Paleontological Resources Assessment
Hemet 30 Project
City of Hemet, Riverside County, California

APN: 464-040-008, 464-040-009, and 464-040-010
NENW ¼ of Section 14, Township 5 South, Range 2 West, USGS 7.5' *Winchester*

Prepared for:

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Prepared on Behalf of:

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Prepared by:

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DUKE CRM Project Number: C-0305

October 2021

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EXECUTIVE SUMMARY

Duke Cultural Resources Management, LLC (DUKE CRM) is under contract to Carlson Strategic Land Solutions (Client) to provide a Paleontological Resources Assessment for the Hemet 30 Project (Project) near the City of Hemet, Riverside County, California. The Project proposes to construct residential units with associated streets and infrastructure on 29 acres of undeveloped land southwest of the intersection of State Route 74 and California Avenue. The purpose of this report is to comply with the California Environmental Quality Act (CEQA).

The paleontological resource assessment included a records search by the Western Science Center and other online and published databases, and a field survey to identify potential paleontological resources. The records searches indicated multiple nearby (within 3 miles) fossil localities from two projects underlain by deposits similar to those underlying this Project. The young alluvial fan deposits (*Qyf*) underlying the Project, due to their recent deposition, have not had the opportunity to amass and fossilize biologic material, and low paleontological potential at the surface. However, these deposits can transition into older, higher-sensitivity Pleistocene deposits with depth, and as a result, their paleontological sensitivity increases to high with depth. The old alluvial fan deposits (*Qof*) underlying the Project are assigned a high paleontological sensitivity due to other Pleistocene-age sediments yielding significant fossils of Pleistocene fauna and flora elsewhere in Riverside County. The igneous rocks in the Project (*Kgab* and *Khg*), are not conducive to preserving fossils, and are assigned a low paleontological sensitivity. The field survey did not identify any paleontological resources at the surface or in exposed deposits.

Therefore, any ground disturbance in young or old alluvial fan deposits has a high potential to directly impact unique paleontological resources. This would result in a potentially significant impact according to CEQA. In order to mitigate this potential impact to a level that is less than significant under CEQA, DUKE CRM recommends paleontological monitoring during ground disturbing activities in young or old alluvial fan deposits. Additional efforts may be necessary if the proposed Project changes.

INTRODUCTION

Duke Cultural Resources Management, LLC (DUKE CRM) is under contract to Carlson Strategic Land Solutions (Client) to provide a Paleontological Resources Assessment for the Hemet 30 Project (Project) near Hemet, Riverside County, California. The Project proposes to construct residential units with associated streets and infrastructure on 29 acres of undeveloped land southwest of the intersection of State Route 74 (SR 74) and California Avenue (Appendix A, Map 1 – Project Vicinity). From the 1940s to sometime in the early 2000s, the Project site was used as a rock quarry. A residence existed on the Project site from 1949 to early 1980s. Since 2004, the Project site has been vacant land. The purpose of this report is to comply with the California Environmental Quality Act (CEQA).

The Project is located in NW ¼ of the NE ¼ of Section 14, Township 5 South, and Range 2 West as depicted on the USGS *Winchester, California* 7.5' Quadrangle map (Appendix A, Maps 2 – Project Location). The Project area is bordered to the north by State Route 74 (SR-74) and housing development, to the southeast by housing developments, and to the west, southwest, and east by agricultural land (Appendix A, Map 3 – Project Aerial).

NATURAL SETTING

California is divided into 11 geomorphic provinces, each naturally defined by unique geologic and geomorphic characteristics. The Project is located in the northeastern portion of the Peninsular Ranges geomorphic province. The Peninsular Ranges province is distinguished by northwest trending mountain ranges and valleys following faults branching from the San Andreas Fault. The Peninsular Ranges are bound to the east by the Colorado Desert and extend north to the San Bernardino – Riverside county line (Norris and Webb, 1976), west into the submarine continental shelf, and south to the California state line and beyond.

Locally, the Project is located on the eastern edge of the Perris Block, a large, eroded mass of Cretaceous and older (66 million years ago [Ma] and older) plutonic igneous rocks, bordered to the west by the Elsinore Fault System and to the east by the San Jacinto Fault (Woodford, et al., 1971). The Perris Block, in contrast to many geological features in Southern California, has remained largely intact and unaltered over the past 23 million years (Langenheim, et al., 2006). Subsequent erosion and minor volcanic activity have resulted in the Perris Block being mantled by thin sedimentary and volcanic units. Being harder and more resistant to erosion than the surrounding sedimentary and volcanic units, rocks from the Perris Block form prominent hills and mountains in the area. In the Project area, a central exposure of Perris Block igneous rock is surrounded by a combination of the remnants of a Pleistocene-age (2.6 Ma to 11,700 years ago) and Holocene-age (11,700 years ago to present) alluvial fans (Morton, 2003). The geology in the vicinity of the Project has been mapped by Morton (2003) at a scale of 1:24,000. A review of this map indicates the Project area is composed of four geologic units (Appendix A, Map 4 – Project Geology).

Young alluvial fan deposits (*Qyf*)

Young alluvial fan deposits are locally composed of unconsolidated sand, with lesser amounts of silt and gravel, deposited during the late Pleistocene and Holocene Epochs (Morton, 2003). These deposits underlie the northernmost ~25% of the Project.

Old alluvial fan deposits (*Qof*)

Old alluvial fan deposits are locally composed of reddish-brown, moderately consolidated sand, with lesser amounts of gravel, deposited during the Pleistocene Epoch (Morton, 2003). These deposits surround the central igneous rock exposure in the southern 75% of the Project.

Heterogeneous mixture of olivine, pyroxene, and hornblende gabbro (*Kgab*)

These deposits represent the northern portion of a gabbro complex of the Perris Block which is rich in of olivine, pyroxene, and hornblende, with lesser amounts of quartz diorite and tonalite, emplaced during the

Cretaceous Period (145 to 66 Ma) (Morton, 2003). These deposits are exposed in a roughly circular exposure, in the south-central portion of the Project.

Heterogeneous granitic rocks (*Khg*)

These deposits represent the northern end of a batholith of the Perris Block dominated by tonalite, but locally containing high amounts of schist and gneiss, emplaced during the Cretaceous Period (Morton, 2003). These deposits occur as a small exposure bordering the gabbro deposits (*Kgab*) on the northwest of that outcrop.

Summary of the Project Area Geology and Paleontological Sensitivity

The young alluvial fan deposits (*Qyf*) and old alluvial fan deposits (*Qof*) are both sourced from the igneous rocks composing the Perris Block (Morton and Matti, 2005; Dibblee and Minch, 2008). Young alluvial fan deposits, due to their recent deposition, have not had the opportunity to amass and fossilize biologic material, and low paleontological potential at the surface. However, these deposits can transition into older, higher-sensitivity Pleistocene deposits with depth, and as a result, their paleontological sensitivity increases to high with depth. Old alluvial fan deposits and other Pleistocene-age sediments have yielded significant fossils of Pleistocene fauna and flora elsewhere in Riverside County (discussed further in Records Search) and are assigned a high paleontological sensitivity. The paleontological sensitivity of these sediments also depends on their lithology: coarse deposits of cobbles and boulders are not conducive to fossil preservation, but finer-grained deposits of sand and mud have a higher potential (Scott, 2014). As a result, the sand-dominated alluvial fan deposits in the Project area obtain a high paleontological sensitivity. The igneous rocks in the Project (*Kgab* and *Khg*), are not conducive to preserving fossils, and are assigned a low paleontological sensitivity. These paleontological sensitivities are consistent with the paleontological sensitivities assigned by the City of Hemet General Plan FEIR (p. 4.6-10) (AECOM, 2012) and the Riverside County Land Information System (Table 1; Appendix A, Map 5 – Paleontological Sensitivity Map).

Table 1: Geological Units and their Paleontological Sensitivity

Age	Geologic Unit[1]	Potential Fossils	Paleontological Sensitivity
Holocene	Young alluvial fan deposits (*Qyf*)	None	High with depth
Pleistocene			
	Old alluvial fan deposits (*Qof*)	Large and small mammals, reptiles, invertebrates, and plants[2]	High at surface
Cretaceous	Heterogeneous mixture of olivine, pyroxene, and hornblende gabbro (*Kgab*)	None	Low
	Heterogeneous granitic rocks (*Khg*)	None	Low

[1] Morton, (2003)
[2] Springer, et al., 2009; 2010; Radford, 2019

PERSONNEL

This report was completed by Benjamin Scherzer, M.S., Paleontologist. Mr. Scherzer has worked in all phases of paleontology (archival research, field survey, excavation, laboratory analysis, construction monitoring) since 2006. Mr. Scherzer is a certified paleontologist for Riverside County. Mr. Scherzer holds a Master of Science degree in Earth Sciences with an emphasis in vertebrate paleontology from Montana State University, Bozeman, and a Bachelor of Arts degree in Geosciences and Math from Earlham College, Indiana. Mr. Scherzer has worked throughout southern California, Nevada, South Dakota, Utah, and Wyoming.

All work was conducted under the supervision of Curt Duke, M.A., Registered Professional Archaeologist (RPA). Mr. Duke is the Principal Archaeologist and President of DUKE C R M . Mr. Duke meets the professional qualifications of the Secretary of the Interior for prehistoric and historical archaeology; he is also an RPA who has worked in all phases of archaeology (archival research, field survey, testing and data recovery

excavation, laboratory analysis, construction monitoring) since 1994. Mr. Duke holds a Master of Arts degree in Anthropology with an emphasis in archaeology from California State University, Fullerton and a Bachelor of Arts degree in Anthropology from the University of California, Santa Cruz. Mr. Duke has worked throughout southern and northern California and parts of Arizona and Nevada. Mr. Duke is a certified archaeologist in Riverside County. Please see Appendix B for Mr. Scherzer's and Mr. Duke's resume.

METHODS AND RESULTS

Field Survey

On September 6, 2019, Benjamin Scherzer and DUKE C R M archeologist Megan Wilson performed a combined paleontological and cultural resources pedestrian survey of the Project area. Parallel survey transects were spaced at approximately 5 meters apart. The majority of the Project area was heavily vegetated by scrub and brush, reducing ground visibility to 10 – 20% (Figure 1). Observed ground surface and exposed sidewalls in washes exhibited a brown, silty unconsolidated alluvium with abundant pebbles and gravel (Figure 2). Much of the southern 2/3rds of the Project has been subjected to mining activities, leaving a heavily disturbed ground surface with frequent piles of boulders and rubble.

Figure 1: View of Project from southeast corner. Exposed ground surface in center, vegetated ground to the sides, and pile of mining rubble in the right background. View to north.

Sediment in the storm drain just south of SR-74 was imported sand and was heavily disturbed by modern refuse and roadkill. South of the storm drain is a berm, most likely created when the storm drain was constructed. The berm and rest of the right-of-way contained native sediment of poorly sorted, light brown, coarse, silty sands. Small patches of dried weeds were scattered throughout this segment. No fossils or paleosols were observed in any exposed ground surface during the field survey.

Figure 2: Exposed sediment in sidewall of drainage wash along southern border.

Records Search and Literature Review

On September 4, 2018, the Western Science Center (Hemet) performed a paleontological records search to determine if fossil localities were previously identified in or near the Project area (Radford, 2019) (Appendix C – Paleontological Records Search Results). Additionally, Mr. Scherzer performed a search of the online University of California Museum of Paleontology collections, San Diego Natural History Museum collections, Paleobiology Database, FAUNMAP, and other published literature for fossil localities from similar deposits in or near (within 3 miles) the Project area. These records searches produced numerous fossil localities from two projects:

- The Diamond Valley Lake Project, and associated Eastside Pipeline Project, collectively produced over 250,000 fossil specimens from a large excavation area, representing over 105 taxa of large and small mammals, reptiles, invertebrates, and plants. The fossil material was recovered from numerous fossil localities, ranging from 1 to 3 miles east and south of the Project area (Springer, et al., 2009; 2010).

IMPACTS ANALYSIS AND RECOMMENDATIONS

DUKE C R M evaluated the proposed Project for potential impacts to paleontological resources according to CEQA. The records search and the field survey did not identify paleontological resources within the Project area, but the records search indicates numerous nearby fossils localities (within 3 miles) in Pleistocene-age deposits, indicating the young alluvial fan deposits and old alluvial fan deposits underlying the Project area have a high potential to contain fossil resources. Young alluvial fan deposits have a low sensitivity for fossil resources at the surface but can transition with depth in old alluvial fan deposits. Therefore, any ground disturbance in the young or old alluvial fan deposits has a high potential to directly impact unique paleontological resources. This would result in a potentially significant impact according to CEQA. In order to mitigate this potential impact to a level that is less than significant under CEQA, DUKE C R M recommends paleontological monitoring as described below:

1. A paleontological monitor shall observe ground disturbing activities in young or old alluvial fan deposits. The monitor shall work under the direct supervision of a listed County of Riverside paleontologist.
    a. The Riverside County-list paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols.
    b. The paleontological monitor shall be present full-time during initial ground disturbance below 2 feet in depth within the Project, including but not limited to grading, trenching, utilities, and off-site easements. If, after excavation begins, the qualified paleontologist determines that the sediments are not likely to produce fossil resources, monitoring efforts shall be reduced.
    c. The paleontological monitor shall be empowered to temporarily halt or redirect excavation construction efforts if paleontological resources are discovered.
    d. In the event of a paleontological discovery the monitor shall flag an area sufficiently large to protect the resource and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the Riverside County-listed paleontologist has cleared the area.
    e. In consultation with the Riverside County-listed paleontologist the paleontological monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be removed and the area shall be cleared.
    f. If the discovery is significant the Riverside County-listed paleontologist shall notify the applicant and the County immediately.
    g. In consultation with the applicant and the County, the Riverside County-listed paleontologist shall develop a plan of mitigation which will likely include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

REFERENCES

AECOM
2012 City of Hemet General Plan 2030, Final Environmental Impact Report, prepared for City of Hemet, January 12.

Dibblee, T.W., and J.A. Minch
2008 Geologic map of the Hemet & Idyllwild 15 minute quadrangles, Riverside County, California: Dibblee Foundation Map DF-371

Langenheim, V.E., Lee, T.C., Biehler, S., Jachens, R.C., and D.M. Morton
2006 Isostatic Gravity Map with Geology of the Santa Ana 30' x 60' Quadrangle, Southern California: Scientific Investigations Map 2951, 25 p.

Morton, D.M.
2003 Preliminary geological map of the Winchester 7.5' quadrangle, Riverside County, California: United States Geological Survey Open File Report 03-188.

Morton, D.M., and J.C. Matti
2005 Preliminary geologic map of the Hemet 7.5' quadrangle, Riverside County, California: United States Geological Survey Open-File Report OF-2004-1455.

Norris, R.M., and R.W. Webb
1976 Geology of California, second edition: New York, John Wiley & Sons, p. 277-300.

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2019 Records Search for the Hemet 30 Project, County of Riverside: submitted to DUKE CRM, September 4.

Scott, E.
2014 Paleontology literature and records review, Lakeside Temescal Valley Project, Riverside County, California. Prepared for DUKE CRM, August 1.

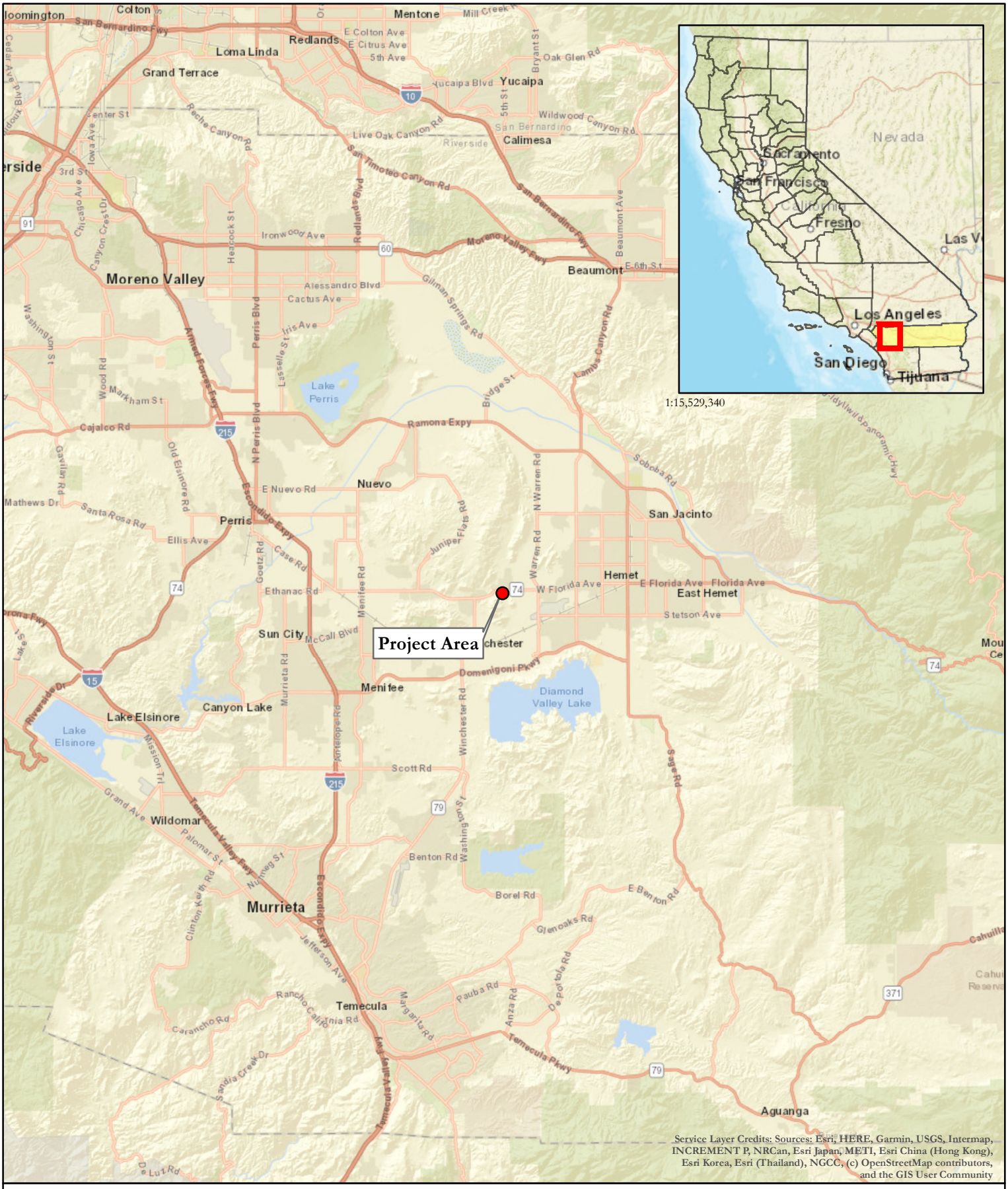
Springer, K.B., Scott, E., Sagebiel, J.C., and L.K. Murray
2009 The Diamond Valley Lake local fauna: late Pleistocene vertebrates from inland southern California. Papers on Geology, Vertebrate Paleontology and Biostratigraphy in Honor of Michael O. Woodburne (L.B. Albright III, ed). Museum of Northern Arizona Bulletin 65, 217-235.

2010 Late Pleistocene large mammal faunal dynamics from inland southern California: the Diamond Valley Lake local fauna. In Scott, E. and G. McDonald, eds., Faunal dynamics and extinction in the Quaternary: Papers honoring Ernest L. Lundelius, Jr. Quaternary International, v. 217, p. 256-265.

Woodford, A.O., Shelton, J.S., Doehring, D.O., and Morton, R.K.
1971 Pliocene-Pleistocene History of the Perris Block, Southern California: Geological Society of America Bulletin, v. 82, p. 3421-3448.

Appendix A

Project Maps



Map 1 - Project Vicinity

Hemet 30, C-0305

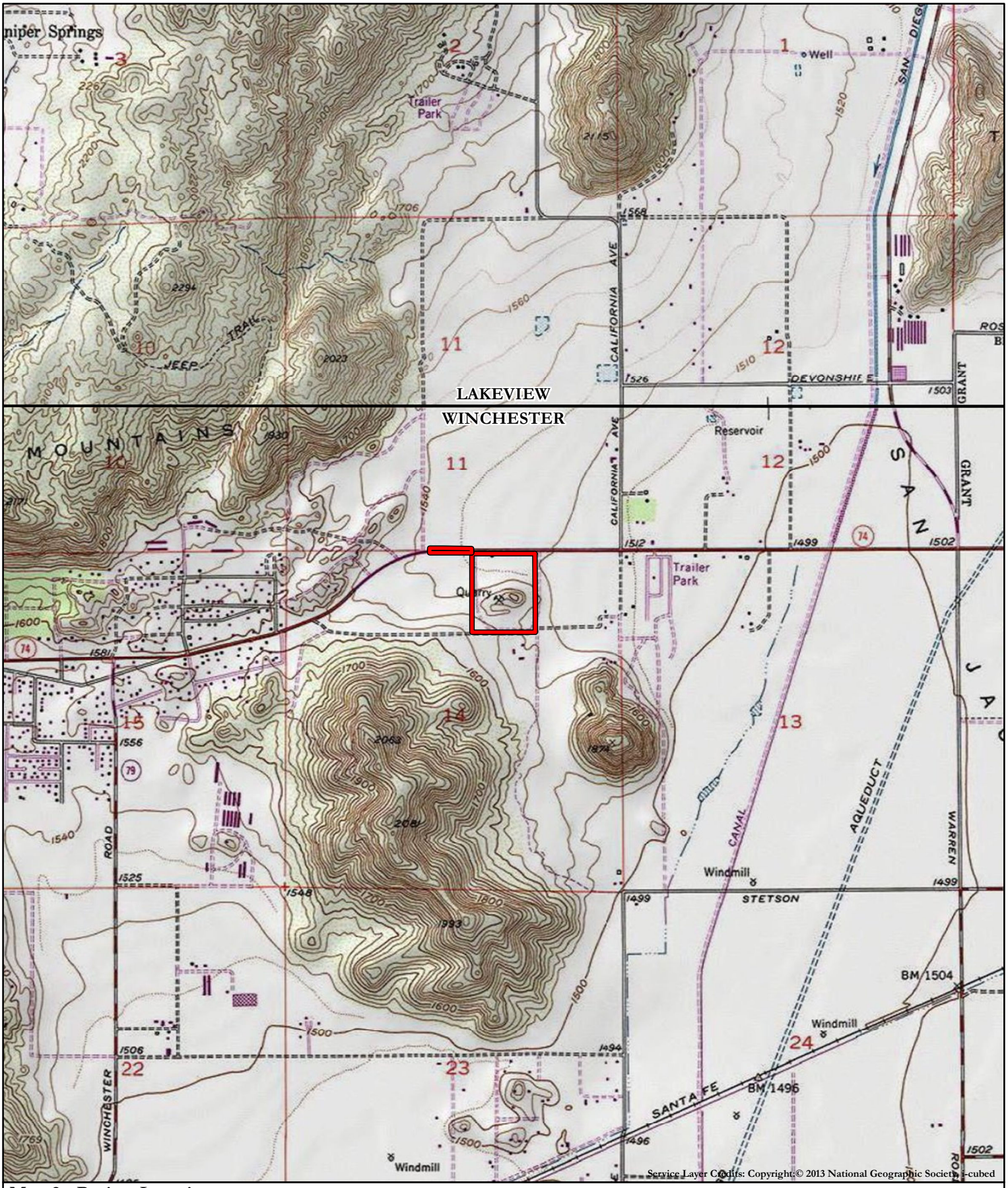
DUKE CRM

Project Area

0 5 10 Miles

1 inch = 5 miles 1:316,800

N



Map 2 - Project Location

Hemet 30, C-0305

DUKE CRM

Winchester, Calif USGS 7.5-Minute Quadrangle

T5S, R2W, Section 14

Date of Map: 1953 / Photorevised: 1979

Project Area

USGS 7.5' Quads

0 0.25 0.5 Miles

0 0.25 0.5 Kilometers

N

1 inch = 2,000 feet 1:24,000

Map 3 - Project Aerial
Hemet 30, C-0305

DUKE CRM

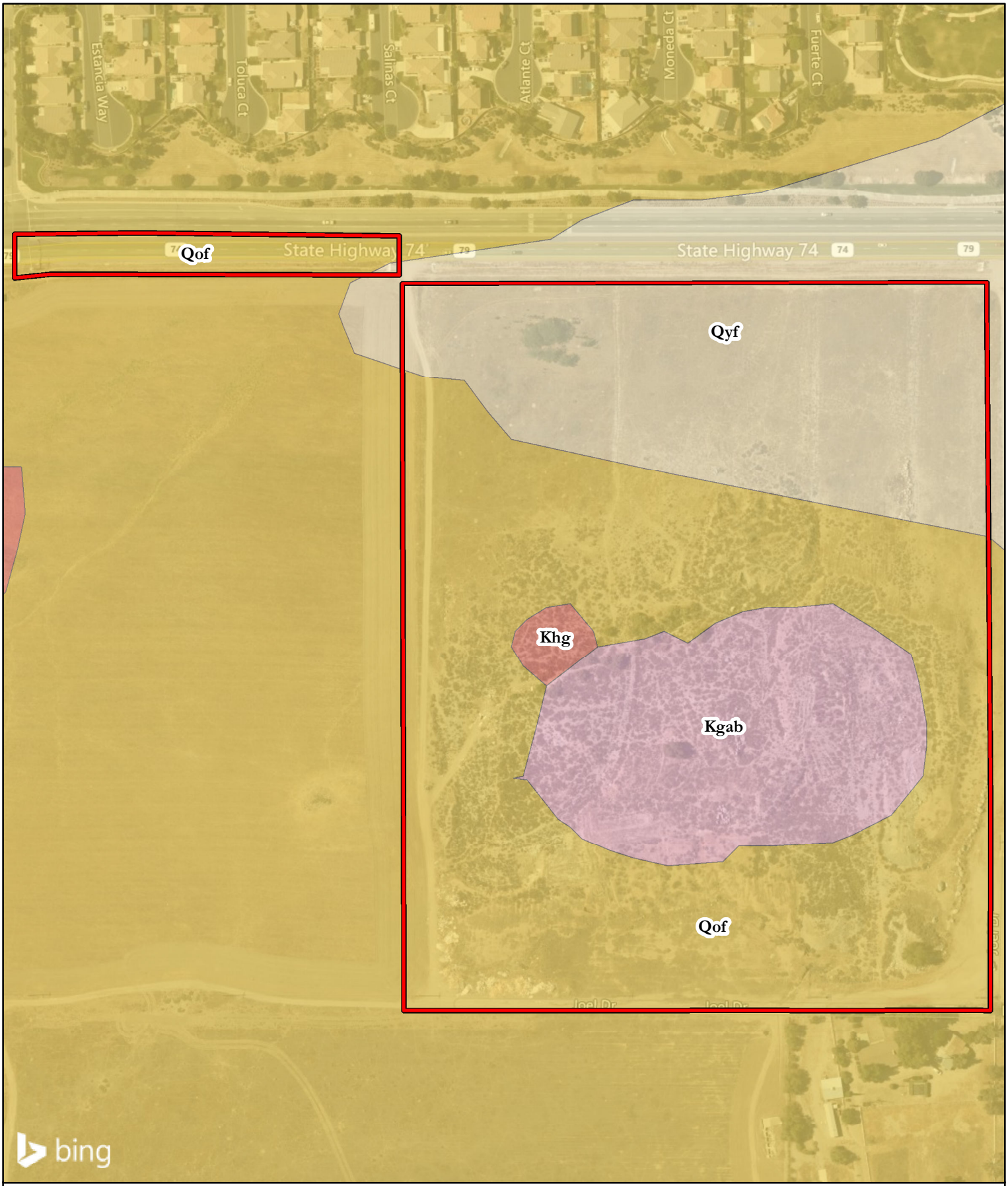
Project Area

0 108.5 217 Feet

1 inch =217 feet

N

1:2,600



Map 4 - Project Geology
Hemet 30, C-0305

DUKE CRM

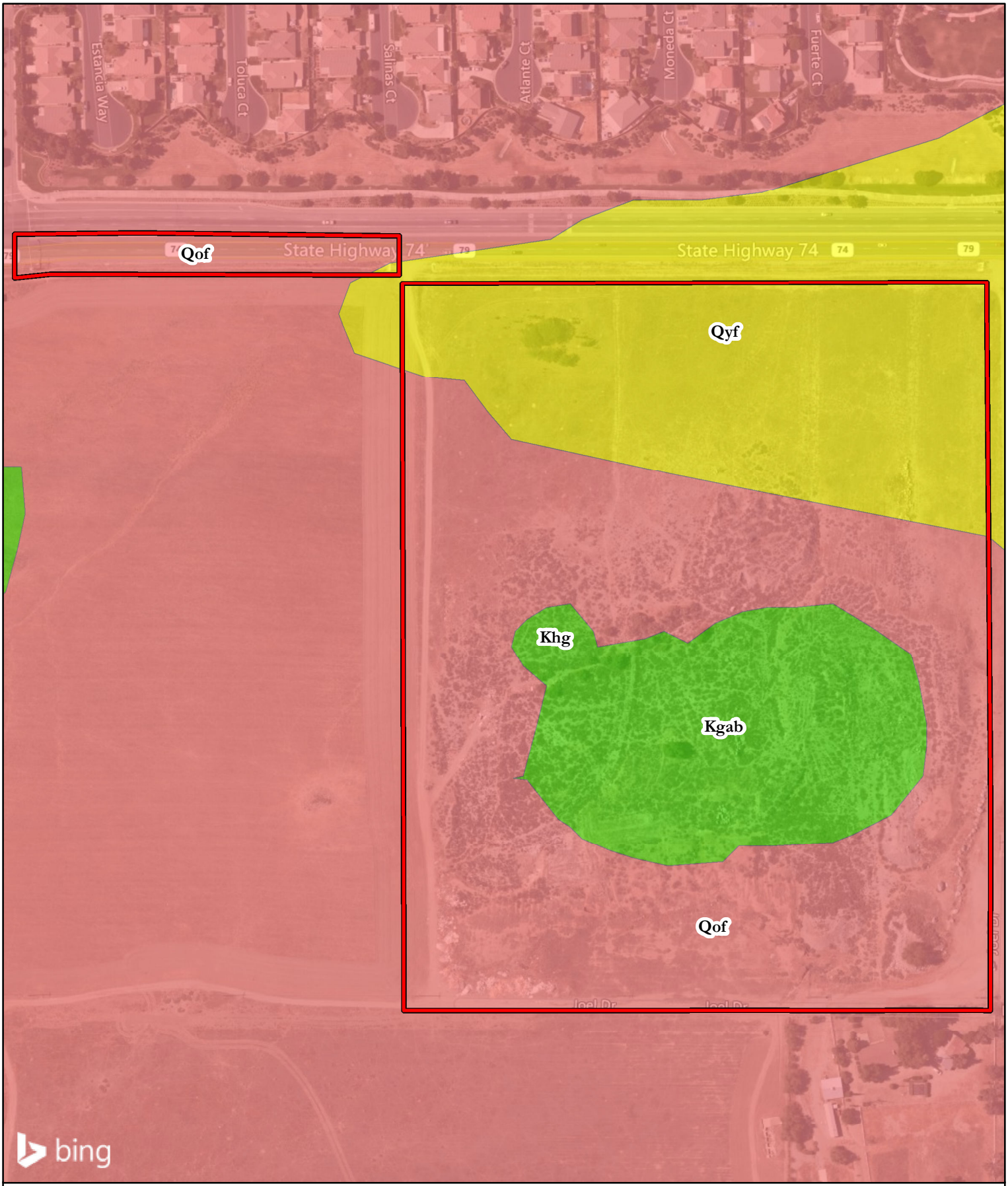
Geology from Morton et al. 2003
- Qyf: young alluvial fan
- Qof: old alluvial fan
- Kgab: heterogeneous mixture of olivine, pyroxene, and hornblade gabbro
- Khg: heterogenous granitic

Project Area

0 108.5 217 Feet
1 inch =217 feet

N

1:2,600



Map 5 - Project Paleontological Sensitivity

Hemet 30, C-0305

DUKE CRM

Paleontological Sensitivity
- High at surface
- High with depth
- Low

Project Area

0 108.5 217 Feet

1 inch =217 feet

N

1:2,600

Appendix B

Resumes

DUKE CRM

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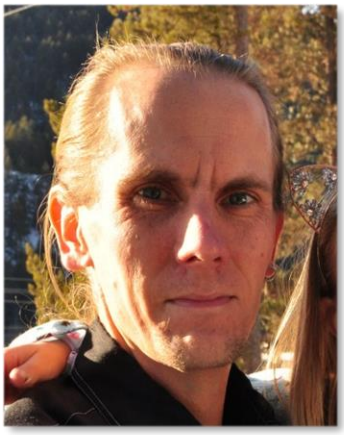
Benjamin Scherzer

Paleontologist



Expertise

Paleontological Resources Management
Fossil excavation
Fossil preparation
Stratigraphy
Natural gas mudlogging
Directional drilling

Education

M.S., Earth Science, 2008, MSU, Bozeman, MT
B.A., Geology/Math, 2002, Earlham College, IN

Professional Registrations

Paleontologist, County of Orange
Paleontologist, County of Riverside

Professional Memberships

Society of Vertebrate Paleontology
Geological Society of America
Society for Sedimentary Geology
American Association of Petroleum Geologists, Pacific Section
South Coast Geological Society
Western Association of Vertebrate Paleontologists

Publications and Professional Papers

Scherzer, B. 2017. A possible physeteroid (cetacea: odontoceti) from the Yorba member of the Puente Formation, Orange County, California.

Scherzer, B. 2016. An archaic baleen whale (Cetacea: Mysticeti) from the Vaqueros Formation, and other fossil material from the Skyridge Project, Orange County, California.

Scherzer, B. 2015. Miocene teleost fish from Chino Hills: preliminary results from the Vila Borba Project, San Bernardino County, California.

Professional Experience

Paleontologist, DUKE CRM, February 2014-present
Senior Paleontologist, Michael Baker International, 2021-present
Senior Paleontologist, VCS Environmental, 2020-present
Senior Paleontologist, Red Tail Environmental, 2020-present
Paleontological Specialist II, SD Natural History Museum, 2013-present
Paleontologist, L&L Environmental, 2017-2018
Stratigrapher, Archeological Resource Management Corp., 2015-2018
Paleontological Specialist II, SWCA (Pasadena), 2012-2015
Paleontologist, SWCA (Vernal, UT), 2011-2012
Fossil Preparator, Carter County Museum, 2010-2011
Physical Science Technician, Badlands National Park, 2010
Mudlogger/Geologist, Pason Systems USA, 2006-2009
Paleontological Field Assistant, ARCADIS US, 2006-2007

Selected Project Experience

I-10 Corridor Project 1, Ontario, 2020 - present
210 Mixed Flow Lane Addition, Highlands, 2020-present
Reid-Baldwin Adobe, Arcadia, 2019-present
San Jacinto GP & Update, San Jacinto, 2019-present
I-5 Widening, Aliso Viejo, 2018-2020
Sweeny Rd, Lompoc, 2018-2020
Atlanta Avenue Widening, Huntington Beach, 2018-present
Ocean Place, Seal Beach, 2018-present
Lake Forest Civic Center, Lake Forest, 2018-present
Vanderham Monitoring, Jurupa Valley, 2017-2018
Gold Flora Farms, Desert Hot Springs, 2017-2019
I-5 HOV Truck Lanes, Santa Clarita, 2017-2018
Brasada Homes, San Dimas, 2017-2018
Murrieta's Hospitality Commons, Murrieta, 2017-2019
6th Street Viaduct, Los Angeles, 2017-present
I-15 TEL, Riverside and San Bernardino Counties, 2017
Lewis Street, Anaheim, 2017
The Crossings, Chino Hills, 2016-2017
Reata Glen, Mission Viejo, 2016-2018
Greenville-Banning Channel, Costa Mesa, 2016
Fairfield Ranch, Chino Hills, 2016
Diamond Valley, Hemet, 2017
Marywood Residential, Orange, 2016-2017
Rancho Mission Viejo, Mission Viejo, 2015-2018
Santa Margarita Water District Tesoro Reservoirs, Mission Viejo, 2015
Evanston Inn, Pasadena, 2015
Sycamore to Peñasquitos 230 kV Transmission Line, San Diego, 2015
Vila Borba, Chino Hills, CA, 2013-present
RP-Outfall Relocation, Ontario, 2014
Serrano Ridge, Temescal Valley, 2014
Lago Los Serranos, Chino Hills, 2014
Baker WTP, Lake Forest, 2014
Skyridge Residential, Mission Viejo, 2014-present
Pacific Highlands, San Diego, 2014
Sol y Mar, Ranchos Palos Verdes, 2013-2014
Mojave Solar Power, Hinkley, 2013
Genesis Solar Energy, Blythe, 2012-13

DUKE CRM

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Curt Duke

President/Principal Archaeologist

Expertise

Cultural Resources Management
California Prehistory
Section 106 Compliance
CEQA Compliance
Native American Consultation

Education

CSU, Fullerton, M.A., Anth, 2006
SDSU, Grad Studies, Anth, 1996-97
UC Santa Cruz, B.A., Anth, 1994

Professional Registrations

RPA, No. 15969
County of Riverside (No. 151)
County of Orange

Professional Memberships

Society for California Archaeology
Society for American Archaeology
Pacific Coast Archaeological Society
Assoc. of Environmental Professionals
Building Industry Association

Professional Experience

President/Principal Archaeologist, DUKE CRM, March 2011 to present
Archaeologist/Principal, LSA Associates, 1997-2011
Archaeological/Paleontological Technician, Various Companies, 1995-97
Archaeological Technician/Teachers Assistant, Cabrillo College, 1994
Anthropological Laboratory Technician, UC Santa Cruz, 1994

Selected Project Experience

Sweeny Road, Lompoc, 2018
Vantage Point Church, Eastvale, 2016 and 2018
Murrieta's Hospitality Commons, Murrieta, 2017-Present
VA West Los Angeles Campus Master Plan, 2017-Present
Avenue S-8 and 40th St. E. Roundabout, Palmdale, 2017-18
SR-110 Improvements, Los Angeles, 2017
Diamond Valley Estates Specific Plan, Hemet, 2017
VA West Los Angeles Campus Hospital Replacement, 2016-Present
Shoemaker Bridge Replacement, Long Beach, 2016-Present
Spruce Goose Hangar, Playa Vista, 2016
Rice Avenue at 5th Street Grade Separation, Oxnard, 2015-Present
Vila Borba, Chino Hills, 2013-Present
Skyridge Residential, Mission Viejo, 2011-Present
Baker Water Treatment Plant, Lake Forest, 2014-2015
VA Clinic, Loma Linda, 2014-Present
Evanston Inn, Pasadena, 2014-2016
Petersen Ranch, Leona Valley, 2013-2014
California Street/Highway 101, Ventura, 2014-Present
6th Street Bridge Replacement, Los Angeles, 2013-Present
I-15/I-215 IC Project, Devore, 2008-10
Colton Crossing Rail-to-Rail Grade Separation, 2008-11
City of LA DPW BOE, On-Call, Cultural/Paleo Services, 2008-11
Mid County Parkway, Riverside County, 2014-10
McSweeny Farms Specific Plan, Hemet, 2004-08
Mesquite Regional Landfill, Coachella Valley, 2006-08
Hacienda at Fairview Valley Specific Plan, Apple Valley2007-08
Majestic Hills Specific Plan, Hesperia, 2006-07
Chuckwalla Solar I Project, Desert Center, 2007-08
Needles Highway Improvement Project, 2004-06
Superstition Solar I Project, Salton Sea, Imperial County, 2008
Muddy Canyon Archaeological Project, Newport Beach, 1997-2001
Temecula 32, Archaeological Phase II Testing, 2007
Mammoth Lakes Parks/Rec and Trail System Master Plan, 2010
24th Street Improvements, City of Bakersfield, 2008-11
California Valley Solar Ranch, San Luis Obispo County, 2009-10
Delano-Alpaugh Water Pipeline, Kern/Tulare Counties, 2006-09
I-15/SR-79 IC Project, Temecula, 2006-10
Westlake Historic Resources Survey, Los Angeles, 2008-09
CETAP, western Riverside County, 1999-2001
Los Coches Creek Elementary School, near Alpine, 2003-06
Oak Valley Specific Plan 1 Amendment, Beaumont, 2004
Fort Irwin, National Training Center, 1999
San Nicolas Island, Naval Base Ventura County, CA, 1997
Cell Sites, ~3,000 projects in CA and in NV, AZ, IL, WI, 1997-2018

Appendix C

Paleontological Records Search Results

WESTERN SCIENCE CENTER

September 24, 2019

Duke CRM
Benjamin Scherzer
18 Technology Drive, Suite 103
Irvine, CA 92618

Dear Mr. Scherzer,

This letter presents the results of a record search conducted for the Hemet 30 Project in the city of Hemet, Riverside County, California. The project site is located south of Highway 74, east of California Avenue in Section 14, Township 5 South, and Range 2 West on the Winchester USGS 7.5 minute quadrangle.

The geologic units underlying the project area consists primarily of mid to late Pleistocene alluvial fan units, with the northern project boundary containing late Pleistocene to Holocene alluvial units, and an outcrop of heterogeneous mixed olivine, pyroxene, and hornblende gabbro associated with the Green Acres gabbro complex in the center of the project area (Morton, 1991, 1995-1999, 2001). Pleistocene alluvial units are considered to be of high paleontological value, but Green Acres gabbro material is considered to be of low paleontological value. The Western Science Center does not have localities within the project area, but has numerous localities within a 1 mile radius associated with the Eastside Pipeline and Diamond Valley Lake Project. The Eastside Pipeline and Diamond Valley Lake Projects resulted in over one hundred thousand Pleistocene fossils and hundreds of fossil localities, including those associated with mastodon (*Mammut pacificus*), mammoth (*Mammuthus columbi*), saber-tooth cat (*Smilodon fatalis*), ancient horse (*Equus sp.*), camel (*Camelops hesternus*), and many more. Considering the age of the sediment and the proximity to abundant fossil material, it is likely that the Hemet 30 Project area could contain fossil resources.

Any fossil specimen recovered from the Hemet Project would be scientifically significant. Excavation activity associated with the development of the project area would impact the paleontologically sensitive Pleistocene alluvial units and it is the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils associated with the study area.

If you have any questions, or would like further information about the Eastside Pipeline or Diamond Valley Lake Projects, please feel free to contact me at dradford@westerncentermuseum.org

Sincerely,

Darla Radford
Collections Manager