Appendix E Paleontological and Cultural Resources Assessment

Appendices

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

PALEONTOLOGICAL AND CULTURAL RESOURCES ASSESSEMENT FOR THE BREA 265 SPECIFIC PLAN, CITY OF BREA, ORANGE COUNTY, CALIFORNIA

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SUMMARY OF FINDINGS

The objective of this study is to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the Brea 265 Specific Plan Project (Project). The proposed Specific Plan will feature a mix of residential neighborhoods, parks, recreational amenities, and open space. The City of Brea is the lead agency under the California Environmental Quality Act (CEQA) and this study provides environmental documentation as required by CEQA.

The Project is mapped as modern artificial fill, Pleistocene to Holocene alluvial fans, the La Habra Formation, the Fernando Formation and the Puente Formation. A record search of the Project area and a one mile radius was obtained from the Natural History Museum of Los Angeles County Department of Vertebrate Paleontology (LACM, McLeod 2019). Online records from the Natural History Museum of Los Angeles County Department of Invertebrate Paleontology (LACMIP 2019), the San Diego Museum of Natura History (SDNHM 2019), the University of California Museum of Paleontology database (UCMP 2019), and the PaleoBiology Database (PBDB 2019) were searched for fossil records as well as prior records searches in the area and print sources. No fossil localities are known from the Project area or within a mile of the Project, however numerous localities have been found within ten-miles of the Project in the same sedimentary units that are present in the Project area.

An archaeological records search at the South Central Coastal Information Center (SCCIC), located on the campus of California State University, Fullerton (CSUF), was conducted on February 7, 2019. The records search covered the entire 265 acres of the Project area as well as a one-mile search radius. Results of the record search indicate a total of 29 cultural resources investigations have been conducted within a one-mile search radius. Of these, nine cultural resources studies have been completed within the Project area. The results of these studies indicate that five cultural resources have been previously recorded within the Project area. In addition, 49 cultural resources are located outside of the Project area but within the one-mile search radius.

A Sacred Lands File (SLF) search was requested from the Native American Heritage Commission (NAHC) on January 25, 2019. On January 28, 2019, the NAHC indicated that a search of the SLF was completed with negative results.

Five previously recorded resources are located within the Project area: P-30-001665, P-30-001666, P-30-001738, P-30-120002, and P-30-177012. These resources were revisited and updated on DPR 523 forms. In addition to the five previously recorded resources, three new cultural resources were observed and recorded; BREA_2019FEB25_01, BREA_2019FEB25_02, and BREA_2019FEB27_01.

Review of existing historical documents, maps, and literature, in tandem with the results of the intensive pedestrian survey, indicate that survey Areas A and B of the current Project area represent an extension of the previously recorded Brea-Olinda Oil Filed District (P-30-177012). It is proposed in this study, that the Areas A and B be subsumed into the Brea-Olinda Oil Filed District. The District is not recommended eligible for listing on the California Register of Historical Resources (CRHR).

A Paleontological Resource Impact Mitigation Program and full-time monitoring is currently recommended for deposits with a PFYC ranking of 3 or greater. If unanticipated fossils are unearthed during construction, work should be halted in that area until a qualified paleontologist can assess the significance of the find. Work further than 50 feet away from the find may resume immediately. This procedure should be included in the Worker Environmental Awareness Program (WEAP) training provided to construction personnel.

Due to the high sensitivity for subsurface archaeological resources, a cultural resources mitigation plan and monitoring is currently recommended. The mitigation plan will require monitoring during grading and other earthmoving activities in undisturbed sediments and provides a treatment plan for the discovery of potential resources.

In the event of an unanticipated discovery of archaeological resource, all work must be suspended within 50 feet of the find until a qualified archaeologist can evaluate the find. In the unlikely event that human remains are encountered during project development, all work must cease immediately.

INTRODUCTION

PURPOSE OF STUDY

The objective of this study is to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the Brea 265 Specific Plan Project (Project; Figure 1). The proposed Specific Plan will feature a mix of residential neighborhoods, parks, recreational amenities, and open space. The City of Brea is the lead agency under the California Environmental Quality Act (CEQA) and this study provides environmental documentation as required by CEQA.

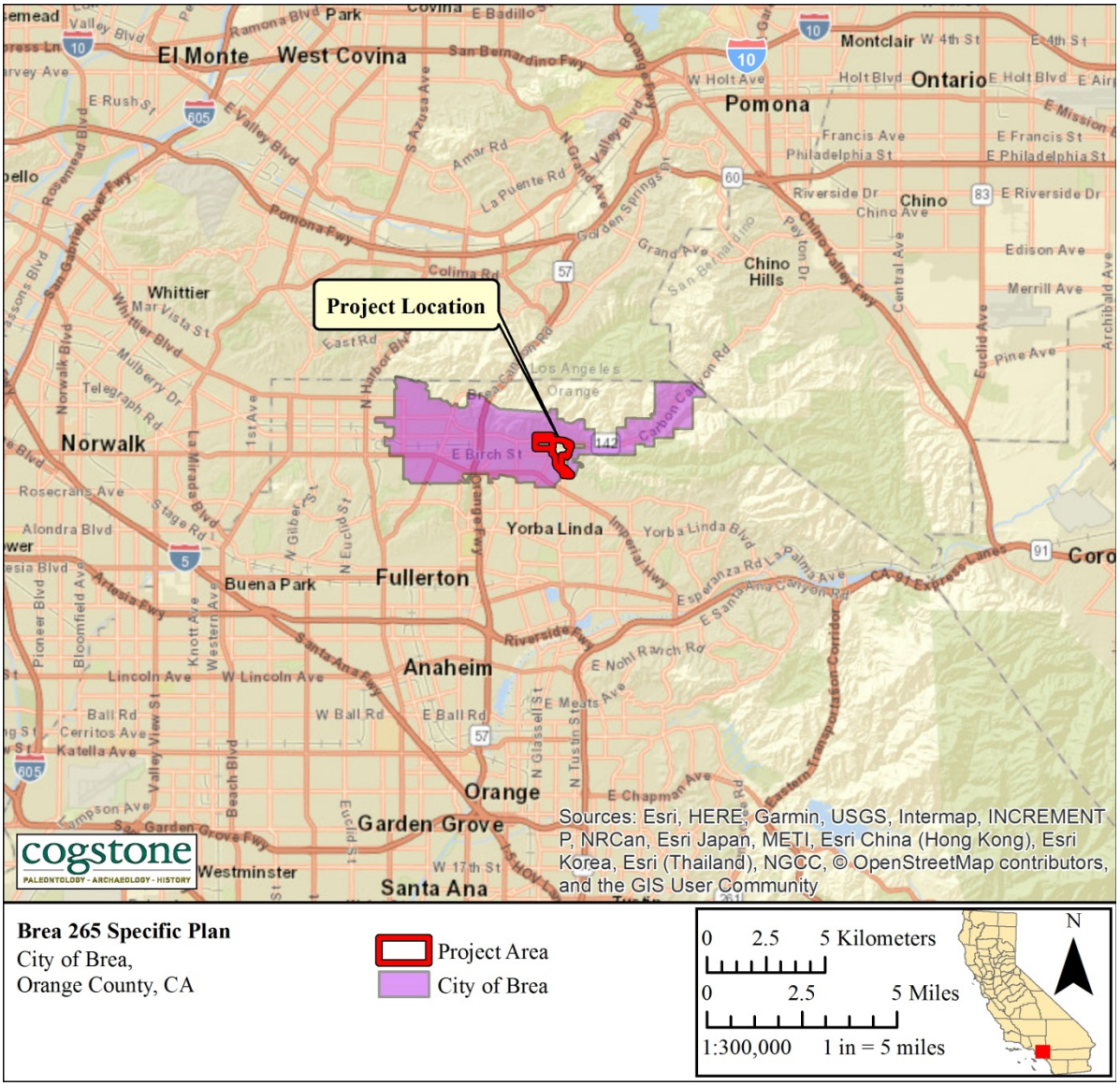

Figure 1. Project vicinity map

PROJECT LOCATION AND DESCRIPTION

The Project is located in the eastern portion of the City of Brea (City) and is surrounded by an existing residential neighborhood to the north and west, the Brea Sports Park to the southwest, commercial and residential mixed-use area to the south, and Carbon Canyon Regional Park to the east (Figure 2). The Project area is bisected by Valencia Avenue along a north-south axis and by Lambert Road along an east-west axis.

The Project proposes a master planned residential community that includes a mix of approximately 1,100 residential units, 18.1 acres of parks and residential uses, 55.7 acres of open space with an overall average density of 4 dwelling units per acre (4± du/acre).

The various land uses intend to be connected through a trail system that links the park and recreation areas to the adjacent neighborhoods and off-site parks, open space, employment centers, and retail spaces (Figure3).

The Brea Specific Plan fulfils the vision set forth by the City of Brea General Plan and fulfills a 2005 pre-annexation agreement between the City, Aera Energy, County of Orange, and Orange County Local Agency Formation Commission (OCLAFCO). This Specific Plan echoes implements the goals set forth by the 2017 Brea Envisions Community Strategic Plan- a resident driven strategic plan adopted in 2017, which established clear goals for attainable housing, innovative transportation solutions, stronger trail connectivity, and sustainability measure across the City.

Figure 2. Project Location

Figure 3. Project Concept Plan

PROJECT PERSONNEL

Cogstone Resource Management Inc. (Cogstone) conducted the cultural and paleontological resources study. Resumes of key personnel are provided in Appendix A.

- Sherri Gust served as the Task Manager for this Project, provided QA/QC, and wrote the prehistoric and ethnographic sections. Gust has an M.S. in Anatomy (Evolutionary Morphology) from the University of Southern California, a B.S. in Anthropology from the University of California, Davis, and over 37 years of experience in California archaeology and paleontology.

- Molly Valasik served as the Principal Archaeologist for the Project and reviewed the report. Valasik has an M.A. in Anthropology from Kent State University, a B.A. in Anthropology from Ohio State University, and ten years of experience in southern California archaeology.

- Kim Scott served as the Principal Paleontologist for the Project and wrote the geological and paleontological portions of this report. Scott has an M.S. in Biology with paleontology emphasis from California State University, San Bernardino, a B.S. in Geology with paleontology emphasis from the University of California, Los Angeles, and over 24 years of experience in California paleontology and geology.

- Megan Wilson served as Supervisor/GIS Manager, prepared all maps, conducted the archaeological and historic records searches, participated in the pedestrian survey, wrote the historic context, and drafted portions of the report. Wilson has an M.A. in Anthropology from California State University, Fullerton, and has over eight years of experience in southern California archaeology.
- Tony Quach conducted the pedestrian survey and wrote the cultural context for this report. Quach has a B.A. in Anthropology from California State University, Long Beach, and over 10 years of experience in cultural resource management.

- Shannon Lopez reviewed two built environment features. Ms. Lopez has an M.A. in History from California State University, Fullerton, and one year of experience in California architecture.

- Andrew Denina assisted in the pedestrian survey. Denina has a B.A. in Anthropology from California State University, Long Beach, and one year of experience in California archaeology.

REGULATORY ENVIRONMENT

This Project is subject to state and local regulations regarding cultural and paleontological resources. The Project must meet the requirements of the California Environmental Quality Act (CEQA) in addition to the goals and polices regarding the identification and protection of important archaeological and paleontological resources within the City of Brea.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA states that: It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required are intended to assist public agencies in systematically identifying both the significant effects of proposed project and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

CEQA declares that it is state policy to: "take all action necessary to provide the people of this state with...historic environmental qualities." It further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. In the event that a project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered.

TRIBAL CULTURAL RESOURCES

As of 2015, CEQA established that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Pub. Resources Code, § 21084.2). In order to be considered a "tribal cultural resource," a resource must be either:

(1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or

(2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource.

To help determine whether a project may have such an effect, the lead agency must consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. If a lead agency determines that a

project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code §20184.3 (b) (2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources.

PUBLIC RESOURCES CODE

Section 5097.5: No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands (lands under state, county, city, district or public authority jurisdiction, or the jurisdiction of a public corporation), except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

NATIVE AMERICAN HUMAN REMAINS

Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with state law (i.e., Health and Safety Code §7050.5 and Public Resources Code §5097.98), as reviewed below:

> In the event that human remains are encountered during project development and in accordance with the Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods.

CALIFORNIA ADMINISTRATIVE CODE, TITLE 14, SECTION 4307

This section states that “No person shall remove, injure, deface or destroy any object of paleontological, archeological or historical interest or value.”

CITY OF BREA CULTURAL RESOURCES MITIGATION MEASURES

The City of Brea generally defers to the provisions of CEQA. Specific mitigation measures for cultural resources (paleontological and archaeological) can be found in Section 3.7 of the City of Brea General Plan (2003) and are summarize below:

1. City staff may require development permit applicants to provide studies that document the presence/absence or archaeological and/or paleontological resources. Studies will be required in areas with documented or inferred resource presence. On properties where resources are identified, such studies shall provide a detailed mitigation plan, including a monitoring program and recovery and/or *in situ* preservation plan, based on the recommendations of a qualified specialist.
2. All archaeological resources shall be subject to the provisions of CEQA (Public Resources Code Section 21083.2)

DEFINITION OF SIGNIFICANCE FOR PALEONTOLOGICAL RESOURCES

Only qualified, trained paleontologists with specific expertise in the type of fossils being evaluated can determine the scientific significance of paleontological resources. Fossils are considered to be significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life;
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

As so defined, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important (Scott and Springer 2003, Scott et al. 2004).

BACKGROUND

GEOLOGICAL SETTING

The Project lies at the western edge of the Puente Hills and the northeastern-most reach of the Tustin Plain. This broad coastal plain is bounded by the Puente and Coyote Hills to the north, Santa Ana Mountains to the east, Pacific Ocean to the west, and San Joaquin Hills to the south. Orange County is part of the coastal section of the Peninsular Range Geomorphic Province, which is characterized by elongated northwest-trending mountain ridges separated by sediment-floored valleys. This geomorphic province extends from Mount San Jacinto in the north to Cabo San Lucas in the south and includes the Inland Empire, Los Angeles, Orange County, and San Diego areas of southern California. The province topography is due to the numerous faults which parallel the Salton Trough section of the San Andreas Fault Zone (SAFZ). Strain caused by the east-west "bend" in the SAFZ between Palm Springs and Cajon Pass in San Bernardino, has been transferred westward off the Salton Trough section of the SAFZ. Motion along these paralleling faults has resulted in elongated northwest-trending mountain ridges separated by sediment-floored valleys. The San Jacinto Fault Zone and the Elsinore Fault Zone are the two major fault zones taking up the strain of the SAFZ.

PALEONTOLOGIC SETTING

The Chino and Puente Hills are comprised of late Miocene to early Pliocene (13.8 Ma to 3.6 Ma) marine sedimentary rock units overlain in some areas by Pleistocene (2.6 Ma to 11 thousand years old) terrestrial sediments. At about 23 million years ago (Ma), the ocean extended east of the modern Pacific shoreline into eastern California. Major changes to the local topography began approximately 18 Ma when the San Andreas Fault Zone captured several small tectonic plates (microplates) in the Los Angeles area. The microplates were subjected to approximately 60 degrees of rapid, clockwise rotation and translation forces from about 18 to about 12 Ma. This caused rifting and extension of the area east of the microplates. Subsidence of this area from the plates stretching lead to the creation of the Los Angeles Basin which included the Chino and Puente Hills (Ingersoll and Rumelhart 1999, Kamerling and Luyendyk 1979). The captured microplates became the initial Transverse Ranges (Campbell et al. 2014, Ingersoll 2008, Ingersoll and Rumelhart 1999).

During the late Miocene to early Pliocene, submarine canyons along the coast periodically sluiced sands and gravels off the continental shelf and onto the ocean basin. Between these events, called turbidity currents, slower accumulations of silts and clays became shale. The turbidity sediments were deposited as submarine fans at bathyal depths of 1,000-4,000 meters or

3,300-13,000 feet (Rumelhart and Ingersoll 1997). Continued movement of the Pacific Plate to the northwest relative to the North American Plate raised the land in this area and increased the deposition into these subsided basins. By about 5 Ma, local tectonics had begun to uplift the Transverse Ranges which are currently some of the fastest growing mountains on earth. Increased uplift resulted in increased erosion and deposition into the basin areas, filling them in.

STRATIGRAPHY

The Project is mapped as modern artificial fill, Pleistocene to Holocene alluvial fans, the La Habra Formation, the Fernando Formation, and the Puente Formation (Figure 4; Morton and Miller 2006).

ARTIFICIAL FILL, MODERN

In California, these deposits are less than 200 years old and only the largest deposits are typically noted on geologic maps. Although fill is typically less than a few feet thick, it can be substantially thicker in the areas of overpasses, freeways, and other large earthworks. Any fossils that may be encountered therein are not scientifically significant. Only large deposits are shown. Fills emplaced after source maps were completed are generally not shown.

YOUNG ALLUVIAL FAN, LATE PLEISTOCENE TO HOLOCENE

These sediments are less than 126,000 years old and are deposited along the outer slopes of our valleys from local mountains via the mouths of canyons. Sediments are clearly related to depositional processes that are still on-going and consist of slightly to moderately consolidated, moderately dissected, silty sands to bouldery deposits. Due to having a longer period of exposure without burial than the alluvial deposits, sediments range from light to medium brown and can have an orange or red hue from soil development and oxidation. Clasts coarsen upstream with boulders up to several meters across being deposited near the mountains during flash floods. These fans comprise a majority of fill in the Inland Empire valley areas (Morton and Miller 2006).

VERY OLD ALLUVIAL FAN, EARLY TO MIDDLE PLEISTOCENE

These deposits are from approximately 2.6 Ma to 126,000 years ago and consist of well-indurated, reddish-brown sands compose these alluvial fans. Duripans are common and silcretes are present locally. The upper surface is capped with moderately to well-developed soils as much as 2 to 3 meters thick with well-dissected surfaces (Morton and Miller 2006).

LA HABRA FORMATION, PLEISTOCENE

These sediments have been brought to the surface by the tectonics of the Whittier Fault Zone and are from between 2.6 Ma to 10,000 years ago. The formation is mapped at the surface along the

western end of the northern boundary of the project. About 1.5 miles to the west of the project, a strike of about north 80 degrees west and a dip of 41 degrees southwest was recorded off Wildcat Way just north of Lambert Road. The high dip makes it likely that the formation will only be potentially impacted within a block of the area mapped along the project margin.

The non-marine La Habra Formation is the uppermost named formation below the unnamed Pleistocene to Holocene alluvial fans through the majority of the Project area. The 200 to 1000 feet thick, flood plain deposit of poorly indurated, light pinkish grey to reddish brown mudstones, fluvial sandstones, and conglomerates fine upwards through the formation. While the upper two thirds of the formation consists of friable, siltstones and sandy mudstones which may be massive or well-bedded in some sandstones, the lower part consists of massive to crudely bedded, coarse-grained, pebbly sandstones, and conglomerates. At the base, an approximately 36 foot thick pebbly sandstones and conglomerate alters color to a yellowish-tan to brownish-gray (Yerkes 1972, Morton et al. 1976, Morton and Miller 2006).

FERNANDO FORMATION, PLIOCENE

Both the upper and lower members of this 5.3 Ma to 2.6 Ma marine formation are mapped within the project study area. The upper member (Tfu) is subdivided into three units: (1) an uppermost thick-bedded to massive, friable, fine- to medium-grained sandstone and brownish-gray, massive, pebbly sandstone which has abundant mollusks and is at most 820 feet thick; (2) a middle pale gray, massive, poorly sorted, friable, micaceous siltstone to medium-grained sandstone which reaches a thickness of 1,935 feet; and (3) a basal 600 feet of sandstone, pebbly sandstone, and pebbly conglomerate. These three units are not mapped separately. Locally however a 1,600 foot thick brown, well- cemented, cliff-forming conglomerate with clasts up to 45 cm across is present and occurs as part of the upper member (Tfuc; Morton and Miller 2006).

The lower member (Tfl) is separated from the upper by an unconformity. This 1,500 foot thick, crudely bedded, micaceous, brownish siltstone contains some thin interbeds of pebbly conglomerate (Morton and Miller 2006).

PUENTE FORMATION, SYCAMORE CANYON MEMBER, LATE MIOCENE TO EARLY PLIOCENE

The Sycamore Canyon Member of the Puente Formation is from between 13.8 and 3.6 Ma. This formation occurs within the project area as a brownish-gray, massive conglomerate (Tpscc; Morton and Miller 2006).

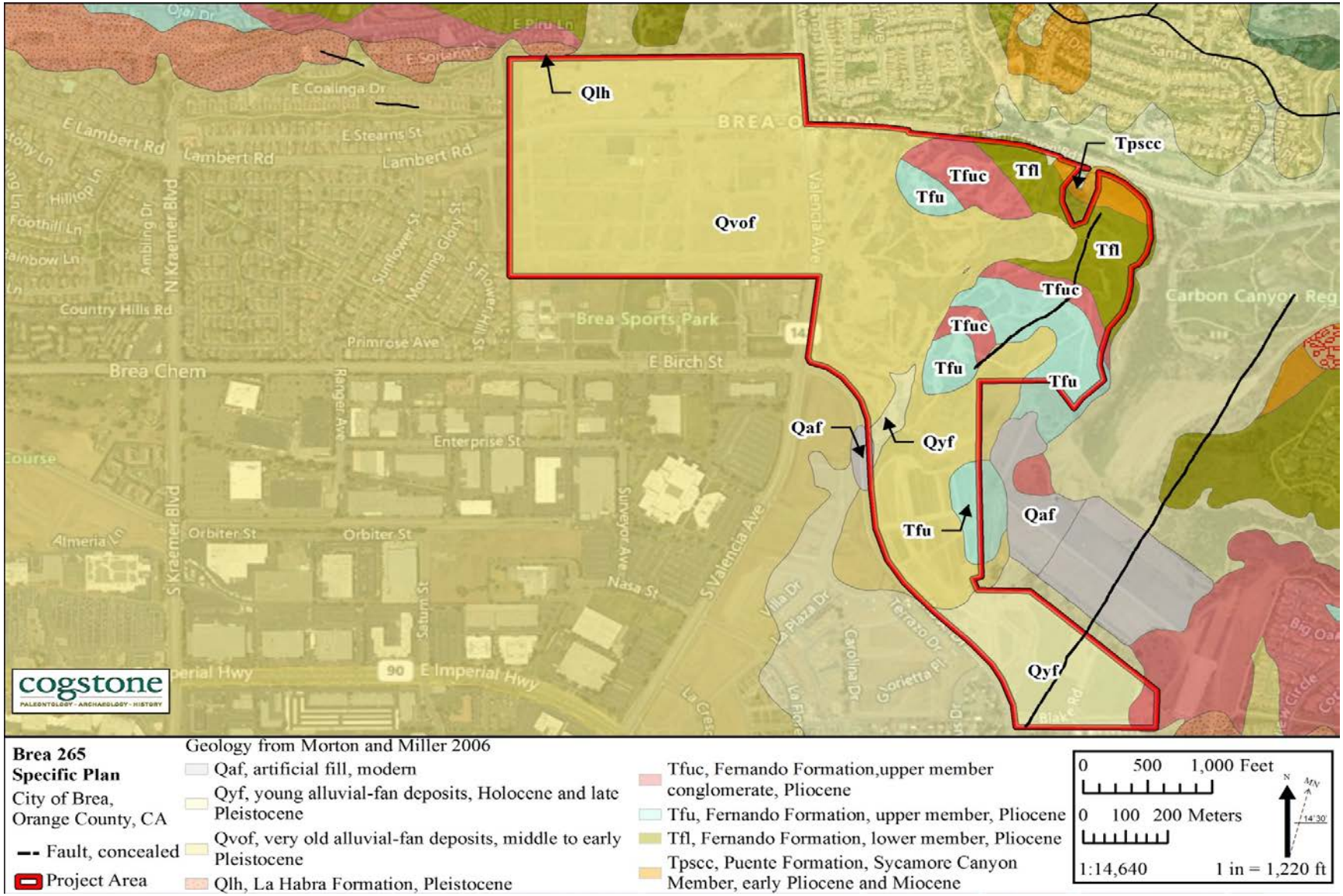

Figure 4. Project Geology

ENVIRONMENTAL SETTING AND LAND-USE

The geological, physiographical, and ecological zones represented in the Project area are best described as alluvial plains and valleys bounding the western margin of the Chino Hills. The Chino Hills are the northern-most portion of the Santa Ana Mountains and the Peninsular Ranges, but are isolated from both by the Santa Ana Canyon, located southeast of the Project Area. A majority of the Project has a 0 to 10 percent slope range.

The Project area is located approximately 4.25 miles north of the Santa Ana River and Carbon Canyon Creek crosses the southern end of the Project area.

Native vegetation communities are characterized by coastal scrub communities dominated by species such as California sagebrush (Artemisia californica), coastal brittle-bush (Encelia californica), monkey flowers (Mimulus aurantiacus), scrub oak (Quercus berberidifolia), and toyon (Heteromeles arbutifolia). Wildlife species native to the area include amphibians such as the side-blotched lizard (Uta stansburiana), birds such as black-necked stilt (Himantopus mexicanus), mammals such as the California mouse (Peromyscus californicus) and raccoon (Procyon lotor), and fish species such as the white croaker (Genyonemus lineatus) and the California corbina (Menticirrhus undulatus) (Schoenherr 1992; Caughman and Ginsberg 1987).

The majority of the Project has been used for oil production continuously since the early 1900s, with the exception of the southern agricultural area. Approximately 110 wells are in operation.

PREHISTORY

Approaches to prehistoric frameworks have changed over the past half century from being based on material attributes to radiocarbon chronologies to association with cultural traditions. Archaeologists defined a material complex consisting of an abundance of milling stones (for grinding food items) with few projectile points or vertebrate faunal remains dating from about 7,000 to 3,000 years before the present as the “Millingstone Horizon” (Wallace 1955). Later, the “Millingstone Horizon” was redefined as a cultural tradition named the Encinitas Tradition (Warren 1968) with various regional expressions including Topanga and La Jolla. Uses by archaeologists varied as some adopted a generalized Encinitas Tradition without regional variations, some continued to use “Millingstone Horizon”, and some used Middle Holocene (the time period) to indicate this observed pattern (Sutton and Gardner 2010:1-2).

Recently, it was recognized that generalized terminology is suppressing the identification of cultural, spatial, and temporal variation and the movement of peoples throughout space and time. These factors are critical to understanding adaptation and change (Sutton and Gardner 2010:1-2).

The Encinitas Tradition characteristics are abundant metates and manos, crudely made core and flake tools, bone tools, shell ornaments, very few projectile points with subsistence focusing on collecting (plants, shellfish, etc.; Sutton and Gardner 2010:7). Faunal remains vary by location but include shellfish, land animals, marine mammals, and fish. The Encinitas Tradition is currently redefined as comprising four geographical patterns (Sutton and Gardner 2010:8-25). These are (1) Topanga in coastal Los Angeles and Orange counties; (2) La Jolla in coastal San Diego County; (3) Greven Knoll in inland San Bernardino, Riverside, Orange, and Los Angeles counties; and (4) Pauma in inland San Diego County.

About 3,500 years before present, the Encinitas Tradition was replaced in the greater Los Angeles Basin by the Del Rey Tradition (Sutton 2010). This tradition has been generally assigned to the Intermediate and Late Prehistoric periods. The changes that initiated the beginning of the Intermediate Period include new settlement patterns, economic foci, and artifact types that coincided with the arrival of a biologically distinctive population. The Intermediate and Late Prehistoric periods have not been well-defined. Many archaeologists have proposed, however, that the beginning of the Intermediate marked the arrival of Takic-speaking groups (from the Mojave Desert, southern Sierra Nevada, and San Joaquin Valley) and that the Late Prehistoric Period reflected Shoshonean groups (from the Great Basin). Related cultural and biological changes occurred on the southern Channel Islands about 300 years later.

As defined by Sutton (2010), the Del Rey Tradition replaces usage of the Intermediate and Late Prehistoric designations for both the southern California mainland and the southern Channel Islands. Within the Del Rey Tradition are two regional patterns named Angeles and Island. The Del Rey Tradition represents the arrival, divergence, and development of the Gabrielino in southern California.

PREHISTORIC CHRONOLOGY

The latest studies of the Project area recognize its prehistoric cultures as expressive of the Greven Knoll Pattern of the Encinitas Tradition (Sutton and Gardner 2010; Table 1). This pattern is replaced by the Angeles Pattern of the Del Rey Tradition by about 3,500 BP (Sutton 2010; Table 1). Each pattern has subdivisions that are characterized by specific changes in cultural assemblages. Phases are identified by their archaeological signatures in components within sites.

Greven Knoll sites tend to occur in inland valleys. The inland groups did not switch from manos/metates to pestles/mortars like coastal peoples (c. 5,000 years before present). This may suggest a closer relationship with desert groups who exhibited similar traits. The Greven Knoll toolkit is dominated by manos and metates throughout its extent. In Phase I, other typical characteristics were Pinto dart points for atlatls or spears, charmstones, cogged stones, absence of shell artifacts, and flexed position burials (Table 1). In Phase II, Elko dart points for atlatls or spears and core tools are observed along with increased indications of gathering (Table 1). In

addition, the Greven Knoll populations are biologically Yuman (based on skeletal remains) while the later Angeles populations are biologically Shoshonean (Sutton and Gardner 2010, Sutton 2010).

The Angeles pattern generally is restricted to the mainland and appears to have been less technologically conservative and more ecologically diverse, with a largely terrestrial focus and greater emphases on hunting and nearshore fishing. In Angeles Phase I, Elko points for atlatls or darts appear, small steatite objects such as pipes and effigies from Catalina are found, shell beads and ornaments increase, fishing technologies increase including bone harpoons/fishhooks and shell fishhooks, donut stones appear, and hafted micro blades for cutting/graving wood or stone appear. In addition, several Encinitas (Topanga) traits, such as discoidals, cogged stones, plummet-like charm stones and cairn burials (see Sutton and Gardner 2010: Table 1) virtually disappear from the archaeological record. Mortuary practices changed to consist mostly of flexed primary inhumations, with extended inhumations becoming less common. With regard to settlement patterns, there is a transition from general use sites to habitation sites with distinct functional work areas. Subsistence trends shift from mostly collecting to increased hunting and fishing (Sutton 2010).

Table 1. Culture Change Chronology

Pattern	Phase	Dates (BP)	Material Traits	Other Traits
Encinitas	Greven Knoll I	8,500 to 4,000	Abundant manos and metates, Pinto dart points for atlatls or spears, charmstones, cogged stones and discoidals rare, no mortars or pestles, general absence of shell artifacts	No shellfish, hunting important, flexed inhumations, cremations rare
	Greven Knoll II	4,000 to 3,000	Abundant manos and metates, Elko dart points for atlatls or spears, core tools, late discoidals, few mortars and pestles, general absence of shell artifacts	No shellfish, hunting and gathering important, flexed inhumations, cremations rare
Angeles	Angeles I	3,500 to 2,600	Appearance of Elko dart points and an increase in the overall number of projectile points from Encinitas components; beginning of large-scale trade in small steatite artifacts (effigies, pipes, and beads) and *Olivella* shell beads from the southern Channel Islands; appearance of single-piece shell fishhooks and bone harpoon points; Coso obsidian becomes important; appearance of donut stones	appearance of a new biological population (Takic proto-Gab/Supan language), apparent population increase; fewer and larger sites along the coast; collector strategy; less overall dependence on shellfish but fishing and terrestrial hunting more important; appearance of flexed and extended inhumations without cairns, cremations uncommon

Pattern	Phase	Dates (BP)	Material Traits	Other Traits
	Angeles II	2,600 to 1,600	Continuation of basic Angeles I material culture with the addition of mortuary features containing broken tools and fragmented cremated human bone; fishhooks become more common	continuation of basic Angeles I settlement and subsistence systems; appearance of a new funerary complex
	Angeles III	1,600 to 1,250	Appearance of bow and arrow technology (e.g., Marymount or Rose Spring points); changes in *Olivella* beads; asphaltum becomes important; reduction in obsidian use; Obsidian Butte obsidian largely replaces Coso	larger seasonal villages; flexed primary inhumations but no extended inhumations and an increase in cremations; appearance of obsidian grave goods; possible expansion into eastern Santa Monica Mountains, replacing Topanga III groups
	Angeles IV	1,250 to 800	Cottonwood points appear; some imported pottery appears; birdstone effigies at the beginning of the phase and "spike" effigies dropped by the end of the phase; possible appearance of ceramic pipes	change in settlement pattern to fewer but larger permanent villages; flexed primary inhumations continue, cremations uncommon; expansion into the San Gabriel Mountains, displacing Greven Knoll III groups
	Angeles V	800 to 450	Trade of steatite artifacts from the southern Channel Islands becomes more intensive and extensive, with the addition or increase in more and larger artifacts, such as vessels and comals; larger and more elaborate effigies	strengthening of ties, especially trade, with southern Channel Islands; expansion into the northern Santa Ana Mountains and San Joaquin Hills; development of mainland dialects of Gabrielino
	Angeles VI	450 to 150	Addition of Euroamerican material culture (e.g., glass beads and metal tools), locally made pottery, metal needle-drilled *Olivella* beads	change of settlement pattern, movement close to missions and ranches; use of domesticated species obtained from Euroamericans; flexed primary inhumations continue, cremations uncommon to the north (nearer the Chumash) but somewhat more common to the south (nearer the Luiseño); apparent adoption of Chingichngish religion

The Angeles Phase II is identified primarily by the appearance of a new funerary complex, with other characteristics similar to Angeles I. The complex features killed (ritually broken) artifacts

including manos, metates, bowls, mortars, pestles, points, and others plus highly fragmented cremated human bones and a variety of faunal remains. Funerary goods are often burned along with the remains of the deceased. Burning does not appear to have taken place within the burial feature in most cases (Sutton 2010).

The Angeles III Phase is the beginning of what has been known as the Late Period and is marked by several changes from Angeles I and II. These include the appearance of small projectile points, steatite shaft straighteners, and increased use of Asphaltum, all reflecting adoption of bow and arrow technology. Obsidian sources change from mostly Coso to Obsidian Butte, and shell beads from species native to the Gulf of California began to appear. Subsistence practices continue as before and the geographic extent of the Angeles Pattern increases (Sutton 2010).

Angeles Phase IV is marked by the appearance of new material items including Cottonwood points for arrows, *Olivella* cupped beads and *Mytilus* shell disks, birdstones (zoomorphic effigies with magico-religious properties), and other trade items from the Southwest including pottery. It appears that populations increase and that there is a change in the settlement pattern to fewer but larger and more complex permanent villages. Presence and utility of steatite vessels may have impeded the diffusion of pottery into the Los Angeles Basin. The settlement pattern transition to fewer and larger permanent villages, though smaller special-purpose sites continued to be used (Sutton 2010).

Angeles V components contain greater quantities of steatite artifacts which are often more robust, including large vessels, more elaborate effigies and comals. Settlement locations shift from woodland to open grasslands. The exploitation of marine resources seems to decline and use of small seeds increases. Many Gabrielino inhumations contain grave goods, though cremations do not (Sutton 2010).

The Angeles VI phase reflects the ethnographic mainland Gabrielino of the post-contact period (A.D. 1542). One of the most devastating changes in Gabrielino culture after contact was undoubtedly population loss due to disease and the resulting social and political disruption. Angeles VI material culture is similar in most way to that of Angeles V, though is augmented by a number of European-American tools, including glass beads and metal tools such as knives and needles, which were often used in bead manufacture. The frequency of European-American material culture increased through time until it constituted the vast majority of materials used. Locally produced brownware pottery appears along with metal needle-drilled *Olivella* disk beads (Sutton 2010)

The ethnographic mainland Gabrielino subsistence system was based primarily on terrestrial hunting and gathering, although nearshore fish and shellfish played important roles. Sea mammals, especially whales (likely from beached carcasses), were prized. In addition, a number

of European plant and animal domesticates were obtained and exploited. Ethnographically, the mainland Gabrielino practiced interment and some cremation (Sutton 2010).

ETHNOGRAPHY

The Project area is within the traditional tribal territory of the Gabrielino (Tongva) (Figure 5). Much of the southern California archaeological literature argues that the Gabrielino moved into southern California from the Great Basin around 4,000 Before Present (B. P.), "wedging" themselves between the Hokan-speaking Chumash, located to the north, and the Yuman-speaking Kumeyaay, located to the south (see Sutton 2009 for the latest discussion). This Shoshonean Wedge, or Shoshonean "intrusion" theory, is counter to the Gabrielino community's knowledge about their history and origins. Oral tradition states that the Gabrielino have always lived in their traditional territory, with their emergence into this world occurring at Puvungna, located in Long Beach (Martinez and Teeter 2015:26). The Tongva speak a language that is part of the Takic language family. Their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast and the four southern Channel Islands, in all an area of more than 2,500 square miles (Figure 3; Bean and Shipek 1978; McCawley 1996). At European contact, the tribe consisted of more than 5,000 people living in various settlements throughout the area. Some of the villages were large, housing up to 150 people.

The Gabrielino (Tongva) are considered to have been one of the wealthiest tribes, greatly influencing tribes they traded with (Kroeber 1976:621). Houses were domed, circular structures thatched with tule or similar materials (Bean and Smith 1978:542). The best known artifacts were made of steatite and were highly prized. Many common everyday items were decorated with inlaid shell or carvings reflecting an elaborately developed artisanship (Bean and Smith 1978:542).

The main food zones utilized were marine, woodland and grassland (Bean and Smith 1978). Plant foods were, by far, the greatest part of the traditional diet at contact. Acorns were the most important single food source. Villages were located near water sources necessary for the leaching of acorns which was a daily occurrence. Grass seeds were the next most abundant plant food used along with chia. Seeds were parched, ground, and cooked as mush in various combinations according to taste and availability. Greens and fruits were eaten raw or cooked or sometimes dried for storage. Bulbs, roots, and tubers were dug in the spring and summer and usually eaten fresh. Mushrooms and tree fungus were prized as delicacies. Various teas were made from flowers, fruits, stems, and roots for medicinal cures as well as beverages (Bean and Smith 1978:538-540).

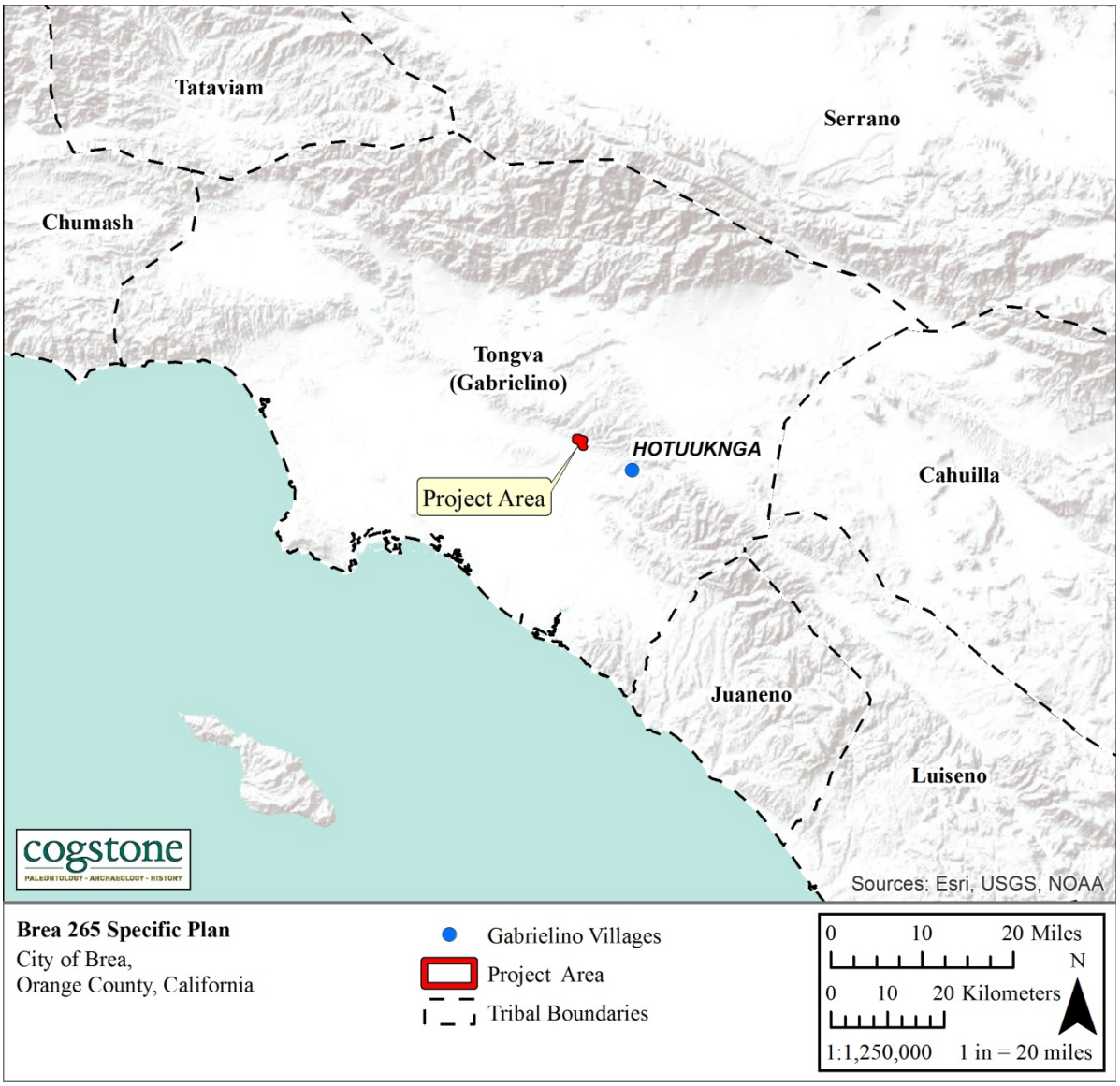

Figure 5. Ethnographic Native American tribal territories

The principal game animals were deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, quail, dove, ducks, and other birds. Most predators were avoided as food, as were tree squirrels and most reptiles. Trout and other fish were caught in the streams, while salmon were available when they ran in the larger creeks. Marine foods were extensively utilized. Sea mammals, fish, and crustaceans were hunted and gathered from both the shoreline and the open ocean, using reed and dugout canoes. Shellfish were the most common resource, including abalone, turbans, mussels, clams, scallops, bubble shells, and others (Bean and Smith 1978:538-540).

The Project area is located 5.5 miles west of the approximate location of the ethnographical documented Gabrielino Village of` *Hotuukngа* (Figure 6). Located on the northern banks of the Santa Ana River, *Hotuukngа* was reported near the location of the former Bernardo Yorba adobe house. *Hotuukngа* was recorded by Father Crespí during the 1969 Portola Expedition when the group crossed the Santa Ana River and noted "a populous village of Indians, who received us with great friendliness" (McCawley 1996: 60).

The Project area was utilized in prehistory for its abundant deposits of asphaltum, or tar. The Gabrielino word for tar is *shaanat* (Munro 2014). Local Native American tribes used the naturally occurring oil and tar seeps for its effective adhesive properties, as a means of waterproofing baskets and canoes, hafting (attaching) projectile points to their shafts, plugging abaolone shells for bowls and containers, as well as for medicinal purposes. It was also a valuable trade item. Early Spanish explorers referred to the local substance as *brea*, Spanish for "tar" or "pitch", from which the City of Brea get its' name from.

HISTORIC SETTING

SPANISH EXPLORATION

Juan Cabrillo was the first European to sail along the coast of California in 1542 and was followed in 1602 by Sebastian Vizcaino (Bean and Rawls 1993). The Spanish colonization of what was then known as Alta California began with the 1769 overland expedition, led by Gaspar de Portolá, with a crew of 63 men, in order to explore the land between San Diego and Monterey. Between 1769 and 1822, the Spanish had colonized California and established missions, presidios, and pueblos and documented the people and landscape along the way (McCawley 1996).

In July 1769, Portolá and his expedition camped in the area (Brea Canyon Camp) east of the Project area, following a reported difficult crossing of the Santa Ana River. It was during this time that Father Crespí noted in his journal the Gabrielino Village of` *Hotuukngа*.

Following the Portolá Expedition, vast tracts of land were granted to the missions. The Project area is roughly situated between the fourth, Mission San Gabriel Arcángel, founded in 1771, and seventh, Mission San Juan Capistrano, founded in 1776, of the Franciscan Missions established along Portolá s route. The goals of the missions were tri-fold: they establish a Spanish presence on the west coast, proselytize Christianity to the native peoples, and served to exploit the native population as laborers. The Spanish also hoped each mission would become a town center, whereas, "the pueblo would receive a ground of four square leagues of land… and other property would be parceled out among the Indians". The missionaries, or padres, would essentially serve as a mayor, or head of the town (Bean 1968:29-30).

MEXICAN PERIOD

In 1821, Mexico won its independence from Spain and worked to lessen the wealth and power held by the missions. The Secularization Act was passed in 1833, appropriating the vast mission lands to the Mexican governor and downgrading the missions' status to that of parish churches. The governor then redistributed the former mission lands, in the form of land grants, to private owners (Bean and Rawls 1993). The lands were typically granted to soldiers who proved their loyalty to the Mexican government once liberated from the Spanish crown.

In 1837, then governor of Alta California, Juan Alvarado awarded the 35,970-acre Rancho San Juan Cajón de Santa Ana (Saint John's Canyon of Saint Anne) to Juan Pacífico Ontiveros (Figure 6). The grant encompassed the present day Cities of Anaheim, Fullerton, and Placentia and includes the western portion of the Project area. The land grant was verified and patented to Ontiveros by the U.S. courts in 1877 after years of litigation and land claim contestments. Ontiveros sold approximately 21,000 acres to the businessman Able Stearns.

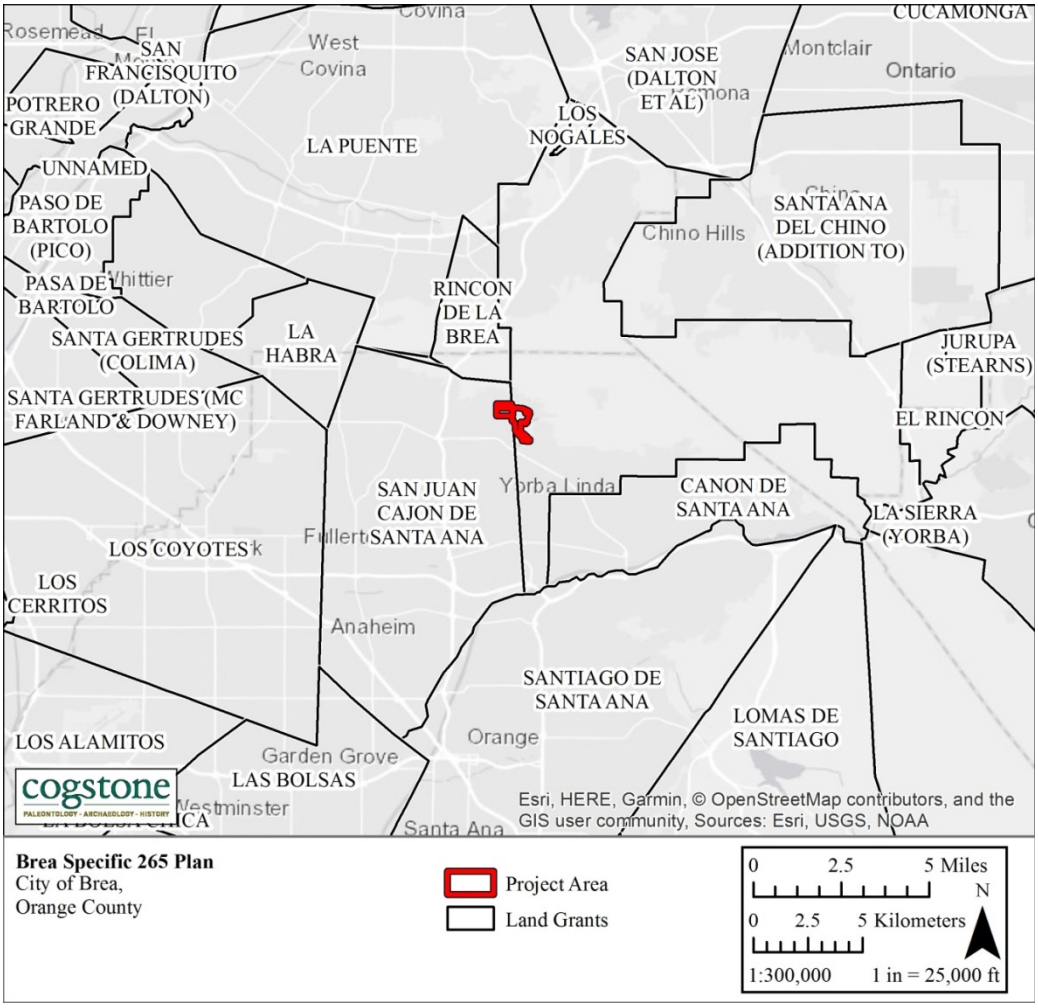

Figure 6. Land Grant Map

PROJECT AREA HISTORY

The Project area is located along the eastern boundary of the former oil boom town known as Olinda. The town name is derived from the Spanish word, *linda* meaning pretty and "O-linda" has been rumored to derive from an early observers' exclamation upon seeing the beauty of the area (OC Board of Supervisors 1975). Following the establishment of the Santa Fe Railroad into Orange County along the Santa Ana Canyon in 1887, land companies formed to solicit aggressive land advertising campaigns. The area was originally subdivided and advertised to farmers and ranchers in the 1880s. The promise of Olinda as a productive agricultural area was unfulfilled when settlers found that the available water supply was brackish and alkaline. The agricultural industry was abandoned just before the emerging oil industry took off (Meighan et al. 1978). The southern portion of the Project area, located on the floodplain of Carbon Canyon Creek retained its value as agricultural land and is used for agriculture to this day.

In 1882, the Chandler Oil and Mining Company were the first to extract oil, drilling to depths of 100 to 300 feet (Meighan et al. 1978), in the Olinda area in Tonner Canyon. Tonner Canyon was immediately north of the Project area and shortly thereafter a town site by the name of Petrolia was established (Brechbiel and Mason 1998). Pooling their resources with others, the members of the Chandler Oil and Mining Company formed the Union Oil Company of California in 1890. The Union Oil Company expanded its holding, referred to as the Upper and Lower Stearns Lease (the Project area includes portions of the southern Lower Stearns Lease) and in 1890 were said to have extracted 510,000 barrels of crude oil. By 1913, the Union Oil Company was the principal producers of oil in southern California (Meighan et al. 1978).

In 1897, the Union Oil Company lost some its land holding due to title disputes and over 200 acres were acquired by the Brea Cañon Oil Company. A proven successful Los Angeles oil man and owner of Brea Cañon Oil Company, Edward L. Dohney, in partnership with Charles Canfield, entered a partnership with the Santa Fe Railway Company. The railway company was looking for promising oil producing lands to supply their locomotives (OC Board of Supervisors 1975). The Santa Fe Railway established a spur immediately east of the Project area which terminated just north of Carbon Canyon Road (Figure 7).

The current Project area is located on what was formally referred to as the lower Santa Fe Lease, later owned by the Shell Oil Company and the West Coast Oil Company (Figure 8). The northern portion of the Project area has been continuously utilized for oil production since the 1880s, while the southernmost portion has been utilized for agriculture. The large oil companies owned the land and houses in the former town of Olinda, located to the east of the Project area, where Carbon Canyon Regional Park is now located as well as the area just north of the Park and Carbon Canyon Road (OC Board of Supervisors 1975).

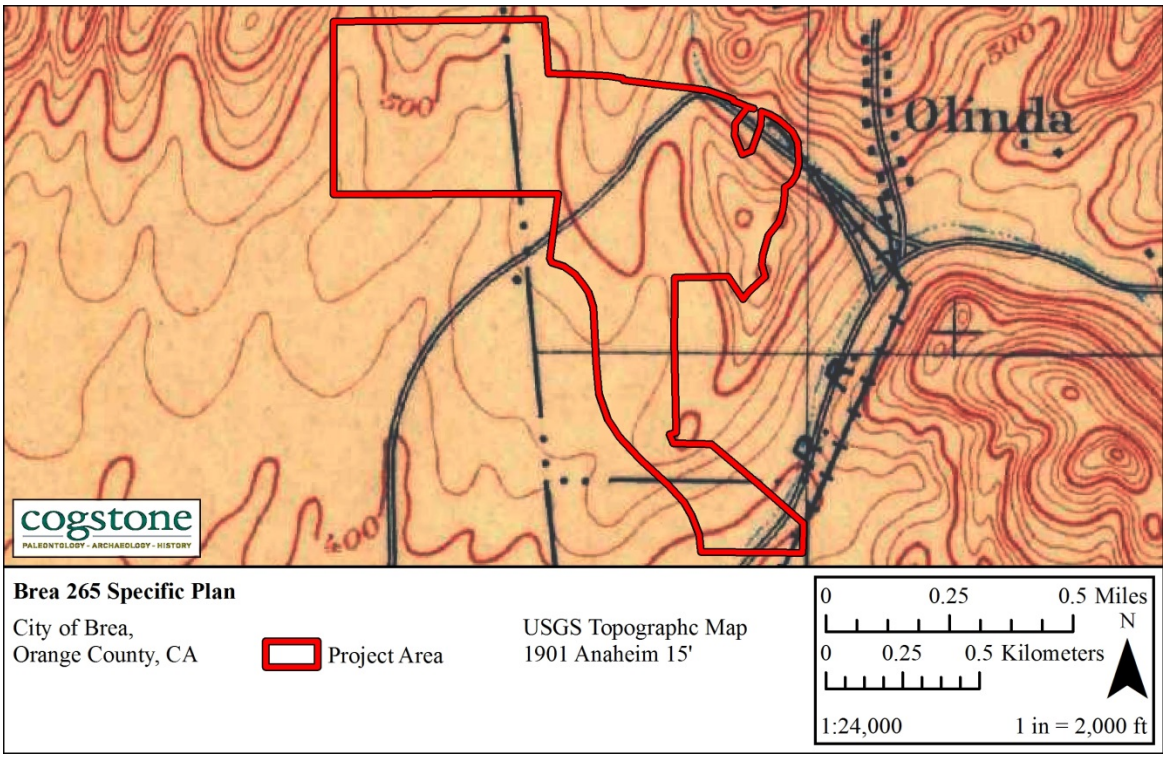

Figure 7. Historic topographic map showing the Olinda spur of the Santa Fe Railroad

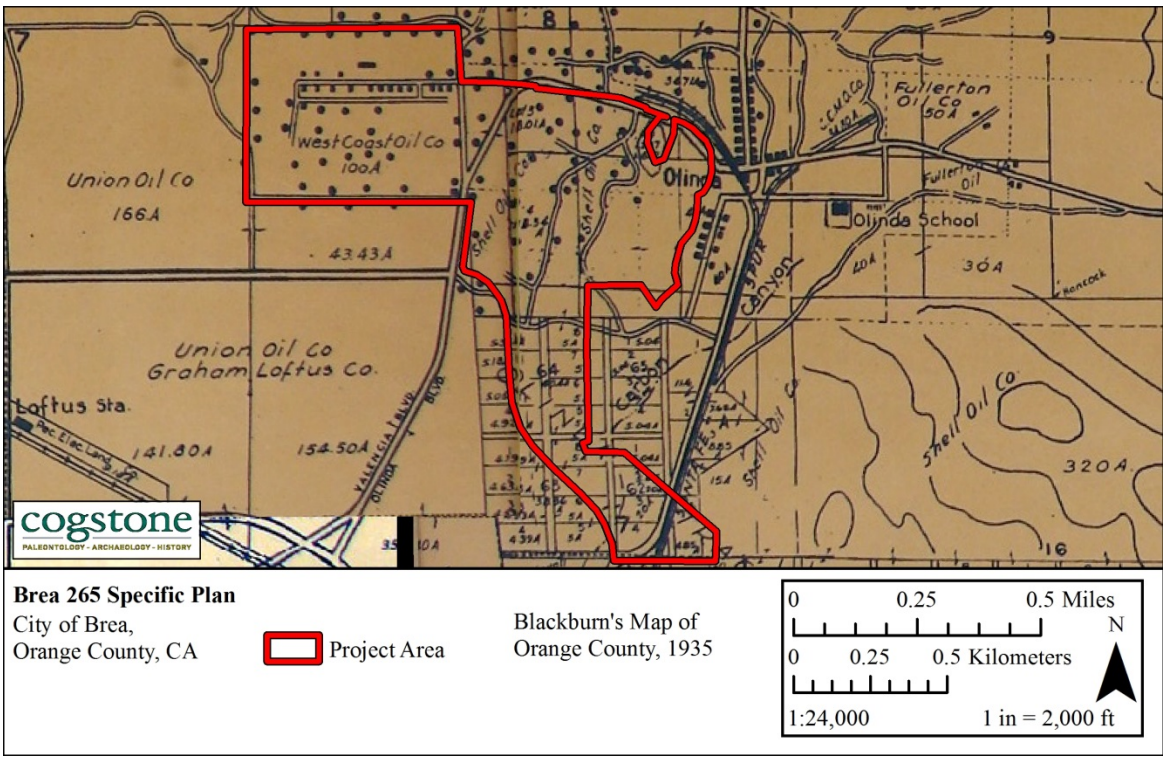

Figure 8. Blackburn's Map of Orange County showing property ownership

The town of Olinda was removed in 1959, due to flood control measures undertaken by the County of Orange and the U.S. Army Corps of Engineers. Olinda was situated in the valley floodplain created by Carbon Creek, a perineal tributary to the Santa Ana River. The valley experienced devastating flooding during heavy rains when the Santa Ana River swelled. The flood control measure implemented for the area constructed the Carbon Canyon Dam and converted the valley into a reservoir in 1959 (OC Board of Supervisors 1975). Although Olinda is gone, the associated oil fields located at higher elevations, are still in use to the west of the former town.

RECORDS SEARCH

PALEONTOLOGICAL RECORD AND LITERATURE SEARCH

A record search of the project area and a one mile radius was obtained from the Natural History Museum of Los Angeles County Department of Vertebrate Paleontology (LACM, McLeod 2019; Appendix B). Online records from the Natural History Museum of Los Angeles County Department of Invertebrate Paleontology (LACMIP 2019), the San Diego Museum of Natura History (SDNHM 2019), the University of California Museum of Paleontology database (UCMP 2019), and the PaleoBiology Database (PBDB 2019) were searched for fossil records as well as prior records searches in the area and print sources.

No fossil localities are known from the Project area or within a mile of the project, however numerous localities have been found within ten-miles of the project in the same sedimentary units that are present in the Project area (Appendix B).

PLEISTOCENE FOSSILS FROM UNNAMED FORMATIONS

Pleistocene fossils are typically found more than 10 feet deep in the valley areas of California, however local faulting and erosion can bring older sediments to the surface. Extinct animals from these sediments in the northern Orange County area include giant ground sloth (1†*Nothrotheriops*), Scott's horse (†*Equus scotti*), sea duck (†*Chendytes milleri*), and Imperial mammoth (†*Mammuthus imperator*) and have been recovered from unnamed Pleistocene deposits in the La Habra and Chino Hills area (McLeod 2019). During the Highway 57 expansion between Brea and Fullerton, fossils of carnivore, rodents, snakes, bird, bivalve, and plants were recovered from Quaternary very old alluvial fan deposits between 4 and 26 feet below the original surface (Gust and Richards 2012; Appendix B).

1 † = the only taxon that this could represent is extinct although the Family or genus may still be extant

LA HABRA FORMATION, PLEISTOCENE

Extinct animals from the La Habra Formation are known from the La Habra, Fullerton, and La Mirada areas. These deposits include California turkey (†*Melagris californica*), giant tortoise (†*Hesperotestudo*), ground sloths (†*Megalonyx jeffersonii*, †*Paramylodon harlani*), dire wolf (†*Canis* cf. *C. dirus*), horses (†*Equus*), llamas and camels (†*Hemiauchenia,* † *Camelops* cf. *C. hesternus*), bison (†*Bison*), American mastodons (†*Mammut americanum*), and mammoths (†*Mammuthus columbi*, †*Mammuthus*; Jefferson 1991a, 1991b, McLeod 2015, McLeod 2017, SDNHM 2019). Fossils of bobcat, black bear, coyote, grey fox, mule deer, American pronghorn, rodents, snakes, lizards, birds, and fish have also been recovered from these localities in northern Orange County (Appendix B).

FERNANDO FORMATION, PLIOCENE

The records of Fernando Formation localities found did not list what member they were recovered from. Morton and Miller (2006) noted that marine mollusks were abundant in the upper member; however, it is unlikely that many fossils were recovered from the upper member conglomerate. Recovered fossils from three localities in La Habra, City of Industry, and Whittier include an extinct deep sea eel (†*Laytonia californica*), whales (Odontoceti, Cetacea), swordfish (*Coelorhynchus scaphopsis*), flounder (Pleuronectidae), mackerel (Scombridae), lanternfishes (*Diaphus*, *Lampanyctus*), hake (*Merluccius*), herring (†*Ganolytes*), and great white shark (*Carcharodon carcharias*). The fossil of an Arnold's white shark (†*Carcharodon arnoldi*) recovered from a La Habra Formation deposit may have initially been from the Fernando Formation (Appendix B).

PUENTE FORMATION, SYCAMORE CANYON CONGLOMERATE, LATE MIOCENE TO PLIOCENE

The records of Puente Formation localities found did not list what member they were recovered from, however it is unlikely that many fossils were recovered from the Sycamore Canyon Member conglomerate.

Thirty-one localities that appear to have been from the finer grained facies of the Sycamore Canyon Member in the eastern Chino Hills have produced fossils of extinct dolphins and porpoises (†*Atocetus*, Delphinoidea, Phocoenidae), whales (†*Scaldicetus*, Balaenopteridaa), sea lion (†*Pithanotaria*), numerous fish including many deeper marine species, and shark (*Cetorhinus*). Localities from the Puente Formation where the member was completely unclear or that were defiantly not from the Sycamore Canyon Member were excluded in this search (Appendix B).

CALIFORNIA HISTORIC RESOURCES INFORMATION SYSTEM

A search of the California Historic Resources Information System (CHRIS) at the South Central Coastal Information Center (SCCIC) located on the campus of California State University,

Fullerton (CSUF), was conducted on February 7, 2019, by Cogstone archaeologist, Megan Wilson, with assistance by Nancy DelaCruz, Cogstone technician. The records search covered the entire 265 acres of the Project area as well as a one-mile search radius. The records search was located entirely within the Yorba Linda USGS 7.5-minute quadrangle.

Results of the record search indicate a total of 29 cultural resources investigations have been conducted within a one-mile search radius. Of these, nine cultural resources studies have been completed within the Project area (Table 2).

Table 2. Previous Cultural Resource Studies

Report No. (OR)	Author(s)	Title	Year	Distance (miles) from Project area
00182	Desautels, Roger J.	Archaeological Survey Report on the Proposed Carbon Canyon Wastewater Facility and Attendant Pipelines	1977	Within
00474	Martz, Patricia	Description and Evaluation of the Cultural Resources Within Brea, Carbon Canyon, Fullerton and San Antonio Reservoirs, Santa Ana River Basin, Orange, Los Angeles, and San Bernardino Counties	1977	Within
01106	Brown, Joan C.	Cultural Resources Reconnaissance of the Proposed North Orange County Landfill Alternative Technologies Study (noclats) Landfill Property, Approximately 2,700 Acres in Orange County, California	1990	0.5-1
01184	Becker, Kenneth M. and Juanita R. Shinn	Report on the Investigations at the "Landa House," an Early Twentieth Century Basque Sheepherder's House Near the City of Brea, Orange County, California	1992	0.5-1
01199	Mason, Roger D.	Cultural Resources Survey Report for the Santa Fe Energy Company Olinda Property Orange County, California	1992	0.5-1
01480	White, Robert S. and Laura S. White	An Archaeological Assessment of the Olinda/Olinda Alpha Landfill Alternative Access Routes, Brea, County of Orange	1994	0.5-1
01494	Walker, Edwin Francis	Report of Preliminary Archaeological Survey Carbon Canyon, Olinda Dam Site, Southern California	1947	0-0.25
01778	Brechbiel, Brant A.	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: Cm 147-11 in the City of Placentia, California	1998	0.25-0.5
01779	Brechbiel, Brant A.	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: Cm 313-05 in the City of Brea, California	1998	0-0.25
01837	Whitney-Desautels, Nancy A.	Final Report Cultural and Paleontological Resources Investigation of the Tonner Canyon Channel Facility	1989	0.5-1
02279	Kyle, Carolyn E.	Cultural Resource Survey for the Metropolitan Water District of Southern California Robert B. Diemer Filtration Plant Improvement Orange County, Ca	1999	0.5-1

Report No. (OR)	Author(s)	Title	Year	Distance (miles) from Project area
02460	Duke, Curt	Cultural Resource Assessment Cingular Wireless Facility No. Sc 045-02 Orange County, California	2002	0.5-1
02524	Duke, Curt	AT&T Wireless Services Facility No.c872c Los Angeles County, California	2002	Within
02884	Mason, Roger D.	Cultural Resources Survey Report for the Stearns Property City of Brea, Orange County	1997	Within
03213	Girod, Catherine	Archaeological Reconnaissance Report: Tonner Hills ExxonMobil Pipeline Relocation Project Located Within the Lambert Road Row, Between Kraemer Boulevard and Valencia Avenue, City of Brea, Orange County, California	2005	0.25-0.5
03223	Mason, Roger D., Bonner, Wayne H., Martin, Steve L., Popper, Virginia, and Gibson, Robert O.	Cultural Resources Test and Data Recovery Report CA-ORA-1321 Olinda Heights Project, Brea, Orange County, California	1999	0-0.25
03225	Younger, Shannon, Brooks Smith, William Sawyer, and Kevin Buffington	Results of Archaeological Monitoring Robert B. Diemer Filtration Plant Improvement Project, Carbon Canyon And Telegraph Creeks Chino Hills State Park Orange County, California	2003	0.25-0.5
03227	Brechbiel, Brant A.	Cultural Resources Test Report CA-ora1322/h and CA-ORA-1323h Olinda Heights Project Brea, Orange County, California	1998	0-0.25
03279	Ashkar, Shahira	Cultural Resources Inventory of Four Proposed Sites for the Brea Sports Park, Orange County, California	2000	Within
03550	Robert J. Wlodarski	Field Reconnaissance for Proposed Bechtel Wireless Telecommunications Site OC0086, Koch Park, Placentia	2009	0.5-1
03711	Ashkar, Shahira	California Register of Historical Resources Evaluation of Oil Well on the Stearns Property in the Sphere of Influence of the City of Brea, Orange County, California	2000	Within
03730	Dahdul, Mariam	Reinstatement of Carbon Canyon Dam Sewer And Pump Station Abandonment Project	2002	Within
03911	Backes, Clarus, John Dietler, Laura Hoffman, Joan Brown, and Virginia Austerman	Archaeological Monitoring for the Tonner Hills Project Located in Brea, Orange County, California	2010	0.5-1
03912	Brown, Joan C.	Cultural Resources Reconnaissance of the 600 Acre Stearns - Unocal Project Area, California	1989	0.5-1
03980	Killeen, John	Cultural Resources Investigation for the Carbon Canyon Dam Sewer Pipeline Project, City of Brea, Orange County, California	2007	Within
04167	Wlodarski, Robert	Koch Park-OC0086 2210 Valencia Avenue Placentia, CA 92870	2011	0.5-1
04185	Cisneros, Charles and Hunt, Cheryle	Cultural Resources Monitoring Report for the La Floresta Village Project, City of Brea, Orange County, California	2011	0.5-0.5
04258	Glentis, Dionisios	Cultural Resources Assessment for the Brea Power II Project Brea, Orange County, California	2011	Within

Report No. (OR)	Author(s)	Title	Year	Distance (miles) from Project area
04356	Brown, Joan C.	Cultural Resources Reconnaissance of the 333 Acre Imperial Properties - Unocal Project Brea, Orange County, California	1989	0.5-1

The results of these studies indicate that five cultural resources have been previously recorded within the Project area. In addition, 49 cultural resources are located outside of the Project area but within the one-mile search radius. These include 15 cultural resources located between 0-0.25 miles, 12 cultural resources located between 0.25-0.5 miles, and 19 cultural resources located between 0.5-1 miles of the Project area (Table 2). The cultural resource types include two prehistoric archaeological sites, four prehistoric isolates, three multicomponent sites (both prehistoric and historic), 24 historic archaeological sites, 10 historic isolates, two historic districts, and six historic built environment resources (historic resources; see Table 3).

East of the Project area is the former location of the historic oil boom town, Olinda, located at 4442 Carbon Canyon Road, Brea (P-30-162260; HRI 089531). This resource is California State Landmark Number 918 and is listed on the California Register of Historic Places, Number 918. It is also listed on the California Historical Resources Inventory as Property Number 089531. Although the physical location of the historic plaque is located 0.5-mile to the east of the Project area, the oil wells associated with the former town of Olinda are located within the current Project area.

The historic plaque reads:

> The course of oil production was changed in 1899 when the Olinda Area became the first site in California to use the technique of drilling with the hole full of water. Having been developed as a source of fuel oil for the Santa Fe Railroad, Olinda became a bustling boom town at the turn of the century. Its demise came with the construction of Carbon Canyon Dam in 1959 [Arbuckle 1980].

Table 3. Previously Recorded Cultural Resources

Primary Number	Trinomial	Resource Type	Resource Description	Date Recorded	Distance from Project area
P-30-110	CA-ORA-1101H	Historic Archaeological Site	Historic refuse scatter, small grove of Eucalyptus	1984	0-0.25
P-30-001321	CA-ORA-001321/H	Multicomponent Site	Prehistoric habitation site, lithic and groundstone scatter, cogged	1991	0-0.25

Primary Number	Trinomial	Resource Type	Resource Description	Date Recorded	Distance from Project area
			stone; Historic refuse scatter		
P-30-001322	CA-ORA-001322/H	Multicomponent Site	Lithic and groundstone scatter, shell scatter, historic refuse scatter, building debris, ceramic doll, shell buttons	1991	0-0.25
P-30-001323	CA-ORA-001323H	Historic Archaeological Site	Red brick floor	1991	0-0.25
P-30-001483	CA-ORA-001483H	Historic Archaeological Site	Historic foundation, building debris	1997, 2006	0-0.25
P-30-001494	CA-ORA-001494H	Historic Archaeological Site	Large historic dump	1998	0-0.25
P-30-001620	CA-ORA-001620H	Historic Archaeological Site	Historic refuse deposit associated with the "Landa House"	2006	0.25-0.5
P-30-001621	CA-ORA-001621H	Historic Archaeological Site	Historic foundation, well, refuse deposit, landscaping	1989, 2006, 2010	0-0.25
P-30-001622	CA-ORA-001622H	Historic Archaeological Site	Historic refuse deposit, burned	1989, 2006, 2010	0-0.25
P-30-001623	CA-ORA-001623H	Historic Archaeological Site	Historic refuse deposit, brick walkway, landscaping	1989, 2006, 2010	0.5-1
P-30-001624	CA-ORA-001624H	Historic Archaeological Site	Historic refuse deposit, old road, landscaping	1989, 2006, 2010	0.5-1
P-30-001625	CA-ORA-001625H	Historic Archaeological Site	Historic refuse deposit	1989, 2006, 2010	0.5-1
P-30-001626	CA-ORA-001626H	Historic Archaeological Site	Historic refuse deposit, Eucalyptus trees	1989, 2006, 2010	0-0.25
P-30-001627	CA-ORA-001627	Prehistoric Archaeological Site	Hearths	2009, 2010	0-0.25
P-30-001665	CA-ORA-001665H	Historic Archaeological Site	Historic refuse scatter, small grove of Eucalyptus	1998	Within
P-30-001666		Historic Resource	Ancillary Building, rectangular wood frame building, "generator building": Not dated	1998	Within
P-30-001690	CA-ORA-001690	Historic Archaeological Site	Historic refuse scatter	2007	0-0.25
P-30-001691	CA-ORA-001691H	Historic Archaeological Site	Historic refuse deposit	2007, 2010	0-0.25
P-30-001693	CA-ORA-001693H	Historic Archaeological Site	Historic refuse deposit	2007, 2010	0.25-0.5
P-30-001694	CA-ORA-001694H	Historic Archaeological Site	Historic refuse deposit	2008, 2010	0.25-0.5
P-30-001695	CA-ORA-001695H	Historic Archaeological Site	Historic refuse deposit	2008, 2010	0.25-0.5
P-30-001696	CA-ORA-001696H	Historic Archaeological Site	Historic refuse deposit	2008, 2010	0-0.25
P-30-	CA-ORA-	Historic	Historic refuse deposit	2007,	0.25-0.5

Primary Number	Trinomial	Resource Type	Resource Description	Date Recorded	Distance from Project area
001697	001697H	Archaeological Site		2010	
P-30-001735	CA-ORA-001735/H	Multicomponent Site	Prehistoric chert flake; Historic refuse scatter	2012	0.5-1
P-30-001736	CA-ORA-001736	Prehistoric Archaeological Site	Groundstone scatter	2012, 2013	0.5-1
P-30-001737	CA-ORA-001737H	Historic Archaeological Site	Historic foundation, historic trash deposit	2013	0.5-1
P-30-001738	CA-ORA-001738H	Historic Archaeological Site	Historic foundation, remnant of historic oiled road	2013	Within
P-30-100012		Prehistoric Isolate	Quartzite flake	1993	0.5-1
P-30-100012		Historic isolate	Ceramic ironstone sherd	1993	0.5-1
P-30-100123		Historic isolate	Aqua glass insulator fragment	2007	0.25-0.5
P-30-100378		Historic Isolate	Cow bone	2002	0.5-1
P-30-100379		Historic Isolate	Brown glass bottle	2002	0.5-1
P-30-100380		Historic Isolate	Glass shard	2002	0.5-1
P-30-100381		Historic Isolate	Ceramic sherd	2002	0.5-1
P-30-100382		Historic Isolate	Cow bone	2002	0.5-1
P-30-100441		Prehistoric Isolate	Metate fragment and hammerstone	1991	0.5-1
P-30-100486		Prehistoric Isolate	Granitic mortar fragment	2010	0.25-0.5
P-30-100487		Historic Isolate	Whole glass bottle	2010	0.25-0.5
P-30-100488		Historic Isolate	Whole glass bottle	2010	0.25-0.5
P-30-100489		Historic Isolate	Whole glass bottle	2010	0.25-0.5
P-30-100490		Prehistoric Isolate	Sandstone metate fragment	2011 (Gary King, SWCA)	0.25-0.5
P-30-120001		Historic Archaeological Site	Historic refuse scatter	1977	0-0.25
P-30-120002		Historic Archaeological Site	Historic refuse scatter	1977	Within
P-30-120003		Historic Archaeological Site	Historic refuse scatter	1977	0-0.25
P-30-162260	CRHP and CHL No.918, HRI No. 089531	Historic Resource	Historic Resource, former location of the City of Olinda, an Oil Boom Town: 1888-1930s	1992	0-0.5
P-30-		Historic Resource	Single family residence, "Landa	1992	0.5-1

Primary Number	Trinomial	Resource Type	Resource Description	Date Recorded	Distance from Project area
176487			House" auxiliary sheds, barns, burial, not date		
P-30-177011	15551 E. Birth Street, HRI?	Historic Resource	Single family property, Frame Ranch House-style: 1900	1989 (Joan C. Brown, RMW)	0.5-1
P-30-177012		Historic District	Oil Field, "Stearns Lease, oil derricks, pumps, well, storage and processing facilities, oil pipelines, and associated buildings.	2000, 2006	Within
P-30-177614	4102 Prospect Ave.	Historic District	Grove House and Ranch Buildings, collection of Craftsman style citrus ranch houses: 1924-1960	1993	0.5-1
P-30-177632	16651 Lathrop Drive	Historic Resource	Single family property, Minimal Traditional style: 1960	2016	0.5-1
P-30-177658	16631 Lathrop Drive	Historic Resource	Single family residence, California Ranch style: 1955	2016	0.5-1

CULTURAL RESOURCES WITHIN THE PROJECT AREA

P-30-001665 (CA-ORA-1665H)

P-30-001665 is a historic archaeological site consisting of three concentrations of historic refuse scatters within an 18 acre area. The site is located south of Lambert Road and West of South Valencia Avenue and artifacts date from 1900 to 1920 (Ashkar 2000b). The site is located within the area of Flanigan Corners, a secondary area of development to the west of historic Olinda. This site was not evaluated for the NRHP or the CRHR.

P-30-001666

P-30-001666 is a historic built environment resource consisting of a generator building associated with the oil field. The building is a rectangular wood framed building on a poured concrete foundation with a gabled roof. The walls and roof are comprised of corrugated metal. The building is located along an access road west of South Valencia Avenue (Ashkar 2000b). This site was not evaluated for the NRHP or the CRHR.

P-30-001738 (CA-ORA-1738H)

P-30-001738 is an historic archaeological site consisting of two linear features located north of Lambert Road and west of Valencia Avenue. The first feature is a concrete road segment measuring 24 feet in length and 18 inches wide. The second feature is a segment of an oiled road that runs parallel to the previously mentioned concrete road segment (Millington 2013). The

features are likely associated with the nearby oil wells. This site was not evaluated for the NRHP or the CRHR.

P-30-120002
P-30-120002 is an historic archaeological site consisting of a historic refuse scatter located within Carbon Canyon Regional Park at the eastern boundary of the Project area. The site was recorded in 1977 and was noted to include artifacts dating to the late 1800s. Some of the artifacts were collected by the Park and displayed at the Visitor's Center (Martz 1977). This site was recommended ineligible for listing in the NRHP and CRHR.

P-30-177012
P-30-177012 was originally recorded as the Stearns Lease Historic District composed of formally active air balanced and counter balanced pump jack oil wells (Ashkar 2000). The Historic District was later updated and is now referred to as the Brea-Olinda Oil Field District. A narrow strip of the originally recorded district overlaps the northwest boundary of the current Project area. The formally recorded oil wells have been removed and a housing development now exits on the property, excluding the narrow strip included in the current Project area. Assembled by the Union Oil Corporation (UNCOAL) as a benefit for the employees of Union's Brea-area operators and their families, the site record was updated to include the "Wildcatters Park" (circa 1960) in 2007, which includes a commemorative historic oil derrick and other relics and monuments to the area's oil industry (Steeley 2007). However, Wildcatters Park is not located in the Project area. P-30-177012 was recommended ineligible for listing in the CRHR and was not evaluated for the NRHP.

OTHER SOURCES

In addition to the record search conducted at the SCCIC, a variety of sources were consulted in February 2019 to obtain information regarding the cultural context of the Project area (Table 3). Sources included the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), California Historical Resources Inventory (CHRI), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). Specific information about the Project Area, obtained from historic-era maps and aerial photographs, is presented in the Project Area History section.

Table 3. Additional Sources Consulted

Source	Results
National Register of Historic Places (NRHP; 1979-2002 & supplements)	Negative

Source	Results
Historic USGS Topographic Maps	The earliest topographic map for the Project area (PA) is the 1896 Anaheim 15' topographic map and shows the northwest portion of the PA located in the former San Juan Cajon de Santa Ana land grant. Carbon Creek is depicted running northeast to southwest at the southern portion of the PA. The 1901 Anaheim 15' topographic map shows the Santa Fe Railway spur east of the PA as well as the Town center of Olinda. Valencia Road bisects the PA northeast-southwest through the PA. The 1942 Anaheim 15' topographic map depicts a dense cluster of oil drills and unimproved roads in the northwest portion of the PA. The 1950 Yorba Linda 7.5' topographic map shows the expansion of the unimproved roads to the east of Valencia Road as well as the depiction of more oil drills. An "Oil Sump" is labeled in the center of the eastern section of the PA. Agricultural fields are depicted in the 1964 Yorba Linda 7.5' in the southeast section of the PA and to a lesser extent in the northwest section.
Historic US Department of Agriculture Aerial Photographs	The earliest historic aerial dates to 1946and shows structures scattered throughout the PA. A small pond is visible near the southwest intersection of E. Lambert Road and Valencia Avenue, as well as two large structures near the intersection of Lambert Road and Valencia Avenue. The structures still exist today and remain in the same location. Valencia Avenue can be seen in its present day route. A small cluster of agricultural trees are found to the north and south side of Lambert Road. Between 1963 and 1965, a large section of area at the southern end of the PA, east of Rose Drive, is tilled and converted into agricultural groves. A building near the intersection of Valencia Avenue and E. Birch Street has been demolished. From 1972-2005, no major changes occur within the PA with the exception of the increase of trees and other vegetation in the nursery areas near Lambert Road.
California Register of Historical Resources (CRHR; 1992-2014)	Adjacent to the PA: Olinda #918
California Historical Resources Inventory (CHRI; 1976-2014)	Adjacent to the PA HRI # 089531
California Historical Landmarks (CHL; 1995 & supplements to 2014)	Adjacent to the PA: Olinda #918
California Points of Historical Interest (CPHI; 1992 to 2014)	Negative
Caltrans Historic Bridge Inventory (2016)	Negative

Source	Results
Bureau of Land Management (BLM) General Land Office Records	Positive: see Table 6

A search of the Bureau of Land Management, General Land Office Records indicates that several land patents were obtained for portions of the Project area beginning in 1869 and included the State of California, the Southern Pacific Railroad, and several individuals (Table 4).

Table 4 . BLM Land Patents

Name	Year	Aliquots T: 3S, R; 9W	Authority
Juan Pacifico Ontiveros	1877	Sections 7, 8, & 17	Spanish Mexican Grant
State of California	1869	W ½ of SE ¼ and SE ¼ of SE ¼ of Section 8	Indemnity Selections
		S ½ of SW ¼ and NE ¼ of SW ¼ of Section 9	
		NE ¼ and E ½ of ES ¼ of Section 17	
	1870	S ½ of NE ¼ and NE ¼ of SE ¼ of Section 8	Grant-Certain Land to State
		SW ¼ of NW ¼ and NW ¼ of SW ¼ of Section 9	
Southern Pacific Railroad	1879	NE ¼ and N ½ of NW ¼ of Section 9	Grant-Certain Land to State
	1891	SE ¼ of NW ¼ of Section 9	Grant-Certain Land to State
Burdette Chandler and Walter S. Maxwell	1890	NW ¼ of NW ¼ of Section 8	Mineral Patent-Placer
Burdette Chandler	1890	NE ¼ of NE ¼ of Section 8	Sale-Cash Entry

NATIVE AMERICAN CONSULTATION

A Sacred Lands File (SLF) search was requested from the Native American Heritage Commission (NAHC) on January 25, 2019. On January 28, 2019, the NAHC indicated that a search of the SLF was completed with negative results.

The City of Brea conducted Native American consultations under Senate Bill 18 (Chapter 905, Statutes of 2004), also known as SB18, which requires local governments to consult with Tribes prior to making certain planning decisions and requires consultation and notice for a general and specific plan adoption or amendments in order to preserve, or mitigate impacts to, cultural places that may be affected. In addition to SB18 consultation, the City conducted tribal consultations under the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21080.3.1 subdivisions (b), (d) and (e)), also known as AB 52, which requires consulting for projects within the City Brea's jurisdiction and within the traditional territory.

HISTORIC SOCIETY CONSULTATION

Cogstone Archaeologist, Megan Wilson, consulted with the Brea Historical Society and Olinda Oil Museum on March 14, 2019. Linda Shay, Museum Curator, does not have any concerns regarding significant historical resources within the Project area as the area has solely been utilized for the extraction of oil. Ms. Shay requested that the Olinda Oil Museum be the repository for any historic resource, regardless of its condition, that may be recovered during development of the Project area. Ms. Shay also indicated her interest in retaining some of the older oil pumps for possible display at the museums (2019 Shay).

SURVEY

METHODS

The survey stage is important in a project's environmental assessment phase to verify the exact location of each identified cultural resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural resources sensitivity. All undeveloped ground surface areas within the ground disturbance portion of the Project area were examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass, ceramics). Existing ground disturbances (e.g., cutbanks, ditches, animal burrows, etc.) were visually inspected. Photographs of the Project area, including ground surface visibility and items of interest, were taken with a digital camera and recorded using a GeoX6000 Trimble unit.

Cogstone archaeologists and cross-trained paleontologists Tony Quach and Megan Wilson, with the assistance of Andrew Denina, surveyed the Project area on February 25th, 26th, and 27th, 2019. The Project area was divided into three areas to facilitate the pedestrian survey, Areas A, B, and C (Figure 9).

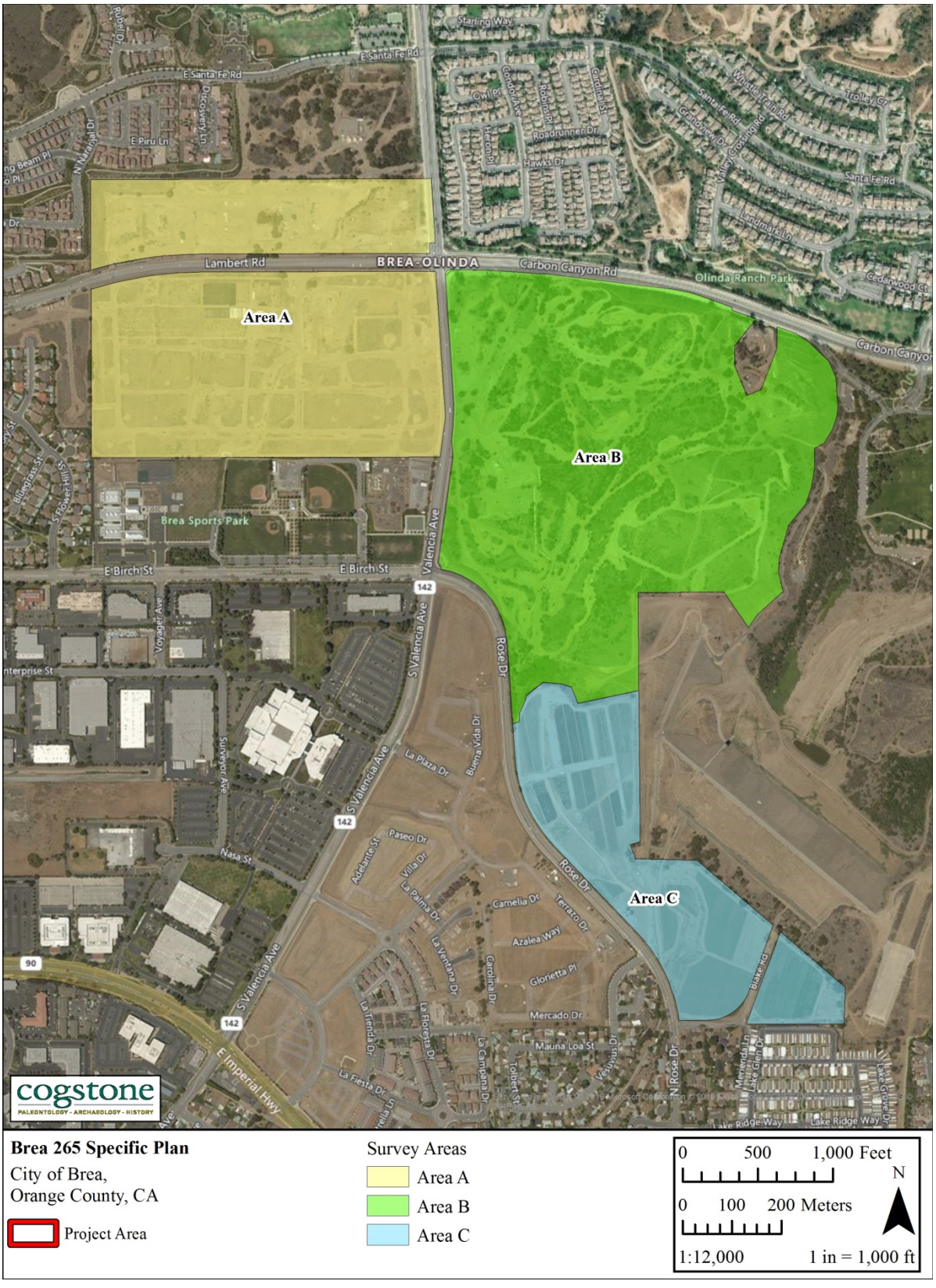

Figure 9. Survey coverage map

Area A consists of the northwestern portion of the Project area, west of Valencia Avenue and north and south of Lambert Road and includes Assessor Parcel Number (APN) 107-682-03. The area is currently used by 100 Acres Oil Field, the Greenfield Nursery, and Future Food Farms. The terrain was flat and relatively level (Figure 10). A grid of access road provided access throughout the area along north-south oriented roads as well as the perimeter of Area A. Visibility within the access road was excellent (100%); however, visibility within the majority of the Project area was poor (5-10%) due to dense invasive grasses and clovers induced by recent rains and active oil extraction and aquaculture activities (Figure11).

Four previously recorded resources are located within Area A; P-30-001665, P-30-001666, P-30-001738, and P-30-177012. These resources were revisited and updated on DPR 523 forms. In addition, two additional cultural resources, BREA_2019FEB25_01 (historic structure) and BREA_2019FEB25_02 (historic structure) were newly observed and recorded. These resources are discussed in detail in the results section.

Area B consists of a hilly area east of Valencia Avenue, south of Carbon Canyon Road, west of Carbon Canyon Regional Park, and north of the Petlzer Pines Christmas Tree Farms. Area B is composed of APN's 110-512-36, 110-017-14, 110-512-37, 110-512-77, and 110-221-23. The terrain in Area B was overall hilly with variable slopes throughout (Figure 12), although many areas exceeded 45 degrees, inhibiting access. Visibility also varied. A network of access roads traversed Area B, providing access to active oil wells, maintenance and work areas; these roads were highly disturbed due to vehicle traffic. Visibly along the access roads, work and maintenance areas were excellent (100%). The areas between access roads were covered in dense vegetation that consisted of native coastal sage scrub species in the steeper sloped areas and combination of invasive weeds and grasses and coastal sage scrub species in the more level areas. Visibility within the areas between the access road was poor (5-10%). Numerous historic era Eucalyptus and California Pepper trees were located throughout Area B.

Historic era refuse was observed throughout Area B; however, the eastern portion of Area B had the densest concentration of historic era refuse, structural debris, and abandoned foundations and equipment related to the oil extraction industry. Historic material was concentered along an existing and heavily utilized access road that followed the path of an unimproved historic dirt road related to the oil industry (Figures 7 and 8), which bisects Area B in the center, offsetting slightly to the east. Another access road that follows an unimproved historic road bisects Area B and is offset slightly to the west. This road is located in the active oil production areas and crosses through the maintenance yard for the active oil lease; numerous decommissioned oil pumps, pipes, and pumps are cached here. New parts are intermingled with historic era parts and are used when needed. A large concentration of concrete rubble and metal pipes, scraps and rebar was noted in the northern portion of Area B, located among a network of active, lateral pipes.

One previously recorded resource (P-30-120002) was revisited and updated on DPR 523 forms. One newly recorded resource, a historic era segment of the Valencia Road (BREA_2019FEB27_01), was newly observed and recorded. These resources are discussed in detail in the results section.

Area C is located east Rose Drive and west of Carbon Canyon Dam. Area C is composed of APN's 110-512-53, 110-512-52, 110-512-80, 159-402-15, and 110-512-51 and is currently used by Peltzer Christmas Tree Farm (Figure 13) and Mannaserro Strawberry Farm. Visibility within the access road was excellent (100%); however, visibility within the majority of the Project area was poor (5-10%) due to the fact the area is actively used as agricultural fields. No significant cultural resources were observed in Area C.

Figure 10. Southwest portion of Area A, view North

Figure 11. Example of active oil well, east side of Area A, view northwest

Figure 12. Center of Area B on knoll top, overview, view west

Figure 13. Northwest boundary of Area C, view southeast

RESULTS

A total of five previously recorded resources are located within the Project area: P-30-001665, P-30-001666, P-30-001738, P-30-120002 and 30-177012. These resources were revisited and updated on DPR 523 forms. In addition to the five previously recorded resources, three new cultural resources were observed and recorded; BREA_2019FEB25_01, BREA_2019FEB25_02, and BREA_2019FEB27_01 and were newly recorded (Figure 14). One prehistoric isolated prehistoric marine shell, *Chione* was also noted during the survey.

One small oyster fossil (Figure 15) was located in the center of Area B, located along an access road adjacent to an outcrop of the Fernando formation and was not *in situ*. The formation dates to the Pliocene age (Figure 16).

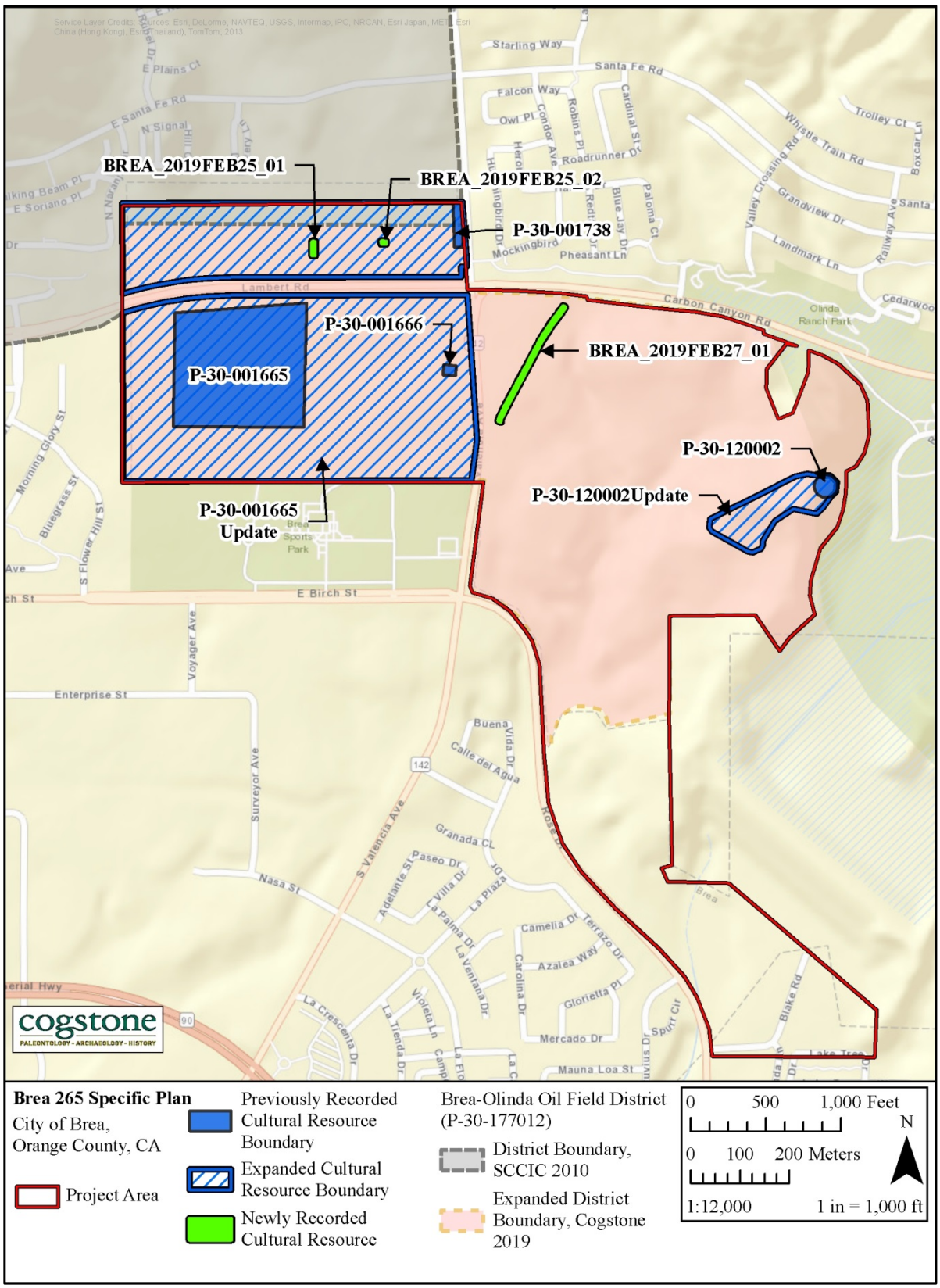

Figure 144. Survey Results

Figure 155. Fossil oyster shell found in access road

Figure 166. Fernando formation located next to road cut where oyster fossil was found

P-30-001665 (CA-ORA-1665H)
This historic archaeological site is located immediately south of Lambert Road and was originally recorded as three concentrations of historic refuse scatter (Ashkar 1998c). P-30-01665 was relocated and expanded. The northern portion of the original site has been heavily disturbed by an active aquaculture farm, Future Foods Farms. A concentration of broken glass was observed in the northern and southern boundaries of the site, as previously recorded by Ashkar (1998). However, the middle concentration was completely obstructed by the active aquaculture farm and the ground surface was heavily disturbed.

Historic glass shards and ceramic sherds were observed throughout Area A including small, undiagnostic fragments of sun-colored amethyst, milk cobalt blue, clear, green, and brown glass shards as well as whiteware ceramic shards. Two metal spoons were also observed. Reflecting the areas use for the oil extraction industry, numerous concrete foundations with iron rebar protruding that once supported air balanced oil pumps were distributed throughout Area A as well as metal scraps, valves, and pipe fragments.

The surface scatter of historic refuse, concrete foundations, and historic metal scraps were also observed north of Lambert Road. One nearly intact diagnostic bottle, embossed "DR. S. PITCHER'S" on one side panel and "CASTORIA" on the opposite side panel. This bottle dates between 1900-1904 (Lockhart et al. 2014). One polished shell button was also observed north of Lambert Road.

The site boundaries for P-30-001665 (CA-ORA-1665H) were expanded to encompass the entirety of Area A (APN 107-682-03) due to the extensive scatter of historic refuse, concrete foundations, and various metal pipes, valves, and scraps observed throughout the area. A site record update has been prepared (Appendix D).

P-30-001666
This historic built environment resource is a historic generator building located on the eastern side of Area A, just west of Valencia Avenue. This building was not relocated during the pedestrian survey and has been demolished. Concrete foundations were observed 50 meters from the previously recorded building and it is possible that these foundations belong to the extant building. A site record update has been prepared (Appendix D).

P-30-001738 (CA-ORA-1738H)
This historic linear site is located on the northeast boundary of Area A along Valencia Avenue, consisting of a concrete road segment measuring 24 feet in length and 18 inches wide. A parallel segment of an oiled road (Millington 2013) was observed in a similar condition as originally recorded. A site record update has been prepared (Appendix D).

P-30-120002
This historic archaeological site is located at the eastern boundary of the Project and consists of a historic refuse scatter dating to the late 1800s (Martz 1977). The site was originally recorded on the opposite side of the existing property boundary of the Project survey area. The site was relocated and was substantially expanded to include additional historic refuse scatters, foundations, and structural debris. All of the constituents are related to the oil extraction industry. A site record update has been prepared (Appendix D).

P-30-177012
P-30-177012 was originally recorded as the Stearns Lease Historic District composed of formally active air balanced and counter balanced pump jack oil wells (Ashkar 2000). The Historic District was later updated and is now referred to as the Brea-Olinda Oil Field District. Only a very small portion of the original district is within the northern boundary of Area A where modern and active oil pumps are still located. The district boundary has been expanded to include Areas A and B of the current Project survey. The Brea-Olinda Oil Field District has been updated as a multi-component site that includes both historic archaeological foundations and structure pads, roads, refuse deposits, numerous isolate artifacts, historic landscaping (Eucalyptus and California Pepper Trees), and historic machinery and structure. The historic district is discussed in further detail in the cultural resources findings section of this report. A district record update has been prepared (Appendix D).

BREA_2019FEB25_01
Located in the northern portion of Area A, north of Lambert Road, this historic built environment resource consists of a utilitarian shed built in a rectangular plan on a concrete slab with a normal-pitched front gabled roof. A gabled monitor roof is positioned at the center of the roof's ridge and is likely used for ventilation. The building's wood and metal framed exterior is clad in corrugated metal sheets as is the roof and monitor roof. A single small, wood framed, square window is located in the center of the north and south elevations. Double doors are located as the west elevation; doors are composed of corrugated metal sheets. DPR 523 forms have been prepared (Appendix D).

BREA_2019FEB25_02
Located in the northern portion of Area A, north of Lambert Road, this historic built environment resource consists of a single story utilitarian building, set in a rectangular plan on a concrete slab with a high pitched roof. The side-gabled roof is covered with corrugated metal sheets with its exposed eaves overhanging on all elevations. The building's wood frame is clad in corrugated steel sheets. At the buildings east elevation are six bay door openings. Doors to five of these openings are comprised of hinged corrugated steel and wood boards. Near the north end of the east elevation, the fifth bay opening has a swinging metal rod gate. A wooden lean-to is attached to the north elevation and is covered by corrugated sheet metal. Also at the north elevation are two window openings; one is boarded up and the other is a two-over-two, double

hung, aluminum window. A wire security mesh covers all window openings. This fenestration pattern at the north is identical to the south elevation. DPR 523 forms have been prepared (Appendix D).

BREA_2019FEB27_01
This historic road segment consists of a former segment of Valencia Avenue. Originally, the road trended north-south veering north-east and merging into what is now Carbon Canyon Road. The original alignment appears on the 1901 Anaheim 15' Topographic map (Figure 7). The 1935 Blackburn Map of Orange County (see Figure 8) labels the road as Valencia Boulevard and as Olinda Boulevard. According to historic aerials, the road fell into disuse sometime between 1972 and 1980 in which the current alignment of the roads became the primary vehicle corridor. DPR 523 forms have been prepared (Appendix D).

PALEONTOLOGICAL RESOURCES FINDINGS

PALEONTOLOGICAL SENSITIVITY

A multilevel ranking system was developed by professional resource managers within the Bureau of Land Management (BLM) as a practical tool to assess the sensitivity of sediments for fossils. The Potential Fossil Yield Classification (PFYC) system (BLM 2007; Appendix C) has a multi-level scale based on demonstrated yield of fossils. The PFYC system provides additional guidance regarding assessment and management for different fossil yield rankings.

Fossil resources occur in geologic units (e.g., formations or members). The probability for finding significant fossils in a project area can be broadly predicted from previous records of fossils recovered from the geologic units present in and/or adjacent to the study area. The geological setting and the number of known fossil localities help determine the paleontological sensitivity according to PFYC criteria

All alluvial deposits may increase or decrease in fossiliferous potential depending on how coarse the sediments are. Sediments that are close to their basement rock source are typically coarse; those farther from the basement rock source are finer. The chance of fossils being preserved greatly increases once the average size of the sediment particles is reduced to 5 mm or less in diameter. Moreover, fossil preservation also greatly increases with rapid burial in flood-plains, rivers, lakes, oceans, etc. Remains left on the ground surface become weathered by the sun or consumed by scavengers and bacterial activity, usually within 20 years or less. So the sands, silts, and clays of flood-plains, rivers, lakes, and oceans are the most likely sediments to contain fossils.

Using the PFYC system, geologic units are classified according to the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts within the known extent of the geological unit. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher PFYC value; instead, the relative abundance of localities is intended to be the major determinant for the value assignment.

The artificial fill has a very low potential for fossils (PFYC 1). The upper 8 feet of the late Pleistocene to Holocene young alluvial fan is assigned a low potential for fossils (PFYC 2) at the surface and increases to moderate but patchy sensitivity (PFYC 3a) by 8 feet below the original ground surface. Both the upper member conglomerate of the Fernando Formation and the Sycamore Canyon Member conglomerate of the Puente Formation are assigned a low potential for fossils (PFYC 2) due to the coarseness of these deposits. The early to middle Pleistocene very old alluvial fan, the La Habra Formation, the nonconglomeratic facies of the upper and lower members of the Fernando Formation are assigned a moderate and patchy sensitivity (PFYC 3a; Table 5; Figure 17).

Table 5. Paleontological Sensitivity Rankings

Rock Unit	Map Symbol (Figure 4)	PFYC rankings					
		5 Very High	**4 High**	**3a Moderate; Patchy**	**3b Moderate; Undemonstrated**	**2 Low**	**1 Very Low**
artificial fill, modern	Qaf						X
late Pleistocene to Holocene deposits young alluvial fan	Qyf			more than 8 feet below the original surface		less than 8 feet below the original surface	
very old alluvial fan, early to middle Pleistocene	Qvof			X			
La Habra Formation, Pleistocene	Qlh			X			
Fernando Formation, upper member, Pliocene	Tfu			X			
Fernando Formation, upper member conglomerate, Pliocene	Tfuc					X	
Fernando Formation, lower member, Pliocene	Tfl			X			
Puente Formation, Sycamore Canyon Member conglomerate, late Miocene to early Pliocene	Tpscc					X	

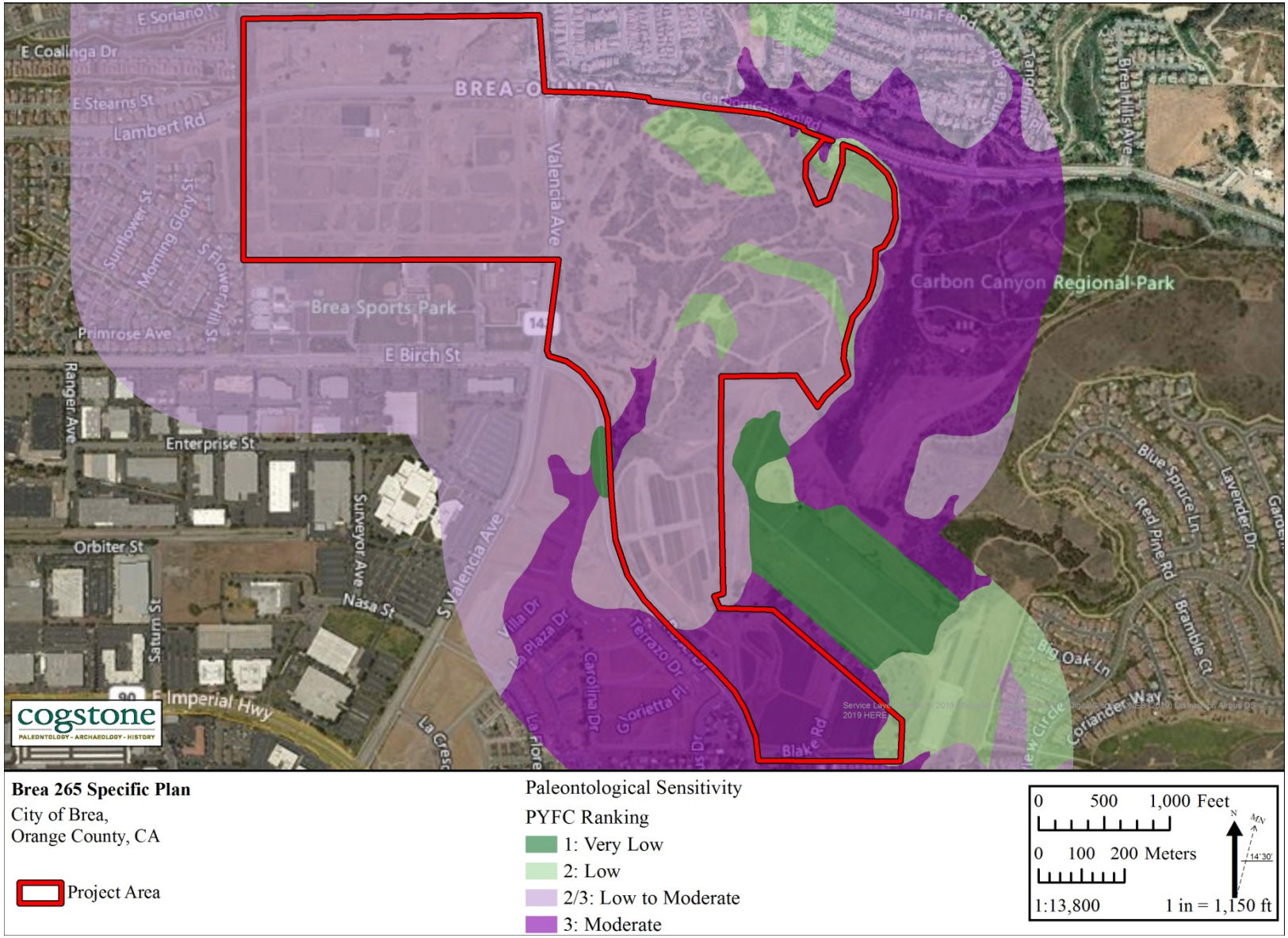

Figure 17. Paleontological Sensitivity of the Project

DEFINITION AND EVALUATION OF SCIENTIFIC SIGNIFICANCE FOR FOSSILS

Only qualified, trained paleontologists with specific expertise in the type of fossils being evaluated can determine the scientific significance of paleontological resources. Fossils are considered to be scientifically significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life;
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations (Scott and Springer 2003, Scott et al. 2004).

Scientific significance is assessed subsequent to recovery and identification of fossils, typically by the scientific institution receiving the fossils. Typically all identifiable vertebrate fossils are to be curated in perpetuity at an accredited repository after excavations have finished. Nonvertebrate fossils (plants, shells, trace fossils, etc.) may be collected as a representative sample when numerous fossils of the same species are present. Although initial identifications can be made in the field, final determination on fossil identifications and significance must be made by the repository.

In the case of unidentifiable fossils, unless they can be used for radiometric dating these typically do not meet the significance criteria listed above. In the case of isolated finds or single bones, while they may not initially appear to meet the scientific significance criteria listed above by themselves, they cannot immediately be discounted as not scientifically significant. This is because the evaluation of evolutionary relationships, development of biological communities, interaction between paleobotanical and paleozoological biotas, or unusual or spectacular circumstances in the history of life (criteria 1, 3, and 4 above) require a large quantity of data to assess. The accumulation of information on localities of similar age with identifiable fossils recovered in a geographic area is necessary to build these data sets.

CULTURAL RESOURCES FINDINGS

The current Project area has been continuously used for oil production and to a lesser degree for agriculture since the 1880s. The Project area has adverted substantial urban development precisely because of the lands productivity for oil production and agriculture.

Review of existing historical documents, maps, and literature in tandem with the results of the intensive pedestrian survey indicate that Areas A and B of the current Project area represent an extension of the previously recorded historic district Brea-Olinda Oil Field District (P-30-177012). It is proposed in this study, that Survey Areas A and B be included in the Brea-Olinda Oil Field Historic District. Thematically, the Brea-Olinda Oil Field District belongs to the Oil and Other Petroleum Products sub-theme (1894–1965) of the larger historic context for the Industrial Development (1850-1980) Southern California (n.d. Survey LA).

In 2000, Shahira Ashkar evaluated an area of the Brea-Olinda Oil Field District to the northwest of the current Project area. Her reports surveyed and evaluated archaeological resources and historic resources separately in two different studies (Ashkar 2000a, Ashkar 200b). The historic archaeological sites (2000b) and historic resources (2000a) should be considered together as they represent the continuum of local oil extraction activities in the area. Previously recorded historic archaeological sites and historic resources (which include sites revisited and expanded in this study) show a cohesive historic district relating to the early local oil industry. Additionally, when coupled with the numerous historic archaeological sites observed during archaeological monitoring for construction activities for the Tonner Hills Project on behalf of Shea Homes (Backes et al.2010), the Brea-Olinda Oil Field Historic District manifests itself beneath the ground. Therefore, the findings of this study include both previously recorded resources and newly recorded resources and will be evaluated as a whole, on a district level as an addition to the Brea-Olinda Oil Field District.

The update to the Brea-Olinda Oil Field District includes both historic archaeological sites (historic foundations and structure pads, historic roads, historic refuse deposits, numerous historic isolate artifacts, historic landscaping (Eucalyptus and California Pepper Trees), historic aged machinery (air-balanced and beam-balanced pumps), as well as standing historic aged structures that consist of metal utility sheds. One prehistoric isolated prehistoric marine shell, *Chione* was noted during the survey.

Specifically, the newly recorded elements of the Brea-Olinda Oil Field District include updates to four previously recorded cultural resources; P-30-001665; P-30-001666; P-30-001738; and P-30-120002. The boundaries of two historic refuse deposits, P-30-001665 and P-30-120002, have been expanded to include concentrations of historic refuse, foundations, and structural debris that are present within the current survey area. Newly recorded elements include three historic metal

utility sheds, 2019FEB25_01 and 2019FEB25_02, and a now extant segment of Valencia Road, BREA_2019FEB27_01 (see Figure 11).

EVALUATION OF THE OLINDA-BREA OIL FIELD HISTORIC DISTRICT

The majority of the Brea-Olinda Oil Field District has been evaluated in previous studies (Ashkar 2000a). The initial evaluation of the northwest portion of the Brea-Olinda Oil Field District only considered the air-balanced and counter-balanced oil jacks. In the evaluation, the Criteria for Evaluation for listing on the California Register of Historical Resources (CRHR) was only applied to the existing, now extant oil wells and recommended them as not eligible of listing in the CRHR. The original 2000 evaluation states:

> As individual resources, these pumps lack the context necessary to convey their significance; however, a number of resources considered as a district may be eligible. A representative array of resources sufficient to convey what the oil field settlement was like between 1894 and 1920s would need to be present for the resources to qualify for CRHR listing as a historic district. Historic photographs and archival research indicate that between1894 and the 1920s, this oil field consisted of derricks, pumps, oil storage and processing facilities, and a camp which was composed of boarding houses, homes, warehouses, and administrative buildings. All that remains of the field today are pumps. Therefore, as a district, the Stearns Lease lacks integrity and is recommended not eligible for listing in the CRHR [Askhar 2000].

The portion of the Brea-Olinda Oil Field District that is evaluated as part of this study includes Survey Areas A and B (see Figure 11) of the current Project and includes both archeological resources as well as historic (built environment resources/machinery). The following evaluation applies only to the area surveyed as part of this study.

Criterion 1: Although this portion of the Brea-Olinda Oil Field District was one of the earliest areas in Southern California that was used for large-scale oil production, it was the not the first, nor is it a unique example of the industry. Therefore it is not recommended eligible for CRHR listing under Criterion 1.

Criterion 2: This portion of the Brea-Olinda Oil Field District is associated with Edward L. Doheny who was instrumental in bringing the oil industry to Orange County and connecting the Santa Fe Railroad spur to the area, his association to the district is limited to its founding and early development. Doheny is considered an important player in local, and California history; however, his legacy has been preserved farther to the east near the old town site of Olinda (P-30-162260; CRHP; CHL No.918, HRI No. 089531) where his original Olinda Oil Well Number 1 is still in use near the Olinda Museum. The Brea-Olinda Oil Field District is not recommended eligible for CRHR listing under Criterion 2.

Criterion 3: Oil extraction activities on this portion of the Brea-Olinda Oil Field District have been occurring since late 1800s. Standing oil pumps and existing pipes, machines, and storage facilities have been in continuous use since the original wells were drilled; therefore, all the standing pumps have been updated as time progressed. Technological upgrades and mechanical maintenance of the wells stripped these resources of their original historic context and integrity. They are not recommended as eligible for CRHR listing under Criterion 3.

Criterion 4: The subject portion of the Brea-Olinda Oil Field has numerous historical archaeological artifacts and features visible on the surface that have been observed and recorded as part of this study. Surface manifestations of archaeological material are a reliable indication of subsurface deposits. Additionally, the numerous subsurface deposits observed from construction actives to the northwest on the Stearns Property during construction activities for the Tonner Hills Project on behalf of Shea Homes (Backes et al.2010) are an excellent indicator that similar archaeological deposits will be uncovered during ground disturbing activities on the subject Project area. The Brea-Olinda Oil Field District may be eligible for CRHR listing under Criterion 4.

Although the Brea-Olinda Oil Field evaluated in this study is associated with the earliest development of the oil industry in Orange County and is connected to Edward L. Dohney, the area has been in continuous use since the late 1800s. Updates in technology and equipment necessary to maintain an active oil field has stripped the area of historic context and the Project area does not convey what the oil field or settlement was like during its historically significant period. The Project area only possess integrity of location and is limited to that and does not maintain the feel of a bustling oil field that once supported an oil boom town. There is always the potential that subsurface may yield important information to the prehistory as well as the history of the area. This is a general caveat often applied to areas with known archaeological sensitivity, but it does not qualify the area as significant. The Brea-Olinda Oil Field is therefore recommended as ineligible for listing on the CRHR.

RECOMMENDATIONS

PALEONTOLOGY

The Project is mapped as modern artificial fill, Pleistocene to Holocene alluvial fans, the La Habra Formation, the Fernando Formation, and the Puente Formation. It is possible that all of these formations will be impacted during excavations.

The artificial fill has a very low potential for fossils (PFYC 1). The upper 8 feet of the late Pleistocene to Holocene young alluvial fan is assigned a low potential for fossils (PFYC 2) at the surface and increases to moderate but patchy sensitivity (PFYC 3a) by 8 feet below the original ground surface. Both the upper member conglomerate of the Fernando Formation and the Sycamore Canyon Member conglomerate of the Puente Formation are assigned a low potential for fossils (PFYC 2) due to the coarseness of these deposits. The early to middle Pleistocene very old alluvial fan, the La Habra Formation, the nonconglomeratic facies of the upper and lower members of the Fernando Formation are assigned a moderate and patchy sensitivity (PFYC 3a).

A Paleontological Resource Impact Mitigation Program and full-time monitoring is currently recommended for deposits with a PFYC ranking of 3 or greater. If unanticipated fossils are unearthed during construction, work should be halted in that area until a qualified paleontologist can assess the significance of the find. Work may resume immediately a minimum of 50 feet away from the find. This procedure should be included in the Worker Environmental Awareness Program (WEAP) training provided to construction personnel.

CULTURAL RESOURCES

Identification efforts included a review of existing literature and historic maps of the Project Area and vicinity, a CHRIS records search conducted at the SCCIC, and an intensive pedestrian survey.

Updates in technology and equipment necessary to maintain an active oil field has stripped the Brea-Olinda Oil Field of historic context and integrity and it does convey what the oil field or settlement was like during its historically significant period; therefore, the Brea-Olinda Oil Field is recommended as ineligible for listing on the CRHR.

The sensitivity for subsurface archaeological resources within Areas A and B considered being high due to its use since the 1880s by the oil industry and the presence of numerous historic artifacts and features observed throughout the areas. Additionally, the multiple archaeological

deposits uncovered to the northwest of the Project area on the Stearns Property during construction activities in 2010 is a good indication of the kinds of resources that will likely be found in the Project area as the two areas share a nearly identical history and land use pattern. The sensitivity for subsurface archaeological resources within Areas C is considered low due to the high degree of previous ground disturbances from agricultural activities.

Potential archaeological deposits include historic-era buried (i.e. privies, trash pits, or structural remains) and additional undocumented surface archaeological materials during. Additionally, there is a potential for subsurface prehistoric archaeological resources based on the local ethnographic settlement and subsistence patterns, the prehistory and history of the area, the proximity of Carbon Canyon Wash as well as the natural tar seeps that was a valuable resource in prehistory. Previously recorded prehistoric sites are also numerous in the surrounding area of the Project area.

Due to the high sensitivity for subsurface archaeological resources a cultural resources mitigation plan and monitoring is currently recommended. The mitigation plan which shall require monitoring during grading and other earthmoving activities in undisturbed sediments, provide a treatment plan for potential resources that includes data to be collected, requires professional identification, other special studies as appropriate, requires curation at an accredited museum for artifacts meeting significance criteria, requires a comprehensive final mitigation compliance report including a catalog of specimens with museum numbers and an appendix containing a letter from the museum stating that they are in possession of the materials.

In the event of an unanticipated discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it. In the unlikely event that human remains are encountered during project development, all work must cease near the find immediately.

In accordance with California Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods. Work may not resume in the vicinity of the find until all requirements of the health and safety code have been met.

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2017 Vertebrate Paleontology Records Check for Paleontological Resources for the Proposed Bastanchury Project, Cogstone Project # 4176, in the City of Yorba Linda, Orange County, Project Area. On file with Cogstone, Orange, California.

2019 Vertebrate paleontological Records Check for Paleontological Resources for the Proposed Brea Specific Plan Project, Cogstone Project # 4575, in the City of Brea, Orange County, project area. Appendix B.

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APPENDIX A. QUALIFICATIONS

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

SHERRI GUST
Task Manager

EDUCATION

1994 M. S., Anatomy (Evolutionary Morphology), University of Southern California, Los Angeles
1979 B. S., Anthropology (Physical), University of California, Davis

SUMMARY QUALIFICATIONS

Ms. Gust is a Registered Professional Archaeologist and Qualified Principal Paleontologist with more than 35 years of experience in cultural resources management and consulting in California. She has conducted technical studies and prepared cultural resources chapters for CEQA/EIR compliance documents for project-level and program-level Specific Plans, General Plans, Master Plans, and Zoning Amendments for mixed-use, residential, commercial and industrial developments. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. She is accepted as a principal investigator for both prehistoric and historical archaeology by the State Office of Historic Preservation's Information Centers. Her expertise also includes historical archaeology of California (statewide) and prehistoric archaeology in the central and southern California coastal and inland areas. She has expertise in the paleontology of the western United States including research, survey, assessment of impacts/effects, significance criteria and determinations, management plans, mitigation implementation, fossil identification and analysis.

SELECTED PROJECTS

Hidden Oaks Country Club Specific Plan and TT 18869, Chino Hills, San Bernardino County, CA. Managed cultural and paleontological resources assessments, assisted the City with SB 18 compliance, and responded to the cultural section of the project EIR comment for this proposed 537-acre residential project with minimum 5-acre per lot constraints. Services included records search, Sacred Lands search, NAHC consultation, field survey, and mitigation recommendations. Principal Investigator. 2015-2016

Pasadena General Plan Update Program EIR, Pasadena, Los Angeles County, CA. The General Plan Update focuses on changes to the Land Use and Mobility Elements and Land Use Diagram. The City consists of 14,802 acres. The General Plan also includes the consolidation of optional elements (cultural and recreational, historic and cultural, public facilities, scenic highways, social development, and economic development) into the required elements of the General Plan. Cogstone conducted cultural and paleontological resources record searches, historical places searches, built environment sites, Sacred Lands search, Native American consultation, reviewed historic maps, consulted with local historic preservation groups, and prepared brief contexts for paleontological, archaeological, and historical resources. Prepared the Prehistoric Setting, Ethnography, Impact Analysis and Recommendations. Sub to PlaceWorks. Principal Investigator. 2014

Paradise Valley Specific Plan, Glorious Land Company, unincorporated Riverside County, CA. The project involves construction of a resort community, which will include a variety of residential developments, recreational opportunities, commercial and industrial facilities and associated infrastructures. Of the 5, 411-acre project area, 2,151 acres are slated for development (planned development area), leaving the remaining 3,260 acres as open space. Determined the potential impacts to paleontological, archaeological, and historical resources. Prepared final reports, including Supplemental Phase I Cultural Resources Assessment Report; Peer Review of the CRM Tech Document: Paleontological Resources Assessment Report; and a Final Paleontological Assessment Report. Sub to Envicom. Principal Investigator. 2011-2014

Los Alamitos General Plan Update, City of Los Alamitos, Orange County, CA. Conducted a cultural and paleontological resources technical study of the 2,617-acre city and adjacent unincorporated community of Rossmoor to support an update of the General Plan environmental documents. Conducted archaeological, historical, and paleontological records searches; a Native American Sacred Lands file search; and prepared a Paleontological and Cultural Resources Report. Sub to PlaceWorks. Principal Investigator. 2011-2013

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

MOLLY VALASIK
Principal Investigator for Archaeology

EDUCATION

2009 M.A., Anthropology, Kent State University, Kent, Ohio
2006 B.A., Anthropology, Ohio State University, Columbus, Ohio

SUMMARY QUALIFICATIONS

Ms. Valasik is a Registered Professional Archaeologist (RPA) and cross-trained paleontologist with 10 years of professional and academic archaeological field and research experience. She has conducted technical studies and prepared cultural resources reports for CEQA/EIR compliance documents for project-level and program-level Specific Plans, General Plans, Master Plans, and Zoning Amendments for mixed-use, residential, commercial, and industrial developments. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. She is a skilled professional who is well-versed in the compliance procedures of CEQA and Section 106 of the NHPA and in working with a variety of federal, state, and local agencies throughout California.

SELECTED PROJECTS

State Route 57 Northbound Improvement Project, Caltrans District 12, Orange County, CA. For this project on behalf of OCTA and Caltrans an ASR and HPSR technical reports were prepared for Section 106 of the NHPA compliance. Managed record search, Sacred Lands File search, extended Native American consultations, pedestrian archaeological survey, as well as coordination and approval by District 12 of an APE map. Authored technical reports. Sub to WSP. Principal Investigator. 2018

Agora Town Center Mixed-Use EIR, City of Laguna Niguel, Orange County, CA. Conducted due diligence review of the previous environmental document. Prepared updated cultural and paleontological sections, including updated records search. The project also involved preparation of a new Tribal cultural resources section; and assisting the City of Laguna Niguel with combined SB 18/AB52 consultation and outreach. Sub to PlaceWorks. Principal Archaeologist. 2016

Shoppes at Corona Vista Specific Plan, City of Corona, Riverside County, CA. The Project involved the construction of a shopping center and a church and included a specific plan amendment for a 7.25-acre site situated within a former citrus growing community. Services included archaeological, paleontological and historical records searches, NAHC consultation, pedestrian survey and prepared technical reports. Sub to Applied Planning. Principal Archaeologist and Report Co-Author. 2015

Paradise Valley Specific Plan, Glorious Land Company, unincorporated Riverside County, CA. Determined the potential effects of paleontological, archaeological, and historical resources on the proposed project. Supervised and participated in the archaeological fieldwork and prepared all GIS maps. The proposed project, encompassing approximately 5,411 acres, consists of the construction of a resort community, which will include a variety of residential developments, recreational opportunities, commercial and industrial facilities and associated infrastructures. Of the 5,411 acre project area, 2,151 acres are slated for development (planned development area), leaving the remaining 3,260 acres as open space. Sub to Envicom. Archaeology Field Supervisor,GIS Specialist, and Report Co-Author. 2011-2013; 2014-2015

Los Alamitos General Plan Update, City of Los Alamitos, Orange County, CA. Cultural Resources technical study on behalf of the City of Los Alamitos to support an update of the General Plan environmental documents. The City consists of 2,617 acres in Orange County, California. Conducted the archaeological records search, wrote portions of the report, and prepared the report maps for 2,617 acres in the City of Los Alamitos. Sub to The Planning Center. GIS Specialist and Report Co-author. 2011-2013

Chino Hills General Plan EIR, City of Chino Hills, San Bernardino County, CA. Supported archaeological and paleontological programmatic technical studies including record searches, Native American consultation, and prepared assessment report for the City of Chino Hills. This study was conducted to provide available information on paleontological and cultural resources to support an update of the General Plan program-level environmental documents. The City consists of 28,723 acres. Archaeologist/GIS Specialist. 2010-2011

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

KIM SCOTT
Principal Investigator for Paleontology

EDUCATION

2013 M.S. Biology with paleontology emphasis, California State University San Bernardino
2000 B.S., Geology with paleontology emphasis, University of California, Los Angeles

SUMMARY QUALIFICATIONS

Ms. Scott has 21 years of experience in California as a paleontologist and sedimentary geologist. She has worked extensively in the field surveying, monitoring, and salvaging fossils on over 100 projects. In addition, she has special skills in fossil preparation (cleaning and stabilization) and in the preparation of stratigraphic sections and other documentation for fossil localities. She has written over 100 assessments and monitoring compliance reports to all agency requirements. Ms. Scott serves as company safety officer and is the author of the company safety and paleontology manuals. She is a Member of the Society of Vertebrate Paleontology and the Geological Society of America.

SELECTED PROJECTS

Westminster General Plan Update EIR, City of Westminster, Orange County, CA. Prepared paleontological resources assessment to support the General Plan Update. The study area included the entire city, spanning 6,590 acres. Services involved records search, GIS mapping. Impact analysis determined negative results. Sub to PlaceWorks. Principal Investigator/Author of Paleontological Report. 2015-2016

Lyon Subdivision EIR, Coto de Caza, Orange County, CA. The Project proposes the subdivision of an existing large estate for development of 28 new residential lots on approximately 50-57 acres of land. Proposed residential lots will be a minimum of one acre in size. Sub to CAA Planning. Co-Principal Paleontologist/Report Co-author. 2015

Temecula Gateway EIR, City of Temecula, Riverside County, CA. A Planned Development Overlay/Zone Change and General Plan Amendment. The applicant intended to change the General Plan designation to Community Commercial. The Planned Development Overlay would allow for a mixture of uses intended to provide for the development of a variety of local and tourist- serving commercial development. Prepared an assessment report for a 9-acre parcel for the EIR. Sub to PMC. Co-Principal Investigator/Report Co-author. 2015

Valley Boulevard Specific Plan and EIR, Cities of Fontana and Bloomington, San Bernardino County, CA. The Project proposes to maintain and improve existing private and community assets with land use change. Land use changes would involve replacing current conventional zoning districts with five Specific Plan land use districts; Mixed Use, Bloomington Enterprise, Commercial, Low and Medium Residential, and Medium and High Residential districts.Co-Principal Paleontologist/Report Co-author. 2015

Yucaipa General Plan Update and Program EIR, City of Yucaipa, San Bernardino County, CA. The project involved a comprehensive update to the Yucaipa General Plan, an Initial Study, a Program Environmental Impact Report (EIR), a Mitigation Monitoring or Reporting Program (MMRP), and the Findings of Fact and Statement of Overriding Considerations (SOC) for an advanced planning project proposal on behalf of the City of Yucaipa Community Development Department. Conducted record search, Sacred Lands search, NAHC consultation, GIS mapping, cultural and paleontological resources sensitivity analysis, and reporting. Sub to PlaceWorks. Co-Principal Investigator/Report Co-author. 2014

Chino Hills General Plan EIR, City of Chino Hills, San Bernardino County, CA. Performed archaeological and paleontological programmatic technical study including record searches, Native American consultation, and prepared assessment report for the City of Chino Hills under subcontract to Comprehensive Planning. This study was conducted to provide available information on paleontological and cultural resources to support an update of the General Plan program-level environmental documents. The City consists of 28,723 acres. The work was performed on behalf of the City of Chino Hills. Sub to Comprehensive Planning Services. Field and Laboratory Supervisor / Report Co-author. 2010

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

MEGAN PATRICIA WILSON
Archaeologist/GIS Manager

EDUCATION

2014 M.A. Anthropology, California State University, Fullerton *cum laude*
2013 GIS Certificate, California State University, Fullerton
2006 B.A., Anthropology, University of California, Los Angeles *cum laude*

SUMMARY QUALIFICATIONS

Ms. Wilson is a Registered Professional Archaeologist (RPA) and cross-trained paleontologist. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. Further, she is certified in Geographic Information Systems (GIS) and specializes in ESRI's ArcGIS software. Ms. Wilson is responsible for supervising GIS data collection and management, geospatial analysis, and the production of GIS maps and databases for large and small-scale projects. Ms. Wilson has eight years of experience in southern California archaeology.

SELECTED PROJECTS

Purple Line Extension (Westside Subway) Section 1 Construction Management, Metropolitan Transportation Authority (METRO), Los Angeles County, California. The project involves excavations along Wilshire Blvd. for a drop box at Western, three stations at La Brea, Fairfax and La Cienega and appendages. GIS Supervisor. Sub to WEST JV. 2014-2018

Park Place Extension and Grade Separation EIR EA, Caltrans District 7, City of El Segundo, Los Angeles County, CA. Conducted a pedestrian survey to record and evaluate cultural resources within the archaeological and architectural APEs for a ~0.5-mile project along NBSF and UPRR rail lines and spur tracks on behalf of the City of El Segundo for HPSR/ASR/HRER and paleontological reports. Seven built-environment resources were identified, evaluated, and DPR 523 forms were prepared. Archaeologist/GIS Supervisor. 2017

Whittier Boulevard/Three Intersection Improvements, City of Whittier, Los Angeles County, CA. Conducted an intensive-level cultural resources survey to support cultural and paleontological resources technical studies for improvements proposed for three intersections in a disturbed urban environment. Drafted APE maps, records search, Sacred Lands search, and NAHC consultation for intersections at Colima Road, Santa Fe Springs Road and Painter Avenue. Archaeologist/GIS Supervisor. 2016

Hidden Oaks Country Club Specific Plan and TT 18869, City of Chino Hills, San Bernardino County, CA. Prepared report maps, conducted cultural and paleontological resources assessments and assisted the City with SB 18 compliance. Services included records search, drafting project maps, Sacred Lands search, NAHC consultation, field survey, and mitigation recommendations. Cogstone responded to the cultural section of the project EIR comment for this proposed 537-acre residential project. Archaeologist/GIS Supervisor. 2015-2016

On-Call Cultural Resources Services, Sanitation Districts of Los Angeles County, CA. Prepared APE maps, conducted record searches, NAHC consultation, field surveys, and prepared DPR forms to support upgrades and improvements to pipelines at Mesquite Landfill, Clearwater, and Santa Clarita facilities. Archaeologist/GIS Supervisor. 2015-2016

Accelerated Charter Elementary School, City of Los Angeles, Los Angeles County, CA. The project involves documentation of five historic-age buildings prior to demolition, background research, mitigation monitoring plans, archaeological and paleontological monitoring and preparation of a monitoring compliance report. LAUSD is constructing a new facility on a 2.3-acre site in South Central Los Angeles consisting of classrooms, open areas and parking. Drafted project related maps, conducted background research and contributed to preparation of DPR forms. Archaeologist/GIS Supervisor. 2015

Sweany Pipeline, Phase II, Laguna Beach County Water District, Orange County, CA. Completed a cultural resources assessment; conducted archaeological/paleontological records search, NAHC consultation, and drafted project maps for inclusion in a CEQA environmental document. Archaeologist/GIS Supervisor. 2014

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

TONY QUACH
GIS, Archaeological Supervisor

EDUCATION

2006 B.A., Anthropology, California State University, Long Beach

SUMMARY QUALIFICATIONS

Mr. Quach has over 10 years of experience in cultural resource management. He has been involved in over one-hundred cultural resource projects throughout Southern California, and has extensive experience in cultural resource monitoring, pedestrian surveys, and excavations. He is skilled in a variety of analytical techniques and is proficient in geophysical, geochemical, and palynological methods, and has contributed to numerous professional cultural resources technical reports. Mr. Quach also has a strong grounding in conventional field and laboratory methods and is skilled in the use of ArcGIS.

SELECTED PROJECTS

Southern California Edison (SCE) Environmental Clearance On-Call Program, Statewide, CA. Cogstone was sub-contracted to provide on-call cultural resource monitoring services for various SCE projects throughout California. Cogstone conducted archaeological monitoring, GIS mapping, and prepared technical reports for nearly 41 different sites. Sub to Cardno. Supervisor & Author. 2018-ongoing

San Diego Gas & Electric Pole Replacements, Counties of San Diego and Orange, CA. Performed cultural resource monitoring during the construction of line and pole upgrades. Provided recommendations and comments to SDG&E contractors and engineers in cases where project activities may affect the cultural resources in an area. Archaeologist 2010-2017.

Tule Wind Alternative Energy Project, San Diego County, CA. This project entailed the construction of a 131 MW wind energy grid. Conducted survey of 2,500 acres, documented and recorded identified 41 sites, 23 historic structures, 78 isolates, and updated information on 4 previously recorded sites. Also updated and verified data from previous surveys within the region. Assisted in the preparation and writing of the technical report detailing the survey findings. Monitored meteorological tower construction, geotechnical boring, and wind turbine pad grading during different phases of the project. Archaeologist 2011-2016.

Camp Pendleton Section 110 and Wildland Fire Burn Surveys, San Diego County, CA. Over a period of four years, conducted multiple intensive pedestrian surveys totaling over 30,000 acres under different task orders. Survey tasks included field identification and documentation of new resources, verification, and updates of previously recorded resources as well condition assessment of sites potentially affected by wildland fire burns. Identified and recorded over 100 archaeological sites and historic structures, as well as over 100 isolates. Prepared maps and site record forms for the newly identified and updated resources and also assisted in the writing and preparation of the technical report detailing the survey findings. Archaeologist. 2015

West of Devers Project, Southern California Edison, Riverside and Los Angeles Counties, CA. Project consisted of the removal and replacement of 8 miles of existing 220 kV transmission lines. Conducted field surveys and excavations in the assessments of cultural resources. Provided recommendations to construction and engineering personnel. Archaeologist 2014.

Tenaska Imperial Energy Solar Center West (ISEC West) Project, Imperial County, CA. Monitored the access road grading and grading of construction pads for the electrical transmission line interconnections to the ISEC West 150 megawatt (MW) photovoltaic power plant. Archaeologist 2014

APPENDIX B. PALEONTOLOGICAL RECORD SEARCH

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

8 February 2019

Cogstone Resource Management, Inc.
1518 West Taft Avenue
Orange, CA 92865-4157

Attn: Megan Wilson, Archaeologist & GIS Technician

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed Brea Specific Plan Project, Cogstone Project # 4575, in the City of Brea, Orange County, project area

Dear Megan:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Brea Specific Plan Project, Cogstone Project # 4575, in the City of Brea, Orange County, project area as outlined on the portion of the Yorba Linda USGS topographic quadrangle map that you sent to me via e-mail on 25 January 2019. We do not have any vertebrate fossil localities that lie directly within the proposed project boundaries, but we do have localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

In the lower lying terrain in the eastern margins of the proposed project area the surficial deposits consist of younger Quaternary Alluvium, derived as alluvial fan deposits from the Puente Hills to the east via Carbon Canyon Creek. These younger Quaternary deposits typically do not contain significant vertebrate fossils in the uppermost layers, but at depth are underlain by older sedimentary deposits that may well contain significant fossil vertebrate remains. In the slightly less elevated terrain of most of the proposed project area the surficial deposits consist of older Quaternary Alluvium, also derived as alluvial fan deposits from the Puente Hills to the north and east. Our closest fossil vertebrate locality from older Quaternary deposits is LACM 7508, east-northeast of the proposed project area in the uppermost reaches of Soquel Canyon,

that produced fossil specimens of ground sloth, *Nothrotheriops*, and horse, *Equus giganteus*. Our next closest older Quaternary localities are probably LACM 3861, just south of west of the proposed project area in the West Coyote Hills Oil Field south of Imperial Highway and west of Idaho Street, that produced a skeleton of the fossil duck *Chendytes milleri*, and LACM 3538, directly west of the proposed project area along Imperial Highway west of Beach Boulevard, that produced a fossil specimen of the imperial mammoth *Mammuthus imperator*.

Most of the elevated terrain in the central portion of the proposed project area has exposures of the Pliocene Fernando Formation. Our closest Fernando Formation locality is LACM 5557, just to the west between the proposed project area and the Orange Freeway (Highway 57), that although obtained from a well core, produced a specimen of the fossil fish *Laytonia californica* figured in the scientific literature by L. R. David (1948. Halosauridae from the California Tertiary. Journal of Paleontology, 22(1):94-100). Our next closest Fernando Formation locality is LACM 1897, in Whittier west-northwest of the proposed project area, that produced a fossil specimen of tooth whale, Odontoceti. Our other closest fossil vertebrate localities in the Fernando Formation are LACM 6350-6361, are all from around the Puente Hills Landfill west of Hacienda Heights and northwest of the proposed project area. These Fernando Formation localities have produced a suite of fossil marine vertebrates including great white shark, *Carcharodon carcharias*, herring, *Ganolytes*, hake, *Merluccius*, lanternfish, *Diaphus* and *Lampanyctus*, mackerels, Scombridae, swordfish, *Coelorhynchus scaphopsis*, flounder, Pleuronectidae and whale, Cetacea.

In the very northeastern part of the elevated terrain in the central portion of the proposed project area there are exposures of the marine late Miocene Sycamore Canyon Member of the Puente Formation. Our closest vertebrate fossil localities in the Puente Formation, LACM 5837, 6170, 6907-6908, 7046 and 8017, are situated in or north of Rowland Heights north-northwest of the proposed project area. These localities have produced a rich suite of fossil marine vertebrates including bonito shark, *Isurus oxyrinchus*, top smelts, *Atherinops barkeri* and *Atherinopsis*, sauries, Scomberesocidae, herrings, *Etringus scintillans* and *Ganolytes cameo*, cod, *Eclipes*, anglerfish, *Acentrophryne longidens*, lanternfish, Myctophidae, jack, *Decapterus*, snake mackerel, *Thyrsocles kriegeri*, croakers, *Seriphus lavenbergi* and *Lompoquia*, sanddab, mackerel, Scombridae, Pleuronectiformes, deep sea smelt, Bathylagidae, viperfish, *Chauliodus eximius*, bristlemouth, *Cyclothone*, pipefish, *Syngnathus emeritus*, and whale, Cetacea. The fossil pipefish, *Syngnathus emeritus*, from locality LACM 7046 were published in the scientific literature by R. A. Fritzsche in 1980 (Revision of the eastern Pacific Syngnathidae (Pisces: Syngnathiformes), including both Recent and fossil forms. Proceedings of the California Academy of Science, 42(6):181-227). The fossil anglerfish, *Acentrophryne longidens*, from locality LACM 6908 was figured in the scientific literature by T. W. Pietsch and R. J. Lavenberg in 1980 (A fossil ceratoid anglerfish from the Late Miocene of California. Copeia, 1980(4):906-908). The fossil croaker, *Seriphus lavenbergi*, from locality LACM 6907 is a holotype (specimen that is used to describe a species new to science) described by R. W. Huddleston and G. T. Takeuchi in 2006 (A New Late Miocene Species of Sciaenid Fish, Based Primarily on an in situ Otolith from California. Bulletin of the Southern California Academy of Sciences, 105(1):30-42).

locality LACM 7503 mentioned above. These localities produced a suite of fossil marine vertebrates including basking shark, *Cetorhinus*, grunion, Atherinidae, herring, *Ganolytes cameo* and *Xyne grex*, cod, *Eclipes*, mora, Moridae, lantern fish, Myctophidae, jacks, *Decapterus* and *Pseudoseriola*, snake mackerel, *Thyrsocles kriegeri*, croaker, *Lompoquia*, bonito, *Sarda*, mackerel, *Scomber*, slickhead, Alepocephalidae, grouper, Serranidae, deep sea smelt, Bathylagidae, salmon, *Oncorhynchus*, rockfish, Scorpaenidae, viperfish, *Chauliodus eximus*, hatchetfish, *Argyropelecus*, as well as marine mammals including sea lion, *Pithanotaria*, rorqual whale, Balaenopteridae, porpoise, Phocoenidae, dolphin, Delphinoidea, and sperm whale, *Scaldicetus*.

Shallow excavations in the younger Quaternary Alluvium exposed in the eastern margins of the proposed project area are unlikely to uncover significant fossil vertebrate remains. Deeper excavations there that extend down into older sedimentary deposits, however, and any excavations in older Quaternary Alluvium, the Fernando Formation, or the Puente Formation exposed in the proposed project area, may well encounter significant vertebrate fossils. Any substantial excavations in the proposed project area, therefore, should be closely monitored to quickly and professionally recover any potential vertebrate fossils without impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

FOSSIL LOCALITIES NEAR TO THE PROJECT

These tables are broken out by Geological formation.

† = the only taxon that this could represent is extinct although the Family or genus may still be extant. All fossils from deposits older than Pleistocene are likely from extinct species.

‡ = animal extirpated from the area

Common Name	Taxon	Formation	Age/ dates	Locality	Location	Reference
ground sloth	†*Nothrotheriops*	Pleistocene alluvium	Pleistocene	LACM 7508	In the uppermost reaches of Soquel Canyon, Chino Hills	McLeod 2019
horse	†*Equus scotti*					
sea duck	†*Chendytes milleri*	Pleistocene alluvium	Pleistocene	LACM 3861	West Coyote Hills Oil Field south of Imperial Hwy and west of Idaho St, La Habra	McLeod 2019
Imperial mammoth	†*Mammuthus imperator*	Pleistocene alluvium	Pleistocene	LACM 3538	Imperial Hwy west of Beach Blvd, La Habra	McLeod 2019

Common Name	Taxon	Depth	Formation	Age/ dates	Locality	Location	Reference
plant (2)	Plantae	7'9"	Quaternary very old alluvial fan	Pleistocene	2011SRW07 28.1	SR 57 NB between Imperial Highway or Greenbrier Lane, Brea	Gust and Richards 2012
bivalve	Pelecypoda						
bony fish	Teleostei						
snake (2)	Ophidia						
cottontail rabbit (3)	*Sylvilagus*						
rodent (2)	Cricetinae						
rodent (7)	Rodentia						
vertebrate	Vertebrata						
rattlesnake	*Crotalus*	21"-38"	Quaternary very old alluvial fan	Pleistocene	2011JLM07 21.1	SR 57 NB between Imperial Highway or Greenbrier Lane, Brea	Gust and Richards 2012
bird	Passeriformes (sparrow-sized species)						
rodent (2)	Rodentia						
vertebrate	Vertebrata						
cottontail rabbit	*Sylvilagus* aff. *S. audubonii*	24'-25.66'	Quaternary very old alluvial fan	Pleistocene	2011KMS05 20.2	SR 57 NB west of Mystic Ave, Fullerton	Gust and Richards 2012
rodent	Rodentia						
herbivore (large)	herbivore						
vertebrate	vertebrata						
cottontail rabbit	*Sylvilagus* aff. *S. audubonii*	10.32'-8.5'	Quaternary very old alluvial fan	Pleistocene	2011KMS05 20.1	SR 57 NB west of Deerpark Drive or Devonshire Ave, Fullerton	Gust and Richards 2012
rodent	Rodentia						

Common Name	Taxon	Depth	Formation	Age/ dates	Locality	Location	Reference
vertebrate	Vertebrata						
rodent	Rodentia	4'-5'	Quaternary very old alluvial fan	Pleistocene	2011JLM1209.1	SR 57 NB west of Deerpark Drive, Fullerton	Gust and Richards 2012
vertebrate	Vertebrata						
plant	Plantae	4'2"-5'6"	Quaternary very old alluvial fan	Pleistocene	2011JLM1209.2	SR 57 NB west of Deerpark Drive or Devonshire Ave, Fullerton	Gust and Richards 2012
carnivore	Carnivora	4'	Quaternary very old alluvial fan	Pleistocene	2011JLM1209.3	SR 57 NB west of Deerpark Drive or between Bedford Drive or Braeburn Ave, Fullerton	Gust and Richards 2012
vertebrate	Vertebrata						

Common Name	Taxon	Formation	Age/ dates	Locality	Location	Reference
horse	†*Equus*	La Habra	Pleistocene	LACM 6472	near intersection of Bastanchury Road & State College Boulevard, Fullerton	Jefferson 1991b, McLeod 2017
large herbivores	Ungulata	La Habra	Pleistocene	LACM 3524	Malvern Avenue, Fullerton	Jefferson 1991b
Arnold's white shark	†*Carcharodon arnoldi*	specimen may be from Fernando Fm	Pleistocene	LACM 1052	Imperial Highway near the Los Angeles - Orange County line, La Habra	McLeod 2015, Jefferson 1991a, 1991b
California turkey	†*Melagris californica*	La Habra				
Harlan's ground sloth	†*Paramylodon harlani*					
American mastodon	†*Mammut* cf. *M. americanum*					
Columbian mammoth	†*Mammuthus columbi*					
horse	†*Equus*					
camel	†cf. *Camelops*					
deer	*Odocoileus*					
pronghorn	‡*Antilocapra americana*					
mammoth	†*Mammuthus*	La Habra	Pleistocene	LACM 3538	Imperial Highway, La Habra	Jefferson 1991b
frog	cf. *Rana*	La Habra	Pleistocene	LACM 6689	Coyote Creek, La Mirada	Jefferson 1991a, 1991b
western pond turtle	*Actinemys*					
snake or lizard	Squamata					
duck	Anatidae					
quail	*Callipepla*					
California turkey	†*Melagris californica*					
Jefferson's ground sloth	†*Megalonyx jeffersonii*					
rabbit	*Sylvilagus*					
Botta's pocket gopher	*Thomomys bottae*					

white-footed mouse	*Peromyscus*					
California meadow vole	*Microtus* cf. *M. californicus*					
coyote	*Canis* cf. *C. latrans*					
dire wolf	†*Canis* cf. *C. dirus*					
grey fox	*Urocyon* cf. *U. cinereoargenteus*					
black bear	*Ursus americanus*					
bobcat	*Lynx* cf. *L. rufus*					
eared seal	Phocidae					
American mastodon	†*Mammut americanum*					
horse	†*Equus*					
yesterday's camel	†*Camelops* cf. *C. hesternus*					
mule deer	*Odocoileus* cf. *O. hemionus*					
bison	†*Bison*					
horse	†*Equus*	La Habra	Pleistocene	LACM 4185-4187, 4195-4201 (= in part LACM 6689)	Coyote Creek Numbers II-X, La Mirada	Jefferson 1991b
giant tortoise	†*Hesperotestudo*	La Habra	Pleistocene	SDMNH 6398	Pepper Tree Hills	SDNHM 2019
horse	†*Equus*	La Habra	Pleistocene	SDMNH 6399	Pepper Tree Hills	SDNHM 2019
two-toed ungulate	Artiodactyl	La Habra	Pleistocene	SDMNH 6400	Pepper Tree Hills	SDNHM 2019
shrew	*Sorex*, Soricidae	La Habra	Pleistocene	SDMNH 6401	Pepper Tree Hills	SDNHM 2019
rabbit	Leporidae					
pocket gopher	*Thomomys*					
pocket mouse	*Perognathus*					
deer mouse	*Peromyscus*					
vesper mouse	*Calomys*					
harvest mouse	*Reithrodontomys*					
wood rat	*Neotoma*					
cotton rat	*Sigmodon*					
vole	*Microtus*					
bird	Aves					
alligator lizard	Anguidae					
lizard	Lacertilla					

snake	Serpentes					
amphibian	Amphibia					
bony fish	Osteichthyes					
llama	†*Hemiauchenia*	La Habra	Pleistocene	SDMNH 6402	Pepper Tree Hills	SDNHM 2019
proboscidean	†Proboscidea?	La Habra	Pleistocene	SDMNH 6403	Pepper Tree Hills	SDNHM 2019
proboscidean	†Proboscidea?	La Habra	Pleistocene	SDMNH 6406	Tonner Hills	SDNHM 2019

Common Name	**Taxon**	**Formation**	**Age/ dates**	**Locality**	**Location**	**Reference**
deep sea eel (halosaur)	†*Laytonia californica*	Fernando	Pliocene	LACM 5557	between the proposed project area and the Orange Freeway (Highway 57)	David 1948, McLeod 2019
toothed whale	Odontoceti	Fernando	Pliocene	LACM 1897	Penn Park near Whittier College, Whittier	McLeod 2019
whale	Cetacea	Fernando	Pliocene	LACM 6350-6361	around the Puente Hills Landfill	McLeod 2019
swordfish	*Coelorhynchus scaphopsis*					
flounder	Pleuronectidae					
mackerel	Scombridae					
lanternfish	*Diaphus*					
	Lampanyctus					
hake	*Merluccius*					
herring	†*Ganolytes*					
great white shark	*Carcharodon carcharias*					

Common Name	Taxon	Formation	Age/ dates	Locality	Location	Reference
dolphin	†*Atocetus*	Puente Fm.; Yorba or Sycamore Canyon Mbr.		LACM 7503	west-southwest of Los Serranos, north of Vellano Club Drive, Chino Hills	McLeod 2019
dolphin	Delphinoidea	Puente Fm.; Sycamore Canyon Mbr.		LACM 7674	directly east of locality LACM 7503, Chino Hills	McLeod 2019
rorqual whale	Balaenopteridae					
grunion	Atherinidae					
herrings	†*Ganolytes cameo*, †*Xyne grex*					
cod	†*Eclipes*					
scad	†*Decapterus*					
snake mackerel	†*Thyrsocles kriergeri*					
croaker	†*Lompoquia*					
bonito	†*Sarda*					
mackerel	†*Scomber*					
slickhead	Alepocephalidae					
deep sea smelt	Bathylagidae					
rockfish	Scorpaenidae					
viperfish	†*Chauliodus eximus*					
basking shark	*Cetorhinus*					
sea lion	†*Pithanotaria*					
rorqual whale	Balaenopteridae	Puente Fm.; Sycamore Canyon Mbr.		LACM 6307-6336	directly east of locality LACM 7674, Chino Hills	McLeod 2019
porpoise	Phocoenidae					
sperm whale	†*Scaldicetus*					
herrings	†*Ganolytes cameo*, †*Xyne grex*					
cod	†*Eclipes*					
mora	Moridae					
lanternfish	Myctophidae					
jacks	†*Decapterus*, †*Pseudoseriola*					
snake mackerel	†*Thyrsocles kriergeri*					
croaker	†*Lompoquia*					
bonito	†*Sarda*					
grouper	Serranidae					
deep sea smelt	Bathylagidae					
salmon	*Oncorhynchus*					
rockfish	Scorpaenidae					

viperfish	†*Chauliodus eximus*					
hatchetfish	*Argyropelecus*					

APPENDIX C. SITE RECORDS

In previous studies the, P-30-177012 was referred to as the Stearns Property/Stearns Lease (Ashkar 2000a). However, the initial evaluation did not consider the archaeological elements of the site as part of the evaluation. This initial evaluation of the district only considered the air-balanced and beam-balances oil pumps. In the evaluation, the Criteria for Evaluation for listing on the California Register of Historical Resources (CRHR) was only applied to the existing, now extant oil pumps and recommended them as not eligible for listing in the CRHR.

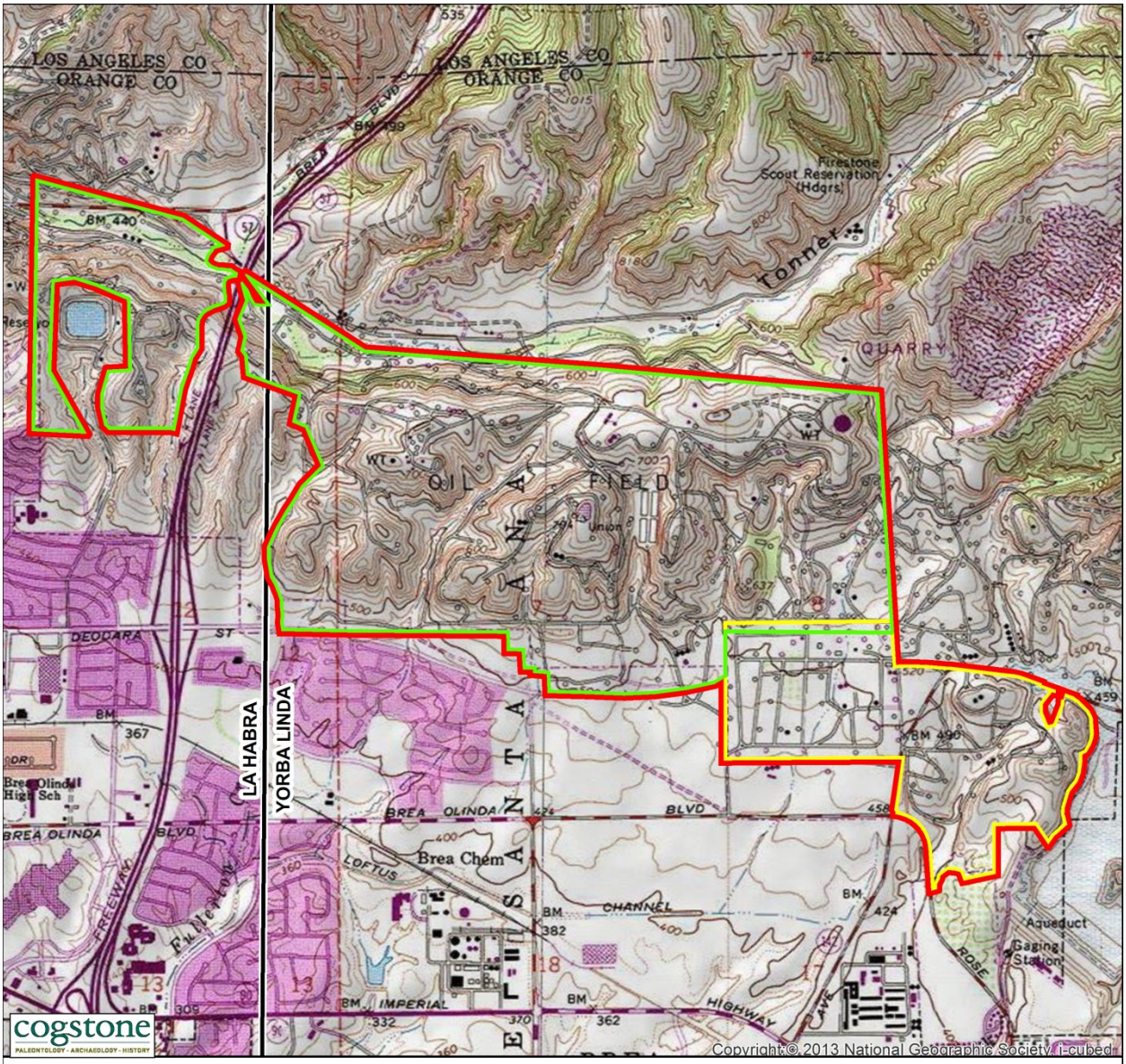
In 2007 the district record was updated to include the "Wildcatters Park" (circa 1960) which includes commemorative historic oil well derrick and other relics and monuments to the areas oil industry which was assembled by the Union Oil Corporation (UNCOAL) as a benefit for the employees of Union's Brea-area operators and their families (Steeley 2007). As the result of a pedestrian survey conducted in February 2019, as part of the Paleontological and Cultural Resources Assessment for the Brea 265 Specific Plan, City of Brea, Orange County, California Prepared by Cogstone Resource Management, the original Stearns Property/Stearns Lease has been expanded to include additional lands within the Stearns Lease that have been utilized for oil extraction since the late 1880s.

In 2000 Shahira Ashkar evaluated the Stearns Property. The reports surveyed and evaluated archaeological resources and historic resources separately in two different studies (Ashkar 2000a, Ashkar 200b). The historic archaeological sites (2000b) and historic resources (2000a) should be considered together as they represent the continuum of local oil extraction activities in the area. Previously recorded historic archaeological sites and historic resources (which include sites revisited and expanded in this study) show a cohesive historic district relating to the early local oil industry. Additionally, when coupled with the numerous historic archaeological sites observed during archaeological monitoring for construction activities for the Tonner Hills Project on behalf of Shea Homes (Backes et al.2010), the Brea-Olinda Oil Field District manifests itself beneath the ground. Therefore, the findings of the 2019 study include both previously recorded resources and newly recorded resources and will be evaluated as a whole, on a district level as an addition to the Brea-Olinda Oil Field District. An updated site boundary is included.

The expanded area of P-30-177012 is slated for development in the near future. Any subsurface finds during construction monitoring should be included in this District.

The Brea-Olinda Oil Field District (P-30-177012) is a multi-component site that includes both historic archaeological sites (historic foundations and structure pads, historic roads, historic refuse deposits, numerous historic isolate artifacts, historic landscaping (Eucalyptus and California Pepper Trees), historic machinery (air-balanced and beam-balanced pumps), as well as standing historic aged structures that consist of metal utility sheds. One prehistoric isolated prehistoric marine shell, Chione was also recorded.

The newly recorded elements of the Brea-Olinda Oil Field District include updates to four previously recorded historic archaeological sites (P-30-001665; -001666; -001738; and -120002). The boundaries of two of these sites that consist of historic refuse deposits (P-30-001665 and P-30-120002) have been expanded to include additional historic refuse, foundations, structural debris, historic landscaping, historic roads, historic machinery that were not observed by previous surveys due to the limitations of the spatial scope of the cultural study that identified them in the first place. The expanded boundaries of these sites also account for numerous historic isolated artifacts and features that occur throughout the site, although scattered, when considered at a larger district-wide scale, are related. Newly recorded elements include two metal utility sheds (BREA_2019FEB25_01, BREA_2019FEB25_02), and an extant segment of Valencia Road BREA_2019FEB27_01).



Brea-Olinda Oil Field
Historic District Boundary
City of Brea,
Orange County, CA

District Boundary
P-30-177012
2010 Original Boundary
2019 Update
USGS Quads

USGS 7.5' Quads:
LA HABRA
YORBA LINDA

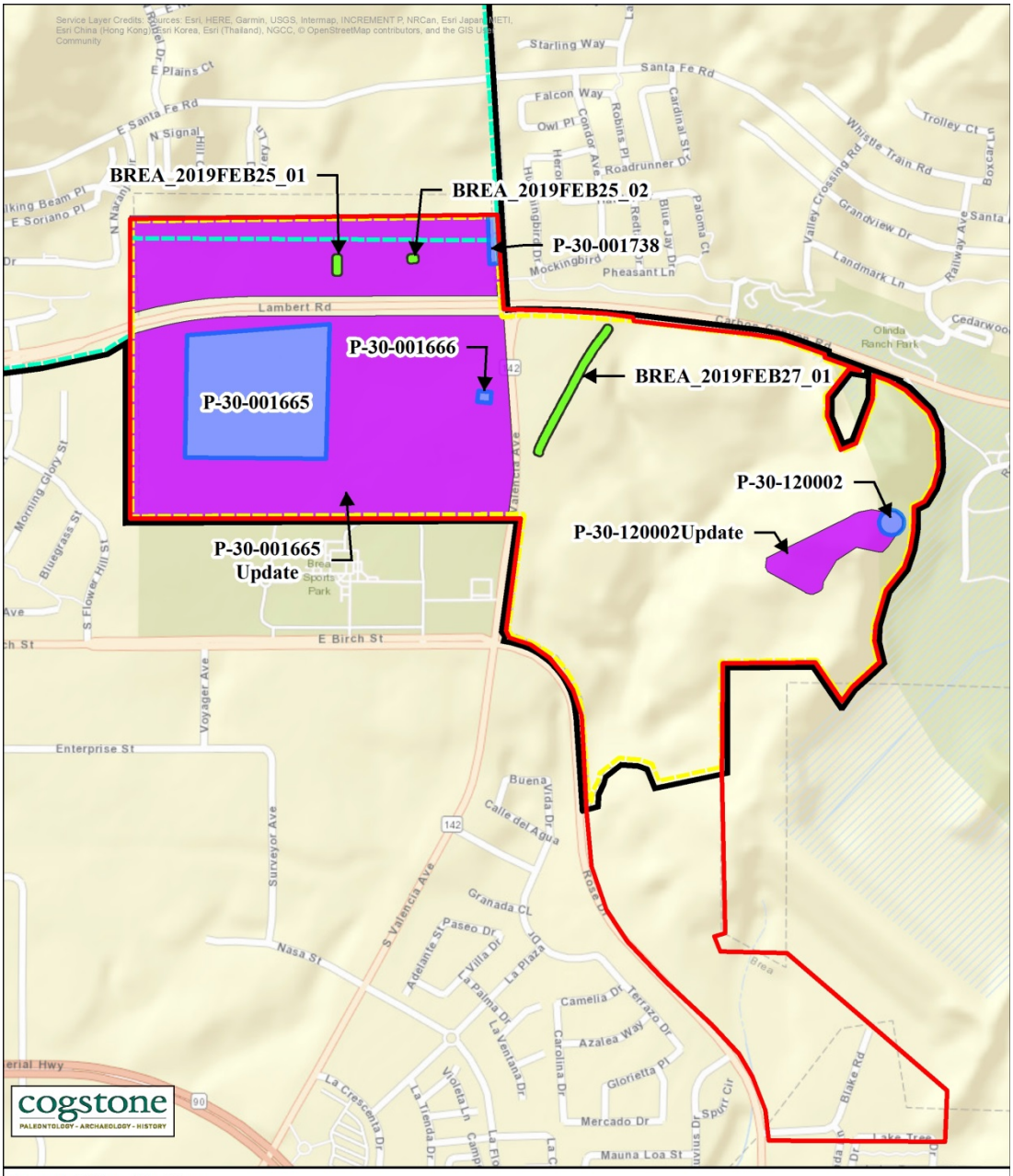
0 0.25 0.5 Miles N
0 0.25 0.5 Kilometers
1:24,000 1 in = 2,000 ft

State of California ♦ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary # P-30-177012
HRI#
Trinomial **UPADTE**

Page 3 **of** 3 *** Resource Name or #**P-30-177012,Brea-Olinda Oil Field District, formally the Stearns Lease

*** Drawn by:** Megan Wilson *** Date of map:** 3/21/2019



Brea 265 Specific Plan
City of Brea,
Orange County, CA

Project Area

Previously Recorded Resources

Survey Results

Newly Recorded Resources

Updated Resources

P-30-177012

Brea-Olinda Oil Field District Boundary

Boundary as Recorded at the SCCIC. 2010

Boundary as Recorded by Cogstone, 2019

0 500 1,000 Feet
0 100 200 Meters
N
1:12,000 1 in = 1,000 ft

DPR 523K (Rev. 1/1995)(Word 9/2013) NOTE: Include bar scale and north arrow.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 30-177012
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 *Resource Name or #: (Assigned by Recorder) air-balance pump jack

P1. Other Identifier:

*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Yorba Linda, PR 1981 Date 1964 T 3S ; R 9W ; ___ ¼ of ___ ¼ of Sec ___ ; _____ B.M.

c. Address _____ City Brea Zip _____

d. UTM: (Give more than one for large and/or linear resources) Zone: _____ ; _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, directions to resource, elevation, etc., as appropriate)

From Highway 57 South, take the Imperial Highway exit and proceed east. Turn left on Valencia Avenue and continue north past the "intersection" with Carbon Canyon Road. Just north of that intersection to the west is the Stearns property, where the pump jacks are located. Approximate UTMS: 419250mE/3755340mN; 419240mE/3754040mN; 420200mE/3754010mN/420210mE/3753870mN;421000mE/3753850mN; see cont. sheet

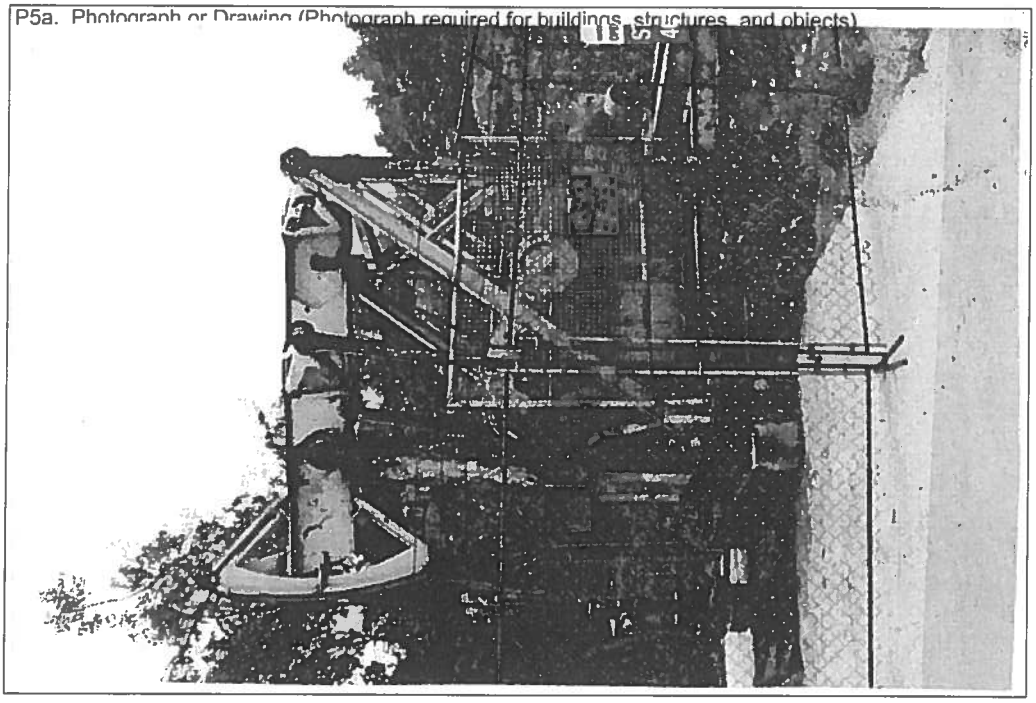
*P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The air-balanced pumps located on the property appear to be newer. They are constructed of bolted I-beams of newer steel. The horseheads are simply the top curve with braces. The Sampson post is located at the rear of the walking beam and braced with a right triangle. The pitman arms are located at the center of the walking beam and the compressed air rod is near the horsehead. The entire unit sits over with motor and gear reducer. The technology for these pumps was perfected in 1929. The pumps are in various states of repair. In virtually all cases, alterations have been made to the pumps, and parts added, in the course of their lifespans.

*P3b. Resource Attributes: (List attributes and codes) HP 11. Engineering Structure

*P4. Resources present: ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #) Air-balanced pump jack

*P6. Date Constructed/Age and Sources: ☒ Historic ☐ Prehistoric ☐ Both
1894- present

*P7. Owner and Address:
Nuevo Energy

*P8. Recorded by: (Name, affiliation, and address)
S. Ashkar and L. Fryman
Jones & Stokes Associates, Inc.
2600 V Street Sacramento, CA 95818

*P9. Date Recorded: 5/12/00

*P10. Survey Type: (Describe)

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Jones & Stokes Associates, Inc. 2000. CRHR Evaluation of Oil Wells on the Stearns Property within the sphere of influence of the City of Brea, Orange County, California. Prepared for the City of Brea

*Attachments: NONE ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

DPR 523A (1/95) *Required Information

OR-3711

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # 30-177012
HRI #

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code

*Resource Name or # (Assigned by recorder) air-balance pump jack

B1. Historic Name:

B2. Common Name:

B3. Original Use: Oil well B4. Present Use: Oil well

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations)
Constructed as early as 1894, altered and updated as necessary since initial construction

*B7. Moved? [X] No [ ] Yes [ ] Unknown Date: Original Location:

*B8. Related Features:
Other oil wells, including counterbalanced pump jacks, storage facilities (modern)

B9a. Architect: n/a b. Builder: unknown

*B10. Significance: Theme: Early Oil Industry Area: Southern California

Period of Significance: 1894-1920 Property Type: Applicable Criteria:

(Discuss imporance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Oil production was an important part of the economic development of Southern California. Some of the oil wells on the Stearns property were drilled as early as 1894.

Resources associated with the theme of the oil industry in Southern California that might be eligible for listing in the CRHR would include oil derricks, pumps, and wells, storage and processing facilities, oil pipelines, and associated buildings. Historic resources on the property consist of oil pumps. These oil pumps, individually, lack the context necessary to be representative of the early oil industry. Pumps are representative of only one part of the process of oil extraction and production. Other facilities, including derricks, storage and processing structures, pipelines and transportation facilities, and administrative and infrastructure facilities, are integral to the functioning of an operating oil field. Additionally, many of the oil pumps have been in continuous use since the well was drilled. These pumps have been updated as time progressed, making them an amalgam of the changes in technology that have occurred throughout the years, rather than representative examples of the significant time period (1894 to 1920s). Therefore, the pumps are recommended not eligible for listing in the CRHR for their association with the theme of the development of the early oil industry because they lack context and integrity.
(See continuation sheet.)

B11. Additional Resource Attributes: (List attributes and codes)

*B12. References:

B13. Remarks:

(Sketch Map with north arrow required.)

*B14.Evaluat S. Ashkar and S. Lassell, Jones & Stokes
2600 V Street, Suite 100 Sacramento, CA 95818-1914

*Date of

(This space reserved for official comments.)

P2e. Locational Data: UTMs, continued: 421010mE/ 3754040mN; 421700mE/3754050mN; 421630mE/3755010mN

B10. Significance:

In order to be eligible for listing in the CRHR for its association with a person important in history, a resource must be representative of the theme, activities, or endeavors for which that individual is historically important. While Doheny was active in the oil industry, and brought about the construction of a rail line to the Olinda oil fields, his association with the Stearns Lease is peripheral to his importance as the primary developer of the Olinda oil field to the east or as a prominent Los Angeles land holder. The pumps are not representative of the activities for which Edward L. Doheny is historically significant. Stewart's historical importance stems from his early association with the Union Oil Company. The oil pumps remaining on this property are not a good example of the oil fields that Stewart's company established, because they represent only one facet of oil extraction. Oil fields consist of other facilities in addition to oil wells. The pumps are not representative of the activities of Stewart because without the remainder of the facilities, they lack context. Therefore, the pumps are recommended not eligible for CRHR listing for their association with historically significant individuals.

Oil wells from the period of significance may be said to embody the technological characteristics of early oil production if they have remained basically unchanged since that time period. The oil field on the Stearns Lease has been in constant operation since its establishment. As technology changed, the pumps were updated. While some pumps retain some characteristics of their original design, other defining characteristics have been changed. Power plants (or motors) have been updated, as have pumping mechanisms in some cases. These pumps lack integrity due to their continuous maintenance. Therefore, the pumps are recommended not eligible for listing in the CRHR as examples of historic engineering or technology.

As individual resources, these pumps lack the context necessary to convey their significance, however, a number of resources considered as a district may be eligible. A representative array of resources sufficient to convey what the oil field or settlement was like between 1894 and the 1920s would need to be present for the resources to qualify for CRHR listing as a historic district. Historic photographs and archival research indicate that between 1894 and the 1920s, this oil field consisted of derricks, pumps, oil storage and processing facilities, and a camp which was composed of boarding houses, homes, warehouses, and administrative buildings. All that remains of the oil field today are the pumps. Therefore, as a district, the Stearns Lease lacks integrity and is recommended not eligible for listing in the CRHR.

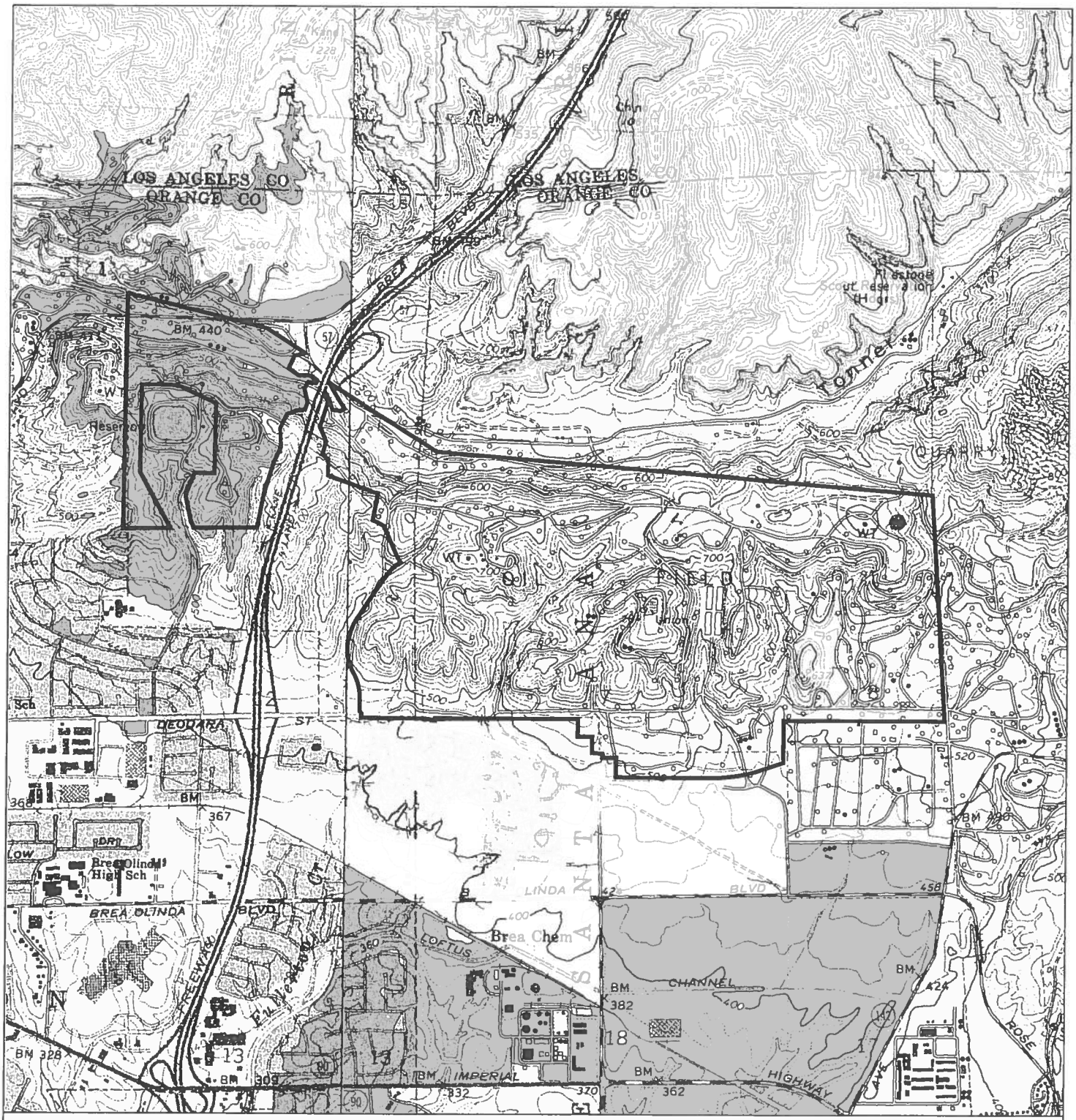
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # 30-177012
HRI #
Trinomial

*Resource Name or #: Air Balance Pump Jack

*Map Name: La Habra &Yorba Linda Quadrangles *Scale: (see bar scale) *Date of Map: Pr 1981



Base map: Portions of USGS 7.5'-series Quadrangles
La Habra, California, 1964, Photorevised 1981 and
Yorba Linda, California, 1964, Photorevised 1981

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 30-177012
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 5 *Resource Name or #: (Assigned by Recorder) counterbalance pump jack

P1. Other Identifier:

*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Yorba Linda, PR1981 Date 1964 T 3S ; R 9W ; ___ ¼ of ___ ¼ of Sec ___ ; _____ B.M.

c. Address _____ City Brea Zip _____

d. UTM: (Give more than one for large and/or linear resources) Zone: 11 ; _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, directions to resource, elevation, etc., as appropriate)

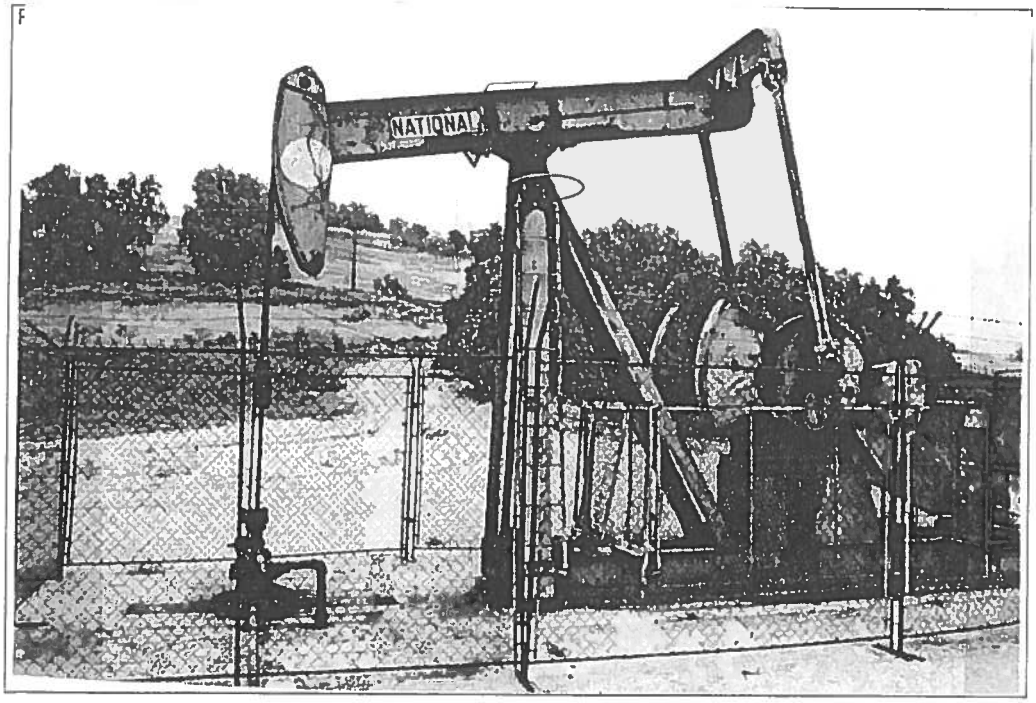
From Highway 57 South, take the Imperial Highway exit and proceed east. Turn left on Valencia Avenue and continue north past the "intersection" with Carbon Canyon Road. Just north of that intersection to the west is the Stearns property, where the pump jacks are located. Approximate UTMS: 419250mE/3755340mN; 419240mE/3754040mN; 420200mE/3754010mN/420210mE/3753870mN;421000mE/3753850mN; see cont. sheet

*P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The beam-balanced pumps located on the property appear to be older than the air-balanced pumps. They are constructed of welded I-beams. Some counterweights are made of wooden posts in a steel fitting, and others are steel with "Lufkin" (Lufkin Industries, Inc., founded 1902) embossed on the side (Lufkin Industries, n.d.). Bases are concrete, I-beams, or in some cases, both. On several of the pumps the horseheads are "skeletal," that is they consist of only the top curve. All these pumps are driven by electric motors, located on the opposite end of the walking beam from the horsehead. The equalizers vary in shape and placement; some are below the walking beam, and others are above it. Other brand names noted on the pumps included "National" embossed on a walking beam, and "Pacific Gear" embossed on a gear reducer. The pumps are in various states of repair. In virtually all cases, alterations have been made to the pumps, and parts added, in the course of their lifespans.

*P3b. Resource Attributes: (List attributes and codes) HP 11. Engineering Structure

*P4. Resources present: ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)



P5b. Description of Photo: (View, date, accession #) _____

*P6. Date Constructed/Age and Sources: ☒ Historic ☐ Prehistoric ☐ Both
1894- present

*P7. Owner and Address:
Nuevo Energy

*P8. Recorded by: (Name, affiliation, and address)
S. Ashkar and L. Fryman
Jones & Stokes Associates, Inc.
2600 V Street Sacramento, CA 95818

*P9. Date Recorded: 5/12/00

*P10. Survey Type: (Describe)

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Jones & Stokes Associates, Inc. 2000. CRHR Evaluation of Oil Wells on the Stearns Property within the sphere of influence of the City of Brea, Orange County, California. Prepared for the City of Brea

*Attachments: NONE ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

DPR 523A (1/95) *Required Information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # 30-177012
HRI #

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 5

*NRHP Status Code

*Resource Name or # (Assigned by recorder) counterbalance pump jack

B1. Historic Name:

B2. Common Name:

B3. Original Use: Oil well B4. Present Use: Oil well

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations)
Constructed as early as 1894, altered and updated as necessary since initial construction

*B7. Moved? [X] No [ ] Yes [ ] Unknown Date: Original Location:

*B8. Related Features:
Other oil wells, including air balanced pump jacks, storage facilities (modern)

B9a. Architect: n/a b. Builder: unknown

*B10. Significance: Theme: Early Oil Industry Area: Southern California

Period of Significance: 1894-1920 Property Type: Applicable Criteria:

(Discuss imporance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Oil production was an important part of the economic development of Southern California. Some of the oil wells on the Stearns property were drilled as early as 1894.

Resources associated with the theme of the oil industry in Southern California that might be eligible for listing in the CRHR would include oil derricks, pumps, and wells, storage and processing facilities, oil pipelines, and associated buildings. Historic resources on the property consist of oil pumps. These oil pumps, individually, lack the context necessary to be representative of the early oil industry. Pumps are representative of only one part of the process of oil extraction and production. Other facilities, including derricks, storage and processing structures, pipelines and transportation facilities, and administrative and infrastructure facilities, are integral to the functioning of an operating oil field. Additionally, many of the oil pumps have been in continuous use since the well was drilled. These pumps have been updated as time progressed, making them an amalgam of the changes in technology that have occurred throughout the years, rather than representative examples of the significant time period (1894 to 1920s). Therefore, the pumps are recommended not eligible for listing in the CRHR for their association with the theme of the development of the early oil industry because they lack context and integrity.
(See continuation sheet.)

B11. Additional Resource Attributes: (List attributes and codes)

*B12. References:

B13. Remarks:

(Sketch Map with north arrow required.)

*B14.Evaluator: S. Ashkar and S. Lassell, Jones & Stokes Associates, Inc.
2600 V Street, Suite 100 Sacramento, CA 95818-1914

*Date of Evaluation:

(This space reserved for official comments.)

DPR 523 B (1/95)

*Required Information

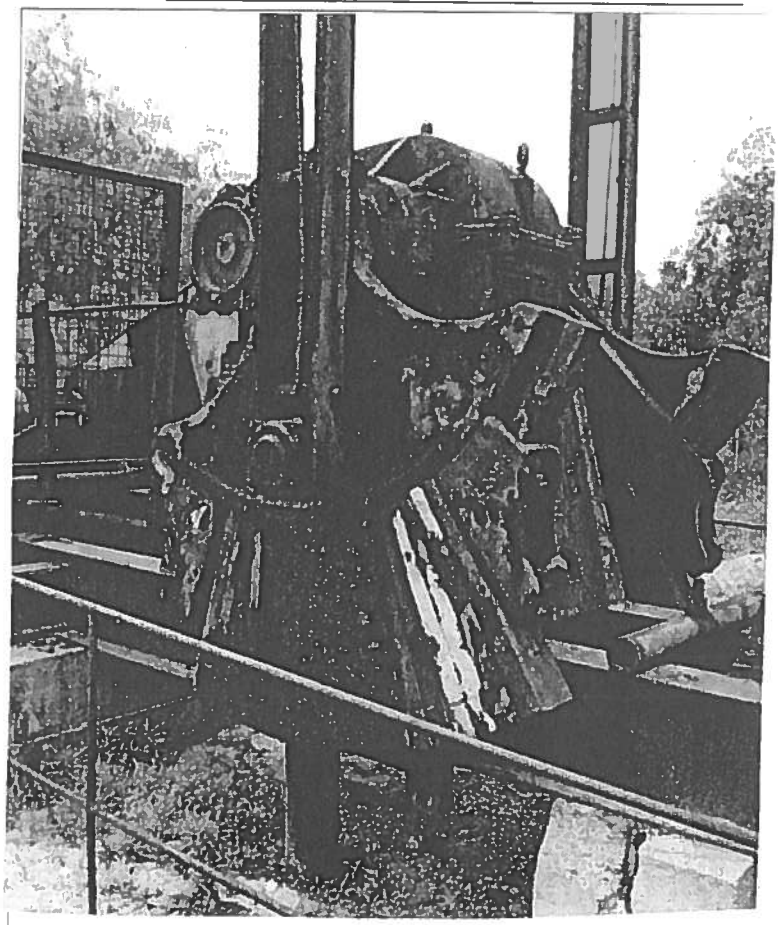
P2e. Locational Data: UTMs, continued: 421010mE/ 3754040mN; 421700mE/3754050mN; 421630mE/3755010mN

B10. Significance:

In order to be eligible for listing in the CRHR for its association with a person important in history, a resource must be representative of the theme, activities, or endeavors for which that individual is historically important. While Doheny was active in the oil industry, and brought about the construction of a rail line to the Olinda oil fields, his association with the Stearns Lease is peripheral to his importance as the primary developer of the Olinda oil field to the east or as a prominent Los Angeles land holder. The pumps are not representative of the activities for which Edward L. Doheny is historically significant. Stewart's historical importance stems from his early association with the Union Oil Company. The oil pumps remaining on this property are not a good example of the oil fields that Stewart's company established, because they represent only one facet of oil extraction. Oil fields consist of other facilities in addition to oil wells. The pumps are not representative of the activities of Stewart because without the remainder of the facilities, they lack context. Therefore, the pumps are recommended not eligible for CRHR listing for their association with historically significant individuals.

Oil wells from the period of significance may be said to embody the technological characteristics of early oil production if they have remained basically unchanged since that time period. The oil field on the Stearns Lease has been in constant operation since its establishment. As technology changed, the pumps were updated. While some pumps retain some characteristics of their original design, other defining characteristics have been changed. Power plants (or motors) have been updated, as have pumping mechanisms in some cases. These pumps lack integrity due to their continuous maintenance. Therefore, the pumps are recommended not eligible for listing in the CRHR as examples of historic engineering or technology.

As individual resources, these pumps lack the context necessary to convey their significance, however, a number of resources considered as a district may be eligible. A representative array of resources sufficient to convey what the oil field or settlement was like between 1894 and the 1920s would need to be present for the resources to qualify for CRHR listing as a historic district. Historic photographs and archival research indicate that between 1894 and the 1920s, this oil field consisted of derricks, pumps, oil storage and processing facilities, and a camp which was composed of boarding houses, homes, warehouses, and administrative buildings. All that remains of the oil field today are the pumps. Therefore, as a district, the Stearns Lease lacks integrity and is recommended not eligible for listing in the CRHR.



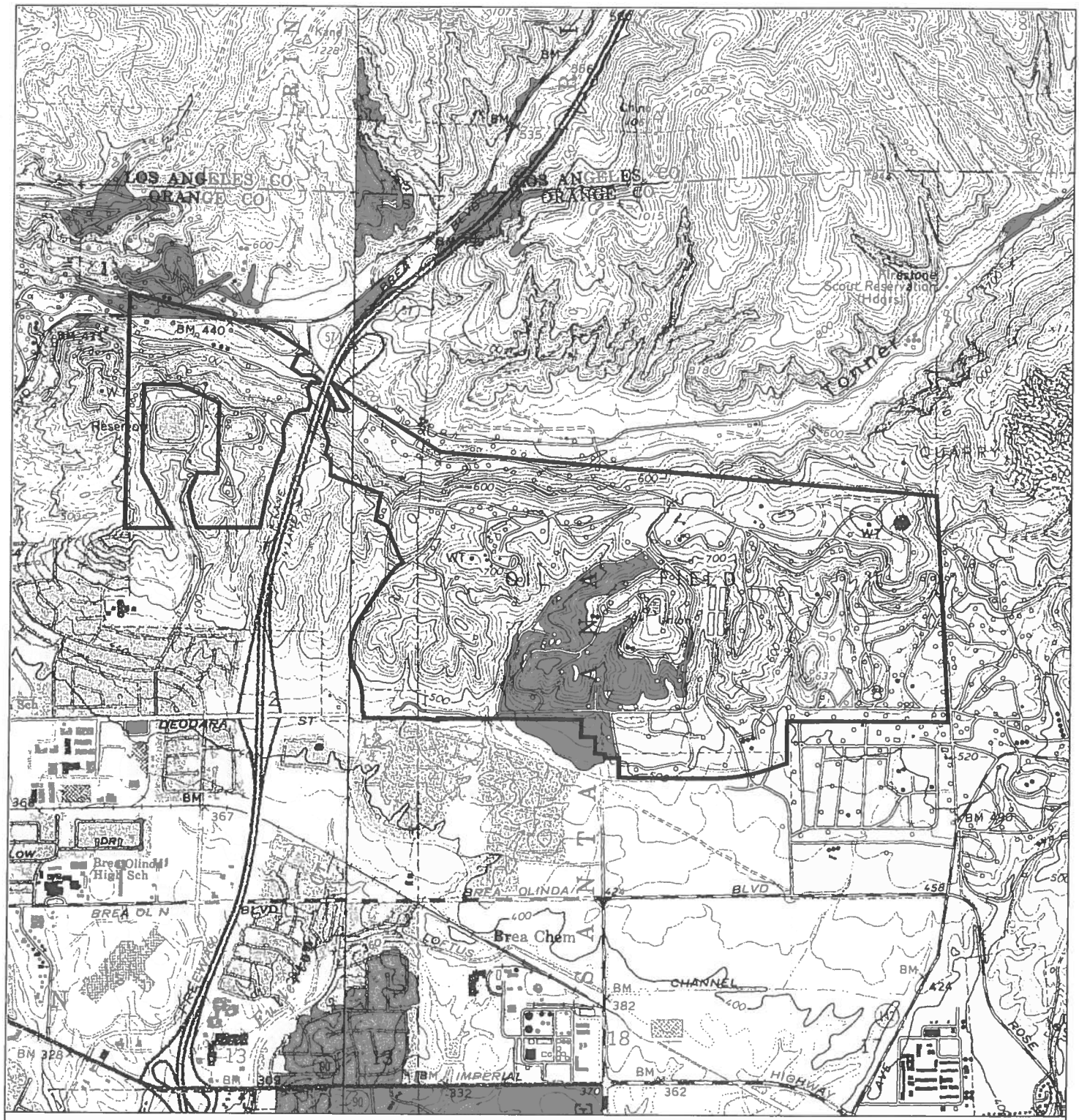
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # 30-177012
HRI #
Trinomial

*Resource Name or #: Counter Balance Pump Jack

*Map Name: La Habra &Yorba Linda Quadrangles *Scale: (see bar scale) *Date of Map: Pr 1981



Base map: Portions of USGS 7.5'-series Quadrangles La Habra, California, 1964, Photorevised 1981 and Yorba Linda, California, 1964, Photorevised 1981

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code | Reviewer | Date

*Resource Name or #: Wildcatter's Park
P1. Other Identifier: Brea-Olinda Oil Field

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County:** Orange
***b. USGS 7.5' Quad:** La Habra, Yorba Linda **Date:** both 1964, both photorevised 1981
Land Grant property, but parly surveyed as **T** 3S; **R** 9W **of Sec** 7 & 8, and **T** 3S; **R** 10W; **of Sec** 12**;** San Bernardino **B.M.**
c. Address: see boundaries in **P3a.** City: Brea Zip: 92821
d. UTM: Zone: 11; 421223 mE/ 3754314 mN (G.P.S.) (@ Stearns 71 Derrick in "Wildcatters Park")
e. Other Locational Data: Elevation: Ranges from approximately 450 to 765 feet above sea level.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The property is the northeast corner of the San Juan Cajon de Santa Ana Land Grant, in the rugged Chino Hills of Orange County. Its combined oilfield leases, with almost 200 active wells (in 1997) of more than 300 drilled here since 1894, cover approximately 820 acres of compact rolling hills south of Tonner Canyon and north of the Santa Ana River floodplain. The 1913 Landa Farmstead, home of a Basque sheepherder and family, once stood on a hilltop of the oilfield's northeast area, now the site of its natural gas processing plant. Historic wellhead steel derricks, reflecting early 20th century drilling and maintenance practices, have been removed, but one from the "Stearns 71" well is preserved at Wildcatters Park (see BSO Form, page 4) in a canyon at the property's southeast area. Throughout the oilfield, newer and older operating facilities present a catalog of pumping, storage, transport, and maintenance structures and buildings from the field's century of operation. The boundaries are roughly Valencia Avenue on the east, Lambert Road on the south, Brea Boulevared on the west and north, and Tonner Canyon Road on the north.

***P3b. Resource Attributes:** HP8. Industrial building, HP11. Engineering structure, HP19. Bridge, HP25 Amusement park, HP30. Trees / vegetation, HP32. Rural open space, HP43. Mine [oilfield] structure / building, HP46. Walls / gates / fences.
***P4. Resources Present:** ☑Building ☑Structure ☐Object ☐Site ☑District ☐Element of District ☐Other (Isolates, etc.)

P5a1. Photo or Drawing

P5b1. Description of Photo: Five oil pump jacks in close proximity, others on hills in background, facing N, 22 February 2007.

***P6. Date Constructed/Age and Sources:** ☑Historic ☐Prehistoric ☐Both
See Continuation Sheet, page 8.

***P7. Owner and Address:**
Shea Homes
1250 Corona Pointe Court, Ste. 600
Corona, CA, 92879

***P8. Recorded by:**
James W. Steely, SWCA Env Conslt
23392 Madero, Suite L
Mission Viejo, CA 92691

***P9. Date Recorded:** 2/22/06
***P10. Survey Type:**
Reconnaissance Level

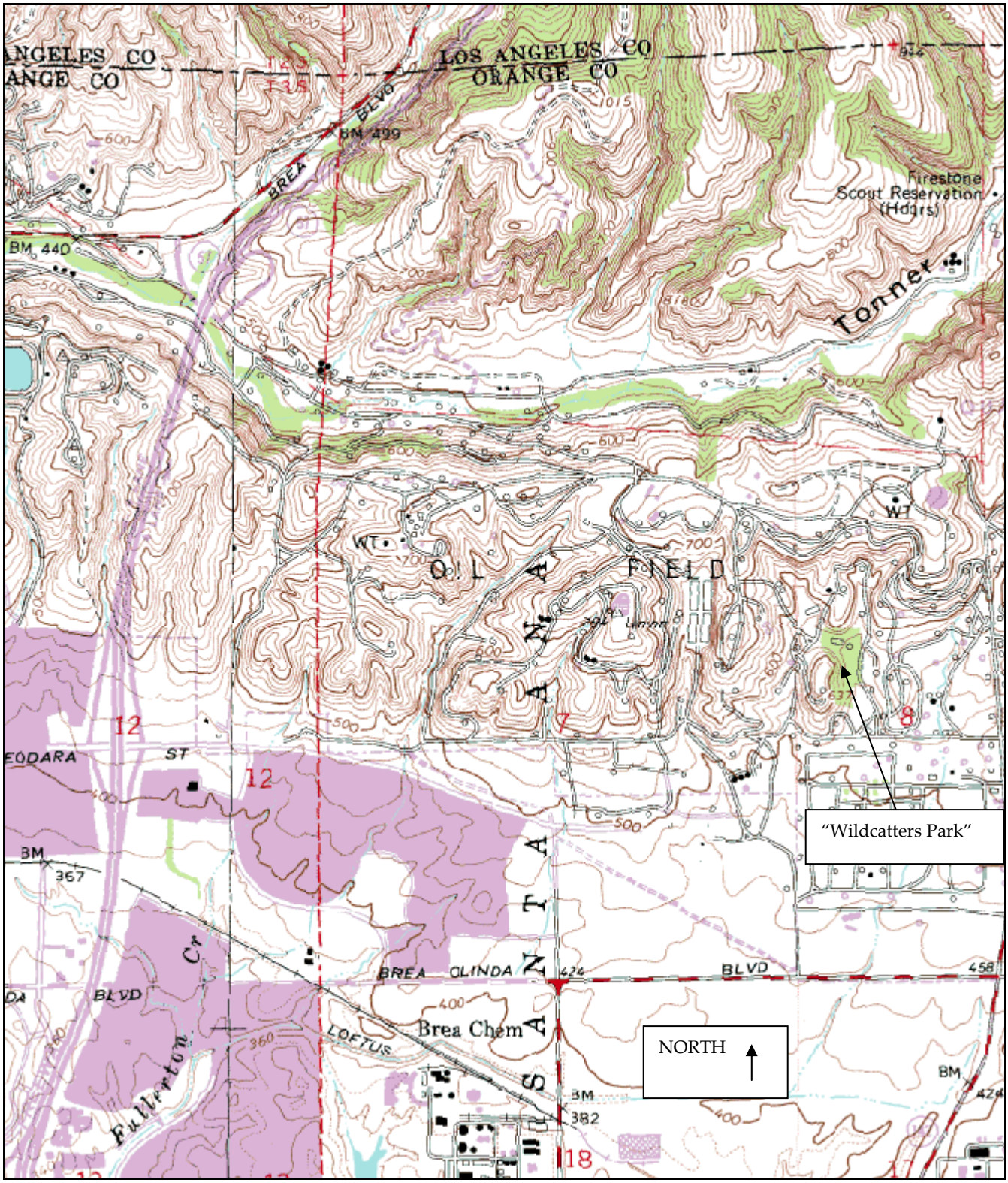
***P11. Report Citation:** Backes, Clarus J. et al, 2010. *Archaeological Monitoring For The Tonner Hills Project Located In Brea, Orange County, California.* Report submitted to Shea Homes of Orange County. Copies on file at SWCA Environmental Consultants, Inc., South Pasadena, CA.

***Attachments:** ☐NONE ☑Location Map ☑Sketch Map ☑Continuation Sheet ☑Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page **2** of **8**
*Resource Name: **Wildcatter's Park, Brea-Olinda Oil Field**
*Map Name: Yorba Linda Quad
*Scale: 1:24000
*Date of Map: 1978



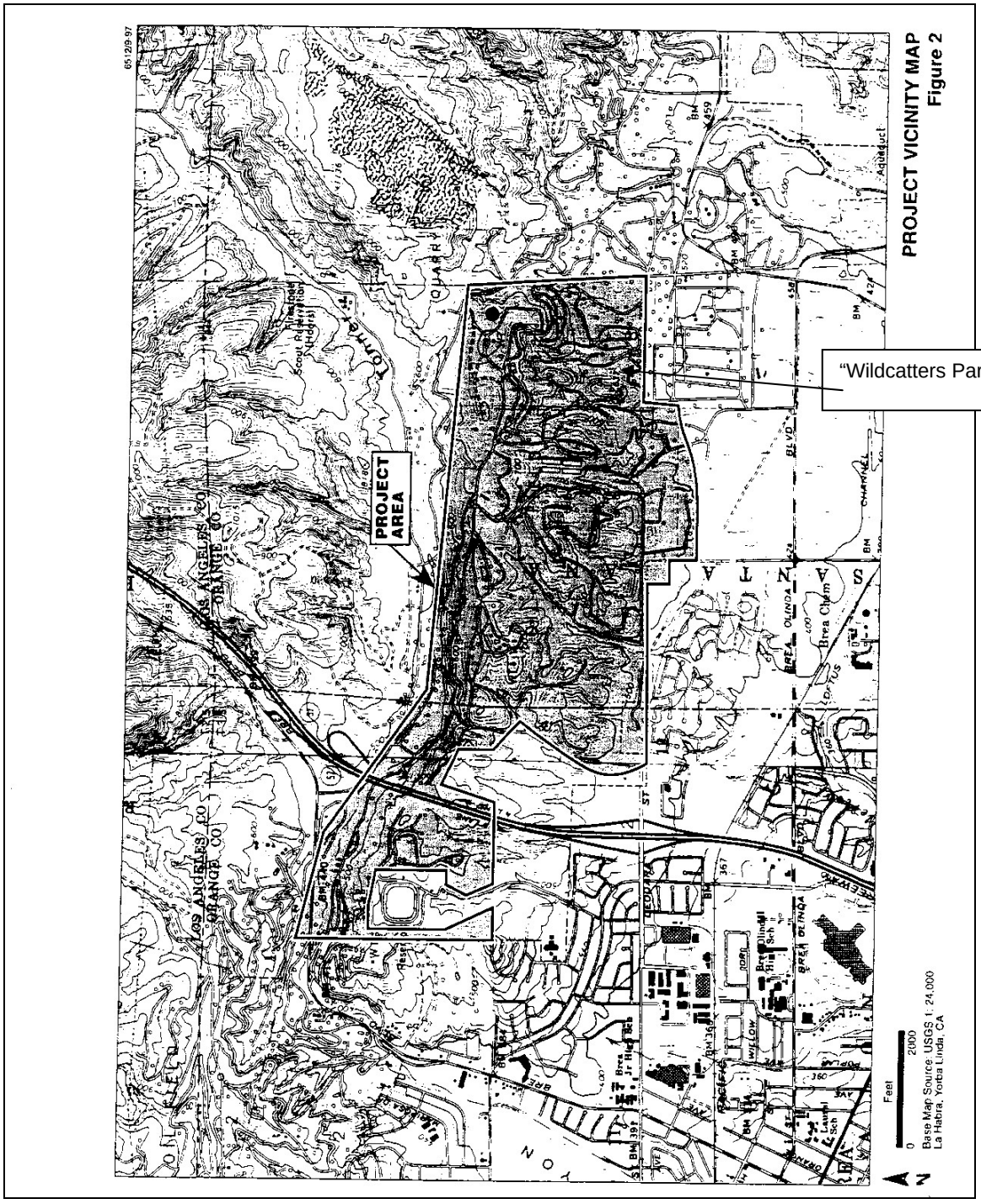
DPR 523J (1/95)
*Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

Page **3** of **8** *Resource Name: **Wildcatter's Park, Brea-Olinda Oil Field**

*Drawn By: Shea Homes of Southern California *Date: c. 2005



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code:** 3S (NRHP eligible), 3CS (CRHR eligible)
***Resource Name: "Wildcatters Park"**

B1. Historic Name: part of **Brea-Olinda Field, "Stearns Lease [or Fee]," Union Oil Corporation (UNOCAL)**
B2. Common Name: Oilfield employees' park
B3. Original Use: oilfield access roads; oilfield employees' park B4. Present Use: abandoned (in 2006)

***B5. Architectural Style:** Modern (concrete block restrooms building)

***B6. Construction History:** (Construction date, alterations, and date of alterations) This cluster of recreation buildings and structures appears to date from about 1960, based on the modern, utilitarian design and concrete-block construction of the restrooms building. A large open pavilion of fabricated metal sheltered occasional employee-event picnics and food preparation, and a small wooden kiosk perhaps housed event management and/or food sales. The "Stearns 71" fabricated-steel derrick is interpreted with a plaque explaining its original 1927 assignment to an oilwell about ½ mile to the northwest, and its move to this location in 1994.

***B7. Moved?** ☐**No** ☑**Yes** ("Stearns 71" derrick) ☐**Unknown Date:** 1994 **Original Location:** approximately ½ mile northwest

***B8. Related Features:** Large open pavilion of metal, restrooms building of concrete block, sales kiosk of wood, concrete pad marked for a ball court, and introduced plantings including mature California palms.

B9a. Architect: unknown b. Builder: Union Oil Corporation

***B10. Significance: Theme:** Corporate Employees' Recreation Facilties **Area:** Southern California Oilfields
Period of Significance: 1945-1962 **Property Type:** District **Applicable Criteria:**
NRHP A/CRHR 1: association with Union Oil employee largesse; NRHP B/CRHR 2: association with Reese Taylor, UNOCAL president and chairman 1938–1962.
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)
"Wildcatters Park" is a recent residential developer's name for the c. 1960 employees' recreation park, including a commemorative historic oilwell derrick, apparently assembled by Union Oil Corporation (UNOCAL) as a benefit for employees of Union's Brea-area operations and their families. This lush, hidden, and exclusive island for recreation inside a large utilitarian oilfield was indicative of the paternal attitude of a large oil company toward its employees (Criterion A/1), and probably of the policies and attitude of UNOCAL's flamboyant and longtime leader Reese Taylor (Criterion B/2). The park retains integrity of location, design, materials, workmanship, feeling, setting, and association. It is recommended eligible for listing in the NRHP and CRHR.

B11. Additional Resource Attributes: HP8. Industrial building, HP11. Engineering structure, HP25 Amusement park, HP30. Trees / vegetation, HP32. Rural open space, HP43. Mine [oilfield] structure / building, HP46. Walls / gates / fences.

***B12. References:** See Continuation Sheet, page 8.

B13. Remarks: Effects of residential development for much of the historic Brea-Olinda Oilfield surrounding the park will be mitigated to less than significant with the proposed incorporation of the old UNOCAL park and its facilities into "Wildcatters Park" for the Tonner Hills and Walden Hills development.

***B14. Evaluator:**
James W. Steely, SWCA Environmental Consultants
23392 Madero, Suite L
Mission Viejo, CA 92691

***Date of Evaluation:**
22 February 2006, 5 March 2007

(Sketch Map with north arrow required.)
See Sketch Map, page 5.

(This space reserved for official comments.)

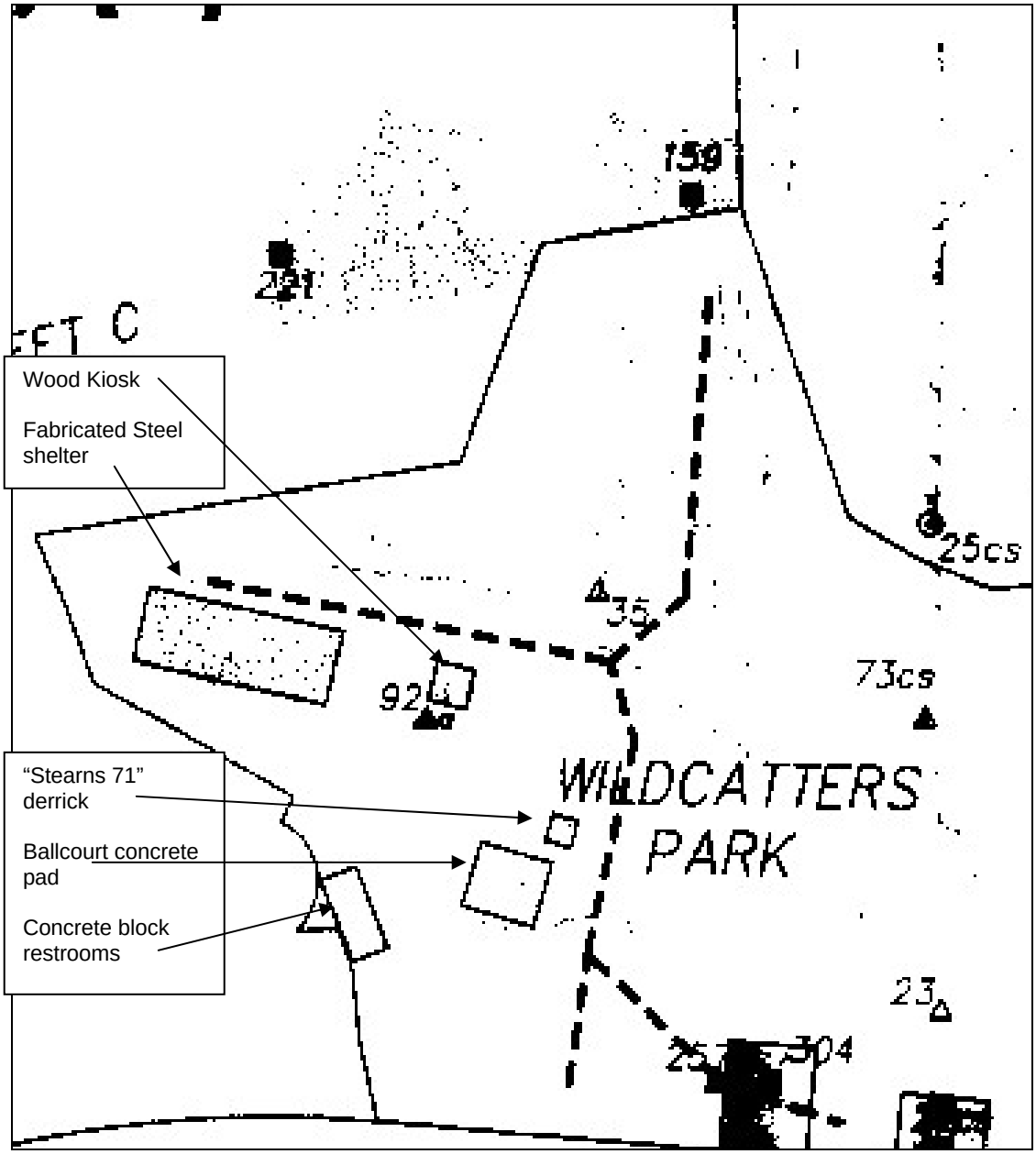
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

*Resource Name: **Wildcatter's Park, Brea-Olinda Oil Field**

*Drawn By: RBF Consulting, Irvine

*Date: 1 February 2005



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI#
Trinomial

Page 6 **of** 8 ***Resource Name:** Wildcatter's Park, Brea-Olinda Oil Field
*Recorded by: James W. Steely, SWCA Environmental Consultants *Date: 2/22/06 ☑ **Continuation** ☐ **Update**

P5a2.

P5b2. Brea-Olinda Oilfield, facing WNW, 22 Febraury 2006. Derricks and truck survive from a century of oilfield operation.

P5a3.

P5b3. Brea-Olinda Oilfield, facing N, 22 February 2006. Derricks, surge tank, and piping carry 1930s builders' plates.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

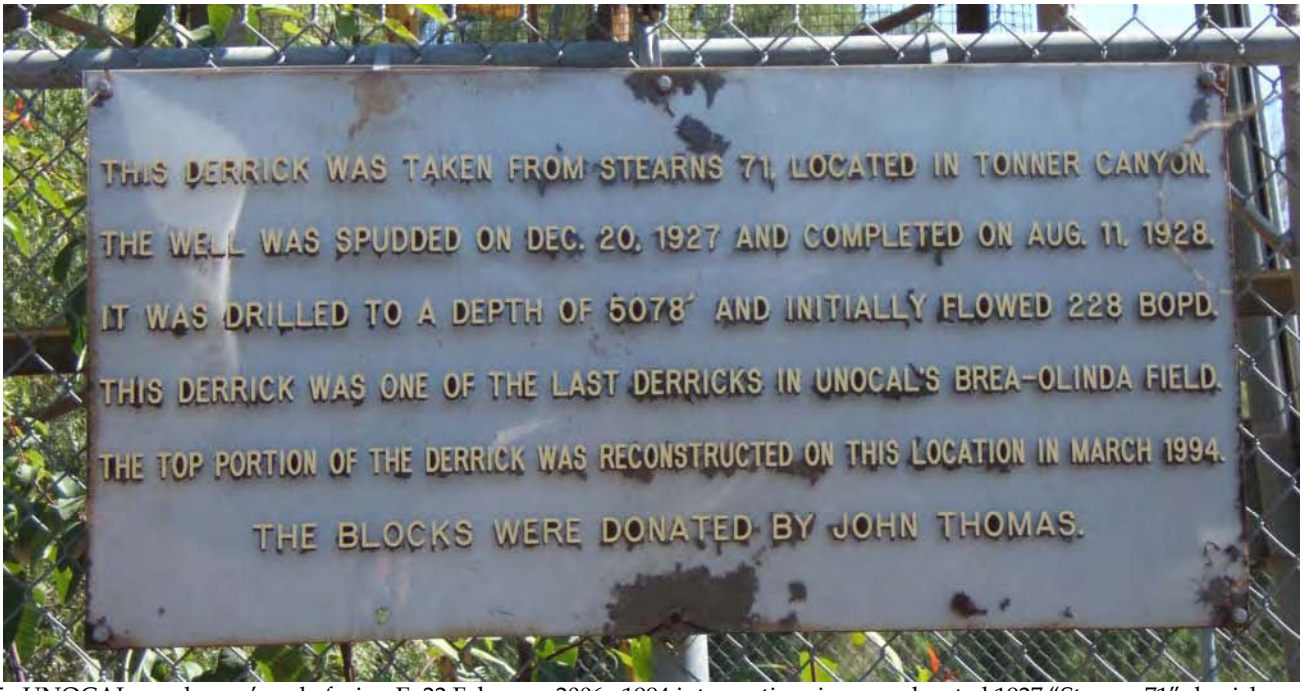
Primary #
HRI#
Trinomial

Page 7 **of** 8 ***Resource Name:** Wildcatter's Park, Brea-Olinda Oil Field
*Recorded by: James W. Steely, SWCA Environmental Consultants *Date: 2/22/06 ☑ **Continuation** ☐ **Update**

P5a4.

P5b4. UNOCAL employees' park, facing WNW, 22 February 2006. 1927 "Stearns 71" derrick preserved amid steel events shed (middle distance), wood kiosk (left of bare tree in foreground), and concrete-block restrooms (far left in trees).

P5a5.



P5b5. UNOCAL employees' park, facing E, 22 February 2006. 1994 interpretive sign on relocated 1927 "Stearns 71" derrick.

***B12. References:**

Becker, Kenneth M., and Juanita R. Shinn
1992 "Report on the Investigations at the "Landa House," an early Twentieth Century Basque Sheepherder's House near the City Brea, Orange County, California." Prepared for UNOCAL. Santa Fe Springs. Prepared by RMW Paleo Associates. Mission Viejo.

Brechbiel, Brant, Roger D. Mason, and Richard Cerreto
1997 "Cultural Resources Survey Report for the Stearns Property, City of Brea, Orange County." Prepared for Nuevo Energo Company. Prepared by Chambers Group, Inc. Irvine.

Brown, Joan C.
1989 "Cultural Resources Reconnaissance of the 600 Acre Stearns – UNOCAL Project Brea, California. Prepared for Planning and Design Solutions. Newport Beach. Prepared by RMW Paleo Associates. Mission Viejo.

RBF Consulting
2005 "Tonner Hills Stage 3 Grading." Engineering and topographical map. RBF Consulting, planning, design, construction. Irvine.

Unocal Corporation
2006 Encyclopedia of Company Histories. Answers.com. Electronic document: http://www.answers.com/topic/unocal-corporation-1. Accessed 2 March 2007. Discusses Reese Taylor, president and chairman 1938-1962.

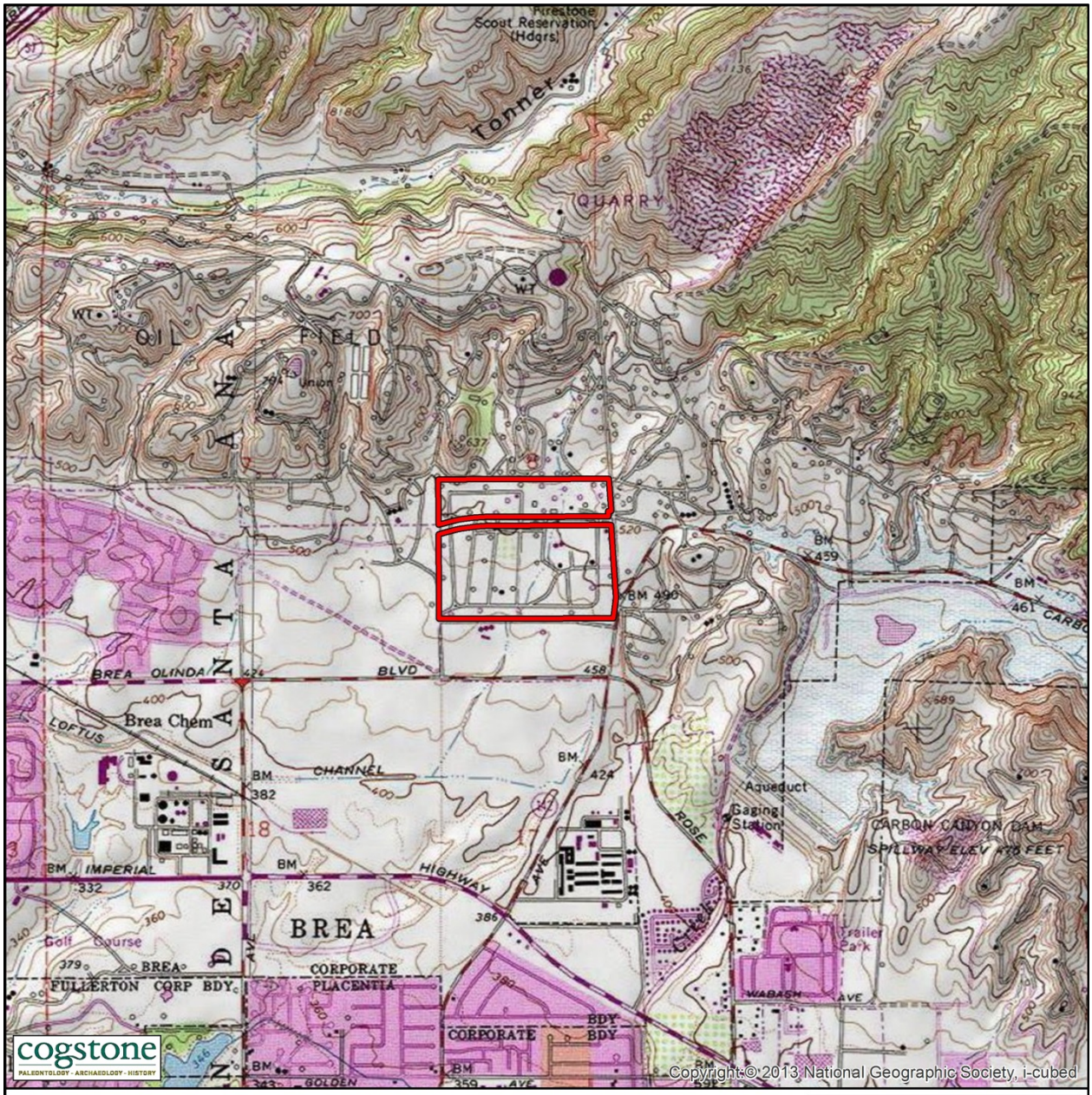
CONTINUATION SHEET

Update by: Tony Quach, Cogstone RMI **Date:** 2/25/2019

In 1998, Jones & Stokes documented a dispersed historic scatter with three historic concentrations along parallel roadways as a single resource.

On February 25, 2019, archeologists Tony Quach and Andrew Denina of Cogstone Resource Management visited the location of P-30-001665 as part of a cultural resource survey. Sherds of amethyst, milk, and cobalt glass were observed throughout the entire Parcel (APN 107-682-03). A noticeably elevated occurrence of broken glass was apparent however in the far northern edge between the aqualculture area and fencline that seems to also occur just north of the paved road. In that northern portion 1 castoreum bottle and a shell button were identified that were diagnostic. A good portion of the northern concentration was likely obliterated or impacted by the aquaculture farm and construction of Lambert Road (road built between 1980-1995). Also a dense concentration of broken glass and diagnostic bottles were located near the southern concentration. The middle concentration was not re-identified (likely built over by the aquaculture farm in 2007) and is overlain by stockpiled tall mounds of dirt along the southern edge of the farm area.

Because scatters of historic debris were observed throughout APN 107-682-03, the site boundary for P-30-001665 (CA-ORA-1665H) was expanded to encompass all of the parcel.



Historic Archaeological Site, update
City of Brea, Sphere of Influence
Orange County, CA

P-30-001665

USGS 7.5' Quads:
YORBA LINDA

0 0.25 0.5 Miles
N
0 0.25 0.5 Kilometers
1:24,000 1 in = 2,000 ft

30-001665

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 3 *Resource Name or #: (Assigned by Recorder) BSP-3-1

P1. Other Identifier: Flanigan Corners

*P2. Location: ☐ Not for Publication ☐ Unrestricted *a. County Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Yorba Linda Date 1946 T 3S ; R 9W ; ___ ¼ of ___ ¼ of Sec 8 ; SB B.M.

c. Address _____ City Brea Zip _____

d. UTM: (Give more than one for large and/or linear resources) Zone: 11 ; _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, directions to resource, elevation, etc., as appropriate)

The site boundaries are tentatively identified as: 421130mE, 3753820mN; 421130mE, 3753580mN; 421140mE, 3753840mN; 421140mE, 3753600mN.

*P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Three concentrations of glass, pottery, metal fragments, and other historic materials are visible in areas where the ground is disturbed by road construction, other excavation, or rodent disturbance. Artifacts include fragments of cobalt, clear, amethyst, aqua, amber, and milk glass, fragments of china and earthenware, railroad spikes, brick fragments, metal fragments, slag, and a horseshoe. The areas between these concentrations are covered with a light scatter of historic debris.

*P3b. Resource Attributes: (List attributes and codes) AH4. Trash scatter; AH16. Other

*P4. Resources present: ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, accession #) None.

*P6. Date Constructed/Age and Sources: ☒ Historic ☐ Prehistoric ☐ Both
1900- 1920

*P7. Owner and Address:

*P8. Recorded by: (Name, affiliation, and address) S. Ashkar
Jones & Stokes Associates, Inc.
2600 V Street, Suite 100
Sacramento, CA. 95818

*P9. Date Recorded: 8/27/98

*P10. Survey Type: (Describe)
Pedestrian Survey

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Jones & Stokes Associates, Inc. 1999. Cultural resources inventory report for the proposed Brea Sportspark, City of Brea, Orange County, California. Prepared for the City of Brea.

*Attachments: NONE ☒ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☒ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

DPR 523A (1/95) *Required Information

30-001665

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHAEOLOGICAL SITE RECORD

Primary # _____
Trinomial _____

 *Resource Name or #: (Assigned by Recorder) BSP-3-1

*A1. Dimensions: a. Length 900 feet (N/S) x b. Width 900 feet (E/W)
Method of measurement: ☐ Paced ☐ Taped ☐ Visual estimate ☒ Other: and interpolated from quad map
Method of determination (Check any that apply.): ☒ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography
☒ Cut bank ☒ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other: (Explain): _____

Reliability of determination: ☐ High ☐ Medium ☒ Low Explain: Artifacts are only visible where ground has been disturbed

Limitations (Check any that apply): ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined
☐ Disturbances ☐ Vegetation ☐ Other (Explain): _____

A2.Depth: _____ ☐ None ☒ Unknown Method of determination: _____

*A3. Human Remains: ☐ Present ☐ Absent ☐ Possible ☒ Unknown (Explain):
Unlikely

*A4. Features (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map.):
Three concentrations of historic debris which are present due to the pattern of ground disturbance.

*A5. Cultural Constituents (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.):
1 railroad spike, a horseshoe, 1 shell two-hole shell button, glass fragments (clear, amber, milk, aqua, cobalt, amethyst), medicine bottle fragments, earthenware, china, slag, metal fragments,

*A6. Were Specimens Collected? ☒ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

*A7. Site Condition: ☐ Good ☒ Fair ☐ Poor (Describe disturbances.):
Site has been disturbed by road construction and continues to be disturbed by rodent activity.

*A8. Nearest Water (Type, distance, and direction): Channelized stream, immediately east.

*A9. Elevation: 480 feet

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.):
The site is located on relatively flat ground adjacent to a channelized stream. No native vegetation is present. There are several pepper trees, and other trees planted from the nursery.

A11. Historical Information:
This area was the site of Flanigan Corners, which sprang up as a secondary area of development to the west of the oil town of Olinda (Hampson 1983).

*A12. Age: ☐ Prehistoric ☐ Protohistoric ☐ (1542-1769) ☐ (1769-1848) ☐ (1848-1880) ☒ (1880-1914) ☒ 1914-1945)
☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factural historic dates if known:**

A13. Interpretations (Discuss data potential, function(s), ethnic affiliation, and other interpretations):
The location of the site and the artifacts present indicate that this is part of the remains of Flanigan Corners.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):
Hampson, T. 1993. Brea: Celebrating 75 years. Brea Historical Society in cooperation with Premiere Editions, Placentia, CA.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record.):

Original Media/Negatives Kept at: Jones & Stokes Associates, Inc. 2600 V Street, Ste. 100 Sacramento, CA 95818

*A17. Form Prepared by: Shahira Ashkar Date: August 30, 1998
Affiliation and address: Jones & Stokes Associates, Inc. 2600 V Street, Ste. 100 Sacramento, CA 95818

30-001665

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

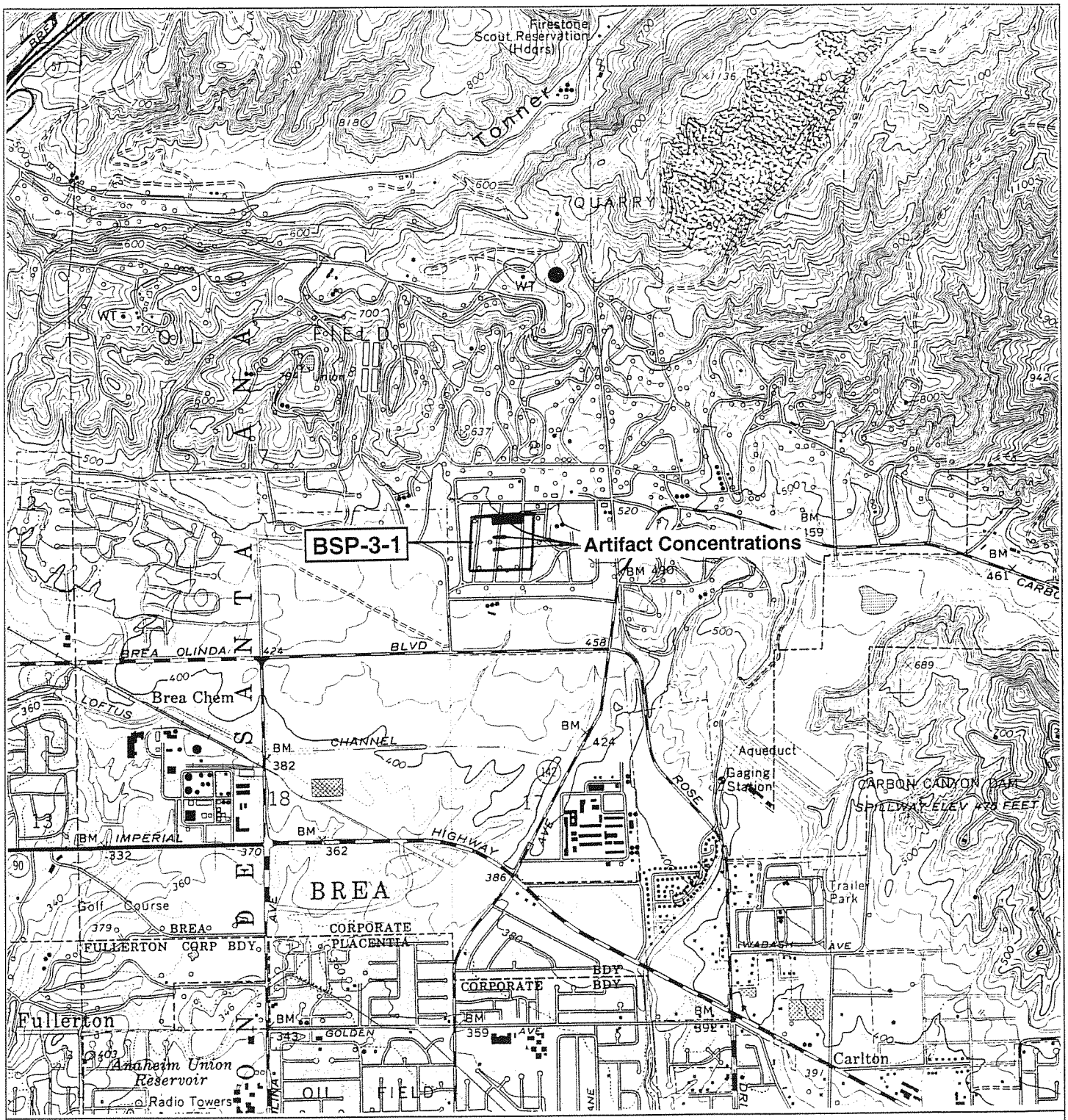
LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 3 of 3

*Resource Name or #: BSP-3-1

*Map Name: Yorba Linda, California *Scale: 1:24,000 (1"=2,000') *Date of Map: 1981



DPR 523J (1/95)

*Required information

In 1998, S. Ashkar of Jones and Stokes Associates, Inc. documented a generator building referred to as BSP- 3-2. The rectangular wood framed building was built on a poured concrete foundation, had a gabled roof with a partial width monitor roof. The building was described to be in poor condition. The building was not evaluated for listing eligibility at the local, state, or national level.

On February 15, 2019, archeologists Tony Quach and Andrew Denina of Cogstone Resource Management visited the location of BSP -3-2 as part of a cultural resource survey. Quach and Denina could not locate the previously recorded generator building and is thus assumed to have been demolished. Concrete foundations were located approximately 50 meters from where the resource was depicted on the 1998 DPR's Location Map. It is possible this foundation may be what remains of BSP- 3-2.

Photo(s)

Possible foundation of BSP- 3-2

30-001666 30-001666

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 3 *Resource Name or #: (Assigned by Recorder) BSP- 3-2

P1. Other Identifier: Generator Building

*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County Orange

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Yorba Linda Date 1964 T 3S ; R 9W ; ___ ¼ of ___ ¼ of Sec 8 ; SB B.M.

c. Address _____ City Brea Zip _____

d. UTM: (Give more than one for large and/or linear resources) Zone: 11 ; 421670 mE/ 3753720 mN

e. Other Locational Data: (e.g. parcel #, directions to resource, elevation, etc., as appropriate)

This building is located on the north side of the access road that comes into the nursery from Valencia Avenue.

*P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The generator building is a rectangular wood frame building on a poured concrete foundation with a gable roof. A partial width monitor with five vents is centered on the roof, and a metal pipe protrudes vertically from the north slope of the gable roof. The walls and roof are covered wtith corrugated metal, but the foundation is exposed. Three wood-sash, double-hung windows are located along the southern facade, and one is located on the western facade. All windows are missing glass and are in poor condition. A single entry door is located on the western facade and a larger opening, without a door, is located on the eastern facade. There is no fenestration on the north side of the building. Overhead lamps are located near the apex of the gable on the east and west gable ends. This building houses what appears to be a steam driven generator that is no longer functioning. The visible generator is a large iron block containing six horizontal rows of three coils.

*P3b. Resource Attributes: (List attributes and codes) HP4. Ancillary Building

*P4. Resources present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, accession #) Generator building south and west facades.

*P6. Date Constructed/Age and Sources: ☒ Historic ☐ Prehistoric ☐ Both

*P7. Owner and Address:

*P8. Recorded by: (Name, affiliation, and address) S. Ashkar
Jones & Stokes Associates, Inc.
2600 V Street, Ste.100
Sacramento, CA 95818

*P9. Date Recorded: 8/27/98

*P10. Survey Type: (Describe) Intensive Pedestrian

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Jones & Stokes Associates, Inc. 1999. Cultural resources inventory report for the proposed Brea Sportspark, City of Brea, Orange County, California. Prepared for the City of Brea.

*Attachments: NONE ☒ Location Map ☐ Sketch Map ☐ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

DPR 523A (1/95) *Required Information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # 30-001666
HRI #

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 3

*NRHP Status Code

*Resource Name or # (Assigned by recorder) BSP-3-2

B1. Historic Name:

B2. Common Name:

B3. Original Use: Generator building

B4. Present Use: Not in use

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations)
Unknown construction date

*B7. Moved? [X] No [ ] Yes [ ] Unknown Date: Original Location:

*B8. Related Features:
None

B9a. Architect: Unknown

b. Builder: Unknown

*B10. Significance: Theme: Area:

Period of Significance: Property Type: Applicable Criteria:

(Discuss imporance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

This structure has not been evaluated for NRHP listing. Further research to determine the date of construction and builder, as well as original function and association would be necessary to determine its significance. It does not appear to be significant for its architectural characteristics

B11. Additional Resource Attributes: (List attributes and codes)

*B12. References:

(Sketch Map with north arrow required.)

B13. Remarks:

*B14.Evaluator: S. Ashkar, Jones & Stokes Associates, Inc.
2600 V Street, Ste. 100 Sacramento, CA 95818

*Date of Evaluation: August 30, 1998

(This space reserved for official comments.)

DPR 523 B (1/95)

*Required Information

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

Page 3 of 3
*Resource Name or #: BSP-3-2
*Map Name: Yorba Linda, California *Scale: 1:24,000 (1"=2,000') *Date of Map: 1981

DPR 523J (1/95)

*Required information

Update by: Tony Quach, Cogstone RMI **Date:** 2/26/2019

In 2013, SWCA documented a concrete alignment adjacent to a deteriorated aspalt roadway.

On February 26, 2019, archeologists Tony Quach and Andrew Denina of Cogstone Resource Management visited the location of P-30-001738 as part of a cultural resource survey. The concrete alignment was relocated and was noted to be consistent with the prior description though the roadway was noted to have been largely obliterated by the construction of a concrete sidewalk and chain-link fencing in 2013.

Photo(s)

Concrete alignment

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial CA-ORA-1738 H
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

Page 1 of 4 | *Resource Name or #: S-20

P1. Other Identifier:
***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted** ***a. County:** Orange
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** *Yorba Linda*, CA **Date:** 1961 (PR 1981) **T** 3 South ;**R** 9 West ; NE ¼ **of** SE ¼ **of Sec** 8 ; San Bernardino **B.M.**
c. Address: N/A City: Zip:
d. UTM: NAD 83 Zone: 11; North 421627 mE / 3754227 mN; South 421627 mE / 3754152 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 158 m (530 feet) AMSL
The site is located on the west side of Valencia Ave. 0.7 km north of the intersection with Brea Olinda Blvd.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
S-20 is a linear concrete footing and segment of an oiled road of unknown age, likely associated with nearby oil wells operated throughout the twentieth century. The site was found during monitoring of nearby pothole excavations. The features are located west of Valencia Avenue along an actively eroding cut in the adjacent landform. The concrete feature (Feature 1) measures 24 feet in length, 18 inches wide, and is at least 12 inches thick. The northern portion of the has a finished and smooth surface; the southern portion is deteriorated, exposing the underlying aggregate made from a mixture of brick fragments, burned and vitrified brick, angular gravels, and pieces of metal, including a one-inch thick protruding rod. The oiled road (Feature 2) is aligned parallel to the concrete footing and existing street, and measures approximately 150 feet long. Inspection of the eroded cut did not reveal any formal preparation such as use of gravel base or even grading, and its thinness suggests it was expediently constructed. Small segments of the oiled road can be seen on both sides but not below the concrete footing, the top of which is just slightly above the road surface. This suggests the footing was in place before the road was created. No historic artifacts were found in the site or vicinity.

***P3b. Resource Attributes:** (List attributes and codes) AH7. (road).
***P4. Resources Present:** ☐Building ☐Structure ☐Object ■Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) Overview of exposed concrete footer (view to north).

***P6. Date Constructed/Age and Sources:** ■Historic ☐Prehistoric ☐Both

***P7. Owner and Address:**
Shea Homes, LP
1250 Corona Pointe Court, Ste. 600
Corona, CA 92879

***P8. Recorded by:** (Name, affiliation, and address)
Chris Millington
SWCA Environment Consultants
150 S. Arroyo Parkway, 2nd Fl.
Pasadena, CA 91105

***P9. Date Recorded:** 3/22/13

***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Murray, Samantha, Sara Ferland, and Benjamin Vargas. *Cultural Resources Evaluation Report for Archaeological Sites CA-ORA-1623H, S-17, S-18, S-19, and S-20 Blackstone Phase II Project, City of Brea, Orange County, California.* Prepared by SWCA Inc. for Shea Tonner Hills, LLC in 2014.

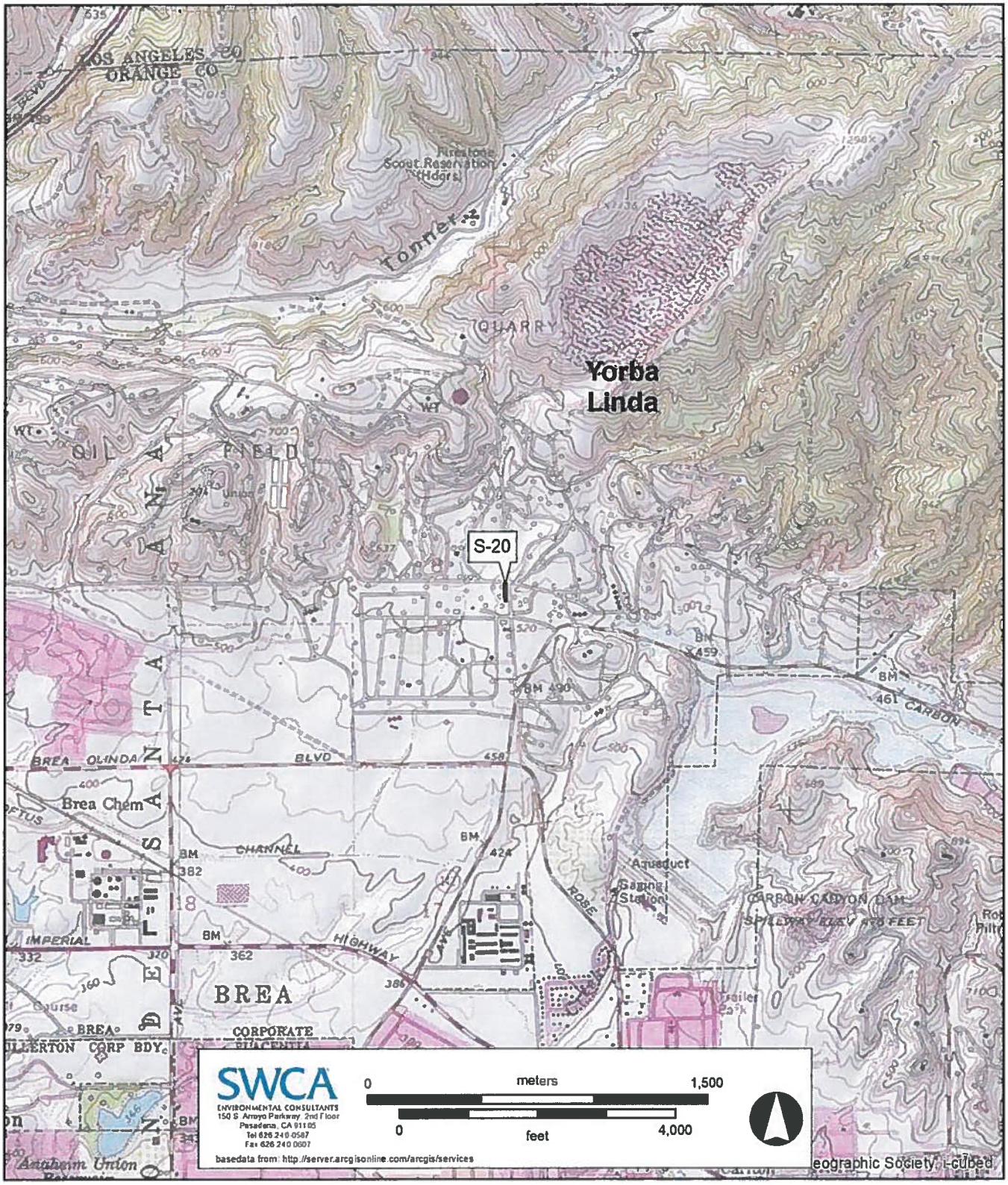
***Attachments:** ☐NONE ■Location Map ■Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ■Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 2 of 4 *Resource Name or #: S-20

*Map Name: Yorba Linda, California *Scale: 1:24,000 *Date of Map:



DPR 523J (1/95)

*Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHAEOLOGICAL SITE RECORD

Primary #
Trinomial

 *Resource Name or #: S-20

*A1. Dimensions: a. Length: 75 m. (N-S) × b. Width: 5 m. (E-W)
Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ■ Other: handheld submeter accurate GPS receiver.
Method of Determination (Check any that apply.): ☐ Artifacts ■ Features ■ Soil ☐ Vegetation ☐ Topography
☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ■ Medium ☐ Low Explain:

Limitations (Check any that apply): ☐ Restricted access ■ Paved/built over ■Site limits incompletely defined
☐ Disturbances ■ Vegetation ☐ Other (Explain): only small segments of the concrete road and oiled road are intact.

A2. Depth: ☐ None ☐ Unknown Method of Determination:
*A3. Human Remains: ☐ Present ■ Absent ☐ Possible ☐ Unknown (Explain):

*A4. Features (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map.):
Feature 1: Concrete road segment measuring 24 feet in length, 18 inches wide, and is at least 12 inches thick. The northern portion of the segment has a finished and smooth surface; the southern portion is deteriorated, exposing the underlying aggregate made from a mixture of brick fragments, burned and vitrified brick, angular gravels, and pieces of metal, including a one-inch thick protruding rod.

Feature 2: Oiled road segment aligned parallel to the concrete road (Feature 1) and existing street, measuring approximately 150 feet long. Inspection of the eroded cut did not reveal any formal preparation such as use of gravel base or even grading, and its thinness suggests it was expediently constructed. Small segments of the oiled road can be seen on both sides but not below the concrete footing, the top of which is just slightly above the road surface. This suggests the footing was in place before the road was created.

*A5. Cultural Constituents (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.):
None.

*A6. Were Specimens Collected? ■ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)
*A7. Site Condition: ☐ Good ☐ Fair ■ Poor (Describe disturbances.): only small segments of Features 1 and 2 are extant. Overall integrity is poor

*A8. Nearest Water (Type, distance, and direction.): Unnamed seasonal drainage, 178 m, west; Carbon Canyon Reservoir (ca. 1936), 525 m, east
*A9. Elevation: 158 m (530 feet) AMSL
A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.): soft chess and wild oat with some grasses (*sp. brome*), willow trees on the west side of the site. The site is situated on a mostly flat alluvial terrace being cut by Valencia Ave. Portions of the feature are being eroded through undercutting in the road cut.

A11. Historical Information:

*A12. Age: ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ■1848-1880 ■ 1880-1914 ■1914-1945
☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known:**
Exact age of resource is unknown, but likely dates between the late 19th and early to mid-twentieth century.

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):
The features are likely associated with nearby oil wells operated throughout the twentieth century.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record.):

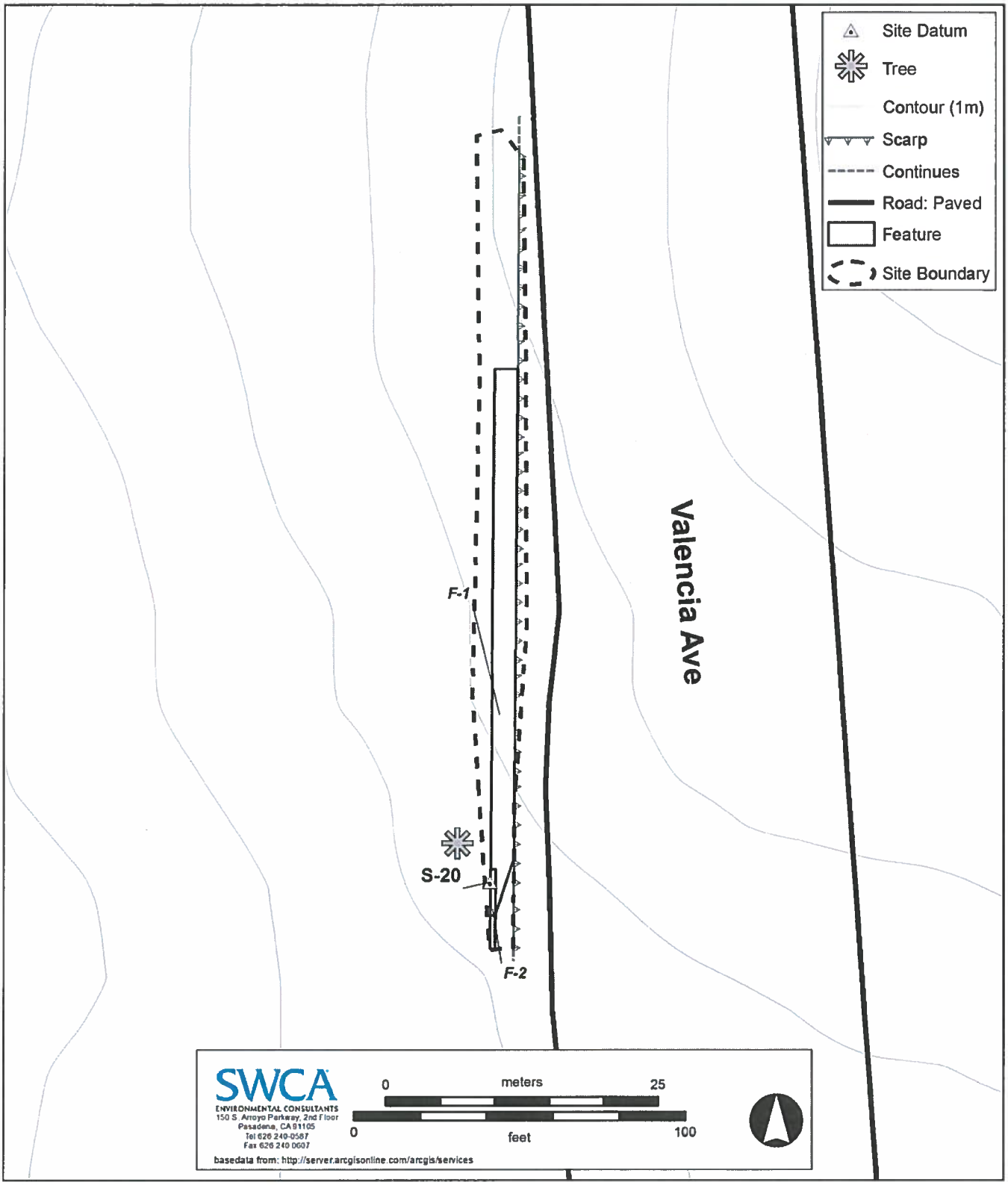
Original Media/Negatives Kept at: SWCA Pasadena Office
*A17. Form Prepared by: Sam Murray and Chris Millington **Date:** 11/14/13
Affiliation and Address: SWCA Environmental Consultants, 150 S. Arroyo Parkway, 2nd Floor, Pasadena, CA 91105

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

Page 4 of 4 *Resource Name or #: S-20

*Drawn By: William Hayden *Date:



DPR 523K (1/95) *Required information

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 270 m. **(** 885.8 feet**) × b. Width:** 65m. **(** 213.25 feet**)**
Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ☐ Other: Trimble
Method of Determination (Check any that apply.): ☒ Artifacts ☒ Features ☐ Soil ☒ Vegetation ☐ Topography
☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐High ☒Medium ☐ Low Explain: Dense vegetation obstructed ground surface and limited accessibility

Limitations (Check any that apply): ☒Restricted access ☐ Paved/built over ☐ Site limits incompletely defined
☐ Disturbances ☒Vegetation ☐ Other (Explain):

A2. Depth: ☐ None ☒ Unknown Method of Determination:
***A3. Human Remains:** ☐ Present ☐ Absent ☐ Possible ☒ Unknown (Explain): None observed, pedestrian survey only

***A4. Features**:

Feature	Description	Constituents	Size	m_E	m_N
1	Wood in asphalt 1	Cut wood beams embedded in possible asphalted road.	N/A, isolated	422140.5292	3753591.888
2	Concrete Lined Sump Pond	Sandstone boulders cemented with concrete. Dried oil remains on bottom. Perforated metal vent lid	50 ft. (l). x 25 ft. 9 (w), approximately 5 ft. deep	422159.4013	3753581.787
3	Wood in asphalt 2	Cut wood beams embedded in possible asphalted road	Small wood rung measured 2 inches wide	422145.5025	3753571.991
4	Metal saw blade		N/A, isolated	422213.9985	3753593.538
5	Historic Structural Debris	Wood fragments, corrugated metal fragments, Riveted metal pipe cylinder, broken window pane glass, porcelain insulator, metal door hinge	76 ft. (l) x 30 ft. (w)	422222.3224	3753537.316
6	Wood fence post and barbed wire	Vertically standing wood fence post and barbed wire	N/A, isolated	422352.0753	3753606.057
7	Refuse Scatter large	Metal scraps, glass shards, old door knob, "ring pull" can tab, lightbulb, metal mesh, metal hardware, metal pipe clamps and screws	191 ft. (l) x 35 ft. (w)	422297.8621	3753641.302
8	Concrete Pad	Multiple concrete slabs with iron rebar protruding	7 ft. (l) x 2.5 ft. (w)	422296.4284	3753626.662
9	Refuse scatter and structural debris	Numerous metal pipes, scrap metal, wood posts, structural debris, barbed wire, concentrated refuse scatter	60 ft. (l) x 35 ft. (w)	422353.2904	3753644.87
10	Brick Scatter	Numerous "SIMMONS" brick fragments	20 ft. (l) x 8 ft. (w)	422299.0141	3753667.553
11	Tank lid with bullet holes	Located among discarded metal pipes	2 ft. (d)	422263.8427	3753641.009
12	Large Tank	Large riveted and welded cylindrical metal tank with multiple valves and one articulated pipe fragment still attached.	7.5 (l) ft. x 3 ft. (d)	422254.1924	3753647.691

***A5. Cultural Constituents**: This site, originally recorded as a historic refuse scatter located on the opposite site of the current property boundary (immediately east of feature 7) was expanded to include additional historic refuse scatters, foundations, and structural debris. All of the constituents are related to the oil extraction industry. Historic metal pipes and scrapes were numerous and scattered throughout the site in addition to concrete rubble and brick fragments. Broken glass shards were also observed t throughout the area. Desiccated oil deposits were observed throughout the site.

ARCHAEOLOGICAL SITE RECORD

***A6. Were Specimens Collected?** ☒ No ☐ Yes

***A7. Site Condition:** ☐ Good ☒ Fair ☐ Poor : Original site was located on the opposite side of a property fence. Site is currently located partially on active access road. Many of the site elements are located on a steep slope and are eroding downslope. Thick vegetation covers most of the site and obscures its elements and features. Features off the access roads are in fair condition; however, they difficult to see and record due to dense vegetation. Features within the access road are extremely disturbed and broken.

***A8. Nearest Water** : Carbon Canyon Creek, 420 feet to the east

***A9. Elevation:** 500-580 feet

A10. Environmental Setting : Native vegetation communities are characterized by coastal scrub communities dominated by species such as California sagebrush. There are numerous historic period Eucalyptus and California Pepper trees throughout the site and surrounding area.

A11. Historical Information: The site has been continuously utilized for oil production since the 1880s. In 1882, the Chandler Oil and Mining Company were the first to extract oil, drilling to depths of 100 to 300 feet in the Olinda area within Tonner Canyon. Tonner Canyon was immediately north of the Project area and shortly thereafter a town site by the name of Petrolia Pooling their resources with others, the members of the Chandler Oil and Mining Company formed the Union Oil Company of California in 1890. In 1897, the Union Oil Company lost some its land holding due to title disputes and over 200 acres were acquired by the Brea Cañon Oil Company. A proven successful Los Angeles oil man and owner of Brea Cañon Oil Company, Edward L. Dohney, in partnership with Charles Canfield, entered a partnership with the Santa Fe Railway Company.

***A12. Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☒1880-1914 ☒ 1914-1945 ☒ Post 1945 ☐ Undetermined : This site is located on an active oil field. Oil extraction has taken place in this area since the 1880's and oil production peaked in the 1920's. The historic artifacts from this site range from the late 1880's to the 1970's.

A13. Interpretations. This historic archaeological site is in an abandoned area of an active oil field. The site constituents are related to the oil extraction industry.

A14. Remarks: This property is scheduled for demolition, clean-up and urban development.

A15. References (Documents, informants, maps, and other references):

A16. Photographs: See Photographic record

Original Media/Negatives Kept at: Cogstone Resource Management, 1518 W. Taft Ave, Orange CA

***A17. Form Prepared by:** Megan Wilson **Date:** 3/6/2019

Affiliation and Address: Cogstone Resource Management, 1518 W. Taft Ave, Orange CA

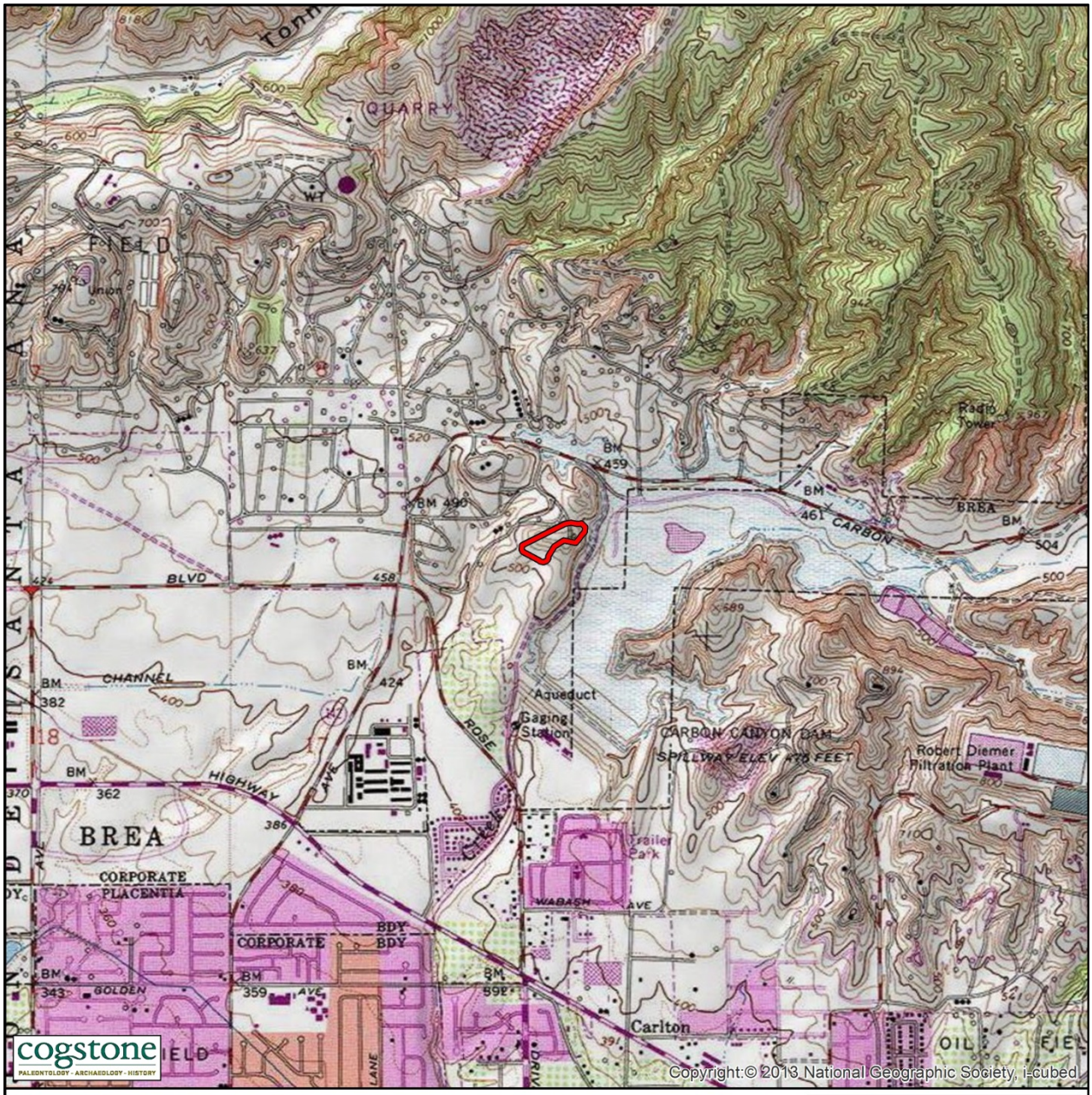
***Required information**

State of California ◆ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # P-30-120002 UPDATE
HRI#
Trinomial

*** Resource Name or #** P-30-120002

*** Map Name:** Yorba Linda *** Scale:** 1:24,000 *** Date of map:** 1981



Historic Archaeological Site
City of Brea, Sphere of Influence
Orange County, CA

P-30-120002

USGS 7.5' Quads:
YORBA LINDA

0 0.25 0.5 Miles
N
0 0.25 0.5 Kilometers
1:24,000 1 in = 2,000 ft

State of California ◆ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary # P-30-120002 UPDATE
HRI#
Trinomial

 *** Resource Name or #** (Assigned by recorder)

*** Drawn by:** Megan Wilson *** Date of map:** March 2019

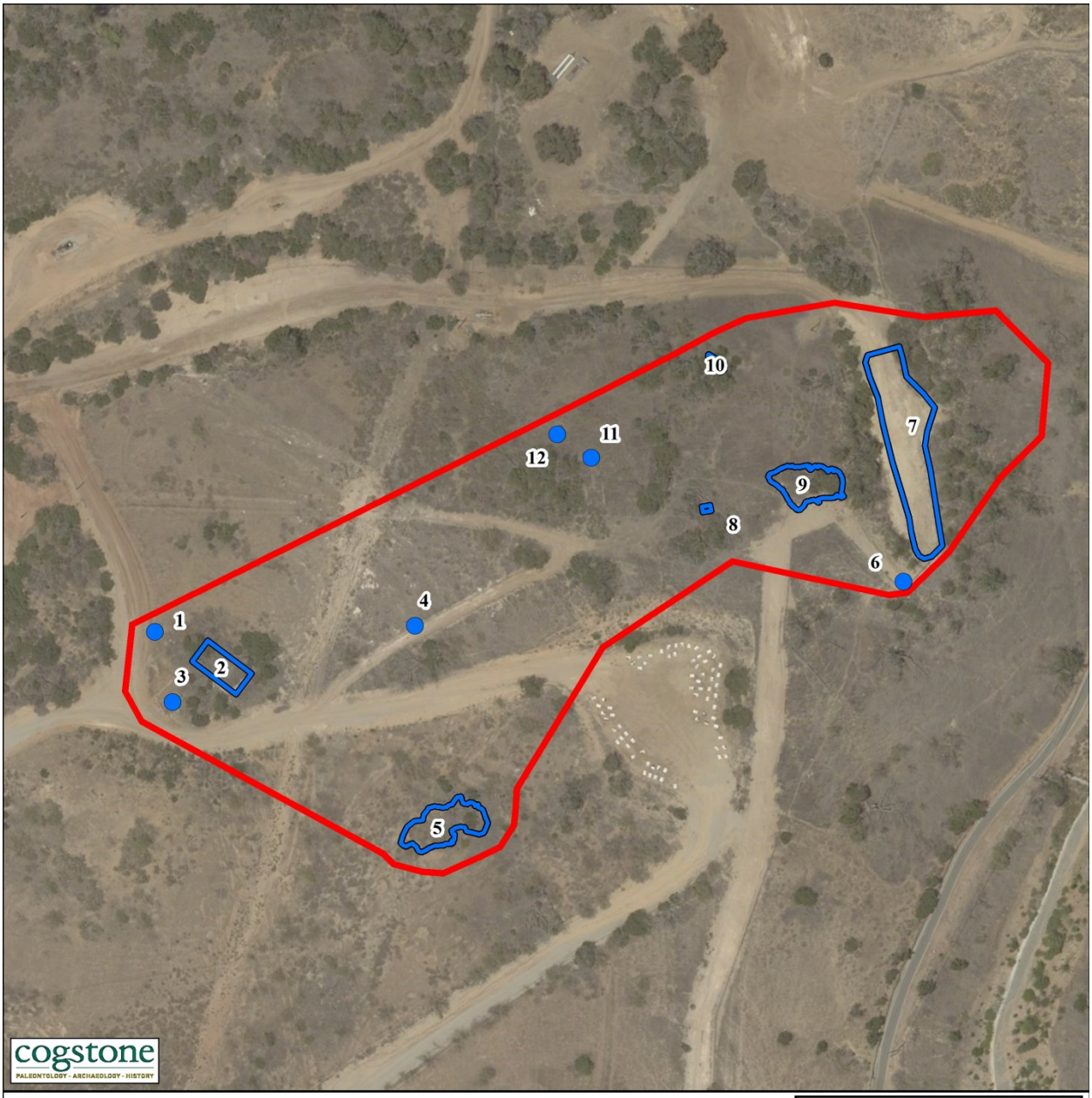


Figure 1. Feature 2, oil sump, view east

Figure 2. Feature 3, wood rung is asphalt, view plane

Figure 3. Riveted metal pipe from Feature 5

Figure 4. Feature 7, sample of artifacts, view plane

Figure 5. Feature 8, concrete foundations, view NW

Figure 6. Feature 9, sample of artifacts, view plane

Figure 7. Figure 10, brick scatter, plane view

Figure 8. Feature 12, large tank, view NW

30-120002

PRELIMINARY INVENTORY OF HISTORIC PLACES FORM

Date: Sept. 3, 1977

1. Name of Property: Carbon Canyon Reservoir

2. Owner of Property: U.S. Army Corps of Engineers

3. Location of Property: Carbon Canyon Regional Park, Carbon Canyon road and Valencia Ave.
(should this information be released. Yes___ No_X_

   A. State and County: Orange County, California

   B. Latitude and Longitude: Lat. 33°15'11" N, Long. 117°50'18" W

   C. Township, Range and Section (if appropriate):

   D. UTM Coordinates: 4225 20 meters east; 3753400 meters north.

   E. Other legal description (if appropriate):

   F. Map Reference: Yorba Linda USGS Quadrangle, 1972.

4. Nature of Property:

   A. District ( ) Site (X) Building ( ) Object ( )

   B. Description, present condition and use: Scatter of historic items dating from the late 1800's. The items are highly fragmented due to construction of flood control improvements and park.

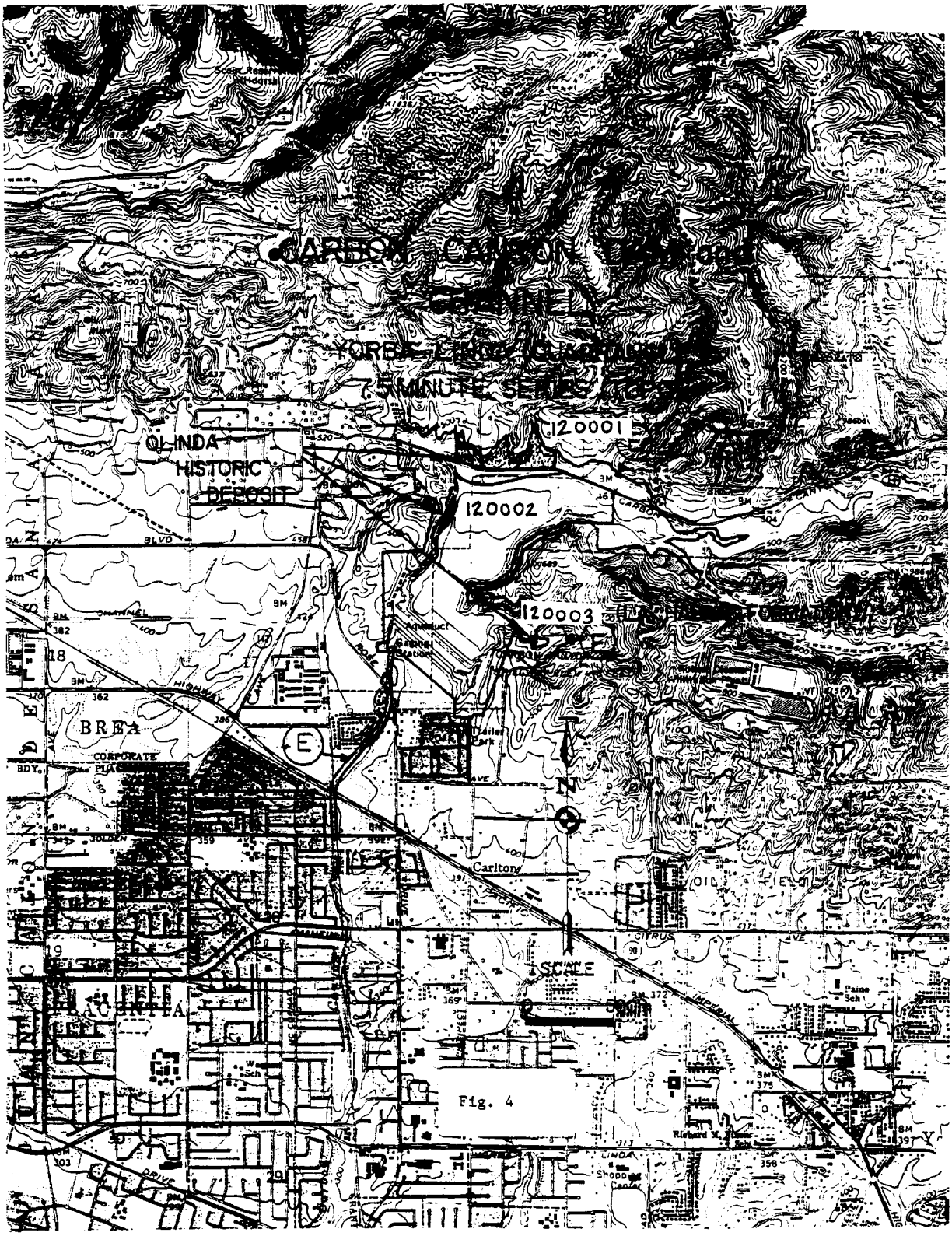
5. Summary of Importance: Well documented and dated items of this age provide valuable type collections which can be used to date & document historic deposits for which data is not available.

6. Should property be nominated to National Register: No

7. Location of more detailed information about the condition and importance of this property:
U.S. Army Corps of Engineers, Environmental Planning Section, Carbon Canyon Regional Park.

8. Name(s) and location of personnel preparing this inventory:

Patricia Martz
University of California, Riverside
Riverside, California 92521


CARBON CANYON
7.5 MINUTE SERIES
120001
120002
120003
OLINDA
HISTORIC
DEPOSIT
BREA
CORPORATE
PLACE
Carlton
SCALE
Fig. 4

O— 474

30-120002

SUMMARY OF CULTURAL RESOURCES

Remnants of the historic town of Olinda

Location: Township T3S, Range R9W in the northwest 1/4 of the southwest 1/4 of section 9, the northwest 1/4 of the northeast 1/4 of section 17, and the southwest 1/4 of the northwest 1/4 of section 16 of the Yorba Linda USGS Quadrangle, 1972. UTM: 423860 meters east, 3753720 meters north; 422520 meters east, 3753400 meters north; 423000 meters east, 3752700 meters north (Fig. 4).

Type of Site: Scatter of historic items representing the remnants of the oil town of Olinda, which was occupied during the late 1800's to the 1940's.

Areal Extent: Approximately 2000' X 200' (609 X 61 m) within the easement area north of Carbon Canyon Road. Approximately 100' X 50' (30 X 15 m) within the western portion of Carbon Canyon Regional Park, and 50 X 75' (15 X 30 m) in the dump area in the southeastern portion of the park.

State of Preservation: The town was torn down in order to permit the construction of the Carbon Canyon Reservoir. The area within the reservoir basin has been developed into a large park. Only a few scattered remnants which can be dated to the late 1800's remain.

Other Data: The land south of Carbon Canyon Road consisting of the park and flood control improvements is held in fee by the U.S. Army Corps of Engineers.

1977. A total of 3 days and 96 man hours were expended. The literature and records search took 2 days and 16 man hours. Report preparation required 5 days and 56 man hours.

The following institutions and organizations were contacted with regards to this study: The University of California, Los Angeles Archaeological Survey, the University of California, Riverside, Archaeological Research Unit, Archaeological Research Inc., Costa Mesa, the Paleontology Department, at Los Angeles County Museum of Natural History, and the Visitor's Center at Carbon Canyon Regional Park.

Brea Reservoir

Brea Reservoir is located in sections 21, 22, 16, and 15 of the La Habra 7.5' USGS Quadrangle, Orange County, California (Fig. 3). This area is highly developed and contains the cities of Fullerton and Brea. A large portion of the project area is occupied by the Fullerton Public Golf Course. Archaeological or historical sites have not been recorded within the reservoir or within the immediate vicinity. All relatively unaltered surfaces within the project area were carefully examined. No cultural materials were observed.

Carbon Canyon Reservoir

This reservoir is located in sections 17, 16, 8 and 9 of the Yorba Linda 7.5' USGS Quadrangle, Orange County, California (Fig. 4). This is a rural area and it is less developed than that of the Brea and Fullerton reservoirs. The majority of the project area has been developed into a recreational facility, Carbon Canyon Regional Park. An oil boom town founded in the late 1800's once occupied the area. This community, known as Olinda closed down in the 1940's when the oil fields became less productive.

Cultural materials which can be dated to the late 1800's were observed within a large area to the north in perpetual easments 103E2 and 104E1. The items included buttons, old type bottle fragments with hand finished necks, purple glass manufactured prior to World War I, ceramics, glass beads, square nails, and butchered cow bone. Fragmentary historic materials were also observed in the west portion of the project area, and northeast of the spillway within the park. The northeast area contains a small historic dump. An automobile of 1920's vintage is partially buried in the debris. No other historic materials were observed, however the old type bottles displayed at the Visitor's Center had been removed from this dump by the Park Ranger.

Fullerton Reservoir

Fullerton Reservoir is located in sections 13 and 24 of the La Habra 7.5' Quadrange, Orange County, California (Fig. 3). A park and small man-made lake occupy almost all of the land within this project area. No cultural materials were found.

San Antonio Reservoir

San Antonio Reservoir is located within sections 13, 23, and 24 of the Mt. Baldy 7.5' Quadrangle, Los Angeles and San Bernardino, California (Fig. 5). This reservoir is the least developed of the four. The San Gabriel Mountains form an area of high relief around the northern borders of the basin. An alluvial area radiates out from the mouth of the canyon (now occupied by the dam) to the south. The southeast portion of this area contains housing. An aboriginal site was previously recorded less than one-half mile (.310 km.) east of the spillway and the project boundaries (Fig. 5). No additional cultural resources have been

30-120002

L— 650

O— 474

DESCRIPTION AND EVALUATION OF THE CULTURAL RESOURCES WITHIN BREA, CARBON CANYON, FULLERTON AND SAN ANTONIO RESERVOIRS, SANTA ANA RIVER BASIN, ORANGE, LOS ANGELES, AND SAN BERNARDINO COUNTIES.

Yorba Linda, La Habra, Mt. [illegible]
T1N /R9W / Sec 13, 23, 24
T3S /R10W / Sec 13, [illegible]
T3S /R9W / —

Z11 - 418000E - 3751000N

945 Acres
2] Partial
18] Unknown
No Sites [illegible]

by: Patricia Martz

Archaeological Research Unit
Dry Lands Research Institute
University of California
Riverside, CA 92521

R.E. Taylor, Principal Investigator
UCRARU #232

31 pp.

for: U.S. Army Corps of Engineers
Environmental Planning Section
Los Angeles, CA 90053
Contract No. DACW09-77-C-0037

September 30, 1977

State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

Page 1 **of** 5 ***Resource Name or #:** 2019FEB25_01
P1. Other Identifier: (Utility Shed) Resource No. 4
***P2. Location:** ☐ **Not for Publication** ☐ **Unrestricted**
***a. County** Orange **and** (P2c, P2e, and P2b or P2d.
***b. USGS 7.5' Quad** Yorba Linda **Date** _____ **T** 3S ; **R** 9W; __ ☐ **of** __ ☐ **of Sec(s)** 07, 08, 09, 17; ____**B.M.**
c. Address 2601 Valencia Ave. City Brea Zip 92823
d. UTM: Zone __, _____ mE/ _____ mN
e. Other Locational Data:

***P3a. Description:**

This utilitarian shed is built in a rectangular plan on a concrete slab, and has a normal-pitched front gabled roof (a gabled monitor roof is positioned at the center of the roof's ridge; likely used primarily for ventilation). The building's wood and metal framed exterior is clad in corrugated metal sheets as is the roof and monitor roof. A single small, wood framed, square window is located in the center of the north and south elevations. Double doors are located as the west elevation; doors are composed of corrugated metal sheets.

***P3b. Resource Attributes:** HP4. Ancillary Building
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)
P5b. Description of Photo: West (left) and south (right) elevations, 2019.

P5a.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
e. 1930s-early 1940s.

***P7. Owner and Address:**

***P8. Recorded by:** Shannon Lopez
Cogstone Resource Inc.
1518 W Taft Ave, Orange, CA 92865

***P9. Date Recorded:** March 8, 2019

***P10. Survey Type:**
Intensive

***P11. Report Citation**:
Paleontological and Cultural Resources Assessment for the Brea 265 Specific Plan, City of Brea, Orange County, California. Prepared for: William Halligan Placeworks 3 MacArthur Place, Suite 1100, Santa Ana, CA 92707. Prepared by Cogstone Resource Management.

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List): _____

State of California ♦ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** 2019FEB25_01 ***NRHP Status Code** _____
Page 2 **of** 5

B1. Historic Name: _____ B2. Common Name: Utility Shed (Resource No. 4)
B3. Original Use: Utility Shed B4. Present Use: Storage Shed
***B5. Architectural Style:** Utilitarian
***B6. Construction History:** Built circa 1930s or early 1940s.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** _____ **Original Location:** _____
***B8. Related Features:**

B9a. Architect: Not Known b. Builder: Not Known
***B10. Significance: Theme** California Oil Production **Area** Brea, California
Period of Significance c.1930-1969 **Property Type** HP4. Ancillary **Applicable Criteria** _____

This building is not associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States and is not recommended as eligible for listing under Criterion 1/A. This building is not associated with the lives of persons important to local, California, or national history and is not recommended as eligible for listing under Criterion 2/B. This building does not embody the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values and is not recommended as eligible for listing under Criterion 3/C. This building is not likely to yield information important to the prehistory or history of the local area, California, or the nation (Criterion 4).

This building maintains integrity of location, materials, and setting.

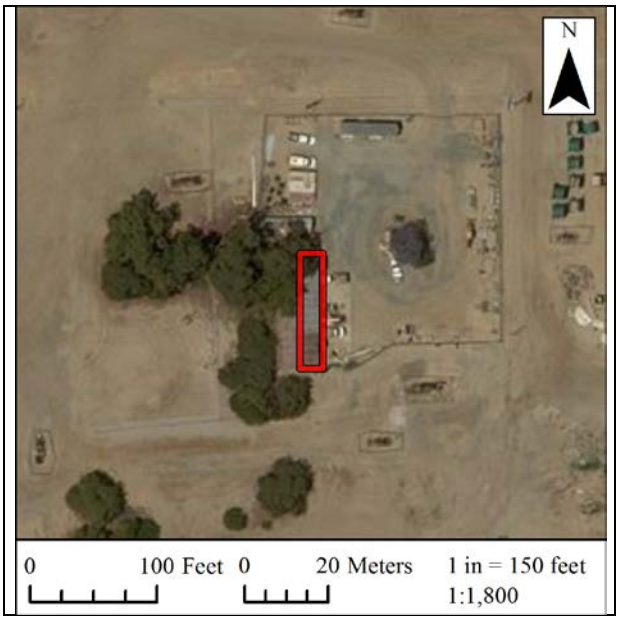
B11. Additional Resource Attributes: _____

***B12. References:**
A Cultural Resource Assessment of the Lambert Road/Carbon Canyon Road Improvement Project, City of Brea and Unincorporated County of Orange. By Robert and Laurie S. White. Archaeological Associates P.O. Box 180 Sun City, CA. 92586

B13. Remarks:

***B14. Evaluator:** Shannon Lopez
***Date of Evaluation:** March 8, 2019

(This space reserved for official comments.)



Description Cont.

Per the 1994 Archaeological Associates (OR-1994) Report, Resource #4 was one of a total of five historic structures adjacent to Lambert Road west of the intersection of Valencia Ave. Currently, only Resource #4 and #5 remain. Both Resources #4 and #5 were owned by Texaco Producing, Inc. and leased by Burgen Nurseries. Currently, these resources appear to be leased by Greenland Nursery.

Photos Cont.

Double doors on the west elevation.

North Elevation

Interior, facing southwest.

State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

Page 1 **of** 5 ***Resource Name or #:** 2019FEB25_02
P1. Other Identifier: (Maintenance Shop) Resource No. 5
***P2. Location:** ☐ **Not for Publication** ☐ **Unrestricted**
***a. County** Orange **and** (P2c, P2e, and P2b or P2d)
***b. USGS 7.5' Quad** Yorba Linda **Date** _____ **T** 3S ; **R** 9W ; _ ☐ **of** _ ☐ **of Sec** _; ____**B.M.**
c. Address 2601 Valencia Ave. City Brea Zip 92823
d. UTM: (Give more than one for large and/or linear resources) Zone _, _____ mE/ _____ mN
e. Other Locational Data:

***P3a. Description:**
This utilitarian building is single story, set in a rectangular plan on a concrete slab, with a high pitched roof. The side-gabled roof is covered with corrugated metal sheets with its exposed eaves overhanging on all elevations. The building's wood frame is clad in corrugated steel sheets. At the buildings east elevation are six bay door openings. Doors to five of these openings are comprised of hinged corrugated steel and wood boards. At the fifth bay opening near the north end of the east elevation is a swinging metal rod gate. A wooden lean-to is attached to the north elevation and is covered by corrugated sheet metal. Also at the north elevation are two window openings (one is boarded up; the other is a two-over-two, double hung, aluminum window. A wire security mesh covers this, as well as all, window openings. This fenestration pattern at the north is identical to the south elevation.

***P3b. Resource Attributes:** HP4. Ancillary Building
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)
P5b. Description of Photo: East elevation, 2019.

P5a.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
Circa. 1930s; OR-1994 (Report)

***P7. Owner and Address:**
Aera Energy, LLC
3030 Saturn St. #101 Brea
Brea, CA 92821

***P8. Recorded by:** Shannon Lopez
Cogstone Resource Management
1518 W Taft Ave, Orange, CA 92865

***P9. Date Recorded:** March 8, 2019

***P10. Survey Type:** (Describe)
Intensive pedestrian survey

***P11. Report Citation**:
Paleontological and Cultural Resources Assessment for the Brea 265 Specific Plan, City of Brea, Orange County, California. Prepared for: William Halligan of Placeworks 3 MacArthur Place, Suite 1100, Santa Ana, CA 92707. Prepared by Cogstone Resource Management.

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record

State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code Reviewer Date

□Artifact Record □Photograph Record □ Other (List): _____

State of California ♦ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** 2019FEB25_02 ***NRHP Status Code** _____
Page 2 **of** 5

B1. Historic Name: _____ B2. Common Name: Maintenance Shop (Resource #5)
B3. Original Use: Maintenance Shop B4. Present Use: Vacant
***B5. Architectural Style:** Utilitarian
***B6. Construction History:** Built in the 1930s.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** _____ **Original Location:** _____
***B8. Related Features:**

B9a. Architect: Not Known b. Builder: Not Known
***B10. Significance: Theme** California Oil Production **Area** Brea, California
Period of Significance c. 1930s-1969 **Property Type** HP4. Ancillary Building **Applicable Criteria** _____

This building is not associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States and is not recommended as eligible for listing under Criterion 1/A. This building is not associated with the lives of persons important to local, California, or national history and is not recommended as eligible for listing under Criterion 2/B. This building does not embody the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values and is not recommended as eligible for listing under Criterion 3/C. This building is not likely to yield information important to the prehistory or history of the local area, California, or the nation (Criterion 4).

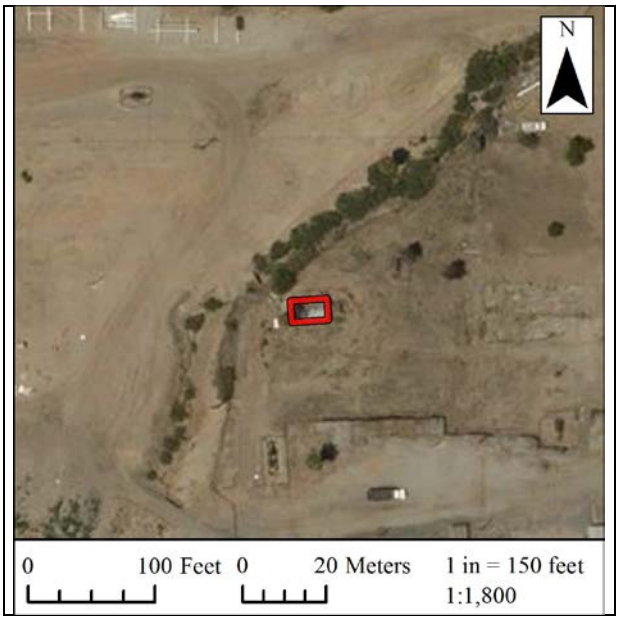
This building maintains integrity of location and setting.

B11. Additional Resource Attributes: _____
***B12. References:**

B13. Remarks:

***B14. Evaluator:** Shannon Lopez
***Date of Evaluation:** March 8, 2018

(This space reserved for official comments.)



***P3a. Description Cont.**

The interior of the building is divided into three spaces: the southern half as a single open area and the northern half is divided into two spaces, separated by a dividing wall (particle board?) running from the west to east elevation. The interior walls appear to be lined with plywood/particle board.

***P7. Owner and Address:**

Per the 1994 Archaeological Associates (OR-1994) Report, Resource #5 was one of a total of five historic structures adjacent to Lambert Road west of the intersection of Valencia Ave. Currently, only Resource #4 and #5 remain. Both Resources #4 and #5 were owned by Texaco Producing, Inc. and leased by Burgen Nurseries. Currently, these resources appear to be leased by Greenland Nursery.

P5a. Photos Cont.

West Elevation

North Elevation; Wood Framed Lean-To (Right).

South Elevation.

Interior, Facing Southwest.

State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code Reviewer Date

Page 1 **of** 3 *** Resource Name or #:** BREA_2019FEB27_01
P1. Other Identifier: Valencia Avenue

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**

*** a. County** Orange **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*** b. USGS 7.5' Quad** Yorba Linda **Date** 1981 **T** 3S ; **R** 9W ; NE ¼ **of** SW ¼ **of Sec** 8 ; San Bernardino **B.M.**

c. Address Southwest quadrant of current Valencia Avenue and Carbon Canyon Road City Brea, Sphere of Influence Zip 92821

d. UTM: (Give more than one for large and/or linear resources) Zone 11S, 421839.01 mE/ 3754021.57 mN

e. Other Locational Data: APN Number 110-221-23

*** P3a. Description:** This historic resource consists of an historic segment of Valencia Avenue. Originally the road trended north-south veering north-east and merging into what is now Carbon Canyon Road. The original alignment appears on the 1901 Anaheim 15-minute topographic map. The 1935 Blackburn Map of Orange County labels the road as Valencia Boulevard and as Olinda Boulevard. According to historic aerials, the road fell into disuse sometime between 1972 and 1980, in which the current alignment of the roads became the primary vehicle corridor.

*** P3b. Resource Attributes:** AH7: Historic Road

P5a.

*** P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: South end of road, view north east:2/27/2019

*** P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both

*** P7. Owner and Address:**
Aera Energy, LLC
3030 Saturn St. #101 Brea
Brea, CA 92821

*** P8. Recorded by:**
Megan Wilson
Cogstone, RMI
1518 W. Taft Ave, Orange CA 92865

*** P9. Date Recorded:** 2/27/2019

*** P10. Survey Type:**
Intensive Pedestrian

*** P11. Report Citation:**
2019 Wilson et al.
Paleontological and Cultural resources Assessment for the Brea 265 Specific Plane, City of Brea, Orange County CA

*** Attachments:** ☐NONE ☒Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☒ Other (List): Sketch Map

State of California ♘ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

 *** Resource Name or #** BREA_2019FEB_01

*** Map Name:** Yorba Linda *** Scale:** 1:24,000 ***Date of map:** **1981**

Historic Road Segement
Valencia Avenue
City of Brea, Sphere of Influence
Orange County, CA

Brea_2019FEB27_01

USGS 7.5' Quads:
YORBA LINDA

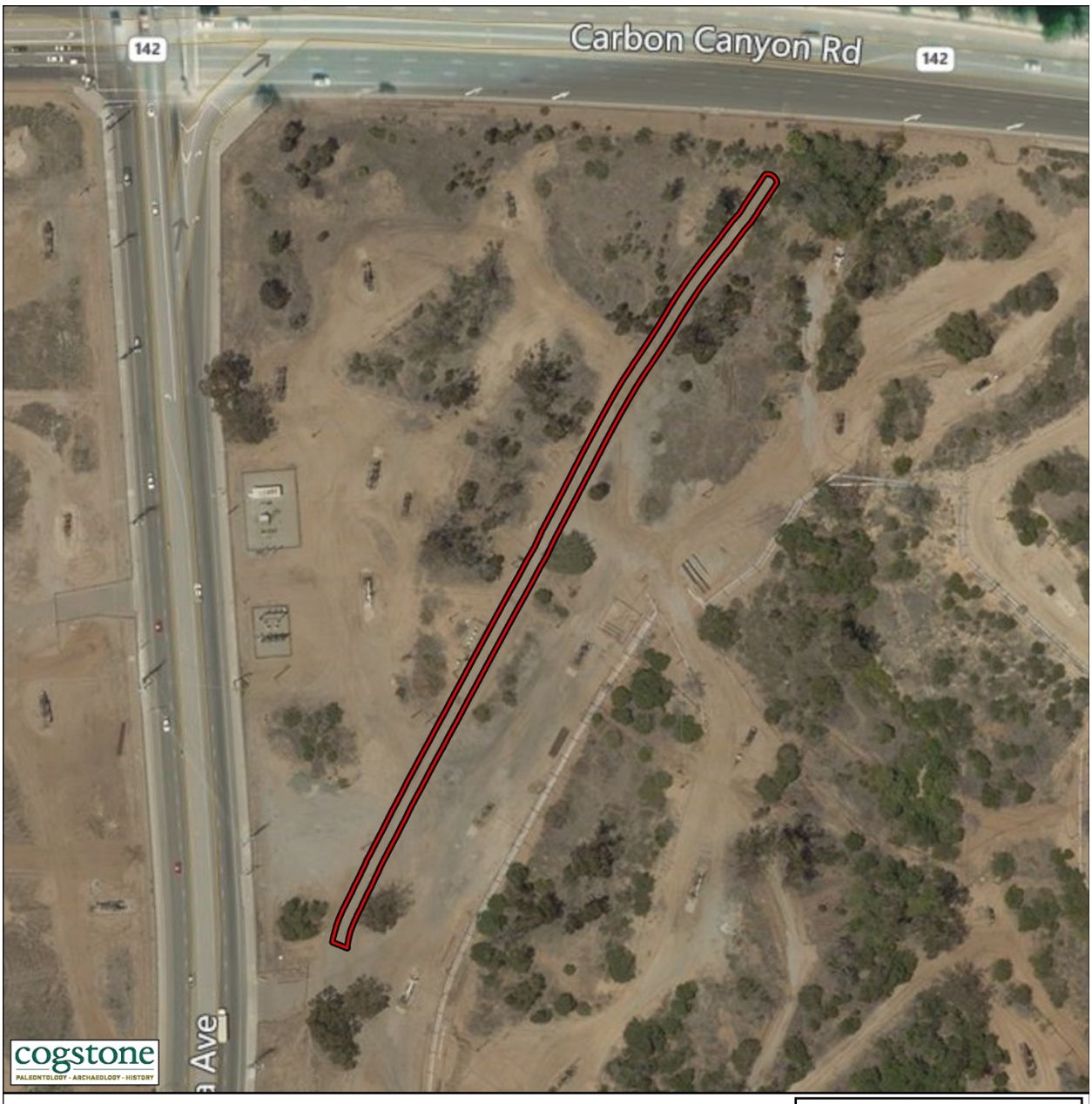
0 0.25 0.5 Miles N
0 0.25 0.5 Kilometers
1:24,000 1 in = 2,000 ft

State of California ♘ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

Page 3 **of** 3 *** Resource Name or #** (Assigned by recorder)

*** Drawn by:** Megan Wilson *** Date of map:** 2/27/2019



Historic Road Segement
Valencia Avenue
City of Brea, Sphere of Influence
Orange County, CA

Brea_2019FEB27_01

0 75 150 Feet
0 20 40 Meters
N
1:1,800 1 in = 150 ft