

PALEONTOLOGICAL ASSESSMENT FOR THE TRAMMELL CROW BEAUMONT PROJECT

CITY OF BEAUMONT, COUNTY OF RIVERSIDE

APN 417-020-070

Prepared on Behalf of:

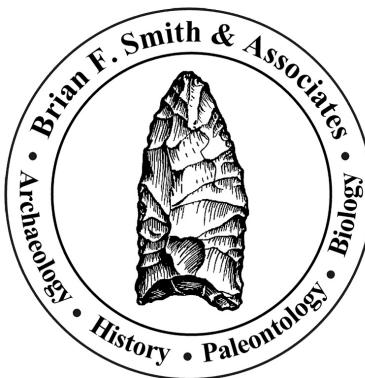
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December 8, 2021

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Report Date: December 8, 2021

Report Title: Paleontological Assessment for the Trammell Crow Beaumont Project, City of Beaumont, County of Riverside

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Assessor's Parcel Number: 417-020-070

USGS Quadrangle: Beaumont, California (7.5 minute)

Study Area: 30.9 acres

Key Words: Paleontological assessment; Pleistocene alluvial fan deposits; city of Beaumont; full-time paleontological monitoring.

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I. INTRODUCTION AND LOCATION

A paleontological resource assessment has been completed for the Trammell Crow Beaumont Project (Assessor's Parcel Number [APN] 417-020-070), which is located south of Highway 60 and west of the Highway 60 and Interstate 10 interchange in the city of Beaumont, Riverside County, California (Figures 1 and 2). On the U.S. Geological Survey, 7.5-minute, 1:24,000-scale *Beaumont, California* topographic quadrangle map, the project is situated within Section 9, Township 3 South, Range 1 West, of the San Bernardino Baseline and Meridian (see Figure 2). The 30.9-acre development will include the construction of a 585,000-square-foot warehouse building with office space, a storm water detention basin, and associated parking and hardscape. Currently, the project property is being used as an orchard with associated small buildings and farming infrastructure.

As the lead agency, the City of Beaumont has required the preparation of a paleontological assessment to evaluate the project's potential to yield paleontological resources. The paleontological assessment of the project included a review of paleontological literature and records of fossil localities in the area; a review of the underlying geology; and recommendations to mitigate impacts to potential paleontological resources, if necessary. A paleontological site survey was not conducted, since the project property is relatively flat and previously disturbed.

II. REGULATORY SETTING

The California Environmental Quality Act (CEQA), which is patterned after the National Environmental Policy Act, is the overriding environmental document that sets the requirement for protecting California's paleontological resources. The document mandates that governing permitting agencies (lead agencies) set their own guidelines for the protection of nonrenewable paleontological resources under their jurisdiction.

State of California

Under "Guidelines for Implementation of the California Environmental Quality Act," as amended in December 2018 (California Code of Regulations [CCR] Title 14, Division 6, Chapter 3, Sections 15000 et seq.), procedures define the types of activities, persons, and public agencies required to comply with CEQA. Section 15063 of the CCR provides a process by which a lead agency may review a project's potential impact to the environment, whether the impacts are significant, and provide recommendations, if necessary.

In CEQA's Environmental Checklist Form, one of the questions to answer is, "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (Appendix G, Section VII, Part f). This is to ensure compliance with California Public Resources Code Section 5097.5, the law that protects nonrenewable resources, including fossils:

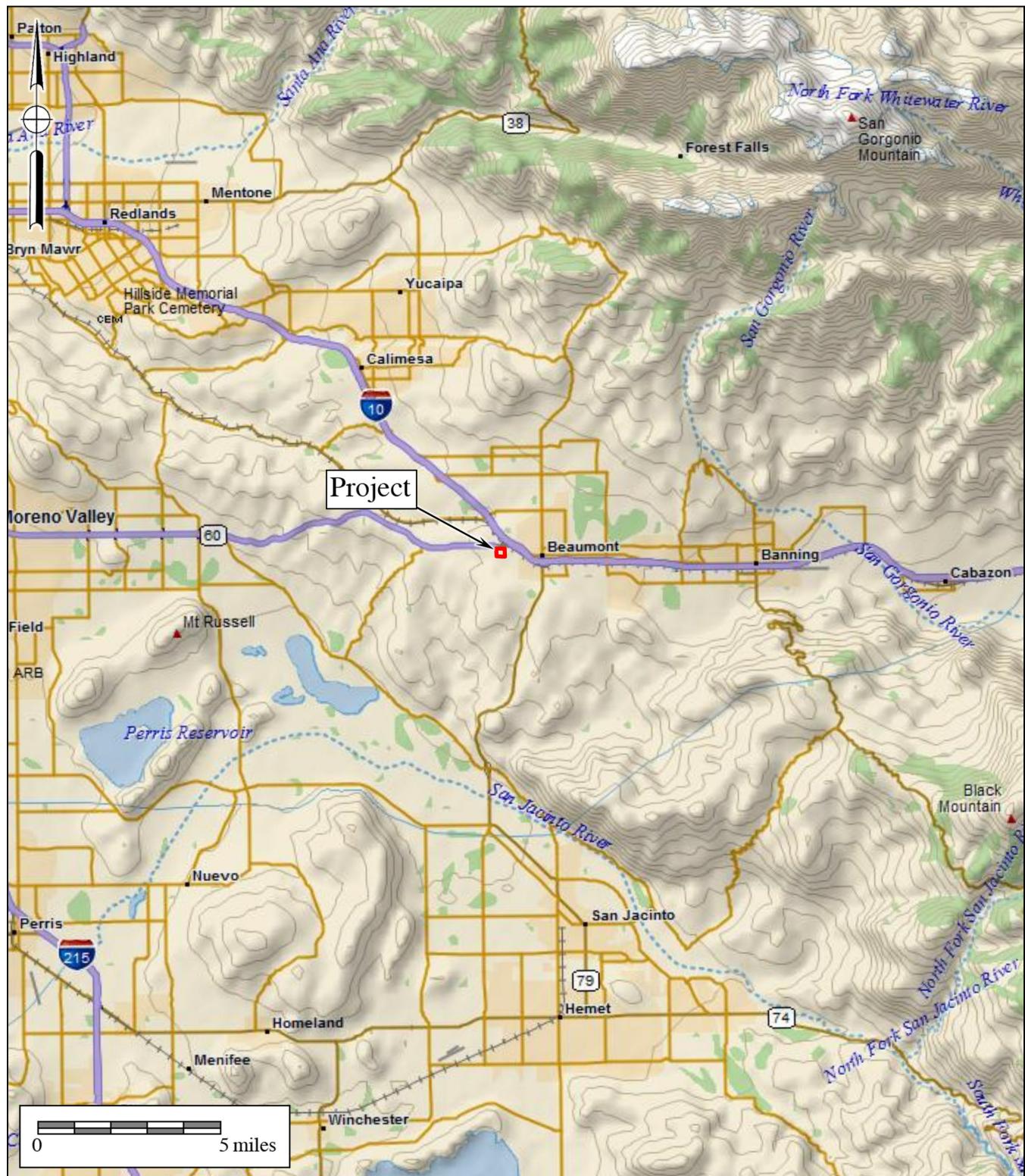
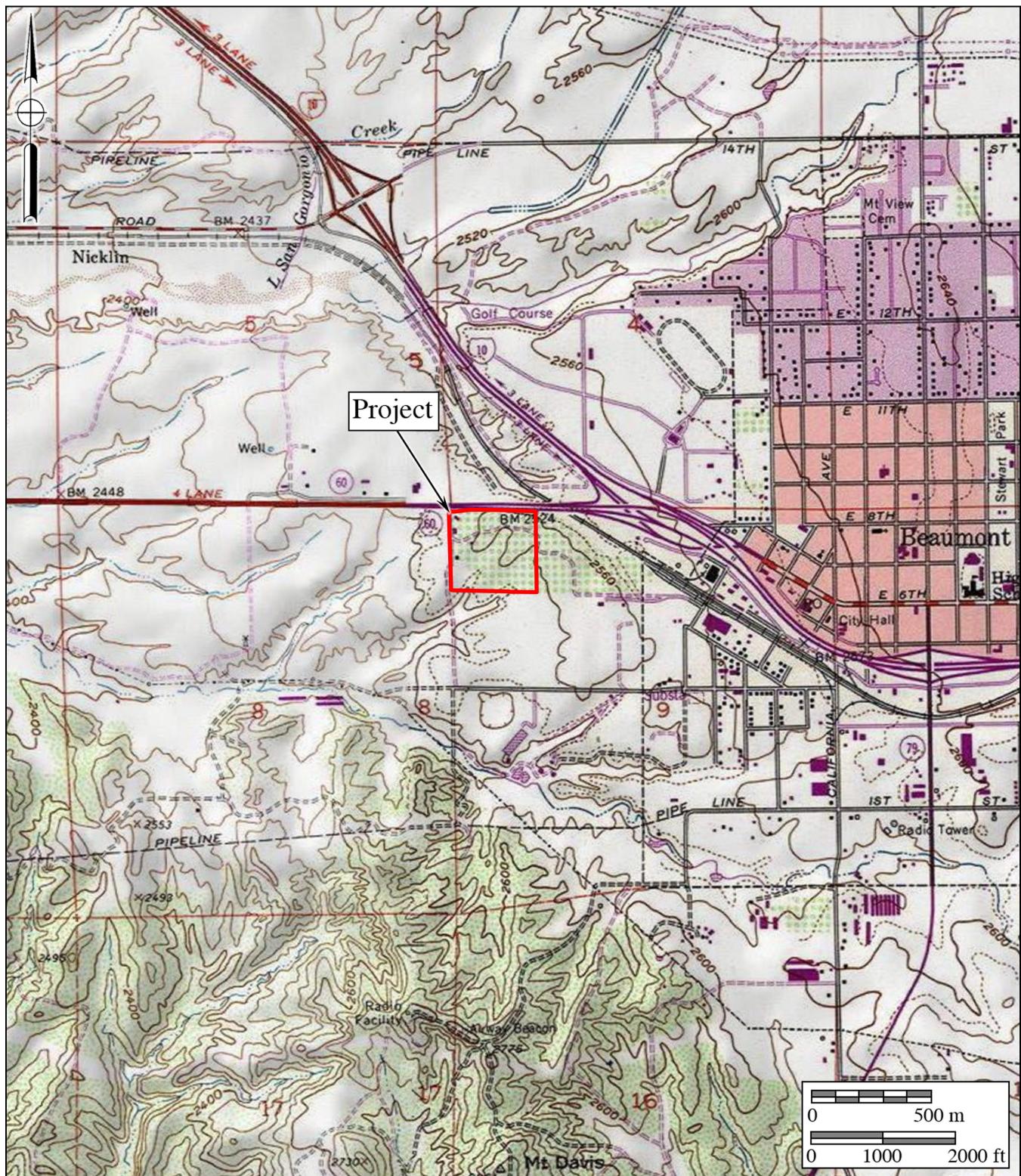


Figure 1
General Location Map

The Trammell Crow Beaumont Project

DeLorme (1:250,000)





- a) A person shall not 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, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.
- b) 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.
- c) A violation of this section is a misdemeanor.

City of Beaumont

The City of Beaumont recently adopted a new General Plan (City of Beaumont 2020a). Policy 8.11.1 is the only passage discussing paleontological resources in the new General Plan, stating “Avoid or when avoidance is not feasible, minimize impacts to sites with significant archaeological, paleontological, cultural and tribal cultural resources, to the extent feasible” (City of Beaumont 2020a:217). A final Environmental Impact Report was available for review, but it did not address paleontological resources (City of Beaumont 2020b).

III. GEOLOGY

Regionally, the project lies within the valley of the San Gorgonio Pass fault zone that separates the granitic mountain blocks of the San Bernardino Mountains to the north and the San Jacinto Mountains to the southeast (Lancaster et al. 2012; Morton and Miller 2006). This region of San Gorgonio Pass, including the project, is characterized by Pleistocene sediments that were shed off the topographic highs of the San Bernardino Mountains and deposited onto the valley floor below by the intermittent flows of several creeks and washes in the valley. Most of the project is mapped as middle to early Pleistocene (approximately 780,000 to 2.5 million years ago [Cohen and Gibbard 2011]) very old alluvial fan deposits (labeled “Qvof” on the left side of Figures 3A and 3B, after Lancaster et al. 2012). The deposits are composed of “moderately to well-consolidated, highly dissected boulder, cobble, gravel, sand, and silt deposits issued from a confined valley or canyon” (Lancaster et al. 2012). These deposits are equivalent to Morton and Miller’s (2006) middle to early Pleistocene very old alluvial fan deposits, Unit 3 (labeled “Qvof₃” on the right side of Figures 3A and 3B).

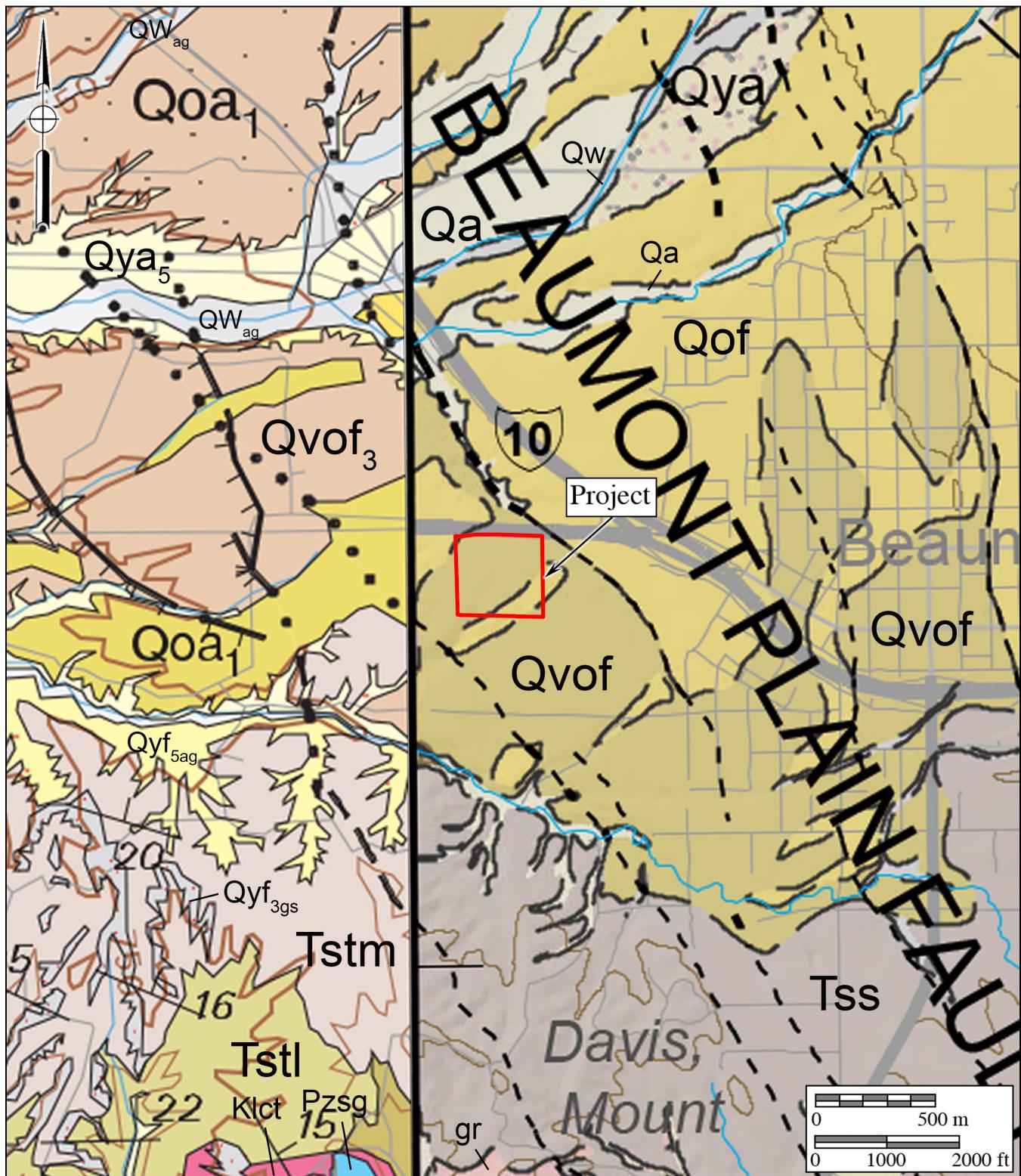


Figure 3A
Geologic Map

The Trammell Crow Beaumont Project

Geology after Morton and Miller (2006) and Lancaster et al. (2012)



DESCRIPTION OF MAP UNITS

MORTON AND MILLER (2006)	LANCASTER ET AL. (2012)
CENOZOIC: QUARTERNARY PERIOD	
Late Holocene  Very young wash deposits  Young axial channel deposits, Unit 5  Young alluvian fan deposits, Unit 5	Late Holocene  Alluvial wash deposits  Alluvial valley deposits
Late to Middle Pleistocene  and  Old axial channel deposits, Unit 1	Hocene to Late Pleistocene  Young alluvial deposits
Middle Holocene  Young alluvial fan deposits, Unit 3	Late to Middle Pleistocene  Old alluvial fan deposits
Middle to Early Pleistocene  Very old alluvial fan deposits, Unit 3	Middle to Early Pleistocene  Very old alluvial fan deposits
CENOZOIC: TERTIARY PERIOD	
Pliocene  Middle member, San Timoteo Beds  Lower sandstone member, San Timoteo Beds	Tertiary  Coarse-grained Tertiary-age formations
MESOZOIC	
Cretaceous  Tonalite of Lamb Canyon	Mesozoic and Older  Granitic and other intrusive crystalline rocks of all ages
PALEOZOIC	
Paleozoic?  Biotite schist, Laborde Canyon area	

Figure 3B

Geologic Key

The Trammell Crow Beaumont Project

Geology after Morton and Miller (2006) and Lancaster et al. (2012)



Overlying the very old alluvial fan deposits at the southern fourth of the project are the remnants of late to middle Pleistocene (a time span of approximately 11,700 to 780,000 years ago [Cohen and Gibbard 2011]) old alluvial fan deposits (labeled “Qof” on the left side of Figures 3A and 3B), which are described as “slightly to moderately consolidated, moderately dissected boulder, cobble, gravel, sand, and silt deposits” (Lancaster et al. 2012). These sedimentary deposits are equivalent to Morton and Miller’s (2006) late to middle Pleistocene old axial channel deposits, Unit 1 (labeled “Qoa₁” on the right side of Figures 3A and 3B).

On Figure 3A, based on Morton and Miller (2006) and Lancaster et al. (2012), the old and very old Pleistocene alluvial deposits likely overlie deposits of the Pliocene-aged (spanning about 5.5 to 2.5 million years ago) middle member of the San Timoteo Formation (or Beds) (“Tstm” and “Tss,” respectively, on Figures 3A and 3B). These deposits are exposed in the hills south of the project and are known to contain vertebrate fossils in well-indurated, medium- to coarse-grained sandstone that locally contain conglomerate beds several meters thick (Morton and Miller 2006).

IV. PALEONTOLOGICAL RESOURCES

Definition

Paleontological resources are the remains of prehistoric life that have been preserved in geologic strata. These remains are called fossils and include bones, shells, teeth, and plant remains (including their impressions, casts, and molds) in the sedimentary matrix, as well as trace fossils such as footprints and burrows. Fossils are considered older than 5,000 years of age (Society of Vertebrate Paleontology 2010) but may include younger remains (subfossils), for example, when viewed in the context of local extinction of the organism or habitat. Fossils are considered a nonrenewable resource under state and local policies (see Section II of this report).

Fossil Locality Records Search

A fossil locality records search was performed for the project by the paleontological collections manager of the Los Angeles County Museum of Natural History (LACM) and is attached in Appendix B (Bell 2021). Although no fossil localities are documented by the LACM from within the project or in the vicinity of the project, the records search indicates that nearby fossil localities are from similar sediments as those that are mapped at the project. According to Bell (2021), the nearest fossil locality, consisting of the remains of a Pleistocene camel, is said to be north of Banning, near Beaumont (LACM loc. 4135); however, when considering the geology mapped in these areas and other fossils found in the area of the southern viewpoint and below, it seems more plausible that this locality might actually be south of Banning, near Beaumont. The next nearest localities (LACM locs. 7618-7622; horse and camel fossils from the San Timoteo Formation) are along the western front of the San Timoteo badlands, east of Gilman Springs Road, a distance of about five miles to the southwest. The remaining localities listed by

Bell (2021) are several miles away.

From published literature, the nearest known Pleistocene-aged fossil locality is about two to three miles north of the project, between Beaumont and Calimesa, consisting of a specimen of *Bison antiquus*, an extinct species of bison (Jefferson 1986, 1991). Another locality is approximately five miles northwest of the project in the area of Calimesa Boulevard, consisting of the remains of an extinct species of horse, *Equus* (Scott 2007). This locality (San Bernardino County Museum locality no. 5.3.113) appears to be situated within late to middle Pleistocene old alluvial fan deposits, Unit 1, of Morton and Miller (2006), which are similar to those mapped at the project.

Several other fossil vertebrate localities are known in the San Gorgonio Pass region, mostly from the San Timoteo Formation (Beds) in the San Timoteo Badlands west and south of the project (Frick 1921; Reynolds and Reeder 1986; Albright 1999; Jefferson 2009; Reynolds 2017). Notably, Albright (1999) recovered almost all the fossil materials, from at least 36 species, by intensively screening matrix from paleosols (ancient soils) totaling 49,150 pounds. Fossils from the San Timoteo Formation include the remains from a variety of amphibians and reptiles, birds, shrews, ground sloth, rabbits, rodents (including porcupine), two species of saber-toothed cat, dire wolf, horses (*Plesippus* and *Equus* spp.), llama, camels, rhinoceros, and mammoth. A locality approximately three miles southeast of the project, along Highland Springs Road south of Banning, yielded 2.2-million-year-old plant remains and snail fossils, as well as fish scales and skeletal elements, from the San Timoteo Formation. Plant fossils included willow, oak, magnolia, and water reeds (Reynolds and Reeder 1986; Jefferson 2009).

V. PALEONTOLOGICAL SENSITIVITY

Overview

The degree of paleontological sensitivity of any particular area is based on a number of factors, including the documented presence of fossiliferous resources on a site or in nearby areas, the presence of documented fossils within a particular geologic formation or lithostratigraphic unit, and whether or not the original depositional environment of the sediments is one that might have been conducive to the accumulation of organic remains that might have become fossilized over time. Holocene alluvium is generally considered to be geologically too young to contain significant, nonrenewable paleontological resources (*i.e.*, fossils) and, therefore, is typically assigned a low paleontological sensitivity. Pleistocene (more than 11,700 years old) alluvial and alluvial fan deposits in the Inland Empire, however, often yield important Ice Age terrestrial vertebrate fossils, such as extinct mammoths, mastodons, giant ground sloths, extinct species of horse, bison, and camel, saber-toothed cats, and others (Jefferson 1991). Therefore, these Pleistocene deposits are accorded a high paleontological resource sensitivity.

Professional Standards

The Society of Vertebrate Paleontology (2010) has drafted guidelines that include four categories of paleontological sensitivity for geologic units (formations) that might be impacted by a proposed project, as listed below:

- *High Potential*: Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered.
- *Undetermined Potential*: Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment, and that further study is needed to determine the potential of the rock unit.
- *Low Potential*: Rock units that are poorly represented by fossil specimens in institutional collections or based on a general scientific consensus that only preserve fossils in rare circumstances.
- *No Potential*: Rock units that have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks and plutonic igneous rocks.

Using these criteria, based on the geologic age of the old and very old alluvial fan deposits mapped at the project and nearby fossils collected from similar deposits, a high potential to yield significant paleontological resources may be assigned to the geologic formations mapped at the project.

VI. CONCLUSIONS AND RECOMMENDATIONS

Research has confirmed the existence of the potentially fossiliferous Pleistocene old and very old alluvial fan deposits at the project. The occurrence of terrestrial vertebrate fossils from the older Pleistocene alluvial deposits is well documented. The “High” paleontological sensitivity rating for yielding paleontological resources assigned to these formations supports the recommendation that paleontological monitoring be implemented during mass grading and excavation activities in these deposits to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. Full-time monitoring of undisturbed Pleistocene alluvial fan deposits at the project is warranted starting at the surface. Paleontological monitoring of disturbed soils and artificial fill is not recommended. A Paleontological Resources Impact Mitigation Program (PRIMP) should be implemented for earth disturbance impacts to the Pleistocene old and very old alluvial fan deposits.

Proposed PRIMP

The following guidelines are based on the findings stated above. Paleontological monitoring may be reduced upon the observations and recommendations of the professional-level project paleontologist. The following PRIMP, when implemented, would reduce potential

impacts of paleontological resources to a level below significant:

1. Monitoring of mass grading and excavation activities in areas identified as likely to contain paleontological resources shall be performed by a City-qualified paleontologist or paleontological monitor supervised by a City-qualified paleontologist. Starting at the surface, monitoring will be conducted full-time in areas of grading or excavation in undisturbed old and very old alluvial fan deposits.
2. Paleontological monitors will be equipped to salvage fossils as they are unearthed to avoid construction delays. The monitor must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or, if present, are determined upon exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources. The monitor shall notify the project paleontologist, who will then notify the concerned parties of the discovery.
3. Paleontological salvage during trenching and boring activities is typically from the generated spoils and does not delay the trenching or drilling activities. Fossils are collected and placed in cardboard flats or plastic buckets and identified by field number, collector, and date collected. Notes are taken on the map location and stratigraphy of the site, which is photographed before it is vacated and the fossils are removed to a safe place. On mass grading projects, discovered fossil sites are protected by flagging to prevent them from being overrun by earthmovers (scrapers) before salvage begins. Fossils are collected in a similar manner, with notes and photographs being taken before removing the fossils. Precise location of the site is determined with the use of handheld GPS units. If the site involves remains from a large terrestrial vertebrate, such as large bone(s) or a mammoth tusk, that is/are too large to be easily removed by a single monitor, a fossil recovery crew shall excavate around the find, encase the find within a plaster and burlap jacket, and remove it after the plaster is set. For large fossils, use of the contractor's construction equipment may be solicited to help remove the jacket to a safe location.
4. Isolated fossils are collected by hand, wrapped in paper, and placed in temporary collecting flats or five-gallon buckets. Notes are taken on the map location and stratigraphy of the site, which is photographed before it is vacated and the fossils are removed to a safe place.
5. Particularly small invertebrate fossils typically represent multiple specimens of a limited number of organisms, and a scientifically suitable sample can be obtained from one to several five-gallon buckets of fossiliferous sediment. If it is possible to dry screen the sediment in the field, a concentrated sample may consist of one or two buckets of material. For vertebrate fossils, the test is usually the observed presence of

small pieces of bones within the sediments. If present, multiple five-gallon buckets of sediment can be collected and returned to a separate facility for wet screening.

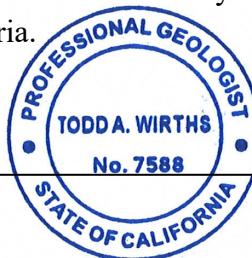
6. In accordance with the “Microfossil Salvage” section of the Society of Vertebrate Paleontology guidelines (2010:7), bulk sampling and screening of fine-grained sedimentary deposits (including carbonate-rich paleosols) must be performed if the deposits are identified to possess indications of producing fossil “microvertebrates” to test the feasibility of the deposit to yield fossil bones and teeth.
7. In the laboratory, individual fossils are cleaned of extraneous matrix, any breaks are repaired, and the specimen, if needed, is stabilized by soaking in an archivally approved acrylic hardener (*e.g.*, a solution of acetone and Paraloid B-72).
8. Recovered specimens are prepared to a point of identification and permanent preservation (not display), including screen-washing sediments to recover small invertebrates and vertebrates. Preparation of individual vertebrate fossils is often more time-consuming than for accumulations of invertebrate fossils.
9. Identification and curation of specimens into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage (the Western Science Center in Hemet is cited by the County of Riverside [2015] as the preferred repository for fossils collected within Riverside County) shall be conducted. The paleontological program should include a written repository agreement prior to the initiation of mitigation activities. Prior to curation, the lead agency (the City of Beaumont) will be consulted on the repository/museum to receive the fossil material.
10. A final report of findings and significance will be prepared, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location(s). The report, when submitted to, and accepted by, the appropriate lead agency, will signify satisfactory completion of the project program to mitigate impacts to any potential nonrenewable paleontological resources (*i.e.*, fossils) that might have been lost or otherwise adversely affected without such a program in place.

VII. CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this paleontological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief and have been compiled in accordance with CEQA criteria.



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California Professional Geologist No. 7588



December 8, 2021

Date

VIII. REFERENCES

Albright, L.B., III. 1999. Biostratigraphy and vertebrate paleontology of the San Timoteo Badlands, southern California. University of California Press, v. 144.

Bell, A. 2021. Paleontological resources for the Trammell Crow Beaumont Project. Unpublished letter for Brian F. Smith and Associates, Inc., Poway, California, by the Los Angeles County Natural History Museum, Los Angeles, California.

City of Beaumont. 2020a. Beaumont General Plan. Electronic document, <https://www.beaumontca.gov/DocumentCenter/View/36837/Beaumont-General-Plan-Update-Final>, accessed November 19, 2021.

City of Beaumont. 2020b. Beaumont General Plan 2040, Final programmatic environmental impact report Sch No. 2018031022. Prepared for the City of Beaumont by Albert A. Webb Associates, Riverside, California. Electronic document, <https://www.beaumontca.gov/DocumentCenter/View/36788/Attachment-F---link-to-Final-EIR>, accessed November 19, 2021.

Cohen, K.M. and Gibbard, P.L. 2011. Global chronostratigraphical correlation table for the last 2.7 million years. Subcommission on Quaternary Stratigraphy (International Commission on Stratigraphy), Cambridge, England. Electronic document, <http://quaternary.stratigraphy.org/wp-content/uploads/2018/04/POSTERstratchart-v2011.jpg.pdf>, accessed November 19, 2021.

County of Riverside. 2015. Environmental Impact Report No. 521. Public Review Draft. Electronic document, https://planning.rctlma.org/Portals/14/genplan/general_plan_2015/DEIR%20521/DEIR%20No.%20521.pdf, accessed November 19, 2021.

Frick, C. 1921. Extinct vertebrate faunas of the badlands of Bautista Creek and San Timoteo Cañon, southern California. University of California Publications in Geology, 12(5): 277-424, figs. 1-165, pls. 43-50.

Jefferson, G.T. 1986. Fossil vertebrates from the late Pleistocene sedimentary deposits in the San Bernardino and Little San Bernardino Mountains region, *in*, Kooser, M.A., and Reynolds, R.E., eds., Geology around the margins of the eastern San Bernardino Mountains. Publications of the Inland Geological Society, v. 1, Redlands, California.

Jefferson, G.T. 1991. A catalogue of late Quaternary vertebrates from California: Part two, mammals. Natural History Museum of Los Angeles County, Technical Reports, no. 7: i-v + 1-129.

Jefferson, G.T. 2009. A catalogue of Blancan and Irvingtonian vertebrates and floras from Arizona, southern California, Nevada, Utah, and northwestern Mexico. Unpublished incomplete draft manuscript, Colorado Desert District Stout Research Center, Anza-Borrego Desert State Park, Borrego Springs, California. Dated March 11, 2009.

Lancaster, J.T., Hayhurst, C.A., and Bedrossian, T.L., compilers. 2012. Preliminary geologic map of Quaternary surficial deposits in southern California. Palm Springs 30' x 60' quadrangle; *in*, Geologic compilation of Quaternary surficial deposits in southern California. California Geological Survey Special Report 217: pl. 24 (scale 1:100,000).

Morton, D.M. and Miller, F.K. 2006. Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California: U.S. Geological Survey Open-File Report 06-1217, scale 1:100,000.

Reynolds, R.E. 2017. Review of the Blancan / Irvingtonian transition in the northern Peninsular Range Province of southern California, *in*, Reynolds, R.E., ed., ECSZ Does It, Revisiting the Eastern California Shear Zone. California State University Desert Studies Center 2017 Desert Symposium Field Guide and Proceedings.

Reynolds, R.E. and Reeder, W.A. 1986. Age and fossil assemblages of the San Timoteo Formation, Riverside County, California, *in*, Kooser, M.A. and Reynolds, R.E., eds., Geology around the margins of the eastern San Bernardino Mountains. Publications of the Inland Geological Society, v. 1, Redlands, California.

Scott, E. 2007. Paleontological review, Yucaipa Freeway Corridor Specific Plan, Calimesa and Yucaipa, San Bernardino County, California. Letter dated April 30, 2007, to P&D Consultants, Orange, California, by the San Bernardino County Museum, Redlands, California. Electronic document, http://yucaipa.org/wp-content/uploads/dev_svcs/EIR/FCSP/M.pdf. In, Appendix M of [Yucaipa] Freeway Corridor Specific Plan EIR, 2008, <http://yucaipa.org/development/community-development/environmental-review/freeway-corridor-specific-plan/>, accessed November 19, 2021.

Society of Vertebrate Paleontology. 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources; by the SVP Impact Mitigation Guidelines Revision Committee. Electronic document, http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guide_lines.aspx, accessed November 19, 2021.

APPENDIX A

Qualifications of Key Personnel

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Education

Master of Science, Geological Sciences, San Diego State University, California	1995
Bachelor of Arts, Earth Sciences, University of California, Santa Cruz	1992

Professional Certifications

California Professional Geologist #7588, 2003
Riverside County Approved Paleontologist
San Diego County Qualified Paleontologist
Orange County Certified Paleontologist
OSHA HAZWOPER 40-hour trained; current 8-hour annual refresher

Professional Memberships

Board member, San Diego Geological Society
San Diego Association of Geologists; past President (2012) and Vice President (2011)
South Coast Geological Society
Southern California Paleontological Society

Experience

Mr. Wirths has more than a dozen years of professional experience as a senior-level paleontologist throughout southern California. He is also a certified California Professional Geologist. At BFS, Mr. Wirths conducts on-site paleontological monitoring, trains and supervises junior staff, and performs all research and reporting duties for locations throughout Los Angeles, Ventura, San Bernardino, Riverside, Orange, San Diego, and Imperial Counties. Mr. Wirths was formerly a senior project manager conducting environmental investigations and remediation projects for petroleum hydrocarbon-impacted sites across southern California.

Selected Recent Reports

2019 *Paleontological Assessment for the 10575 Foothill Boulevard Project, City of Rancho Cucamonga, San Bernardino County, California.* Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the MorningStar Marguerite Project, Mission Viejo, Orange County, California.* Prepared for T&B Planning. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring Report for the Nimitz Crossing Project, City of San Diego.* Prepared for Voltaire 24, LP. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource Impact Mitigation Program (PRIMP) for the Jack Rabbit Trail Logistics Center Project, City of Beaumont, Riverside County, California.* Prepared for JRT BP 1, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Monitoring Report for the Oceanside Beachfront Resort Project, Oceanside, San California.* Prepared for S.D. Malkin Properties. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Impact Mitigation Program for the Nakase Project, Lake Forest, Orange County, San California.* Prepared for Glenn Lukos Associates, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Impact Mitigation Program for the Sunset Crossroads Project, Banning, Riverside County.* Prepared for NP Banning Industrial, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Assessment for the Ortega Plaza Project, Lake Elsinore, Riverside County.* Prepared for Empire Design Group. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Record Search Update for the Green River Ranch III Project, Green River Ranch Specific Plan SP00-001, City of Corona, California.* Prepared for Western Realco. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Assessment for the Cypress/Slover Industrial Center Project, City of Fontana, San Bernardino County, California.* Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Monitoring Report for the Imperial Landfill Expansion Project (Phase VI, Segment C-2), Imperial County, California.* Prepared for Republic Services, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Assessment for the Manitou Court Logistics Center Project, City of Jurupa Valley, Riverside County, California.* Prepared for Link Industrial. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

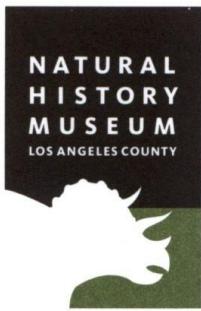
2021 *Paleontological Resource Impact Mitigation Program for the Del Oro (Tract 36852) Project, Menifee, Riverside County.* Prepared for D.R. Horton. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Assessment for the Alessandro Corporate Center Project (Planning Case PR-2020-000519), City of Riverside, Riverside County, California.* Prepared for OZI Alessandro, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Monitoring Report for the Boardwalk Project, La Jolla, City of San Diego.* Prepared for Project Management Advisors, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

APPENDIX B

Paleontological Records Search



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tel 213.763.DINO
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Research & Collections

e-mail: paleorecords@nhm.org

November 22, 2021

Brian F. Smith and Associates, Inc.
Attn: Todd Wirths

re: Paleontological resources for the Trammell Crow Beaumont Project

Dear Todd:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Trammell Crow Beaumont project area as outlined on the portion of the Beaumont USGS topographic quadrangle map that you sent to me via e-mail on November 10, 2021. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County.

Locality Number	Location	Formation	Taxa	Depth
LACM VP 4135	Near Beaumont, CA; north of Banning, CA	Unknown formation (Pleistocene; possibly Imperial or San Timoteo)	Camel family (Camelidae)	Unknown
LACM VP 7618-7622	San Timoteo Badlands; E of Moreno & NW of Eden Hot Springs	San Timoteo Formation	Horse family (Equidae); Camel family (Camelidae)	Unknown
LACM IP 437	West side of Castile Canyon, north of the Soboba Indian Reservation	Unknown formation (Pleistocene)	Invertebrates – insect (<i>Sobobapteron kirkbayne</i>), brachiopod (<i>Terebratalia hemphilli</i>)	Unknown
LACM VP 6059	Overflow area just east-southeast of Lake Elsinore	unknown formation (Pleistocene)	Camel family (Camelidae)	Unknown
LACM VP 1207	Hill on east side of sewage disposal plant; 1 mile N-NW of Corona	Unknown formation (Pleistocene)	Bovidae	Unknown
LACM VP 7811	W of Orchard Park, Chino Valley	Unknown formation (eolian, tan silt;)	Whip snake (<i>Masticophis</i>)	9-11 feet bgs

		Pleistocene)		
LACM VP 1269	Near intersection of Varner Road and Edom Hill Road; west end of Indio Hills	Unknown formation (Pleistocene)	Horse (<i>Equus</i>)	Unknown

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

This records search covers only the records of the Natural History Museum of Los Angeles County ("NHMLA"). It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,



Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice