaked Stone	Debitage		Quartz			Complete					1	0.068	1	
SDI-776	253	TU	2	30-40	Locus B	Flaked Stone	Debitage		Volcanic			Complete					1	0.142	1	
SDI-776	254	TU	2	40-50	Locus B	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.396	1	
SDI-776	255	TU	2	40-50	Locus B	Flaked Stone	Debitage		Chert		X	Complete					1	0.208	1	
SDI-776	256	TU	2	50-60	Locus B	Fauna	Bone	Unmodified	Mammal			Fragment						0.11	1	
SDI-776	257	TU	2	50-60	Locus B	Flaked Stone	Debitage		Volcanic		X	Complete					2	0.63	1	
SDI-776	258	TU	2	50-60	Locus B	Ground Stone	Mano	Bifacial	Granite			Fragment		32.93	28.41	44.75	1	67.8	1	
SDI-776	259	SC	1	Surface	Locus B	Flaked Stone	Debitage		Quartz			Complete					1	18.654	1	
SDI-776	260	SC	2	Surface	Locus B	Flaked Stone	Debitage		PDL Chert			Complete					1	0.39	1	
SDI-776	261	SC	2	Surface	Locus B	Flaked Stone	Debitage		Quartz			Complete					1	1.032	1	
SDI-776	262	SC	3	Surface	Locus B	Flaked Stone	Debitage		Quartz			Complete					1	0.386	1	
SDI-776	263	SC	3	Surface	Locus B	Flaked Stone	Debitage		Metavolcanic			Complete					1	0.654	1	
SDI-776	264	SC	4	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.338	1	
SDI-776	265	SC	5	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	25.1	1	
SDI-776	266	SC	6	Surface	Locus A	Fauna	Shell	Unmodified	Bivalvia sp.			Fragment						0.486	1	Bivalvia (1)
SDI-776	267	SC	7	Surface	Locus A	Fauna	Shell	Unmodified	Chione californiensis, Pectinidae			Fragment						4.742	1	Chione (1), Pectinidae (1)
SDI-776	268	SC	7	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	3.852	1	
SDI-776	269	SC	7	Surface	Locus A	Flaked Stone	Debitage		Volcanic			Complete					1	2.958	1	
SDI-776	270	SC	8	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware	Etched	X	Fragment	Body				1	3.44	1	
SDI-776	271	SC	8	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	3.536	1	
SDI-776	272	SC	9	Surface	Locus A	Flaked Stone	Debitage		Metavolcanic			Fragment					1	3.622	1	
SDI-776	273	SC	10	Surface	Locus A	Fauna	Shell	Unmodified	Chione sp.			Fragment						4.856	1	Chione (1)
SDI-776	274	SC	10	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				2	5.206	1	
SDI-776	275	SC	10	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					2	3.488	1	
SDI-776	276	SC	11	Surface	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						2.488	1	
SDI-776	277	SC	11	Surface	Locus A	Fauna	Shell	Unmodified	Chione californiensis, Pectinidae			Fragment						1.036	1	Chione (1), Pectinidae (1)
SDI-776	278	SC	11	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	9.64	1	
SDI-776	279	SC	11	Surface	Locus A	Flaked Stone	Debitage		Quartz			Fragment					2	1.072	1	
SDI-776	280	SC	11	Surface	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					2	0.406	1	
SDI-776	281	SC	12	Surface	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					1	0.632	1	
SDI-776	282	SC	12	Surface	Locus A	Flaked Stone	Debitage		Quartz			Fragment					3	15.568	1	
SDI-776	283	SC	13	Surface	Locus A	Fauna	Shell	Unmodified	Chione californiensis			Fragment						1.748	1	Chione (1)
SDI-776	284	SC	13	Surface	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.364	1	
SDI-776	285	SC	13	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					3	1.142	1	
SDI-776	286	SC	13	Surface	Locus A	Flaked Stone	Debitage		Volcanic			Fragment					1	10.59	1	
SDI-776	287	SC	13	Surface	Locus A	Flaked Stone	Biface		Monterey Chert		X	Fragment		26.96	19.05	3.79	1	1.794	1	
SDI-776	288	SC	14	Surface	Locus A	Fauna	Shell	Unmodified	Pectinidae			Fragment						0.424	1	Pectinidae (1)
SDI-776	289	SC	14	Surface	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						1.434	1	
SDI-776	290	SC	14	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				4	3.986	1	
SDI-776	291	SC	14	Surface	Locus A	Flaked Stone	Debitage		Quartz			Fragment					1	1.392	1	
SDI-776	292	SC	14	Surface	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					2	0.32	1	
SDI-776	293	SC	15	Surface	Locus A	Fauna	Shell	Unmodified	Chione fluctifraga			Fragment						2.63	1	Chione (1)
SDI-776	294	SC	15	Surface	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.47	1	
SDI-776	295	SC	15	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				4	7.078	1	
SDI-776	296	SC	15	Surface	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					1	0.052	1	
SDI-776	297	SC	15	Surface	Locus A	Flaked Stone	Debitage		Quartz			Fragment					1	0.678	1	
SDI-776	298	SC	15	Surface	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					3	1.918	1	
SDI-776	299	SC	16	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				2	11.84	1	
SDI-776	300	SC	16	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					3	14.13	1	
SDI-776	301	SC	16	Surface	Locus A	Flaked Stone	Debitage		Volcanic			Fragment					1	0.152	1	
SDI-776	302	SC	17	Surface	Locus A	Fauna	Shell	Unmodified	Pectinidae, Indeterminate			Fragment						1.712	1	Pectinidae (1), Indeterminate (1)
SDI-776	303	SC	17	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					3	2.858	1	
SDI-776	304	SC	17	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware	Etched	X	Fragment	Body				1	21.1	1	
SDI-776	305	SC	17	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	5.338	1	
SDI-776	306	SC	18	Surface	Locus A	Flaked Stone	Debitage		Volcanic			Fragment					2	0.546	1	
SDI-776	307	SC	18	Surface	Locus A	Flaked Stone	Debitage		Quartz			Fragment					2	0.706	1	
SDI-776	308	SC	19	Surface	Locus A	Fauna	Bone	Unmodified	Mammal		X	Fragment						0.226	1	
SDI-776	309	SC	19	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	5.722	1	
SDI-776	310	SC	20	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					3	5.396	1	
SDI-776	311	SC	21	Surface	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.384	1	
SDI-776	312	SC	21	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	1.54	1	
SDI-776	313	SC	21	Surface	Locus A	Flaked Stone	Debitage		PDL Chert		X	Complete					1	1.916	1	
SDI-776	314	SC	21	Surface	Locus A	Flaked Stone	Debitage		Volcanic			Complete					3	0.826	1	
SDI-776	315	SC	22	Surface	Locus A	Fire Altered Rock	Fire Altered Rock		Granite		X	Fragment					1	421.7	1	
SDI-776	316	SC	23	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				2	3.368	1	
SDI-776	317	SC	23	Surface	Locus A	Flaked Stone	Debitage		Chert			Complete					1	2.18	1	
SDI-776	318	SC	23	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	1.264	1	
SDI-776	319	SC	23	Surface	Locus A	Flaked Stone	Debitage		Volcanic			Complete					1	2.408	1	
SDI-776	320	SC	24	Surface	Locus A	Fauna	Bone	Unmodified	Mammal			Fragment						0.494	1	
SDI-776	321	SC	24	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					1	0.378	1	
SDI-776	322	SC	25	Surface	Locus A	Flaked Stone	Debitage		PDL Chert		X	Fragment					1	1.584	1	
SDI-776	323	SC	25	Surface	Locus A	Flaked Stone	Debitage		Quartz			Complete					3	1.252	1	
SDI-776	324	SC	25	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				3	5.579	1	
SDI-776	325	SC	26	Surface	Locus A	Ground Stone	Metate		Granite			Fragment		164.14	147.85	75.92	1	2715.5	1	
SDI-776	326	SC	27	Surface	Locus A	Prehistoric Ceramic	Vessel	Unknown	Tizon Brown Ware		X	Fragment	Body				1	3.536	1	
SDI-776	327	SC	28	Surface	Locus A	Ground Stone	Mano	Bifacial	Granite	End-battered	X	Complete		113.4	75.89	48.03	1	734	1	
SDI-776	328	SC	28	Surface	Locus A	Ground Stone	Mano	Bifacial	Granite	End-battered	X	Complete		118.8	93.39	58.4	1	1016.8	1	
SDI-776	329	SC	29	Surface	Locus A	Ground Stone	Mano	Bipolar	Granite	End-battered		Complete		155.37	82.28	49.43	1	1042.8	1	
SDI-776	330	TU	1	0-10	Locus A	Flaked Stone	Debitage		Metavolcanic		X	Complete					10	0.954	1	
SDI-776	331	TU	1	30-40	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					10	13.342	1	
SDI-776	332	TU	1	40-50	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					3	17.726	1	

Site SDI-776A and B
The Ocean Breeze Ranch Project (15-162)
Master Artifact Catalog
2016 Field Year

Site Number	Cat No	Unit Type	Unit No	Depth	Provenience	Artifact Class	Object Type	Object Subtype	Material Type	Modification	Heat-Altered	Condition	Portion	L (mm)	W (mm)	Th (mm)	Qty	Weight (g)	Box	Comments
SDI-776	333	STP	5	10-20	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					2	0.594	1	
SDI-776	334	STP	5	20-30	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					3	0.422	1	
SDI-776	335	STP	5	30-40	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					1	0.142	1	
SDI-776	336	STP	6	20-30	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					4	1.068	1	
SDI-776	337	STP	6	30-40	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					4	1.506	1	
SDI-776	338	STP	8	20-30	Locus A	Flaked Stone	Debitage		PDL Chert			Complete					1	0.2	1	
SDI-776	339	STP	8	60-70	Locus A	Flaked Stone	Debitage		Metavolcanic			Complete					2	0.082	1	

APPENDIX I

Test Plan Review Request for
the Ocean Breeze Ranch Project

(Prepared by Brian F. Smith and Associates, Inc., 2016)

(Deleted for Public Review; Bound Separately)