

APPENDIX L

Mineral Resources Technical Report JVR Energy Park Project

**MINERAL RESOURCE TECHNICAL REPORT
JVR ENERGY PARK, LLC
SAN DIEGO COUNTY, CALIFORNIA**

Prepared for:

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Project No. 12312.002

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To: Dudek
750 Second Street
Encinitas, California 92024

Attention: Ms. Erlin Worthington

Subject: Mineral Resource Technical Report, JVR Energy Park LLC, San Diego County, California

In accordance with your request, we have performed a review and prepared this Mineral Resource Technical Study for the proposed JVR Energy Park Project (Proposed Project) in San Diego County, California (Figure 1 – Site Location Map). The Proposed Project is a solar energy generation and storage facility. To assist us in the preparation of this Study, we have reviewed the conceptual graphics and preliminary geotechnical report along with the Major Use Permit plans for the Project that you have provided. In addition, we have performed a geotechnical site reconnaissance and reviewed boring logs and laboratory testing of the Proposed Project area and have discussed the Project with you and the project team.

Based on the results of our research and review, the site is similar to many valleys of southeastern San Diego County in that it is underlain by alluvium and weathered rock that could be mined and processed and utilized as a source of sand, gravel, and rock. As the site is similar to much of the regional area, it is not unique in this regard. Specifically, the Proposed Project is underlain by Quaternary alluvium and volcanic rock. The project site also includes an existing small abandoned rock quarry in the northeastern portion of the site. We also note that the site is bisected by a Quaternary alluvial stream deposit; which may indicate the potential for mineral resources in the form of aggregate sand and gravel materials.

Of significant importance, the vast majority of the Proposed Project is considered an interim use and will not constitute a “Permanent Loss” of the mineral resource, as described below. Nevertheless, while the Project site (approximately 1,356 acres) and MUP Area (approximately 642 acres) will encroach into these resource areas, portions of the resource in the Proposed Project area are not recoverable as a result of 1,300-foot setback from existing residential and commercial development and a 100-foot setback from existing infrastructure making potential resources not recoverable (Figure 6 – Setback Determinations Map). The Proposed Project area also is outside of the Production-Consumption Boundary mapped by the County (1996).

Further, based on our knowledge of the site geology and laboratory testing by others, much of the alluvium within the Proposed Project site is clayey with significant material waste amounts and substandard gradation, which, as discussed further below, accounts for an estimated waste value of 40 percent in some areas on site (most commercial mining operations use a 20% waste factor as an economic feasibility threshold); and the volcanic rock deposits are highly weathered/fractured and of a substandard strength and quality to be of value. Considering the condition of the resource, the marketability of the resource for much of the site is considered nil. With respect to the resource underlying the 3.2-acre switchyard, laboratory testing indicates that the material may be of better quality than the remainder of the site.

Additionally, the vast majority of the Proposed Project will be decommissioned at the end of its term, which is conservatively estimated to be 35 years, and all surface improvements will be removed from the Property other than the 3.2-acre switchyard. The biological open space easements implemented by the Proposed Project, estimated to be 434 acres (188 acres of which will over lie potential mineral resources), will also remain in place after the Proposed Project is decommissioned. Because the improvements on the vast majority of the Proposed Project site will be removed, any impact on the mineral resources underlying those portions of the Proposed Project will be interim and not permanent. The resource will be available for extraction once the Proposed Project is removed.

The resource underlying the switchyard (3.2 acres) and an approximately 188 acre portion of the biological open space easement within the project site would be “permanently” lost. Due to their high waste factors and poor condition, the resources underlying much of the site are not considered marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years. On the other hand, the resources underlying the 3.2-acre switchyard may be of better quality and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years. Since boring logs are unavailable for the 188-acre

portion of the biological open space easement, the quality of the resource is unknown but conservatively assumed to be comparable to the resource that underlies the switchyard. Therefore, it is conservatively assumed that a portion of the open space easement and the switchyard could create a significant impact with respect to the permanent loss of minable, processable, and marketable mineral resources underlying those portions of the Project site, which in combination exceed the County's minimum value thresholds.

Finally, the Proposed Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The Proposed Project site is not zoned as S82 by the Extractive Land Use Overlay, or General Plan Extractive Land Use Designation and Impact-Sensitive Land Use Designation.

This report has been prepared for submittal to the County of San Diego, per the County of San Diego Land Use and Environment Group's Guidelines for Mineral Resource Technical Report Format and Content requirements.

If you have any questions regarding our report, please contact this office. We appreciate this opportunity to be of service.

Respectfully submitted,

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1.0 EXECUTIVE SUMMARY

In accordance with your request and authorization, this report was prepared to evaluate potential impacts to mineral resources due to implementation of the JVR Energy Park Project (Proposed Project) as depicted in Figure 1 and 2 (Site Location Map and Property Overview Map). This report provides a discussion of the Proposed Project and existing site conditions; a description of site geologic conditions and mineral resource potential; a discussion of relevant mineral resource regulations and guidelines; and, an evaluation of the significance of impacts to local mineral resources due to implementation of the Proposed Project.

Our analysis of potential impacts to mineral resources included a review of State and County technical guidance documents, mineral resource classifications and maps, local land use plans, and site specific geologic and geotechnical data including laboratory testing by others. To be conservative, it was concluded that implementation of the Proposed Project would result in significant unavoidable impacts to mineral resources.

Based on the results of this research and review, the site is similar to many valleys of southeastern San Diego County in that it is underlain by alluvium and weathered rock that could possibly be mined and processed and utilized as a source of sand, gravel, and rock. As the site is similar to much of the regional area, it is not unique in this regard.

The Proposed Project site is not zoned MRZ-3 or MRZ-2 and a portion of the Project site is adjacent to incompatible land use (e.g., high density residential properties and commercial development) that require a 1,300-foot setback for any mineral extraction to occur at the Proposed Project site. In addition, the portions of the site that are surrounded and transected by land uses (e.g., railroad tracks, electrical transmission lines, commercial airport, and County and State roadways) would have 100-foot setbacks. Accordingly, in some instances, mineral resources onsite are already lost due to land use incompatibility due to restrictions posed by required setbacks.

Moreover, when quantified relative to the entire extent of similar geologic exposures found across eastern San Diego County, site development could be considered of negligible relative loss.

Further, the vast majority of the Proposed Project is considered an interim project and will

not result in a “Permanent Loss” of the resource as summarized in the San Diego County Guidelines for Determining Significance of Mineral Resources (2008). Specifically, the Proposed Project will be decommissioned at the end of its life, which is conservatively assumed to be 35-years. Decommissioning would include removal of all solar facilities within the MUP Area, except the 3.2-acre switchyard. The biological open space easements implemented by the Proposed Project, estimated to be up to 434 acres (188 acres of which will overlap potential mineral resources) will also remain in place after the Proposed Project is decommissioned and are considered permanent.¹ By its nature, the Proposed Project’s impacts to any available mineral resources on site (other than resources underlying the switchyard and open space easements) would be considered interim, i.e. there would be no permanent loss of mineral resources should the Proposed Project be developed. When the Proposed Project is removed from the Project site at the conclusion of its life span, the mineral resources at the Project site may still be extracted.

The majority of alluvium within the Proposed Project site is clayey with significant material waste amounts and substandard gradation accounting for an estimated waste value of 40 percent in some areas (most commercial mining operations use a 20% waste factor as an economic feasibility threshold). This waste factor means that 40% percent of the material underlying portions of the Project site is unmarketable and, as a result, that mining, processing and marketing the resources underlying the site would be economically infeasible. Further, the volcanic rock deposits are highly weathered/fractured and of a substandard strength and quality to be of value. As such, the marketability of the resource underlying much of the site is considered nil.

With respect to the 3.2 acre switchyard, the resource underlying that portion of the site may be of better quality and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years.

Additionally, since boring logs are unavailable for the portion of the Project site proposed as a biological open space easement, the quality of the resource is unknown but conservatively assumed to be comparable to the resource that underlies the switchyard. Therefore, it is assumed that a portion of the biological open space easement and the switchyard combined could create a significant impact with respect to the permanent loss of minable, processable, and marketable mineral resources underlying those portions of the Project site, which in combination exceed the County’s minimum value thresholds. .

¹ The total open space area implemented by the Proposed Project may change. However, as shown in Figure 7, the maximum area of mineral resources that may be covered by these easements is around 188 acres.

Finally, the Proposed Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The Proposed Project site is not zoned as S82 by the Extractive Land Use Overlay, or General Plan Extractive Land Use Designation and Impact-Sensitive Land Use Designation.

2.0 INTRODUCTION

2.1 Purpose and Scope

The Project Area has not been classified by the California Department of Conservation – Division of Mines and Geology (Update of Mineral Land Classification as an area of “Potential Mineral Resource Significance” (MRZ-3). However, the Project Area is located in a mapped area of alluvium and contains an existing abandoned small rock quarry. It should be noted the Project Area is unclassified and located approximately 35 miles east of any CGS mapped Potential Mineral Resource areas.

The County of San Diego has requested that a Mineral Resource Investigation Report be prepared to investigate mineral resources on the Project Area to determine if they are significant, if their access would be permanently lost, and whether the loss would be considered significant under CEQA. This report is prepared in accordance with County of San Diego Guidelines for determining Significance and Report Formant and Content Requirements, Mineral Resources, dated July 30, 2008. Specifically, this report presents the results of our review and assessment of the mineral resources for the 1,356-acre site in the southeastern area of San Diego County, California, as depicted in Figure 1 and 2 (rear of text). The scope of services included:

- A review of in-house geotechnical reports and aerial photographs pertinent to the area (Section 5.0).
- Review of the Geotechnical Engineering Report for the site prepared by Terracon Inc. and their subsequent addendum. These documents provided a substantial amount of laboratory testing that was utilized in our analysis.
- A reconnaissance of the site.
- Review of the site location relative to the current Mineral Resource Zonation (MRZ) and designations per the California Surface Mining and Reclamation Act (SMARA) of 1975.

- Preparation of this report summarizing the results of our technical study, including:
 - A discussion of the MRZs located on, adjacent, and within the vicinity of the Proposed Project.
 - A discussion of all mine; quarries, and gemstone deposits (both historic and existing) within the vicinity of the Proposed Project.
 - A discussion of the regional and local geologic setting as it pertains to any mineral resources identified.
 - Review of laboratory testing by others.
 - Analysis of on-site and off-site impacts to the mineral resource, including indication of whether any mineral resources on the Proposed Project would be minable, processable, and marketable in the near future.
 - A discussion of the economic value and significance of any impacts (if present) considering land use compatibility with the Proposed Project.
 - A discussion of any appropriate mitigation measures and project design considerations.

2.2 Proposed Project Location and Description

The Proposed Project site encompasses approximately 1,356 acres in the Jacumba Hot Springs area of unincorporated San Diego County. The Project proposes to develop approximately 642 acres of the site within a Major Use Permit (“MUP”) boundary with solar panels, a battery energy storage system, a switchyard, a substation for electrical distribution, among other things. The Proposed Project is considered interim. Specifically, the Proposed Project is estimated to have a 35-year life span, after which the Proposed Project will be decommissioned. Other than the 3.2 acre switchyard, which will be transferred to San Diego Gas & Electric after construction, the components of the Proposed Project (e.g., solar panels, inverters, transformers, battery storage system, etc.) will be removed from the Proposed Project site and the site will be restored with a compatible hydroseed mix if a new use is not proposed. As part of the Proposed

Project, a removal surety will be provided to the County to ensure the Proposed Project's decommissioning.

3.0 EXISTING CONDITIONS

3.1 Topographic Setting

The Project site is located within the USGS 7.5' Jacumba quadrangle, generally between Interstate 8 and the United States/Mexico border and near Jacumba Hot Springs, California. The Project Area is more specifically located as depicted on Figure 1 and 2 (Site Location Map and Project Overview Map).

Topography on site ranges from gently sloping valley floor to moderately steep existing natural slopes approaching 1:1 (horizontal to vertical) slope inclinations along the western and eastern boundaries of the Project site. Two northerly flowing active drainages transect the site ultimately converging into a broad drainage near the middle of the site which flows in a northerly direction eventually becoming Carrizo Gorge before discharging into the desert area near the small town of Ocotillo. Within the central valley, the existing elevations within the Proposed Project range from a high of approximately 2,800 feet above mean sea level (AMSL) in the south to a low of approximately 2,700 in the north. The surrounding hills around the valley (excluding Round Mountain to the northwest) are roughly at an elevation of 2,950 feet AMSL.

3.2 Land Use

The existing Regional Category in the County's General Plan for the majority of the 1,356-acre Proposed Project site is currently Village, within a Rural Village Boundary. There is also an approximately 38-acre parcel in the easternmost portion of the site that is in the Rural Lands Regional Category.

The 1,356-acre proposed project site has four General Plan land use designations. The majority of the site, approximately 1,214.98 acres, is designated as Specific Plan Area. The other land use designations within the Project site include: Public Agency Lands (90.22 acres), Rural Lands (37.88 acres), Rural Commercial (1.79 acres), and Village Residential (0.06 acre).

Private land to the north of the site, across I-8 is zoned S80 and S92 and designated Rural Lands (RL-80). Jacumba Airport, located adjacent to the southeastern portion of the project site, is zoned S80 and designated Public/Semi-

Public Facilities. One publicly-owned parcel, owned by California State Parks, located at the northwestern corner of the site is zoned S80 and designated Public Agency Land. California State Parks also borders the northeastern corner of the site.

The surrounding Jacumba area, which includes the community of Jacumba Hot Springs, can be characterized as a predominantly rural landscape featuring large-lot ranches and single-family homes with a mixture of small-scale agriculture, recreational opportunities, and vast areas of undeveloped lands. Old Highway 80 functions as the community's main street and runs through the southern portion of the project site. Single-family residences, limited commercial businesses, and the Jacumba branch of the San Diego County Library and an adjacent community park line Old Highway 80 throughout Jacumba. The Jacumba Airport is approximately 1 mile east of Jacumba and adjacent to the project site to the southeast. The airport is unattended, unlit and is mainly used on the weekends as an operations area for gliders (County ALUC 2011).

The community of Jacumba Hot Springs borders the Project site to the southwest and consists of denser development compared to the rest of the area, and largely consists of single-story residential development.

3.3 Mineral Resource Potential

As mandated by the Surface Mining and Reclamation Act of 1975, the California State Mining and Geology Board classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones have been established based on the presence or absence of significant sand and gravel deposits and crushed rock source area, e.g., products used in the production of cement. The classification system emphasizes Portland Cement Concrete (PCC) aggregate, which is subject to a series of specifications to ensure the manufacture of strong durable concrete. The following guidelines are presented in the mineral land classification for the region (CGS, 1982 and 1996b).

- MRZ-1 - Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

- MRZ-2 - Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that there is a high likelihood for their presence.
- MRZ-3 - Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- MRZ-4 - Areas where available information is inadequate for assignment to any other MRZ zone.

The Proposed Project is located within southeastern San Diego County which includes no mapped Mineral Resource Zones (Figure 3). Specifically, it should be noted that the Proposed Project does not contain MRZ-2 zones within or adjacent to the boundaries; the closest MRZ-2 zone to the Proposed Project is located to the southeast roughly 39 miles away (see Figure 3). The vast majority of existing MRZ-2 zones are mapped in Quaternary alluvial areas and Tertiary conglomerate deposits and therefore have irregular, organic limits defined by low-lying topographic drainages. Geologically, these areas are generally characterized by the presence of younger (Quaternary-aged) river channel, floodplain, and terrace deposits that have been eroded from the older (Tertiary to Cretaceous-aged) bedrock units, transported, and re-deposited. They consist of naturally loose mixtures of sands and rounded gravels. Laboratory testing has also confirmed the physical and chemical characteristics of these mapped deposits are appropriate for PCC-grade aggregate.

In contrast, the Proposed Project is located in an entirely different geologic province typical of the MRZ-2 zone, as described above, in that the Proposed Project site is a predominantly volcanic rock site, with fine-grained alluvial clay and clayey sand deposits overlying the volcanic rock (Figure 3). In addition, the Proposed Project is located east and outside of the County mapped P-C Boundary which is an uncategorized zone. We also note that the site is not located in an area near existing aggregate production areas. The nearest production areas within San Diego County are at least 39 miles away. Closer production areas located in Imperial County are at least 13 miles away (Figure 4).

The total Project Area encompasses approximately 1,356 acres, of which approximately 642 acres within the MUP boundary are proposed for solar project development. A portion of the 642 acres proposed for development was previously used for agricultural operations. Most of the proposed development footprint site

is covered with fallow agriculture, and a light to dense growth of annuals. A network of improved and unimproved roads provides access throughout the site. The San Diego and Arizona Eastern Railway easement is located within the western portion of the Project site. Electrical transmission lines and an easement associated with SDG&E transects the northern portion of the site.

Documented historical aggregate extraction operations have been identified on the site. A minor rock quarry was also previously located in the northeastern portion of the site, which was apparently utilized for gravel production in the past. No records of the operation were available for our review at the time of preparing this report. Based on our review of the physical pit excavation, the quality of the volcanic rock making up the pit is in our professional opinion considered substandard for aggregate use, in particular for use in aggregate for concrete. Based on our site reconnaissance and geologic mapping, we found that the volcanic rock within the pit and at the site consists of highly fractured and strongly to moderately weathered, weak, basalt. The preferred rock for aggregate production in San Diego County generally consists of fresh crystalline rock or metavolcanic rock.

It should be noted that the majority of the western San Diego region is mapped as an MRZ-3 zone (San Diego County, 2008). Generally, these areas geologically consist of the older bedrock units, including the crystalline and metavolcanic rocks that are mapped over nearly two thirds of the San Diego County. These areas are also commonly found in rugged mountainous terrain relatively isolated from existing development and infrastructure. As noted in the updated 1996 DMG classification report, these materials can be crushed to yield PCC-grade aggregate provided they possess the appropriate chemical characteristics. Despite considerable costs associated with crushing, additional processing, and transportation, crushed rock has been a feasible source when more economical alluvial materials are not readily available.

Reclassification of an MRZ-3 zone to an MRZ-2 designation is under the purview of the California State Geologist; however, the Proposed Project is in an unmapped region of San Diego County. The criteria includes determination that the “deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds (in 1996 equivalent dollars) \$12,150,000 for construction materials” (DMG, 1996b). Note this equated to \$5,000,000 in 1978 dollars when the guidelines were first written.

3.4 Geology

The Project site is located in the lower Peninsular Range Region of San Diego County, a subset of the greater Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges Geomorphic province is approximately bounded to the east by Elsinore Fault Zone, to the north by the Transverse Ranges, the south by Baja California, and to the west by the Pacific Ocean.

The Project site is underlain by Tertiary volcanic rocks, Tertiary sandstone, Cretaceous plutonic rocks, and Jurassic metamorphic rocks. The plutonic and metamorphic basement rocks are non-conformably overlain by relatively undisturbed sedimentary rocks consisting of older minor terrace deposits and a thin sequence of generally unconsolidated Holocene alluvium consisting of clayey sand with scattered gravels. The site is transected by a northwest trending pre-Holocene fault.

Approximate geologic contacts are shown on Figure 5. A brief description of the units mapped across the site is presented in the following sections.

3.4.1 Surficial Units

Surficial units onsite include undocumented artificial fill (unmapped), topsoil/colluvium (unmapped), young alluvium (map symbol Qa), and terrace deposits (map symbol Qfg), Tertiary sandstone (Ta), and bedrock units (Tb1 and Qd). More detailed descriptions of these units are presented below.

Artificial Fill (not mapped)

Artificial fill soils were observed locally at the Proposed Project site. The undocumented fills are primarily located along the current alignment of the San Diego and Arizona Eastern Railroad as embankment fills for the road and associated culverts, and as waste stockpiles in the area of the minor quarry pit. Based on limited observed exposures, these materials can generally be described as clayey to gravelly sands with abundant rock fragments in a dry to slightly moist and loose to moderately dense condition. In addition, minor undocumented fills exist locally across the site as unimproved

trails, roads, and stockpiles of end dumped rock debris. In consideration of the limited extent of the material and the plan scale, these fills are not mapped.

Topsoil/Colluvium (not mapped)

Undifferentiated topsoil was observed throughout the Proposed Project site as a thin soil veneer up to several feet thick. Thicker accumulations commonly occur near the base of slopes and natural topographic swales. As encountered, these materials ranged from less than four feet in thickness and are generally composed of silty to clayey sand and sandy clay with gravel in a dry to slightly moist and loose to moderately dense condition. Roots and minor to moderate porosity are common.

Alluvium (Qa)

Young alluvial deposits occupy the main valley area and underlie the predominant location of the Proposed Project. These materials can generally be described as silty to clayey sand with small amounts of gravel and small rock fragments in a dry to moist and loose condition, clayey silt and sandy clay in a moist and soft condition. Previous publications have indicated that alluvium could be as deep as approximately 100 to 150 feet in the deeper portions of the drainage (Leighton and Associates, 1994; Houser, C.E., and Murbach, M.L., 2014). It should be noted that alluvium should shallow in the area of the mapped basalt deposits in the middle of the main valley (Figure 5).

Terrace Deposits (Qfg)

Terrace deposits occur generally along the eastern portion of the Proposed Project as moderately dissected terraces that flank young drainage channels/valleys, in particular, those draining from east to west into the site. The older terrace deposits consist of poorly bedded, poorly to moderately consolidated sand to cobble-sized sediment in a clayey sand matrix. Clasts are generally subangular to subrounded. Matrix soils exhibit weak cementation. Based on our field mapping and subsurface exploration (Ninyo and Moore, 2017) these materials are generally about 20 feet or less in thickness.

Tertiary Sandstone (Ta)

Tertiary sandstone associated with the Anza Formation/ Table Mountain Formation occurs onsite as arkosic sandstone and conglomerate. The formation consists of poorly bedded, poorly to moderately well consolidated sand with cobble in a clayey sand matrix. Clasts are generally subangular to subrounded. As described in the literature, these materials are approximately 15 feet in total thickness and are located generally in the southeastern portion of the Project Site.

3.4.2 Bedrock Units

Jacumba Volcanics (Tb1)

The Jacumba Volcanics consist of predominantly basalt flows in the Proposed Project area. The basalt flows are largely alkali and tholeiitic with breccia and pyroclastic rocks. These rocks include the cinder cone (Round Mountain) located in the northwestern portion of the Proposed Project area.

Basement Complex (Qd)

The Proposed Project site is generally bound on the west and east by basement complex units consisting of migmatite and schist of Stephenson Peak along the west and tonalite of the La Posta along the east. In general, the tonalite consists of trondhjemite and granodiorite; the unit is leucocratic, homogenous, and largely undeformed and inclusion-free. The migmatite and schist located along the western portion of the Proposed Project consists of granodiorite orthogneiss and magmatic schist and lesser quartzite, marble and amphibolite with layers ranging from inches to tens of feet in thickness.

3.4.3 Groundwater

Based on our review of the referenced reports, groundwater at the site is generally at a depth of approximately 40 feet. Groundwater depths

historically have ranged between 0 to 60 feet. It is expected that groundwater depths have been lowered from past agricultural pumping.

3.4.4 Laboratory Testing

As part of our analysis we reviewed the Geotechnical Engineering Report for the site (Terracon 2020) which contained 29 exploratory borings and 10 test pits. As part of this report they performed laboratory testing which included 40 Atterberg Limit tests. Subsequently, to assist us with this study, Terracon performed 10 additional Sieve Analysis test, the results which were included in an addendum (Terracon 2020a). The location of all the borings and test pits are shown on their Overall Exploration Plan which is included in Appendix A along with copies of all the boring and test pit logs and laboratory data.

All of these borings and test pits and subsequent laboratory data provide a widespread look at the soil conditions across the site. The laboratory tests in general show that the soils tested contain a percentage of fines that exceed the amount typically feasible in sites utilized for mineral extraction—i.e., fines of 20% or greater. Typically soils with more than 20% fines, such as silt and clay particles, are not suitable for mining due to the additional work needed to extract these fines from the usable mineral resources on site. While the laboratory data is generally consistent across the site a few of the boring logs and laboratory tests show a lower percentage of fines in a 300 by 500 square foot area near the proposed substation and switchyard. This area, which is situated by a drainage area that transects the site, is overlain by up to 15 feet of material that is unusable as a mineral resource. Some borings show that the quality of the material may degrade at different depths, which could limit the available quantity of quality resources. However, to present a conservative analysis of the resources on the project site, this report assumes that the resource underlying the 3.2-acre switchyard is of such quality to be marketable.

Similarly, the 188 acres of the proposed biological open space easement that overlies potential mineral resources, which includes a drainage area in the northwest portion of the valley, is conservatively assumed to be underlain by similar material as the proposed switchyard.

Predominately however, the alluvial soils across much of the site contain a higher percentage of fines and are generally considered not suitable for mineral extraction.

4.0 MINERAL RESOURCE IMPACT ANALYSES

4.1 Methodology for Determination of Significance – County Guidelines

Considering the site characteristics described above, their significance is measured against the County of San Diego Department of Land Use Guidelines For Determining Significance and Report Format and Content Requirements For Mineral Resources (“County Guidelines”) (DPLU, 2008). These characteristics are based on the State CEQA Guidelines, and establish a measurable standard for determining when an impact will be considered significant pursuant to CEQA.

Under the County Guidelines (County Guidelines, 2008, pp. 16-17.), a project would generally be considered to have a significant effect, if it proposes any of the following:

1. The project is:
 - On or within the vicinity (generally up to 1,300 feet from the site) of an area classified as MRZ-2; or
 - On land classified as MRZ-3; or
 - Underlain by Quaternary alluvium; or
 - On a known sand and gravel mine, quarry, or gemstone deposit; and

The project will result in the permanent loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and

The deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds one or more of the following minimum values (in 1998 equivalent dollars):

- Construction materials (sand and gravel, crushed rock) \$12,500,000.00.²
- Industrial and chemical mineral materials (limestone, dolomite, and marble

² Value assessed in 1996 dollars.

[except where used as construction aggregate]; specialty sands, clays, phosphate, borates and gypsum, feldspar, talc, building stone and dimension stone) \$2,500,000.

- Metallic and rare minerals (precious metals [gold, silver, platinum], iron and other ferro-alloy metals, copper, lead, zinc, uranium, rare earths, gemstones, and semi-precious materials, and optical-grade calcite) \$1,250,000.00.
2. The project would result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

The County Guidelines acknowledge that if a project site falls under Guidelines 1 and 2 and is already surrounded by residential, commercial, or other land uses (improvements of high cost, such as high-density residential developments, intensive industrial developments, commercial developments, and major public facilities) that are incompatible to mining, the mineral resources for a project site and up to 1,300 feet from the project site boundary may have already been lost by those existing incompatible land uses (County Guidelines, 2008, p. 18.).

4.2 Impact Analysis

The following analysis utilizes County Guidelines dated July 30, 2008. Based on our use of those guidelines and our study, we conclude that there is a significant impact to mineral resources that will occur from the Proposed Project.

With respect to Guideline 1, the Proposed Project is underlain by quaternary alluvium. The proposed solar facility (with the exception of the switchyard) would be decommissioned at the end of its term (conservatively estimated to be 35 years), and, therefore, the Proposed Project would not result in the permanent loss of availability of a known mineral resource over much of the project site because mineral resources underlying most of the Proposed Project would be available for extraction after the Proposed Project is decommissioned. However, the resources underneath the switchyard (3.2 acres) and open space easements (188 acres) would be permanently lost. Despite boring logs and sieve analysis that suggest much of the resources would have high waste factors and poor quality, the resources underlying the 188-acre portion of the biological open space easements and switchyard are located in drainages and are

conservatively assumed to be marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years. Therefore, it is conservatively assumed that the 188-acre portion of the biological open space easement and the 3.2-acre switchyard could create a significant impact with respect to the permanent loss of minable, processable, and marketable mineral resources underlying those portions of the Project site, which in combination exceed the County's minimum value thresholds. Accordingly, the Proposed Project would result in a significant impact under Guideline 1.

With respect to the Guideline 2, the Proposed Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The Proposed Project site is not zoned as S82 by the Extractive Land Use Overlay, or General Plan Extractive Land Use Designation and Impact-Sensitive Land Use Designation. Further, no known mapped industrial and chemical materials nor metallic and rare minerals are known in the Proposed Project Area and within the setback determination area as shown on Figure 6. Accordingly, the Proposed Project would not result in a significant impact under Guideline 2.

4.2.1 Land Use Compatibility

Guideline 1 involves whether or not the deposit is minable or compatible under the present conditions, or conditions estimated to exist within a 50-year timeframe. In order to be minable, it must be considered compatible with existing land uses, and land uses projected along the 50-year future timeline.

Much of the proposed development footprint was previously used for agricultural development, but is currently fallow. Structures associated with prior dairy and farming operations are located within a portion of the site; however, these structures are unoccupied and would be demolished as part of the project. As shown on Figure 2, surrounding incompatible land uses include the residential development southwest of the project site and the commercial development northeast of the project site, which typically requires a separation of 1,300 feet. The railroad tracks, electrical transmission lines, commercial airport, and County and State roadways, are shown with a setback of 100 feet or more for purposes of this report. Figure 6 illustrates those portions of the Project Area that are within areas where a 1,300-foot buffer would apply. In addition, Figure 6 illustrates other areas

where a 100-foot buffer would apply. Based on our analysis, portions of the Project Area are effectively already a lost mineral resource because it is within buffer zones of existing adjacent residential, commercial and public facility developments.

A portion of the mapped potential aggregate resource (mapped as Qa – Alluvium) within the Project Area (570.8 acres) is outside of any buffer, resulting in that portion being available to possible future mining efforts. San Diego County Guidelines (2008) state that alluvium may be considered a potential resource. However, due to the presence of abundant fine-grained alluvial clay and clayey sand deposits, it is our professional opinion that the mapped alluvium, with the exception of the resource underlying the 3.2 acre switchyard, is not considered a minable, processable, or marketable resource based on the discussion below (Terracon 2020, and 2020a, Ninyo and Moore, 2017). Nonetheless, given the limited data regarding the quality of the mineral resources in the 188-acre portion of the open space easement, resources in the switchyard and open space easement are conservatively assumed to be of better quality and minable. The existing quarry pit consists of highly fractured and strongly to moderately weathered basalt which is not considered a quality minable resource.

Furthermore, by the nature of this Proposed Project, it is considered interim. Therefore, and of significant importance, the Proposed Project would not result in a permanent loss of the potential resource that underlies much of the project site. All proposed development would only occur within the MUP boundary (642 acres). Except the 3.2-acre switchyard site and the up to 188 acre open space easement area, this development would be removed from the Project site at the end of its life (approximately 35 years). When the solar facility is removed from the Project site, the hypothetical mineral resources at the Project site may still be extracted. In other words, outside of the switchyard and open space easements, there would be no permanent loss of a hypothetical mineral resource should the Proposed Project be developed.

Finally, as mentioned above, the nearest MRZ-2 zone is 39 miles away and the nearest aggregate production area is 13 miles away. The Proposed Project site has an abandoned quarry and is also adjacent to land uses

incompatible with mineral resource extraction (e.g., Jacumba Hot Springs).

4.2.2 Marketability and Minimum Dollar Value

As stated previously, only the switch yard and open space easement areas would lead to a permanent loss of the mineral resources underneath those areas. Accordingly, only those areas are assessed further under the County Guidelines to determine whether the deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds one or more of the minimum value thresholds. The majority of the area underneath the MUP area need not be analyzed, however, because impacts associated with the Proposed Project in that area would be interim.

As noted above, portions of the Proposed Project are situated on areas that are uncategorized (outside P-C Region Boundary) within Quaternary alluvium, which could be removed to an average depth of roughly 40 feet below the ground surface (near the approximate groundwater table). It should be noted that this removal would not be uniform across the mapped alluvium as bedrock outcrops in the middle of the site and is therefore conservative and overestimates the total actual depth of potential removal (Figure 5 – Regional Geologic Map).

If we assume that the entire area mapped as Quaternary alluvium (Qa) on the Regional Geologic Map (Figure 5) is to be considered a mineral resource based on Section 4.0 of the County Guidelines (2008), which it is not, as discussed above, a minimum value analysis demonstrates that the resource underlying the open space easements would exceed the minimum value set forth in the County Guidelines.

For this discussion we have calculated resource values assuming the entirety of the mapped potential aggregate underneath the open space easement area and switchyard are available for extraction and would be permanently lost.

It should be noted that based on our review, we find that the mapped

Quaternary alluvium is generally not consistent with significant Quaternary alluvial deposits associated with MRZ-2 and other previously mapped aggregate resource areas since it predominantly consists of clays and clayey sands, with a lack of significant gravels (Leighton and Associates, 1994; Houser, C.E., and Murbach, M.L., 2014; Ninyo and Moore, 2017). Nevertheless, the Quaternary alluvium may be considered consistent with an MRZ-2 resource for this discussion.

The available potential resources located within the open space easement area, following application of setbacks, includes up to 188 acres of open space easement area (see Figure 7), which amounts to roughly 18,006,833 tons of potential sand and aggregate. Assuming a price of \$20.00 per ton, a density of 0.055 tons per cubic foot and a waste factor of approximately 40 percent, the value of material would be roughly \$216,081,994, which would exceed the threshold (\$12,500,000) for the County's definition of a significant impact.

Lastly, assuming a permanent loss of the 3.2 acres for the switchyard which would not be removed and is located within the potential resource area (see Figure 7), we calculate a value of material at roughly \$3,679,949, which does not exceed the threshold for the County's definition of a significant impact.

Our value estimate above is based on reported resource prices (Hanson 2016 – Slaughterhouse Canyon Soils; and Vulcan verbal communication, 2016 – Carrol Canyon) for sand and aggregate material (\$20.00 per ton).

However, as previously mentioned in the text above and except with respect to the resource underlying the 3.2 acre switchyard and potentially up to 188 acres of the open space easement, alluvium and volcanic rock at the Proposed Project is not considered marketable under the technologic and economic conditions existing today or that can be estimated 50 years from today given the resources' high waste values (40%). These waste values mean that large portions of the resource underlying the site is unusable and the generally high quantity of silt and clay within the alluvial deposit would need to be removed using physical methods in order to market the product. With regard to the hard rock at the site, it is highly fractured and generally weak and is therefore not suitable for aggregate due to poor strength

quality. Given these conditions and the 40% waste factor for these resources (most commercial mining operations use a 20% waste factor as an economic feasibility threshold), outside of the 3.2-acre switchyard and potentially the 188-acre open space easement, the Proposed Project site's mineral resources are not considered processable, mineable and marketable, and would be uneconomic to develop. Note that the resources underlying the 3.2-acre switchyard do not meet or exceed the County's 12,500,000 minimum value threshold, any potential impact to those resources would be less than significant. However, the combined loss to mineral resources in the switchyard and open space easement (up to 188 acres) do exceed the County's 12,500,000 minimum value threshold and any potential impact to those resources would be significant.

Therefore, it is conservatively assumed that a portion of the open space easement and the switchyard could create a significant impact with respect to the permanent loss of minable, processable, and marketable mineral resources underlying those portions of the Project site, which exceed the County's minimum value thresholds.

4.3 Conclusions

4.3.1 Significance of Impacts

Based on our analysis, the Proposed Project is primarily an interim use and will not result in the permanent loss of availability of a known mineral resource. In addition, the Project Area is not located on or within 1,300 feet of land classified as MRZ-2, and is not on a known gemstone deposit. However, it is acknowledged that the Proposed Project is partially underlain by Quaternary alluvium and an existing abandoned rock quarry.

It should be noted the Proposed Project is adjacent to incompatible land uses (e.g., residential and commercial development) that require a 1,300-foot setback; or surrounded and transected by land uses (eg., railroad tracks, electrical transmission lines, commercial airport, and County and State roadways) that would include a 100-foot setback for any mineral extraction to occur on the Proposed Project site (See Figure 6.) Accordingly, some potential mineral resources on the Proposed Project site have already been

lost due to land use incompatibility posed by setbacks.

With regard to Quaternary alluvium within the Proposed Project site, based on our field mapping of the alluvium, and existing preliminary laboratory gradation testing, we estimate that waste factors for the majority of the site will likely exceed 40 percent (Leighton and Associates, 1994; Houser, C.E., and Murbach, M.L., 2014; Ninyo and Moore, 2017). In addition, when comparing site gradation results with Caltrans gradation specifications (Caltrans, 2018) for fine and coarse materials utilized in Portland Cement Concrete (PCC), the majority of site materials are not considered a marketable resource. It should be noted that a factor of 20 percent is what most commercial mining operations consider when looking at economic feasibility for recovery of the resource. These elevated waste factors are related to the generally clayey and fine grained sandy nature of the alluvium observed throughout much of the valley portion of the Proposed Project, and mean that a large portion of the resource underlying the site is unusable and would need to be removed using physical methods in order to market the product. This potentially elevated waste factor supports the opinion that the alluvial deposit would not be reclassified as MRZ-2 and is not marketable for mining (Personal Communication, Vulcan Materials Company, 2020).

With regard to the presence of an existing abandoned rock quarry, our mapping indicates that the rock present in the quarry is highly fractured and generally weak and is therefore not suitable for PCC aggregate due to poor strength quality.

When quantified relative to the entire extent of similar geologic exposures found across eastern San Diego County, site development could be considered negligible relative loss.

Further, the vast majority of the proposed solar facility would be decommissioned at the end of its life, which is conservatively estimated to be 35 years. Decommissioning would include removal of all solar facilities within the MUP Area, except the 3.2-acre switchyard. The open space easements associated with the Proposed Project would also remain. Accordingly, by its nature, the Proposed Project's impacts to the majority of available mineral resources on site would be considered interim, i.e., there would be no permanent loss of mineral resource should the Proposed Project be

developed. When the solar facility is removed from the Project site at the conclusion of its life span, the mineral resources at the Project site may still be extracted.

Moreover, as mentioned above, the composition of the mineral resources on the vast majority of the site renders the resources unmarketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years. The resources underlying the 3.2-acre switchyard do not meet or exceed the County's 12,500,000 minimum value threshold, any potential impact to only those resources would be less than significant. However, to present a conservative analysis, it is assumed that a 188-acre portion of the open space easement and the switchyard could create a significant impact with respect to the permanent loss of minable, processable, and marketable mineral resources underlying those portions of the Project site, which exceed the County's minimum value thresholds. Accordingly, it is assumed that up to 188 acres of the Proposed Project's open space easements and the switchyard may have a significant impact with respect to the County's Significance Guideline 1.

With regard to Significance Guideline 2, based on our review, the Proposed Project is not within a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The Proposed Project site is not zoned as S82 by the Extractive Land Use Overlay, or General Plan Extractive Land Use Designation and Impact-Sensitive Land Use Designation.

4.3.2 Mitigation Measures and Design Considerations

As stated above, a portion of the Proposed Project's open space easements (up to 188 acres) and 3.2-acre switchyard are conservatively assumed to cause a significant impact with respect to the mineral resources underlying those portions of the Proposed Project site. The County's Guidelines state that "the only mitigation and design factors appropriate would be to extract the resource and reclaim the site before project approval; to avoid the site, which would only be possible if the project site is large enough to accommodate avoidance and to also not be impacted by future mining of the resource; or to approve only land-uses that can be considered minor or temporary nature." Because the vast majority of the impact to the mineral

resources on the Project site is caused by a portion of the Proposed Project's open space easements, these mitigation measures are considered infeasible. The open space easements are intended to preserve the biological integrity of the area in perpetuity as mitigation for the Project's biological impacts within the MUP area. The 188-acre portion of the easement contains high biological value with sensitive vegetation types and provides for wildlife habitat and movement. Extracting the resources underlying the open space easements prior to Project approval would negate the primary purpose of the biological open space easements. Similarly, extracting the resource underlying the switchyard prior to construction would require additional fill underneath the switchyard prior to construction.

Other potential measures to mitigate the identified impact relate to policy decisions not under the control of the project applicant. The most effective mitigation would be for the County to identify feasible mineral resource extraction areas to implement policies that would avoid resource sterilization (encroachment by development).

Thus, in conclusion, the Proposed Project would result in a significant impact to mineral resources under Guideline 1. There are no feasible mitigation measures that could reduce this impact to less than significant. Therefore, this impact would be significant and unavoidable.

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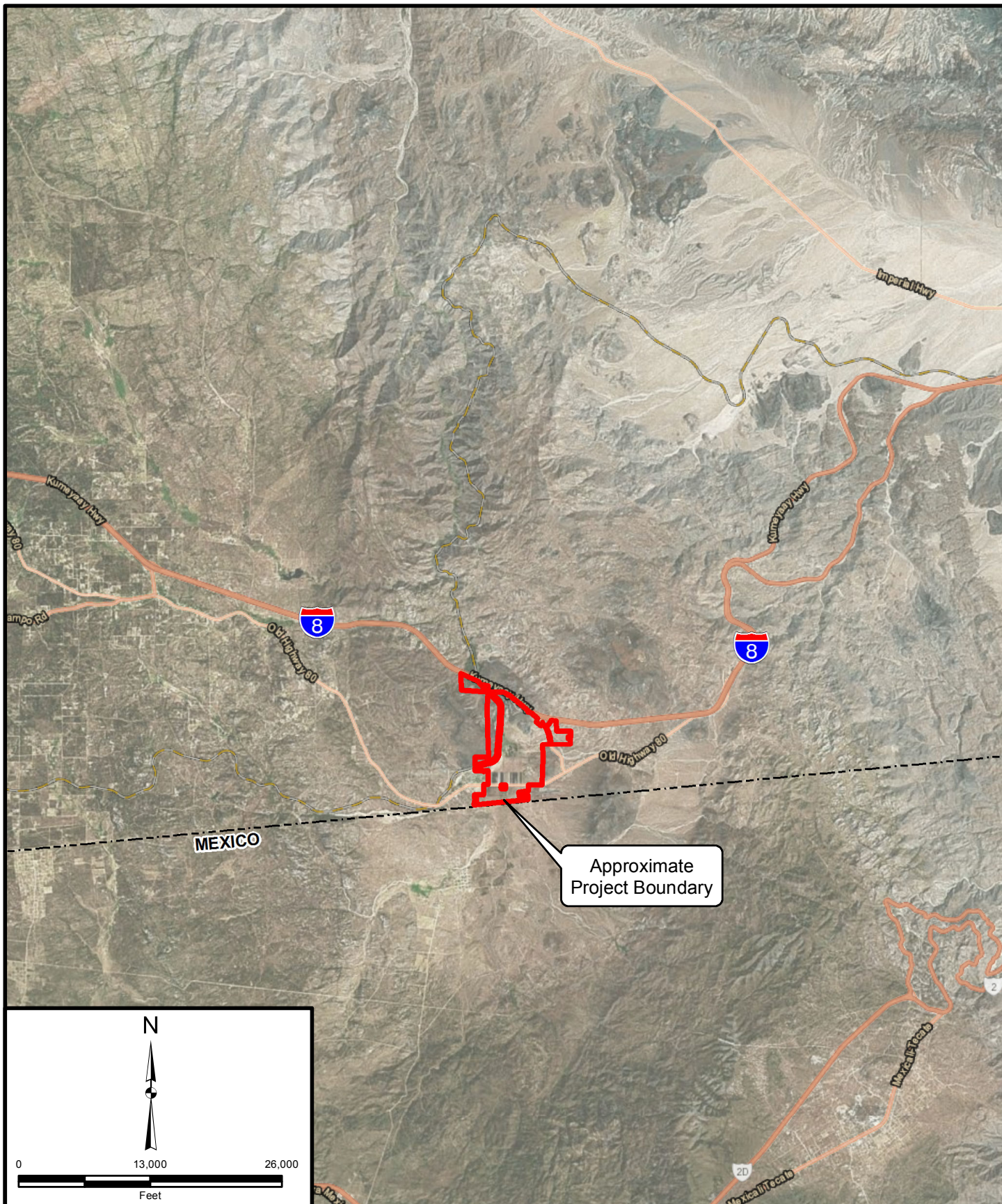
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Aerial Photographs

Aerial Photographs Reviewed for Report			
Year	Flight ID	Photo ID	Photo Scale
3-30-53	AXN	1M-5	1:24,000
3-30-53	AXN	1M-6	1:24,000
3-30-53	AXN	1M-7	1:24,000
3-30-53	AXN	2M-7	1:24,00
3-30-53	AXN	2M-6	1:24,000
3-30-53	AXN	2M-5	1:24,000

FIGURES



Project: 12312.002	Eng/Geol: RCS
Scale: 1" = 13,200'	Date: April 2020
Base Map: Bing Maps 2019	
Author: Leighton Geomatics (mmurphy)	

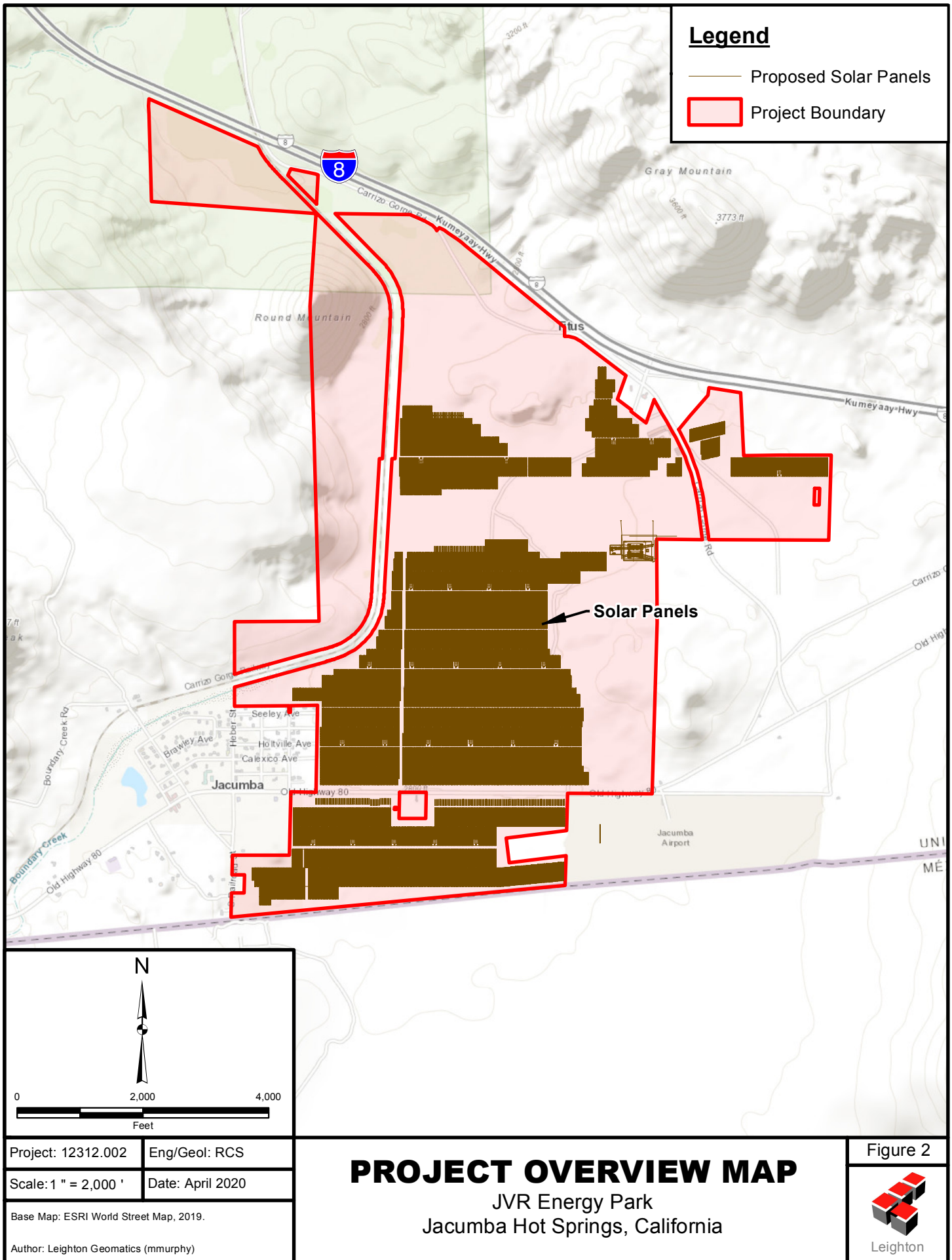
SITE LOCATION MAP

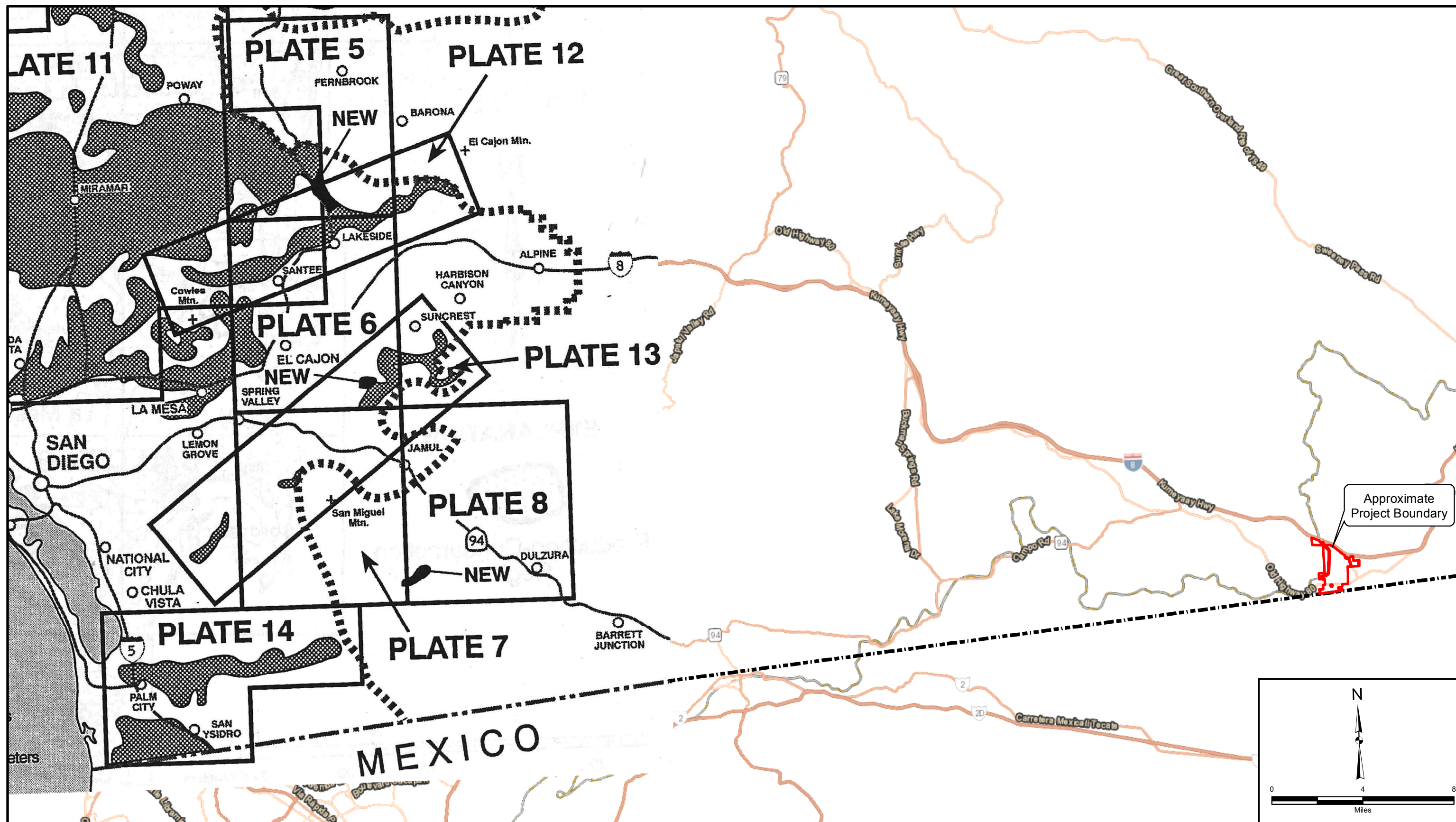
JVR Energy Park
Jacumba Hot Springs, California

Figure 1

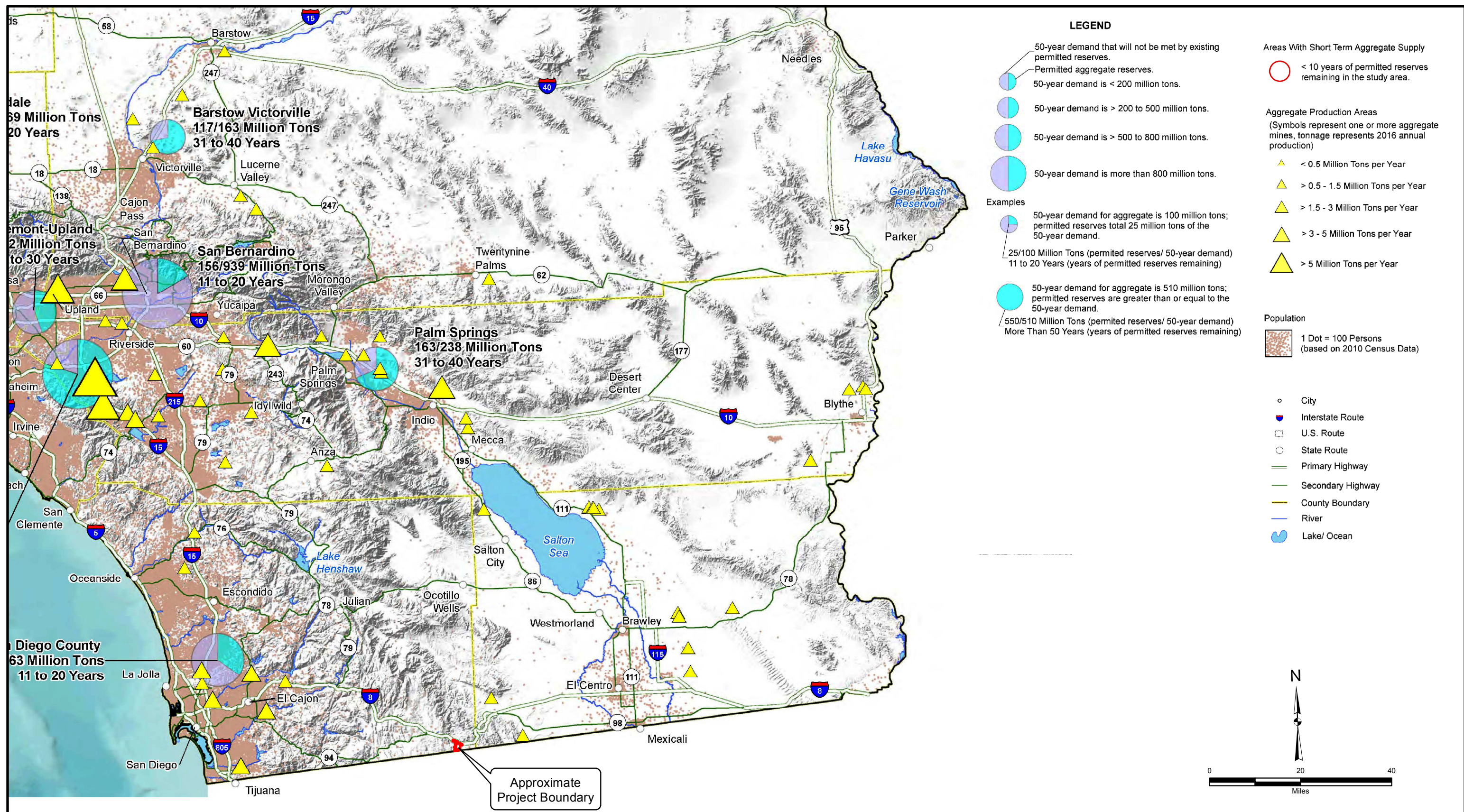


Leighton



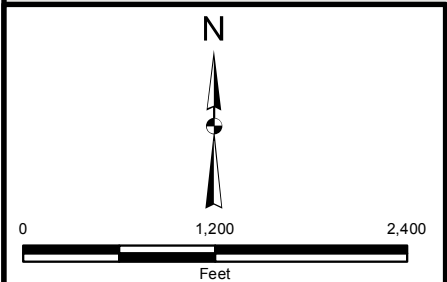
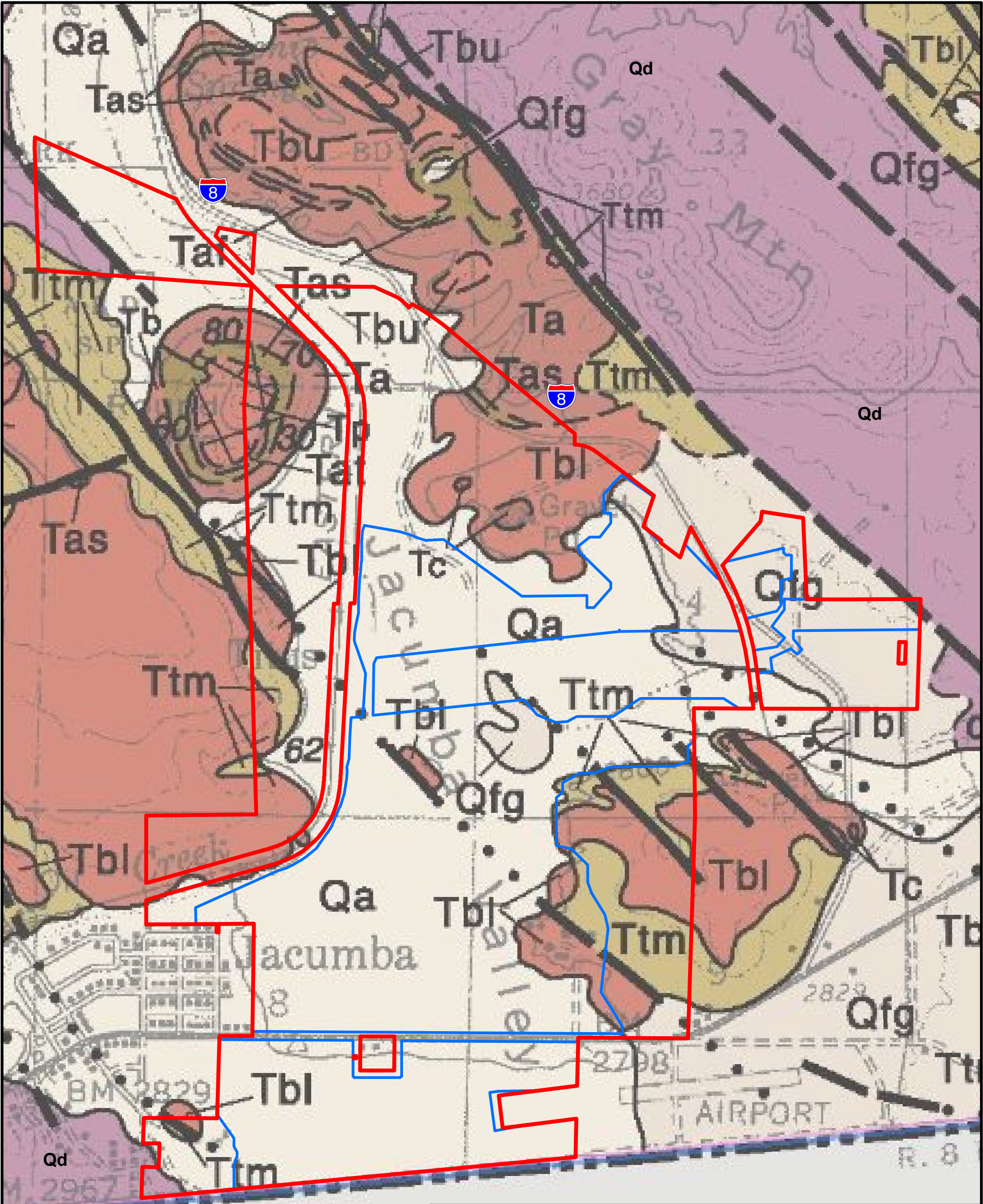


Project: 12312.002 Scale: 1" = 4 miles Base Map: Figure 2, Index Map by CMG Open-File Report 96-04 Author: Leighton Geomatics (mmurphy)	Eng/Geol: RCS Date: April 2020	<h2 style="margin: 0;">HIGHLIGHTED MINERAL RESOURCE ZONES</h2> <p style="margin: 0;">JVR Energy Park Jacumba Hot Springs, California</p>	Figure 3 Leighton
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Project: 12312.002	Eng/Geol: RCS
Scale: 1" = 20 miles	Date: April 2020
Base Map: Aggregate Sustainability in California by John P. Clinkenbeard and Fred W. Gius, 2018.	
Author: Leighton Geomatics (mmurphy)	

STATE MAPPED AGGREGATE SUSTAINABILITY MAP
JVR Energy Park
Jacumba Hot Springs, California



Project: 12312.002	Eng/Geol: RCS
Scale: 1 " = 1,200 '	Date: April 2020
Base Map: USGS	
Author: Leighton Geomatics (mmurphy)	

Map Saved as P:\Drafting\12312\002\Maps\12312-002_F05-RGM-2019-11-15.mxd on 12/19/2019 1:50:34 PM

Qa

Alluvium

Qfg

Fanglomerate

Tbu

Basalt flows

Ta

Andesite breccias

Tas

Volcaniclastic sandstones

Taf

Andesite flows

Tbl

Basalt flows

JACUMBA VOLCANICS

Tbu

Basalt flows

Ta

Andesite breccias

Tas

Volcaniclastic sandstones

Taf

Andesite flows

Tbl

Basalt flows

Ttm

Table Mountain Formation

Qd

Basement Complex (bc)

FAULT: Dashed where indefinite or inferred, dotted where concealed, queried where existence is doubtful

MUP Boundary

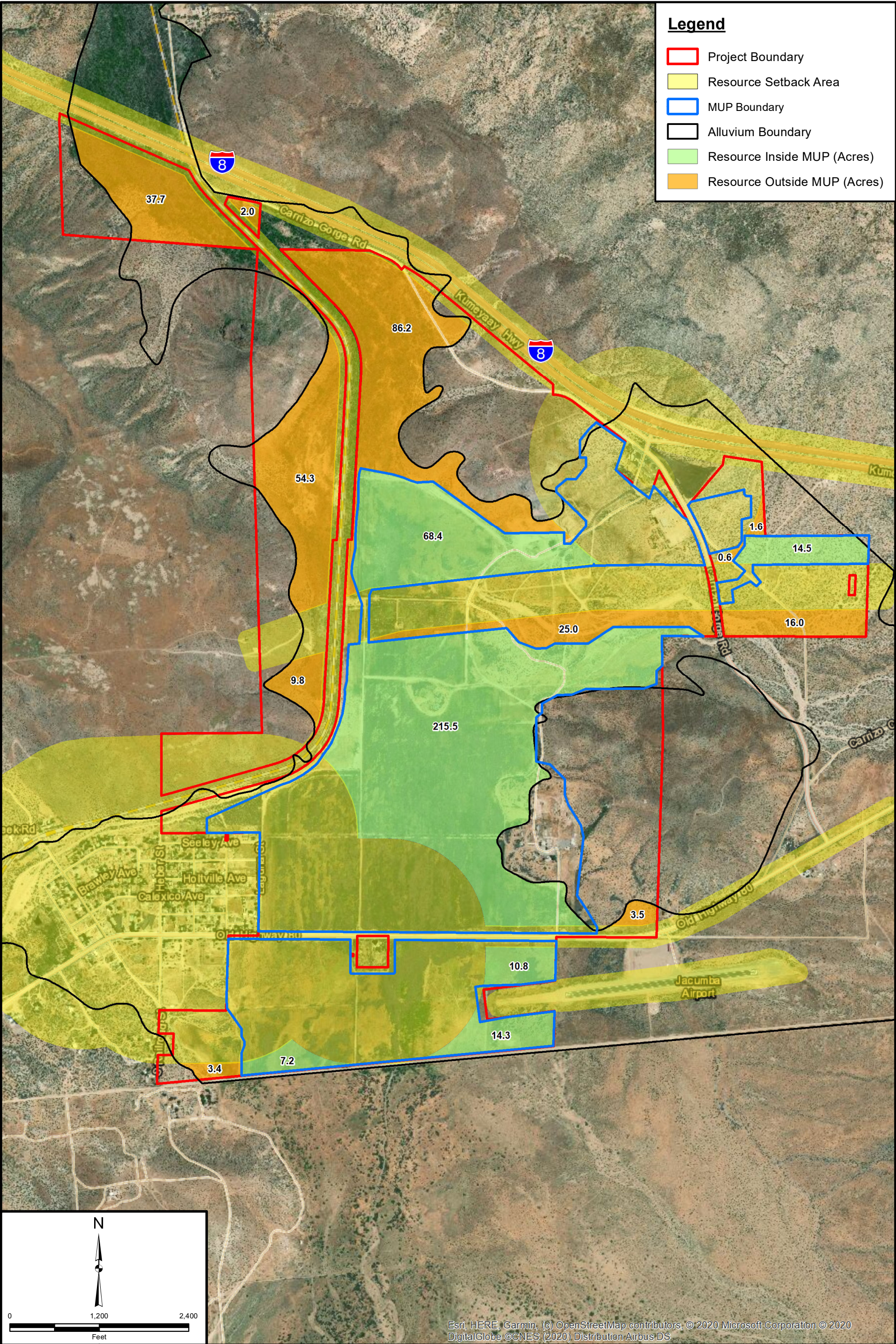
Project Boundary

REGIONAL GEOLOGIC MAP

JVR Energy Park

Jacumba Hot Springs, California

Figure 5



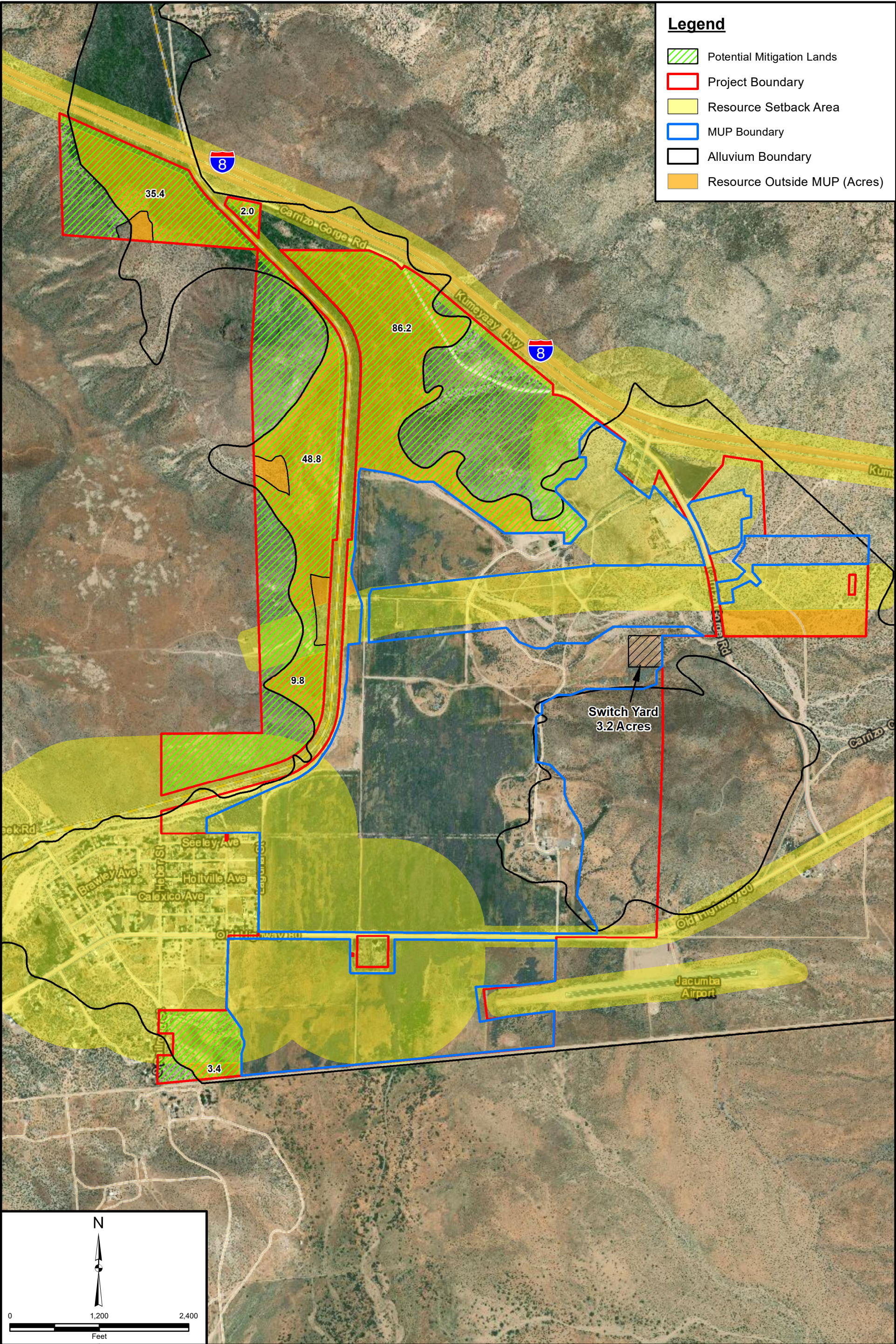
Project: 12312.002	Eng/Geol: RCS
Scale: 1" = 1,200'	Date: April 2020
Base Map: ESRI ArcGIS Online 2020	
Author: Leighton Geomatics (mmurphy)	

SETBACK DETERMINATIONS MAP

JVR Energy Park
Jacumba Hot Springs, California

Figure 6

Leighton



Project: 12312.002	Eng/Geol: RCS
Scale: 1" = 1,200'	Date: April 2020
Base Map: ESRI ArcGIS Online 2020	
Author: Leighton Geomatics (mmurphy)	

POTENTIAL MITIGATION LAND MAP

JVR Energy Park
Jacumba Hot Springs, California

Figure 7



APPENDIX A

OVERALL EXPLORATION PLAN, BORING LOGS AND LABORATORY TEST RESULTS

OVERALL EXPLORATION PLAN

JVR Energy Park ■ Jacumba Hot Springs, CA

January 29, 2020 ■ Terracon Project No. 60195238

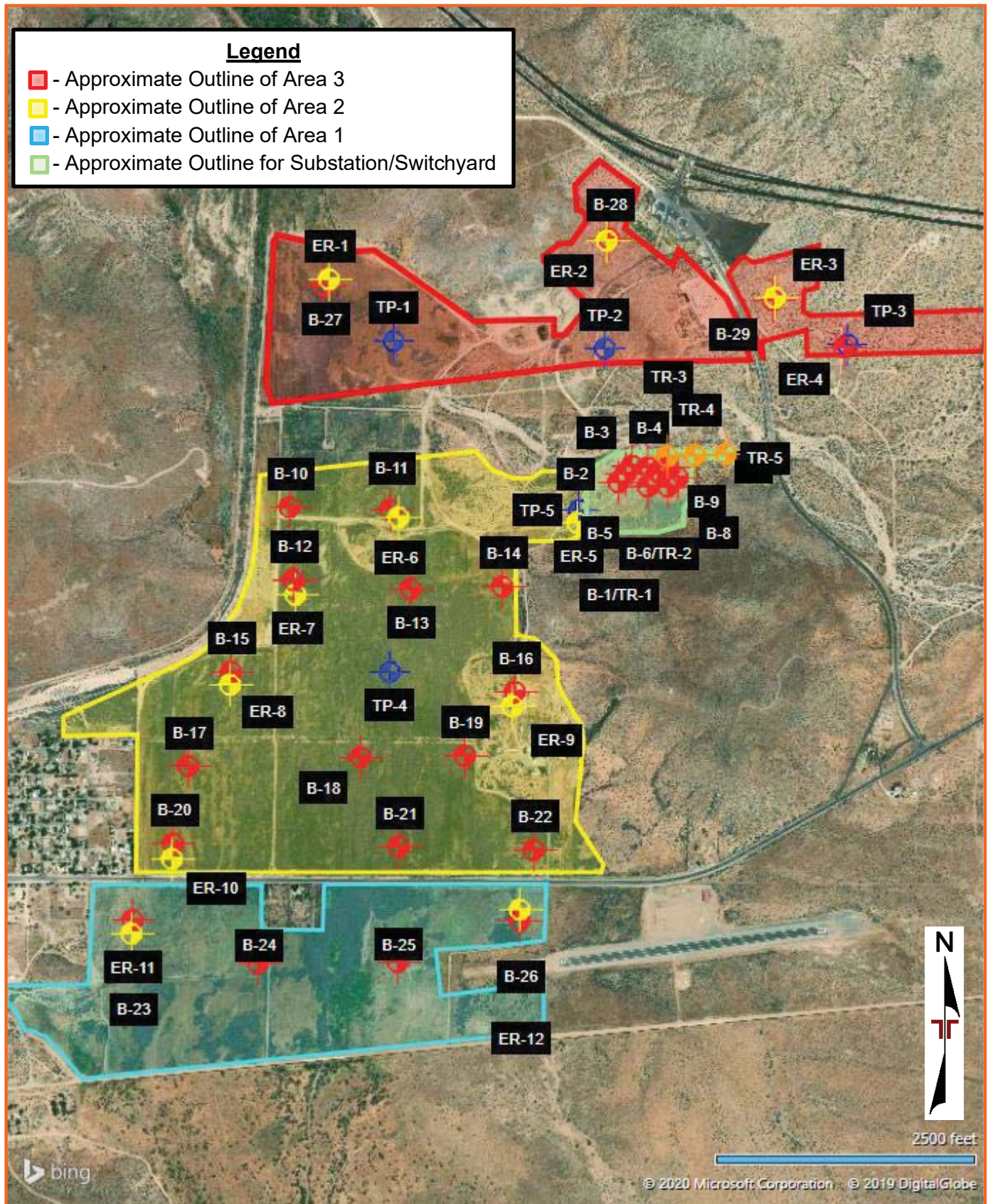


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

BORING LOG NO. B-01/T-01

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6281° Longitude: -116.1679°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM)											
	micaceous, brown, loose				9-6-9				7	87		
	5.0	5										
	POORLY GRADED SAND WITH SILT (SP-SM) , brown, medium dense				6-11-9 N=20				1			
	loose				4-3-6							
		10										
					4-6-7 N=13				4	92		
		15										
					4-4-5							
		20										
	dense				11-20-22 N=42							
	25.0	25										
	SILTY SAND (SM) , brown to tan, very dense				28-50				4	120		
	30.0	30										
	POORLY GRADED SAND WITH SILT (SP-SM) , tan, dense				11-13-14 N=27							
	31.5											
Boring Terminated at 31.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-09-2019

Boring Completed: 12-09-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

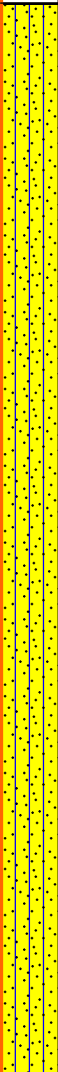
BORING LOG NO. B-02

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6283° Longitude: -116.1676°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	
	<u>SILTY SAND (SM)</u>										NP	19
	tanish yellow, loose											
		5				4-5-7			2	107		
					5-3-2 N=5							
					4-4-5			2				
					3-2-2 N=4							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-09-2019

Boring Completed: 12-09-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-03

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6285° Longitude: -116.1674°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM)										NP	27
	brown, medium dense				7-10-9				2	102		
	5.0	5			3-3-3 N=6							
	POORLY GRADED SAND WITH SILT (SP-SM) , tanish red, loose				4-5-9				2			
		10			3-5-4 N=9							
	medium dense	15			7-13-24				3			
		20			10-11-15 N=26							
		25			11-18-21							
	dense	30			10-19-26 N=45							
	31.5											
	Boring Terminated at 31.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-09-2019

Boring Completed: 12-09-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON.DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-04

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6285° Longitude: -116.1669°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM)										NP	36
	brown to tan, loose				6-5-6				6	99		
		5			4-4-3 N=7							
					4-5-6				5	88		
	POORLY GRADED SAND WITH SILT (SP-SM) , brown to tan, loose				4-4-6 N=10							
	medium dense	10			8-12-18				2			
	reddish tan	15			9-12-12 N=24							
		20			16-16-15							
	SILTY SAND (SM) , reddish tan	25			9-10-12 N=22							
		30										
	Boring Terminated at 31.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-09-2019

Boring Completed: 12-09-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-05

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6279° Longitude: -116.1669°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	<u>SILTY CLAYEY SAND (SC-SM)</u>										26-20-6	34
	brown to tan, loose				6-7-8				5	103		
		5			3-3-4 N=7							
					6-7-8				3			
	medium dense	10			5-6-7 N=13							
		15.0			9-44-29				1			
	<u>POORLY GRADED SAND WITH SILT (SP-SM)</u> , tannish gray dense											
		20			14-20-22 N=42							
	medium dense	25			16-22-21				3	104		
		30.0			5-4-3 N=7							
	<u>SILTY SAND (SM)</u> , brown to tan loose	31.5										
Boring Terminated at 31.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-10-2019

Boring Completed: 12-10-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-06/T-02

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6283° Longitude: -116.1666°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM)											
	tan to brown, loose				8-6-6				5	90		
		5			5-6-6 N=12				4	87		
	medium dense				4-7-8							
		10			6-7-10 N=17							
		15.0										
	POORLY GRADED SAND WITH SILT (SP-SM) , tan to brown medium dense				5-5-6				2			
		20			13-21-30 N=51							
		25			9-12-16				3			
		30.0										
	SILTY SAND (SM) , tan to brown very dense				40-50							
	Boring Terminated at 31.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-09-2019

Boring Completed: 12-09-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-07

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6285° Longitude: -116.1663°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM)											22
	light brown, loose				7-7-7				5	91		
	5.0	5										
	POORLY GRADED SAND WITH SILT (SP-SM) , light brown, loose				3-3-4 N=7							
	medium dense				9-13-15				2			
	10.0	10										
	POORLY GRADED SAND (SP) , light brown, loose				3-2-4 N=6							
	15.0	15										
	POORLY GRADED SAND WITH SILT (SP-SM) , tannish yellow loose				6-8-9				1			
	medium dense				8-11-14 N=25							
	20	20										
	medium dense				15-24-29				3			
	25	25										
	very dense				22-32-21 N=53							
	30	30										
	31.5											
	Boring Terminated at 31.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-10-2019

Boring Completed: 12-10-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

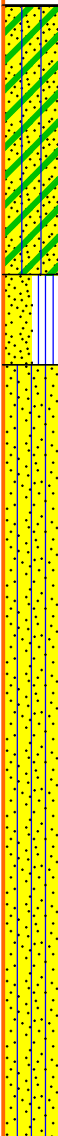
BORING LOG NO. B-08

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6279° Longitude: -116.1663°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	
	<u>SILTY CLAYEY SAND (SC-SM)</u>	5										
	light brown, loose					8-8-7						
												26-21-5
	7.5	<u>POORLY GRADED SAND WITH SILT (SP-SM)</u> , light brown, loose										
	10.0	<u>SILTY SAND (SM)</u> , tan to brown, medium dense	10									
			15									
			20									
		25										
		30										
		</										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-10-2019

Boring Completed: 12-10-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-09

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6282° Longitude: -116.166°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
DEPTH												
	SILTY SAND (SM) , light brown										NP	25
	light brown, loose				9-7-7				5	91		
		5			4-5-3 N=8							
					4-5-6				5	91		
		10			3-3-3 N=6							
15.0	POORLY GRADED SAND (SP) , light brown to yellow, medium dense	15			13-11-9				2	105		
20.0	POORLY GRADED SAND WITH SILT (SP-SM) , brown, medium dense	20			10-8-7 N=15							
	light brown	25			5-12-7				2			
30.0	SILTY SAND (SM) , loose	30			7-7-7 N=14							
31.5	Boring Terminated at 31.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-10-2019

Boring Completed: 12-10-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

Page 1 of 1

CLIENT: BayWare Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

[illegible]

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See **Exploration and Testing Procedures** for a description of field and laboratory procedures used and additional data (if any).

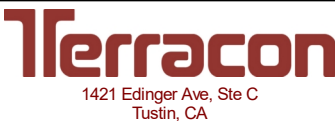
Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See **Supporting Information** for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered



Boring Started: 12-11-2019

Drill Rig: SIMCO 2800

Project No.: 60195238

Boring Completed: 12-11-2019

Driller: 2R

BORING LOG NO. B-11

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6273° Longitude: -116.175°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM) , dark brown											
	3.0				12-21-20				17	87		
	POORLY GRADED SAND WITH SILT (SP-SM) , gray to white, medium dense	5.0										
	SILTY SAND (SM) , dark brown, medium dense				5-5-5 N=10							
					12-16-20				7	93		
	10.0				8-7-7 N=14							
	POORLY GRADED SAND WITH SILT (SP-SM) , grayish tan, medium dense											
	15.0				4-4-6				37	82		
	SILTY CLAY WITH SAND (CL-ML) , dark brown, loose	16.5										
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-11-2019

Boring Completed: 12-11-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

BORING LOG NO. B-12

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6255° Longitude: -116.178°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILT WITH SAND (ML)											
	trace sand, fine grained, brown, stiff				10-14-14				9	101		
	SILTY CLAY WITH SAND (CL-ML) , micaceous, fine grained, brown, soft	5			3-4-3 N=7							
	stiff				7-7-6				17	89		
	SILTY SAND (SM) , micaceous, brown with yellow, soft	10			3-4-4 N=8							
	SILTY CLAY WITH SAND (CL-ML) , micaceous, brown, stiff	15			6-6-9				9	101		
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a
description of field and laboratory procedures used
and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of
symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-11-2019

Boring Completed: 12-11-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

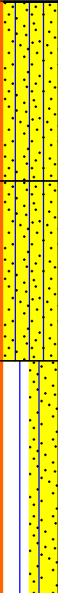
BORING LOG NO. B-13

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6252° Longitude: -116.1744° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES			
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI				
	<u>SILTY SAND (SM)</u> , dark brown medium dense	5							12	83	NP	43			
					11-13-15										
					4-5-6 N=11										
					11-14-17										
		<u>SILTY SAND (SM)</u> , dark brown, medium dense	10									NP	73		
														5-7-7 N=14	
		<u>SILT WITH SAND (ML)</u> , dark brown, stiff	15							24	85				
		very stiff												5-9-12	
	<i>Boring Terminated at 16.5 Feet</i>														

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-11-2019

Boring Completed: 12-11-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-14

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6253° Longitude: -116.1715° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<u>LEAN CLAY (CL)</u> micaceous, fine to medium grained, brown to tan, soft	5			4-4-5				4	91	39-22-17	91
				5-5-4 N=9								
	<u>SILTY SAND (SM)</u> , micaceous, reddish brown, stiff	10			20-23-18				10	106		
	<u>SILTY CLAY WITH SAND (CL-ML)</u> , trace gravels, fine to coarse grained, stiff	10			5-7-6 N=13							
	<u>SILTY SAND (SM)</u> , micaceous, fine to coarse grained, reddish brown, stiff	15			8-11-11				11	103		
	<i>Boring Terminated at 16.5 Feet</i>											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-12-2019

Boring Completed: 12-12-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-15

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6231° Longitude: -116.18°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM)											
	trace clay, fine to medium grained, brown, medium dense				11-24-30				12	93		
		5										
					8-11-10 N=21							
		7.5										
	SILTY CLAY WITH SAND (CL-ML) , with sand, hard				15-21-25				9	95		
	very stiff	10										
					9-8-8 N=16							
		15										
	SILTY SAND (SM) , micaceous, fin to medium grained, brown to tan, medium dense				8-12-12				7	100		
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-11-2019

Boring Completed: 12-11-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-16

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6225° Longitude: -116.1711°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM)										NP	26
	trace gravel, fine to medium grained, brown, dense				21-25-50/5"				13	110		
		5			12-18-20 N=38							
	SILTY CLAY WITH SAND (CL-ML) , tan, hard				27-32-50/5"				22	99		
		10			41-50						NP	26
	SILTY SAND (SM) , red brown, very dense				50/3"							
		15										
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-12-2019

Boring Completed: 12-12-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-17

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6206° Longitude: -116.1813°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM) micaceous, fine to medium graineds, brown to tan, medium dense										NP	
		5			7-18-17				9	84		
					10-7-7 N=14							
					8-12-14				9	83		
	SILTY CLAY WITH SAND (CL-ML) , very stiff	10			5-8-8 N=16							
		15			10-7-6				5	117		
	SILTY SAND (SM) , fine to coarse grained, brown to tan, loose	16.5										
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-11-2019

Boring Completed: 12-11-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-18

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6208° Longitude: -116.1759°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY CLAY WITH SAND (CL-ML) , tan											
	fine to medium grained, very stiff				9-12-20				13	91		
	SILTY SAND (SM) , brown, medium dense	5			5-6-7 N=13							
	SILTY CLAY WITH SAND (CL-ML) , red brown, very stiff				7-12-14				7	85		
	stiff	10			6-5-7 N=12							
	very stiff	15			12-14-17				5	105		
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-12-2019

Boring Completed: 12-12-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-19

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6209° Longitude: -116.1727°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY CLAY WITH SAND (CL-ML) , tan											
	fine to medium grained, very stiff				9-12-13				12	85		
	SILTY SAND (SM) , brown, medium dense	5			5-6-6 N=12							
	SILTY CLAY WITH SAND (CL-ML) , brown, very stiff	7.5			7-10-16				15	94		
	hard	15			9-7-11 N=18							
					21-23-25				26	88		
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-12-2019

Boring Completed: 12-12-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-20

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6186° Longitude: -116.1818°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	<u>SILTY SAND (SM)</u>											
	micaceous, fine to medium grained, brown, medium dense				10-14-24				5	91		
		5			4-6-6 N=12							
					10-18-19				7	94		
	fine grained, loose	10			4-5-4							
	medium dense	15			8-11-15				3	99		
	16.5											
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-11-2019

Boring Completed: 12-11-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-21

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6185° Longitude: -116.1747°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY CLAY WITH SAND (CL-ML) , micaceous, fine to medium grained, brown with white speckles											
	very stiff				9-12-14				7	94		
	5.0	5										
	SILTY SAND (SM) , fine to medium grained, brown, medium dense				5-6-6 N=12							
	7.5											
	SILTY CLAY WITH SAND (CL-ML) , micaceous, brown, very stiff				11-13-17				5	90		
	stiff				6-6-8 N=14							
	10											
	very stiff				10-14-19 N=33				5	93		
	16.5	15										
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-12-2019

Boring Completed: 12-12-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-22

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6184° Longitude: -116.1705°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY CLAY WITH SAND (CL-ML) , brown											
	micaceous, very stiff				7-9-12				8	92		
	fine grained, stiff	5			3-5-4 N=9							
	with sand, very stiff				8-12-17				10	98		
	stiff	10			5-4-4 N=8							
	fine grained to coarse grained, very stiff	15			11-15-14				9	113		
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-12-2019

Boring Completed: 12-12-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-23

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6165° Longitude: -116.183°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM)											
	micaceous, fine to medium grained, brown, medium dense				8-8-10				3	89		
	brown to tan	5			6-8-9 N=17							
	dense				22-29-36				6	104		
	medium dense	10			7-8-10 N=18							
	15.0	15			18-20-20				7	92		
	SILTY CLAY WITH SAND (CL-ML) , micaceous, fine to medium grained, brown, very stiff	16.5										
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-11-2019

Boring Completed: 12-11-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-24

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6154° Longitude: -116.1791°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	<u>SILTY CLAYEY SAND (SC-SM)</u>										25-20-5	40
	fine to medium grained, brown, loose				5-7-9				4	97		
	<u>SILTY SAND (SM)</u> , micaceous, loose	5			3-4-5 N=9							
					4-3-4				4	96		
	brown to tan, medium dense	10			4-5-6 N=11							
	<u>SILTY CLAY (CL-ML)</u> , micaceous, brown to tan, stiff	15			3-7-9				4	99		
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-12-2019

Boring Completed: 12-12-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

Page 1 of 1

CLIENT: BayWare Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

[illegible]

Hammer Type: Automatic

Notes:

See **Supporting Information** for explanation of symbols and abbreviations.

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Completed: 12-12-2019

Driller: 2R

Project No.: 60195238

BORING LOG NO. B-26

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6165° Longitude: -116.1709°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM)											
	micaceous, fine to medium grained, brown, loose				7-9-9				3	92		
	SILT WITH SAND (ML) , micaceous, brown, medium stiff	5			3-2-4 N=6							
	SILTY CLAY WITH SAND (CL-ML) , fine to medium grained, brown, stiff	7.5			7-8-10				4	87		
	SANDY SILT (SM) , stiff	10.0			4-4-7 N=11							
	SILTY CLAY WITH SAND (CL-ML) , trace gravels, fine to coarse grained, brown to tan, hard	15.0			12-50				16	109		
	Boring Terminated at 16.5 Feet	16.5										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-12-2019

Boring Completed: 12-12-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-27

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6332° Longitude: -116.1771°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY CLAY WITH SAND (CL-ML) , dark brown											
	stiff				8-12-14				5	99		
	5.0	5										
	SILT WITH SAND (ML) , dark brown, soft				6-5-4 N=9							
	7.5											
	SILTY SAND (SM) , light brown, medium dense				7-15-18				7	100		
	10.0	10										
	SILTY CLAY WITH SAND (CL-ML) , dark brown, stiff				8-12-16 N=28							
	15.0	15										
	POORLY GRADED SAND WITH SILT (SP-SM) , brown, medium dense				18-18-18				2	110		
	16.5											
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-11-2019

Boring Completed: 12-11-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-28

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6345° Longitude: -116.1681°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	
	DEPTH											
	SILTY SAND (SM) , tan to white										31-24-7	18
	very dense				50/4"				13			
	brown with black rock fragments	5			50/6"							
					33-50/3"							
	tan to white	10			26-50/6"						67-52-15	44
		15			50/5"							
	16.5											
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-11-2019

Boring Completed: 12-11-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. B-29

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6328° Longitude: -116.163°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	<u>SILTY CLAY W/SAND (CL-ML)</u>											
	micaceous, brown, hard				19-28-50/5"				8	106		
	fine to medium grained, tan	5			18-36-47 N=83							
	trace sand				50				2	110		
	micaceous, brown	10			22-21-36 N=57							
	15.0	15										
	<u>POORLY GRADED SAND WITH SILT</u> , very dense				29-36-50/4"				2	118		
	16.5											
	Boring Terminated at 16.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-12-2019

Boring Completed: 12-12-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

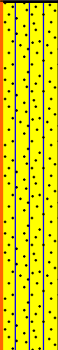
BORING LOG NO. T-03

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6287° Longitude: -116.1663° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	
	<u>SILTY SAND (SM)</u> , brown to tan <											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-10-2019

Boring Completed: 12-10-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON_DATATEMPLATE.GDT 1/10/20

BORING LOG NO. T-04

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CASITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6288° Longitude: -116.1655°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
DEPTH												
	SILTY SAND (SM) , tan to brown											
		5										
	medium dense	10			7-13-16				3			
					12-14-16							
12.5	Boring Terminated at 12.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem AugerSee [Exploration and Testing Procedures](#) for a
description of field and laboratory procedures used
and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and
concrete/groutSee [Supporting Information](#) for explanation of
symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon

1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-10-2019

Boring Completed: 12-10-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

BORING LOG NO. T-05

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6288° Longitude: -116.1645°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM) , light brown											
	medium dense	5			11-11-13				6	103		
					9-10-11				2			
	12.0											
	POORLY GRADED SAND WITH SILT (SP-SM) , tan to light yellow, medium dense				11-11-12				2			
	13.5											
	Boring Terminated at 13.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Grouted, mixed with sandy soil from soil cuttings and concrete/grout

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 12-10-2019

Boring Completed: 12-10-2019

Drill Rig: SIMCO 2800

Driller: 2R

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

TEST PIT LOG NO. TP-1

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6318° Longitude: -116.1749°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY CLAY WITH SAND (CL-ML) , some sand, fine to medium grained, dark brown tannish brown	5										
	9.0											
	10.0 SANDY SILT (SM) , micaceous, fine to medium grained, tannish brown	10										
	Test Pit Terminated at 11.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:

Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon

1421 Edinger Ave, Ste C
Tustin, CA

Test Pit Started: 01-07-2020

Test Pit Completed: 01-07-2020

Excavator: Backhoe

Operator: Neuman

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238_JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20

TEST PIT LOG NO. TP-2

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6316° Longitude: -116.1683°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	
	DEPTH SILTY SAND (SM) , micaceous, fine to medium grained, dark tan trace gravels, tannish brown	5 10										
	Test Pit Terminated at 11.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:	See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Notes:	
Abandonment Method: Boring backfilled with soil cuttings upon completion.			
WATER LEVEL OBSERVATIONS	 1421 Edinger Ave, Ste C Tustin, CA	Test Pit Started: 01-07-2020	Test Pit Completed: 01-07-2020
Not encountered		Excavator: Backhoe	Operator: Neuman
		Project No.: 60195238	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON.DATATEMPLATE.GDT 1/10/20







TEST PIT LOG NO. TP-3

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6318° Longitude: -116.1607°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
DEPTH												
	SILTY SAND (SM) , micaceous, fine to coarse graind, brown											
												
	trace gravels	5										
												
												
		10										
11.5	Test Pit Terminated at 11.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:

Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Test Pit Started: 01-07-2020

Test Pit Completed: 01-07-2020

Excavator: Backhoe

Operator: Neuman

Project No.: 60195238

TEST PIT LOG NO. TP-4

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6231° Longitude: -116.175°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	SILTY SAND (SM) , micaceous, fine to medium grained, brown											
	SILTY CLAY (CL-ML) , fine to medium grained, brown	3.5										
		5										
		7.0										
	SILTY SAND (SM) , micaceous, fine to medium grained											
		10										
		11.0										
	Test Pit Terminated at 11.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:

Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Test Pit Started: 01-07-2020

Test Pit Completed: 01-07-2020

Excavator: Backhoe

Operator: Neuman

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA.GPJ TERRACON DATATEMPLATE.GDT 1/10/20







TEST PIT LOG NO. TP-5

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6273° Longitude: -116.1691°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
DEPTH												
	SANDY SILT (SM) , trace clay, fine to medium grained, brownish tan											
												
		5										
												
												
		10										
11.5	Test Pit Terminated at 11.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:

Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Test Pit Started: 01-07-2020

Test Pit Completed: 01-07-2020

Excavator: Backhoe

Operator: Neuman

Project No.: 60195238

TEST PIT LOG NO. TP-1

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6318° Longitude: -116.1749°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	PERCENT FINES
	DEPTH											
	SANDY LEAN CLAY (CL) , some sand, fine to medium grained, dark brown			Hand								
	tannish brown			Hand							30-20-10	52
	SANDY SILT (ML) , tannish brown	5		Hand							27-22-5	67
	SILTY SAND (SM) , micaceous, fine to medium grained, tannish brown	10		Hand							NP	37
				Hand							NP	37
				Hand							NP	38
	Test Pit Terminated at 11.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:

See [Exploration and Testing Procedures](#) for a
description of field and laboratory procedures used
and additional data (if any).

Notes:

Abandonment Method:

Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of
symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Test Pit Started: 01-07-2020

Test Pit Completed: 01-07-2020

Excavator: Backhoe

Operator: Newman

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA - COPY - COPY.GPJ TERRACON DATATEMPLATE GDT 1/15/20

TEST PIT LOG NO. TP-2

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6316° Longitude: -116.1683° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI		
	SILTY SAND (SM) , micaceous, fine to medium grained, dark tan	5											
											NP	20	
											NP	25	
	trace gravels, tannish brown										NP	16	
											NP	24	
11.5		10								NP	13		
	Test Pit Terminated at 11.5 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:

Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon

1421 Edinger Ave, Ste C
Tustin, CA

Test Pit Started: 01-07-2020

Test Pit Completed: 01-07-2020

Excavator: Backhoe

Operator: Newman

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA - COPY - COPY.GPJ TERRACON DATATEMPLATE GDT_1/15/20

TEST PIT LOG NO. TP-3

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6318° Longitude: -116.1607° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	
	<u>CLAYEY SAND (SC)</u> , fine to coarse grained, brown											
	4.0										28-17-11	19
	<u>SILTY SAND (SM)</u> , micaceous, fine to coarse grained, brown										NP	14
	8.0										NP	14
	<u>POORLY GRADED SAND WITH SILT (SP-SM)</u> , trace gravels, fine to coarse grained, brown										NP	8
	11.5										NP	11
<i>Test Pit Terminated at 11.5 Feet</i>												

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:

Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon

1421 Edinger Ave, Ste C
Tustin, CA

Test Pit Started: 01-07-2020

Test Pit Completed: 01-07-2020

Excavator: Backhoe

Operator: Newman

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA - COPY - COPY GPJ TERRACON DATATEMPLATE GDT 1/15/20

TEST PIT LOG NO. TP-4

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6231° Longitude: -116.175°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	
	DEPTH											
	SANDY LEAN CLAY (CL) , micaceous, fine to medium grained, brown			Hand								
				Hand							28-20-8	59
	LEAN CLAY WITH SAND (CL) , fine to medium grained, brown	5		Hand							31-20-11	75
				Hand							24-22-2	75
	SILT WITH SAND (ML) , micaceous, fine to medium grained, brown			Hand							NP	53
	SANDY SILT (ML) , micaceous, fine to medium grained, brown	10		Hand								
	SANDY LEAN CLAY (CL) , fine to medium grained, brown			Hand							28-17-11	60
	Test Pit Terminated at 11.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:

Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Test Pit Started: 01-07-2020

Test Pit Completed: 01-07-2020

Excavator: Backhoe

Operator: Newman

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60195238 JACUMBA VALLEY RA - COPY - COPY.GPJ TERRACON_DATATEMPLATE.GDT 1/15/20

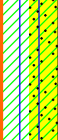


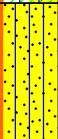






TEST PIT LOG NO. TP-5

Page 1 of 1

PROJECT: Jacumba Valley Ranch Solar

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

SITE: Old Highway 80
Jacumba Hot Springs, CA

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 32.6273° Longitude: -116.1691°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)			LL-PL-PI	
	DEPTH											
	<u>SILTY CLAY WITH SAND (CL-ML)</u> , fine to medium grained, brownish tan											
	4.0			29-22-7							71	
	<u>SILTY SAND (SM)</u> , fine to medium grained, brownish tan	5									NP	42
	8.0			NP							32	
	<u>CLAYEY SAND (SC)</u> , fine to medium grained, brown										26-17-9	39
	10.0											
	<u>SILTY SAND (SM)</u> , fine to medium grained, brownish tan	10			NP	40						
	<i>Test Pit Terminated at 11.5 Feet</i>											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:

Boring backfilled with soil cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Not encountered

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

Test Pit Started: 01-07-2020

Test Pit Completed: 01-07-2020

Excavator: Backhoe

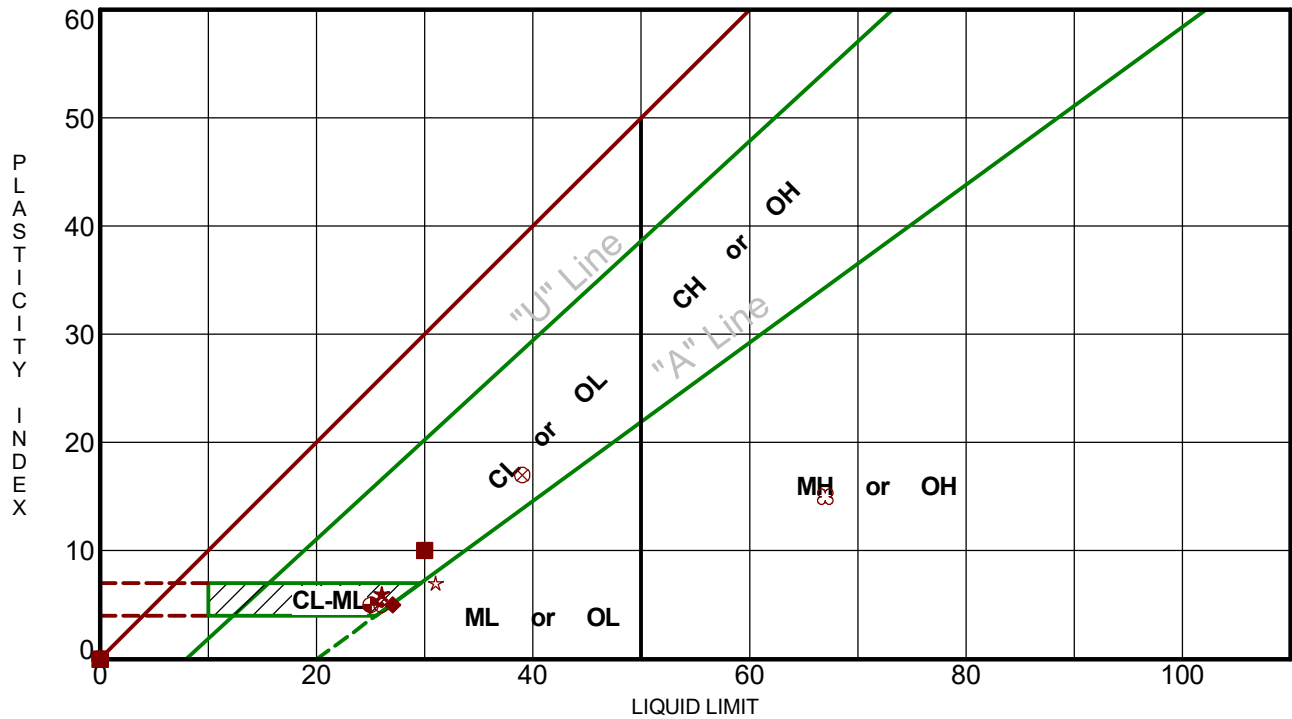
Operator: Newman

Project No.: 60195238

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 60195238 JACUMBA VALLEY RA - COPY - COPY GPJ TERRACON DATATEMPLATE GDT 1/15/20

ATTERBERG LIMITS RESULTS

ASTM D4318



Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
● B-02	0 - 2.5	NP	NP	NP	19.4	SM	SILTY SAND
⊠ B-03	0 - 2.5	NP	NP	NP	27.4	SM	SILTY SAND
▲ B-04	0 - 2.5	NP	NP	NP	35.6	SM	SILTY SAND
★ B-05	0 - 2.5	26	20	6	34.4	SC-SM	SILTY, CLAYEY SAND
⊙ B-08	5 - 6.5	26	21	5	35.0	SC-SM	SILTY, CLAYEY SAND
⊕ B-09	0	NP	NP	NP	25.2	SM	SILTY SAND
○ B-13	0	NP	NP	NP	42.5	SM	SILTY SAND
△ B-13	10 - 11.5	NP	NP	NP	73.5	ML	SILT with SAND
⊗ B-14	5 - 6.5	39	22	17	90.9	CL	LEAN CLAY
⊕ B-16	0 - 2.5	NP	NP	NP	26.4	SM	SILTY SAND
□ B-16	10 - 11	NP	NP	NP	25.9	SM	SILTY SAND
⊕ B-17	0 - 2.5	NP	NP	NP		SM	SILTY SAND
⊕ B-24	0 - 2.5	25	20	5	40.2	SC-SM	SILTY, CLAYEY SAND
★ B-28	0 - 2.5	31	24	7	17.7	SM	SILTY SAND
⊗ B-28	10 - 11	67	52	15	44.1	SM	SILTY SAND
■ TP-1	2 - 3.5	30	20	10	52.4	CL	SANDY LEAN CLAY
◆ TP-1	4 - 5.5	27	22	5	66.9	ML	SANDY SILT
◇ TP-1	6 - 7.5	NP	NP	NP	37.1	SM	SILTY SAND
× TP-1	8 - 9.5	NP	NP	NP	36.8	SM	SILTY SAND
■ TP-1	10 - 11.5	NP	NP	NP	38.0	SM	SILTY SAND

PROJECT: Jacumba Valley Ranch Solar

SITE: Old Highway 80
Jacumba Hot Springs, CA

Terracon
1421 Edinger Ave, Ste C
Tustin, CA

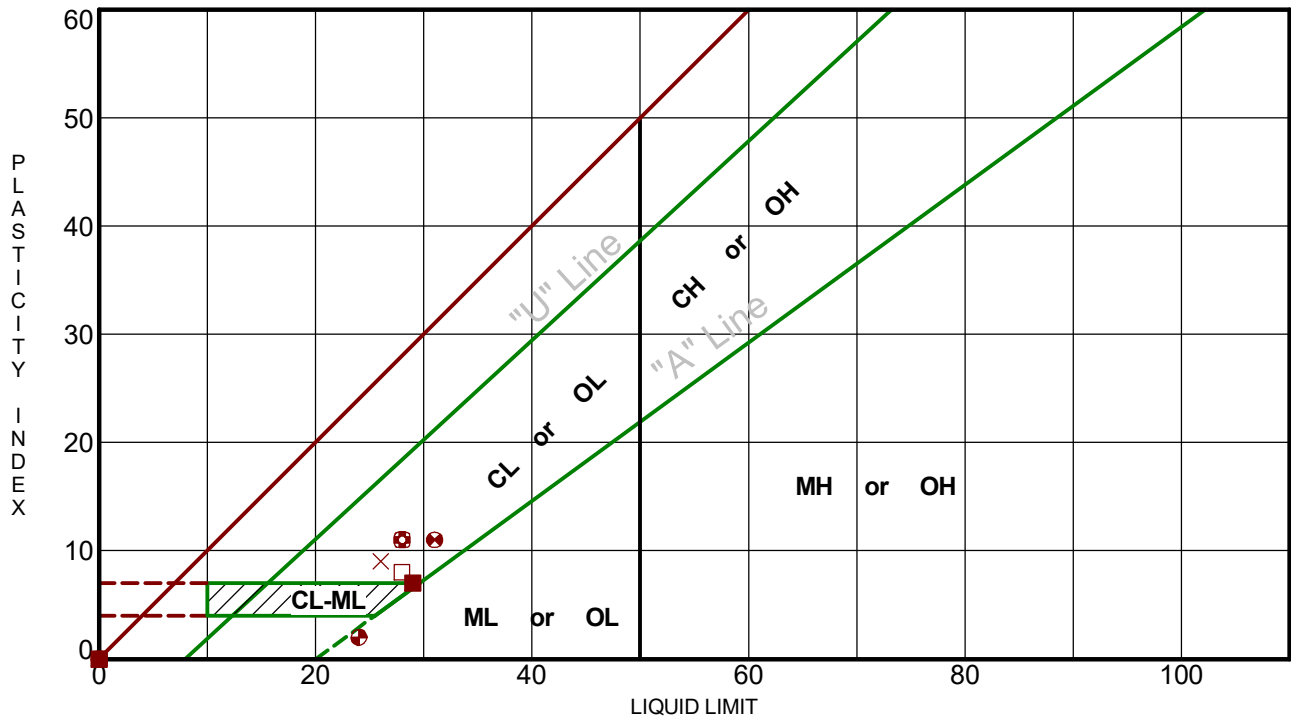
PROJECT NUMBER: 60195238

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS 60195238 JACUMBA VALLEY RANCH - COPY - COPY GPJ TERRACON DATATEMPLATE.GDT 1/15/20

ATTERBERG LIMITS RESULTS

ASTM D4318



Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
● TP-2	2 - 3.5	NP	NP	NP	20.5	SM	SILTY SAND
■ TP-2	4 - 5.5	NP	NP	NP	24.9	SM	SILTY SAND
▲ TP-2	6 - 7.5	NP	NP	NP	16.2	SM	SILTY SAND
★ TP-2	8 - 9.5	NP	NP	NP	24.4	SM	SILTY SAND
⊙ TP-2	10 - 11.5	NP	NP	NP	12.7	SM	SILTY SAND
⊕ TP-3	2 - 3.5	28	17	11	19.1	SC	CLAYEY SAND
○ TP-3	4 - 5.5	NP	NP	NP	14.0	SM	SILTY SAND
△ TP-3	6 - 7.5	NP	NP	NP	13.5	SM	SILTY SAND
⊗ TP-3	8 - 9.5	NP	NP	NP	7.5	SP-SM	POORLY GRADED SAND WITH SILT
⊕ TP-3	10 - 11.5	NP	NP	NP	11.1	SP-SM	POORLY GRADED SAND WITH SILT
□ TP-4	2 - 3.5	28	20	8	58.8	CL	SANDY LEAN CLAY
⊕ TP-4	4 - 5.5	31	20	11	75.0	CL	LEAN CLAY with SAND
⊕ TP-4	6 - 7.5	24	22	2	75.2	ML	SILT with SAND
★ TP-4	8 - 9.5	NP	NP	NP	53.0	ML	SANDY SILT
⊗ TP-4	10 - 11.5	28	17	11	60.5	CL	SANDY LEAN CLAY
■ TP-5	2 - 3.5	29	22	7	71.0	CL-ML	SILTY CLAY with SAND
◆ TP-5	4 - 5.5	NP	NP	NP	41.6	SM	SILTY SAND
◇ TP-5	6 - 7.5	NP	NP	NP	32.3	SM	SILTY SAND
× TP-5	8 - 9.5	26	17	9	38.6	SC	CLAYEY SAND
■ TP-5	10 - 11.5	NP	NP	NP	40.5	SM	SILTY SAND

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Irvine, CA



August 4, 2020

BayWa r.e. Solar Projects LLC
17901 Von Karman Avenue, Suite 1050
Irvine, California 92614

Attn: Mr. Drew Corrao
P: (949) 398-3915
E: drew.corrao@baywa-re.com

**RE: JVR Solar Project – Addendum 1
Full Sieve Test Results
Jacumba Hot Springs, San Diego County, CA
Terracon Project No. 60195238**

Dear Mr. Corrao:

Terracon was requested by Baywa to perform sieve analyses on soil samples that were collected from our soil borings during the original geotechnical exploration. The samples were selected by the design team.

Attached to this letter are the results of the sieve analyses. Testing was performed in general accordance with ASTM C136. However, the minimum test sample quantity prescribed in the ASTM was not met for sample B-02.

Lastly, the resulting classification of these samples may differ from those published in the boring logs of the original geotechnical engineering report. We have reviewed the classifications and these changes do not alter the recommendations concluded in that report.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this letter, or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants, Inc.



Joshua R. Morgan, P.E.
Department Manager



Attachments: Sieve Test Results



Terracon Consultants, Inc. 1421 Edinger Avenue, Ste. C Tustin, California 92780
P [949] 261 0051 F [949] 261 6110 terracon.com

Geotechnical



Environmental



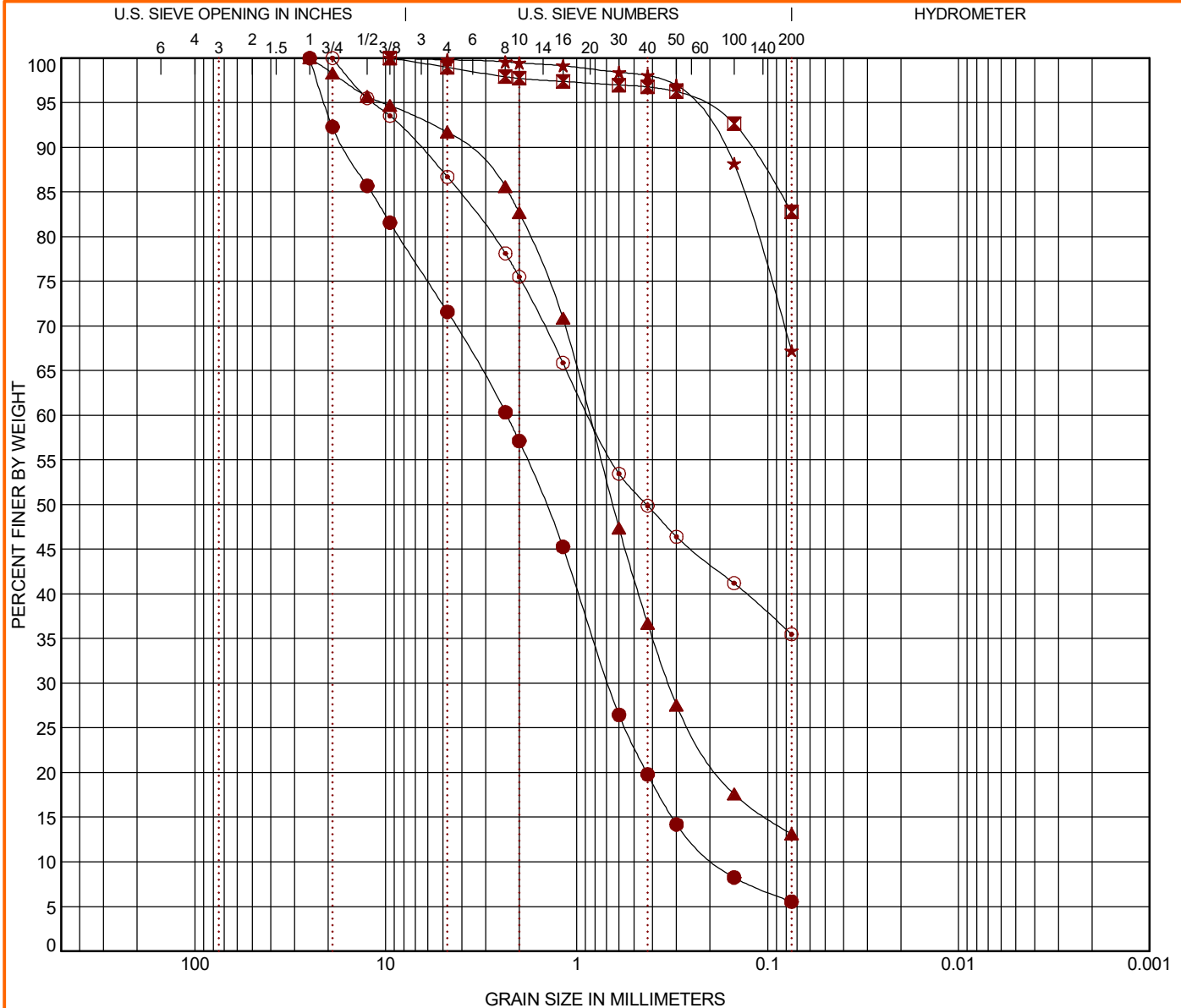
Construction Materials



Facilities

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification				WC (%)	LL	PL	PI	Cc	Cu
● B-02	20 - 21.5	GRAVELLY SAND with CLAY (SP-SC)								1.09	12.61
⊠ B-11	5 - 6.5	CLAY with SAND (CL)									
▲ B-11	10 - 11.5	SILTY SAND (SM)									
★ B-13	5 - 6.5	SANDY CLAY (CL)									
⊙ B-14	10 - 11.5	CLAYEY SAND (SC)									
Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
● B-02	20 - 21.5	25	2.32	0.681	0.184	0.0	28.4	66.0		5.5	
⊠ B-11	5 - 6.5	9.5				0.0	1.0	16.2		82.8	
▲ B-11	10 - 11.5	25	0.863	0.329		0.0	8.3	78.6		13.1	
★ B-13	5 - 6.5	9.5				0.0	0.2	32.6		67.2	
⊙ B-14	10 - 11.5	19	0.857			0.0	13.3	51.2		35.5	

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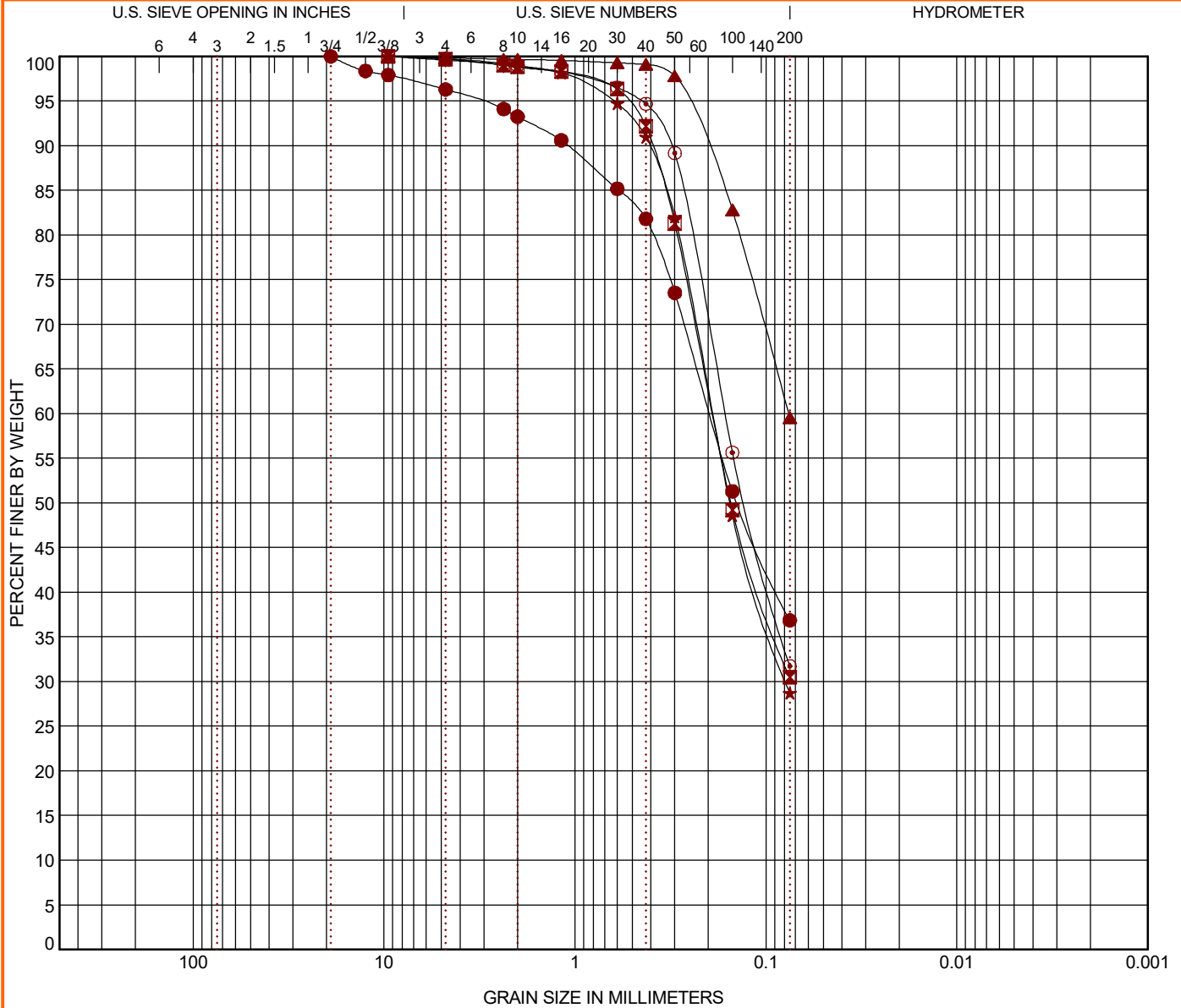
PROJECT NUMBER: 60195238

CLIENT: BayWa re Solar Projects LLC
Irvine, CA

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 60195238 JACUMBA VALLEY RA - COPY - COPY.GPJ TERRACON_DATA_TEMPLATE.GDT 8/3/20

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification				WC (%)	LL	PL	PI	Cc	Cu
● B-16	5 - 6.5	CLAYEY SAND (SC)									
✠ B-18	5 - 6.5	CLAYEY SAND (SC)									
▲ B-24	10 - 11.5	SANDY CLAY (CL)									
★ B-25	10 - 11.5	CLAYEY SAND (SC)									
⊙ B-26	10 - 11.5	CLAYEY SAND (SC)									
Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
● B-16	5 - 6.5	19	0.197			0.0	3.7	59.5		36.8	
✠ B-18	5 - 6.5	9.5	0.189			0.0	0.3	69.2		30.5	
▲ B-24	10 - 11.5	9.5	0.076			0.0	0.1	40.3		59.6	
★ B-25	10 - 11.5	9.5	0.19	0.078		0.0	0.4	70.9		28.7	
⊙ B-26	10 - 11.5	9.5	0.164			0.0	0.3	68.0		31.7	

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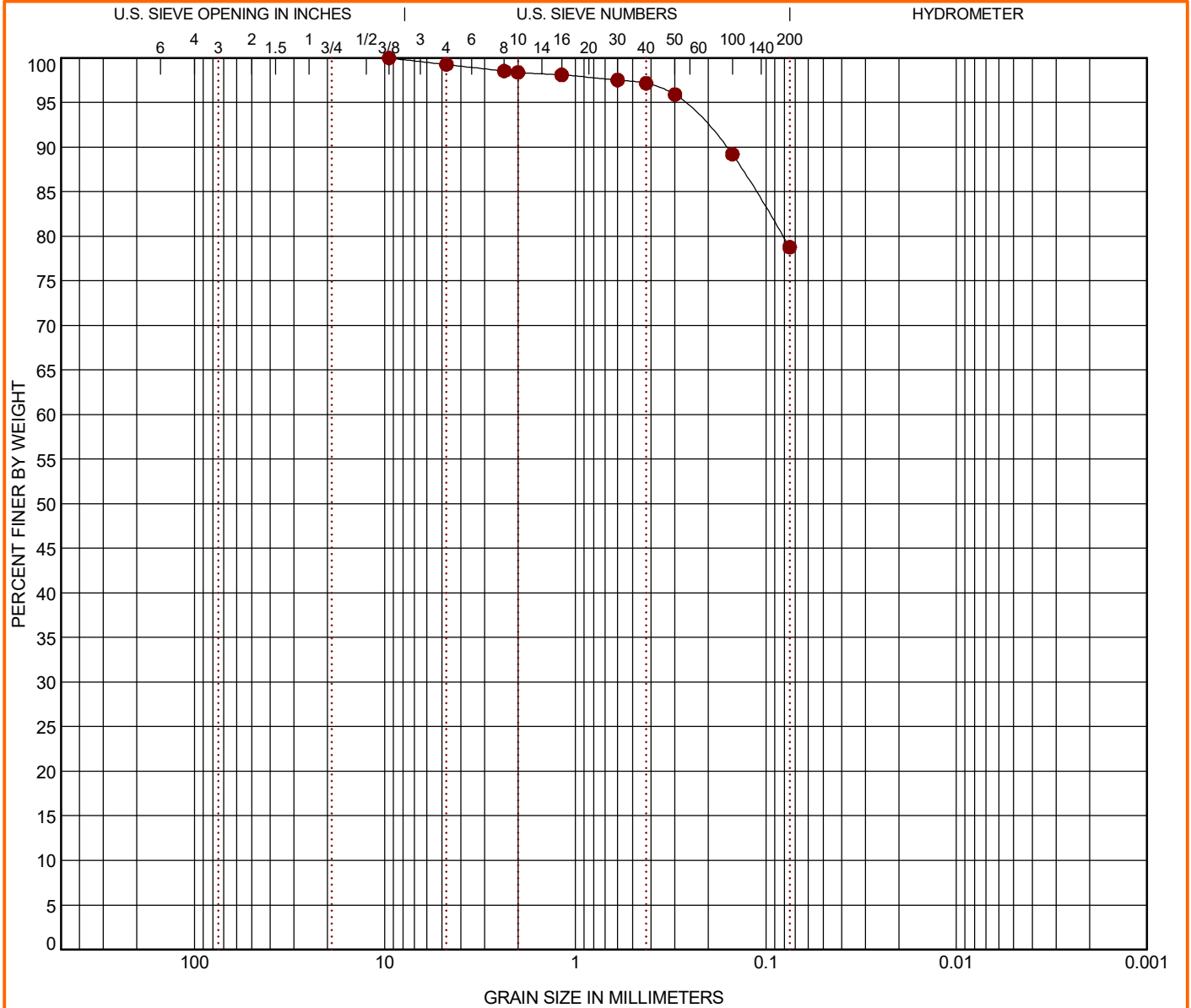
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GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136

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COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification				WC (%)	LL	PL	PI	Cc	Cu
● B-27	10 - 11.5	CLAYEY SAND (SC)									

Boring ID	Depth	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
● B-27	10 - 11.5	9.5				0.0	0.7	20.5		78.8	

PROJECT: Jacumba Valley Ranch Solar	<p>1421 Edinger Ave, Ste C Tustin, CA</p>	PROJECT NUMBER: 60195238
SITE: Old Highway 80 Jacumba Hot Springs, CA		CLIENT: BayWa re Solar Projects LLC Irvine, CA