

EXHIBIT E-2



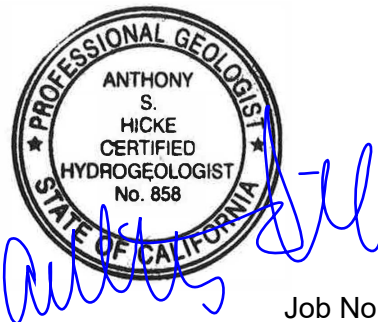
RICHARD C. SLADE & ASSOCIATES LLC
CONSULTING GROUNDWATER GEOLOGISTS

TECHNICAL MEMORANDUM

October 31, 2023

To: Mr. Bruce Phillips
Vine Hill Ranch
Sent via email: bruce@vinehillranch.com

CC: Mr. Mike Muelrath
Applied Civil Engineering Incorporated (ACE)
Sent via email: mike@appliedcivil.com



Job No. 807-NPA01

Re: Napa County Tier 3 Water Availability Analysis (WAA) for the
Trust Vineyard Partners Vineyard Development Project at
Napa County APN 027-490-006
St. Helena Highway, Napa County, CA

Introduction

This Technical Memorandum (TM) presents the key findings and conclusions regarding a Tier 3 Water Availability Analysis (WAA), prepared by Richard C. Slade & Associates LLC, Consulting Groundwater Geologists (RCS), for a proposed Trust Vineyard Partners vineyard development project on the parcel identified by Napa County Assessor's Parcel Number (APN) 027-490-006 (referred to herein as the "subject parcel"; see Figure 1, "Property Map"). The parcel boundaries presented herein were derived from publicly available parcel data provided by Napa County (2023b).

This document was prepared by RCS to provide conformance with Napa County Tier 3 requirements described in the Napa County WAA Guidelines (Napa County, 2015) in support of a 2023 Tier 1 WAA report prepared by the project engineer, Applied Civil Engineering Incorporated (ACE). That Tier 1 WAA was prepared by ACE to facilitate acquisition of an Erosion Control Plan (ECP) permit for the proposed vineyard development project and is titled "Tier 1 Water Availability Analysis for the Trust Vineyard Partners Vineyard Development Erosion Control Plan," with the most recent revision dated June 1, 2023 (ACE, 2023). The Tier 1 WAA by ACE was reviewed by the County, and the County noted that each project well located on an adjacent parcel (not 027-490-006) is within 1,500 feet of one or more County-defined Significant Streams (PBES & LSCE, 2023a & b). Napa County thus requested that a Tier 3 WAA be prepared as an additional part of the ECP permit application process, in accordance with the most recent known update to the County's WAA Guidelines (Napa County, 2023a).

The 2023 ACE WAA document includes details in fulfillment of Tier 1 WAA criteria including estimated groundwater demand, water use screening criteria, and analysis. Although RCS relied on some of those data for the subject TM, RCS does not opine herein on that Tier 1 WAA work by ACE, and RCS does not augment or confirm that Tier 1 WAA work. The subject Tier 3 WAA TM is solely intended to present a Tier 3 WAA, in direct support of the 2023 Tier 1 WAA by ACE.



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The purpose of this TM is to provide compliance with the County's WAA guidelines (Napa County, 2015 & 2023a) for a "Tier 3" WAA (i.e., a Stream Interference Evaluation), which is necessary because the project wells are located within 1,500 feet of two County-defined Significant Streams (PBES & LSCE, 2023a & b; see Figure 1). This TM is thus being submitted to show that pumping of the project wells will not affect possible surface flows in the nearby Significant Streams.

Background

Details of the proposed project and water supply are presented in the 2023 Tier 1 WAA report by ACE, but key details directly relevant to the subject Tier 3 WAA are as follows:

- Irrigation demands of the proposed new vineyards on the subject parcel will be met by groundwater pumped from three existing wells ("Well #1", "Well #2", and "Well #3") on nearby properties (see Figure 1).
- The three existing wells that are proposed to supply groundwater to the subject vineyard development project are currently used to (and will continue to be used to) provide groundwater to four nearby parcels identified by APNs 027-500-032, 027-381-015, 027-381-016, and 027-490-007 (see Figure 1). These parcels that are served by the existing wells, along with the subject parcel, are collectively referred to herein as the "subject property".

Figure 1 depicts the subject parcel, the existing project wells, and the four nearby parcels that currently receive groundwater from the existing project wells. Also shown on Figure 1 are the locations of two Significant Streams that have been identified by Napa County (PBES & LSCE, 2023a) and the 1,500-foot buffer zones around those streams (PBES & LSCE, 2023b). The eastern of these proximal Significant Streams is known as Hopper Creek, whereas the western one is known as Yount Mill Creek. Each of the project wells are within the 1,500-foot buffer zones around at least one of these Significant Streams, as shown on Table 1, below.

Table 1: Project Well to Significant Streams Distance Summary

Project Well Name	Approximate Distance to Hopper Creek	Approximate Distance to Yount Mill Creek
Well #1	489 feet	> 1,500 feet
Well #2	> 1,500 feet	179 feet
Well #3	1,071 feet	1,158 feet

Any runoff that might be present in the portion of Yount Mill Creek near the project wells flows north, to Lincoln Creek, which then conveys any flow that it might receive from Yount Mill Creek towards the northeast, ultimately entering the Napa River. Any runoff that might be present in Hopper Creek near the project wells flows to the east, then to the southeast until it converges with Dry Creek, which then flows a short distance towards the southeast before discharging into the Napa River.

Also shown on Figure 1 are the approximate locations of known or possible nearby offsite wells owned by others. The approximate locations of the known and possible nearby offsite well shown on the Figures of this TM may not be an exhaustive representation of all nearby offsite wells owned by others; other possible offsite water sources may also exist in the vicinity of the subject property. The known and possible offsite water sources shown on those Figures were identified



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based on a search of available the Napa County electronic document retrieval website (PBES, 2023). Among the documents used to help locate these known and possible offsite wells were State Well Completion Reports (WCRs, or “driller’s logs”) and County well permits.

Creek Flow Observations

RCS was able to recover only limited information related to historic surface water flows in Hopper Creek and Yount Mill Creek. Photographs of Hopper Creek and Yount Mill Creek are available from the Google Maps website, using the “Street View” function. Because both creeks are sufficiently close to roads on which “Street View” imagery has historically been captured, they can be viewed in the “Street View” images at several locations. One location from which Hopper Creek can be viewed is located southeast of the subject property, on Washington Street, referred to herein as “Observation Point A”). The location of the “Street View” photos is outside of the map extent of Figure 1, but an arrow is shown on the eastern side of the map that indicates the general direction towards and distance to Observation Point A. Similarly, a location from which Yount Mill Creek can be viewed within the “Street View” dataset (referred to as “Observation Point B” herein) is located northwest of the subject property, on Dyer Road (also outside of the map view of Figure 1; see arrow and note on northern portion of Figure 1). Only a limited number of images captured at those two stream observation point locations were available for review. Table 2, below, presents a summary of the qualitative creek conditions determined by RCS via review of those available “Street View” images. As shown in the table below, these creeks were observed to be dry in the summer and fall months of the year, whereas flow was observed in in the spring months of the year.

Table 2 – Summary of “Street View” Imagery Review

Observation Point A (Hopper Creek)			Observation Point B (Yount Mill Creek)		
Date of “Street View” Image	Flow Visible?	Qualitative Flow Rate Assessment	Date of “Street View” Image	Flow Visible?	Qualitative Flow Rate Assessment
Mar-23	Y	Significant flow	Mar-23	Y	Significant flow
Mar-19	Y	Significant flow	Mar-19	Y	Significant flow
Sep-18	N	No flow	Jun-13	N	No flow
May-17	Y	Low flow	Oct-07	N	No flow
Apr-15	Y	Low flow			
May-11	Y	Low flow			
Oct-07	N	No flow			

During a visit to the subject property on September 12, 2023, an RCS groundwater geologist walked along the transect illustrated on Figure 1, between “Creek Observation Point C” and “Creek Observation Point D”. At the time of the site visit, the geologist observed that Hopper Creek was dry along the entire transect shown. During that same site visit, Yount Mill Creek was observed by the geologist to be dry at “Creek Observation Point E” (see Figure 1) located west of Well #2.



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Napa Valley Subbasin Groundwater Sustainability Plan

In Section 6, “Groundwater and Surface Water Conditions”, of the Napa Valley Subbasin Groundwater Sustainability Plan (LSCE, 2022), a discussion of the hydraulic connection of groundwater and creeks within the County is presented, as simulated by computer modeling. Figure 6-123b therein shows the “average annual hydraulic connection” of creeks in the region and also depicts the category of streams by flow frequency (LSCE, 2022). On that Figure, the only stream within 1,500 feet of the subject property shown to have any hydraulic connection to groundwater is Hopper Creek, in two places that are roughly 1,150 feet and 1,480 feet, east and south, respectively, of Well #1. However, between these reportedly hydraulically connected portions of Hopper Creek, and generally more proximal to the subject property, connection reportedly does not occur. The two proximal sections of Hopper Creek that reportedly exhibit some hydraulic connectivity were categorized as having > 2 to 13 weeks of “average annual hydraulic connection”. No portion of Yount Mill Creek within 1,500 feet of the subject property was categorized as having any hydraulic connection to groundwater on Figure 6-123b of LSCE (2022). Also of note on Figure 6-123b of LSCE is that every portion of Hopper and Yount Mill Creeks that is within 1,500 feet of the project wells and that is not shown to have any hydraulic connection is shown as intermittent. The hydraulic connection to groundwater data presented on LSCE’s Figure 6-123b have been reproduced on Figures 1 and 2, herein; within the visible extents of Figures 1 and 2, the visible portions of Hopper and Yount Mill Creek are shown on LSCE’s Figure 6-123b as being intermittent.

Near the project wells, the intermittent nature of Hopper and Yount Mill Creeks shown on Figure 6-123b of LSCE (2022) agrees with the multiple “dry” observations of the nearby creek noted in the prior section, which were based on the Google Maps “Street View” imagery and the RCS onsite observations. The lack of hydraulic connection between these proximal streams and groundwater accessible to the project wells is further demonstrated in the following sections.

Hydrogeologic Setting

Groundwater basin boundaries in California have been defined and designated by the State Department of Water Resources (DWR) in data found in their Bulletin 118, “California’s Groundwater” (2021). Those DWR groundwater basin boundaries are the same as those used to define groundwater basin boundaries for the purposes of Groundwater Sustainability Plan (GSP) preparation for basins throughout the state. All three of the project wells are within the boundaries of the Napa-Sonoma Valley Groundwater Basin (see Figure 1).

Geologic mapping of the area is available from the California Geological Survey (CGS), and Figure 2, “Geologic Map,” was adapted by RCS from a geologic map of the region produced by the CGS (Wagner & Gutierrez, 2017). On that Figure, the lower-elevation ground surface areas of the parcels associated with project water supply and the surrounding areas are comprised of various recent surficial deposits that consist of silt, sand, gravel, and clay (map symbols Qhf, Qhl, and Qf). A landslide deposit (map symbol Qls) is also visible in the southwest corner of the map area, where it was mapped as occurring in a small, higher elevation portion of one of the parcels of the subject property.

In the higher-elevation portions of the map area, with the exception of the above-described Qls deposit, various rocks of the Sonoma Volcanics have been mapped at ground surface, including several different andesitic units assigned to the Stags Leap Volcanic Center (map symbols Psvasl, Psvbsl, and Psvatsl), and an exposure of the Dacite of Mt. George (map symbol Psvdgl).



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Various combinations of these volcanic materials are interpreted to underlie the recent surficial deposits within the visible extent of Figure 2. The thicknesses of the recent surficial deposits (map symbols Qhf, Qhl, and Qf) are not directly shown on the CGS map, but based on the Figure 2 map patterns and WCRs for wells in the immediate vicinity of the subject property, these materials likely extend to depths on the order of only 0 to 35 feet below ground surface along the cross-section alignments shown on Figures 1 & 2 (discussed in following section).

Geologic Cross Sections and Well Construction

Figures 1 and 2 show the alignments of two geologic cross sections created by RCS for the purposes of this Tier 3 WAA. The alignment of Cross Section A-A' was chosen such that it passes through Wells #1 and #3, and also through both of the proximal Significant Streams (Hopper Creek and Yount Mill Creek). Note that a nearby offsite well (WCR # e0133551) was also used to help create and constrain the subsurface interpretations shown on Figure 3A. However, because of the distance between A-A' and that offsite well, the offsite well is not shown on Figure 3A. In a similar manner to A-A', the alignment of Cross Section B-B' was created such that it passes through Well #2 and a nearby offsite well (WCR # e0221147), and also through Yount Mill Creek. That specific nearby offsite well was selected because it offered an additional control point on which to base the subsurface interpretations shown on Figure 3B, "Cross Section B-B'". An additional offsite well (WCR # e0177364) was also used to help constrain the subsurface interpretations shown on Figure 3B, but it was not shown along the Section because of the distance between B-B' and that offsite well.

The geologic cross sections prepared by RCS are shown on Figures 3A and 3B for Cross Sections A-A' and B-B', respectively. These cross sections are scaled schematic illustrations that show the geologic conditions interpreted by RCS to underlie the subject property. The elevation source used to represent the surface elevations on those figures was a digital elevation model (DEM) with a one-meter horizontal resolution (USGS, 2020b). Interpretations by RCS of the subsurface conditions were made using the geologic mapping by others described above, coupled with RCS's interpretation of the driller's descriptions of drill cuttings reported on Well Completion Reports (WCRs; attached for project Wells #2 and #3, and for offsite wells discussed herein) that are available for some of the onsite wells and nearby offsite wells in the area. Note that a WCR was not available for Well #1; available construction information for this well was limited to a sanitary seal depth found on a likely well permit for this well in PBES records (2023; permit attached), and a well depth, provided to RCS by Imboden Pumps of Napa, CA.

Cross Section A-A' (Figure 3A) shows the locations and available construction details of existing onsite Well #1 and Well #3. Cross Section B-B' (Figure 3B) shows the locations and available construction details of existing onsite Well #2, and a nearby offsite well described on WCR # e0221147. Figures 3A and 3B are both notated with the surface features that each Section alignment intercepts, including the nearby Significant Stream(s) and the subject property boundaries. Also shown on A-A' and B-B' are water level depth measurements for the wells shown on the section (where available); water level measurements shown on Figures 3A and 3B were derived from measurements shown on the respective WCRs, and also from the RCS site visit on September 12, 2023. No attempt was made to measure the water level in or otherwise access any offsite wells during that site visit.

Review of the available WCRs for wells on and near the subject property revealed the likely presence of low permeability clay deposits in the recent surficial deposits, at relatively shallow



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depths in the vicinity of the property. The driller's descriptions of drill cuttings on the WCRs for depths that ranged from 10 feet to 55 feet include terms such as "clay," "sandy clay," and "clay and gravel". Based on the depths of these descriptions, RCS interprets a low permeability deposit (or deposits) beneath the subsurface between the approximate depths of 10 to 50 feet.. RCS interprets these clay-rich, fine-grained deposits to represent a significant portion of the Qf and Qhf deposits beneath the subject property. Below the surficial alluvial deposits, RCS interprets the driller's descriptions on the WCRs as representing various portions of the Sonoma Volcanics. The shallower portion of the Sonoma Volcanics present are generally characterized by an interfingering of various ashy to tuffaceous deposits with harder and sometimes fractured volcanic flow rocks generally below the ashy to tuffaceous deposits. The interpreted depths of the geologic strata described above are reflected generally on Figures 3A and 3B. It is not possible to accurately differentiate the bottom depth of the alluvial deposits from the underlying Sonoma Volcanics rocks based solely on the driller's descriptions on the WCRs.

The existence of low permeability clay-rich layers in the shallow subsurface underlying the subject property, and overlying the water bearing materials of the Sonoma Volcanics, provides evidence that Hopper and Yount Mill Creeks are not connected to groundwater in the vicinity of the subject property. Further, as shown on Figure 3A and 3B, Well #2 and Well #3 are perforated (derive groundwater from) the fractured rocks of the Sonoma Volcanics, well below the overlying alluvial deposits. Although the perforation depths for Well #1 are not known, the depth of the sanitary seal (23 feet) extends well into or below the RCS-interpreted region of clay-rich, low permeability sediments. Hence, based on the hydrogeologic observations by RCS and the known construction of the wells, pumping of the project wells will draw groundwater from the Sonoma Volcanics, below the alluvial deposits over which both Hopper and Yount Mill Creeks flow in the vicinity of the subject property, and therefore the proposed pumping of the onsite wells for the project will not impact the intermittent flows that are occasionally present in the proximal portions of Hopper and Yount Mill Creeks.

Water Level Data

The lack of connection between groundwater accessible to the project wells and the intermittently present surface water in Hopper and Yount Mill Creeks is also demonstrated by the water level data shown on Cross Sections A-A' and B-B' (Figures 3A and 3B, respectively). Available water level data shown on those Figures was derived from the available WCRs for the depicted wells and from water levels measured in the project wells by an RCS groundwater geologist during the September 12, 2023, site visit. Note that the bottom elevations of the creeks discussed herein were assumed to be the local topographic lows along the specified Section alignments. Review of the County-provided dataset for Significant Stream locations (PBES & LSCE, 2023a) shows that, throughout the County, there are places where the mapped stream alignment does not agree with the interpreted alignment of the stream derived from topographic data and air photos.

For two of the three creek/Section alignment intersections discussed herein, the intersection of the Section alignment and the Significant Streams depiction of the creeks occurred at a topographically higher elevation than the actual creek bed as depicted in the digital elevation model (USGS, 2020b) used for this work. At the third of the creek/Section alignment intersections, where Section A-A' intersects with Hopper Creek, the topographic low near the creek along the Section line coincided with the Significant Streams depiction of the creek. Thus, the water level and creek bed comparisons presented herein are generally more conservative than if the creek



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bed elevations reported were based simply on the intersection of the Significant Streams and the Section alignments (i.e., comparison based on the elevation where the Section alignments intersected the Significant Streams would yield larger differences for most of the comparisons).

Figure 3A shows the depth and elevation of the available water levels that have been measured in Well #1 and Well #3 in relation to the bottom elevations of Hopper Creek and Yount Mill Creek, along Section A-A'. On September 12, 2023, the water levels measured in Well #1 and Well #3 were found to occur at approximately 71 and 89 feet below the bed of Hopper Creek, respectively (see Figure 3A). Those same water levels in Well #1 and Well #3 were also 88 and 107 feet below the bed of Yount Mill Creek, respectively. The water level measurement in Well #3 reported on its WCR, recorded at the time of well completion (January 17, 2009), was 48 feet below the bed of Hopper Creek, and 68 feet below the bed of Yount Mill Creek. Thus, comparison of available water level data for wells along Section A-A' to the bottom elevations of the creek beds intersected by Section A-A' shows that any surface water that might be present in these portions of Hopper and Yount Mill Creeks is disconnected from the groundwater accessible to Well #1 and Well #3 at the time of the water level measurements, by differences of at least 48 feet.

Similar to Figure 3A, but for the alignment of Section B-B', Figure 3B depicts the depth and elevation of water levels that have been measured in the wells that intersect this Section alignment, along with the surface topography along the Section alignment. Along Section B-B', those wells are Well #2 and an offsite well (WCR # e0221147). The water level measured in Well #2 on September 12, 2023, was recorded at a depth of 102 feet below the bottom elevation of the bed of Yount Mill Creek, where Section B-B' intersects the creek. As stated above, no attempt was made to access any offsite wells during that site visit by RCS, so a water level measurement was not available for the that neighbor's well on the day of the site visit. Water level measurements recorded at the time of completion of each well were derived from the WCRs for both of the Section B-B' wells. The water level reported on the WCR for Well #2, measured on January 27, 2000, was 37 feet below the bottom elevation of the Yount Mill Creek bed. On WCR # e0221147 (the offsite well) the reported water level was 96 ft deeper than the bottom elevation of the Yount Mill Creek bed on September 8, 2014. Similar to data presented on Section A-A', comparison of available water level data for the wells along Section B-B' to the creek bed bottom elevation of Yount Mill Creek along Section B-B' demonstrates that groundwater accessible to Well #2 is separated from the Creek bed bottom by at least approximately 37 vertical feet at the time of the measurements, and therefore any surface water that might be present in this portion of Yount Mill Creek was disconnected from groundwater.

Note that for the water level data available for the month of January in both the year 2000 (in Well #2) and the year 2004 (in Well #3), when surface water was likely to have been present in the creeks, the depth of the water surface in those two wells was still significantly deeper than the bottom of the creeks, by at least 37 feet.

As demonstrated above, both water level data and geologic data support the assertion that surface water flow in the portions of Hopper and Yount Mill Creeks proximal to the project wells, when present, appears to be hydraulically disconnected from the groundwater accessible to the project wells. Thus, pumping of the project wells is not anticipated to have a direct influence on streamflow conditions in these creeks within 1,500 feet of these wells. As shown on the Figure F-2 "Decision Tree" in the County's WAA Guidance Document (Napa County, 2015), and as described in the Guidance Document text, because the project wells are not hydraulically connected to surface water(s), the "Groundwater/Surface Water Evaluation is complete."



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Conclusion

Groundwater pumping from the project wells (Well #1, Well #2, and Well #3) at the subject property will not affect surface water flows, when present, in the reaches of Hopper Creek and Yount Mill Creek within 1,500 feet of these wells. This lack of connection is demonstrated by several factors, including:

- The intermittent flow character of Hopper Creek and Yount Mill Creek, near the subject property is demonstrated both by the work presented in the Groundwater Sustainability Plan (LSCE, 2022), RCS field observations, and by our independent review of “dry” conditions via available Google Maps “Street View” imagery of these creeks. Neither creek is perennial, and both typically only have flow in the winter and spring months of the year.
- Review of driller’s descriptions of earth materials on available WCRs for onsite wells and wells proximal to the subject property illustrate that a low permeability sedimentary layer exists in the shallow subsurface beneath the subject property, separating deeper groundwater accessible to the onsite wells from the intermittent flows in both Hopper Creek and Yount Mill Creek. The known perforated intervals in the project wells are deeper than the low permeability materials layer and are likely separated from surface water flows that might be intermittently present in nearby portions of these creeks. In addition, for the project well without an available WCR (Well #1), the shallowest possible perforations in the well are below the cement seal and below the top of the low permeability layer, based on available data.
- Water levels measured in the existing onsite wells when they were constructed, and water level data collected more recently from a recent RCS field visit, are significantly deeper (37 feet or more) than the bed elevations of both Hopper Creek and Yount Mill Creek (see Figures 3A and 3B). The significant differences in elevations between groundwater levels beneath the subject property and the beds of Hopper Creek and Yount Mill Creek suggests that, in the vicinity of the subject property, a hydraulic connection does not exist between the project wells and surface water that might be intermittently present in the creeks.
- Modeling work described on Figure 6-123b of the Napa Valley Subbasin Groundwater Sustainability Plan (LSCE, 2022) suggests that only limited portions of Hopper Creek near the subject property are intermittently hydraulically connected to underlying groundwater. Furthermore, any connection that might exist would likely only extend into the shallowest surficial sediments beneath the subject property. No portion of Yount Mill Creek in the vicinity of the subject property is shown on Figure 6-123b of the local Groundwater Sustainability Plan to be hydraulically connected to groundwater.

According to the WAA Guidance document (Napa County, 2015), the Tier 3 analysis has been satisfied because a lack of hydraulic connection between the project wells and the Significant Streams within 1,500 feet of these wells has been demonstrated.



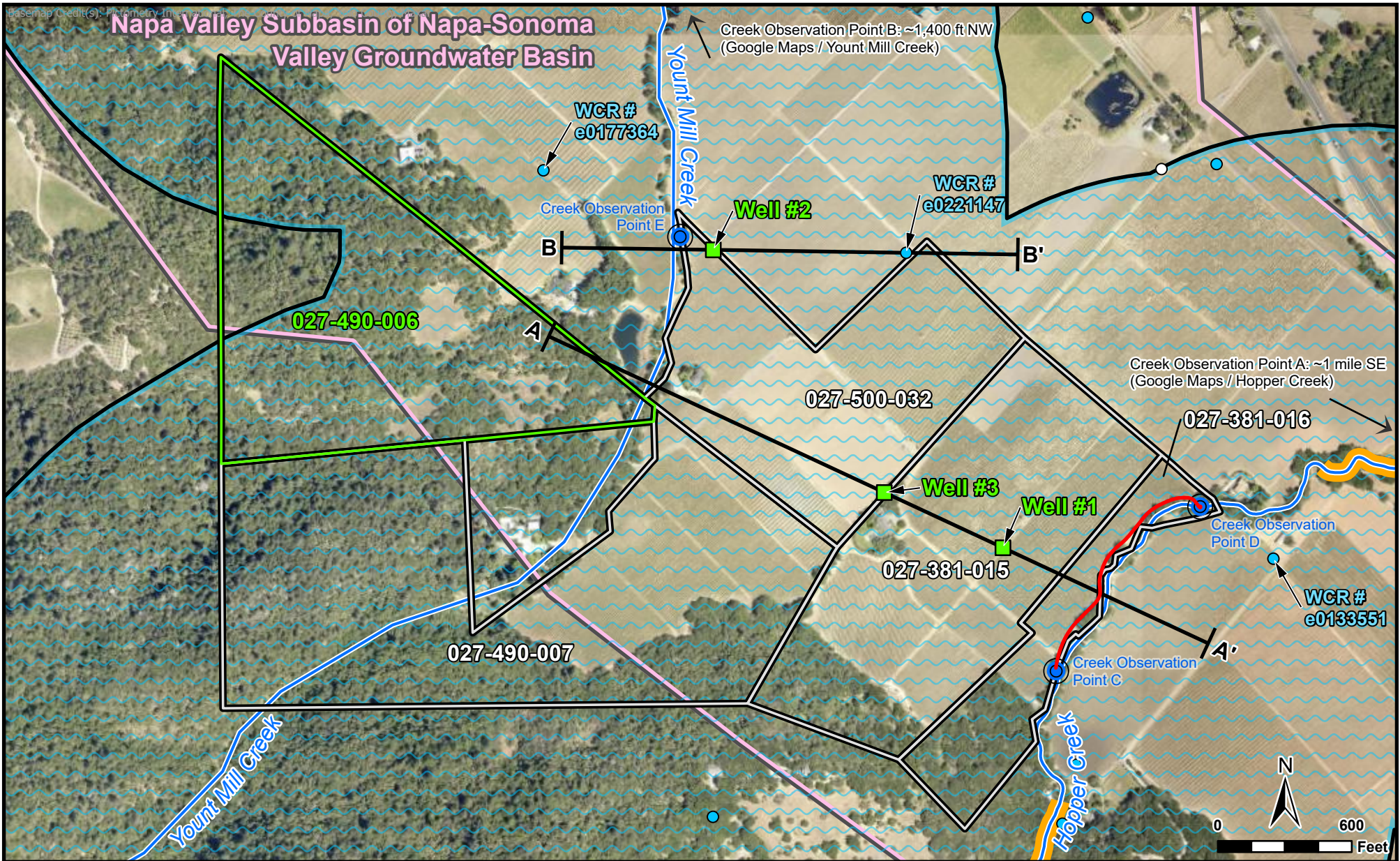
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Closure/Disclaimer

This Technical Memorandum regarding a Tier 3 WAA for a proposed vineyard development project at the Vine Hill Ranch property located at Napa County APN 027-490-006 along St. Helena Highway, CA has been prepared for Trust Vineyard Partners and applies only to the evaluation of the subject property for the requirements discussed herein. This Technical Memorandum has been prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, and in this or similar localities. No other warranty, either express or implied, is made to the calculations, conclusions, or professional advice presented herein.

References:

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- Wagner & Gutierrez, 2017 (Wagner, D.L., and Gutierrez, C.I.). *Preliminary Geologic Map of the Napa and Bodega Bay 30' x 60' Quadrangles, California*. 1:100,000-scale. California Geological Survey.



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|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| ■ Project Well | — Significant Streams (PBES & LSCE, 2023a) |
| — Groundwater Basin Boundary (DWR, 2021; Pink Line on Interior) | — >2-13 weeks Simulated Average Annual Hydraulic Connectivity (LSCE, 2022) |
| Points in RCS Database (2023; All Locations Approximate) | |
| ● Known or Possible Offsite Well | — Significant Streams 1,500-foot Buffer (PBES & LSCE, 2023b) |
| ○ Possible Offsite Well - Possibly Destroyed | — Subject Property Parcels (Napa County, 2023b) |
| ● Creek Observation Point | — Project Parcel (showing APN) |
| — RCS Transect (9/12/2023) | — Parcel with Shared Groundwater Supply (showing APN) |
| | — Cross Section Alignment (see Figures 3A & 3B) |

Note: All locations shown are approximate.

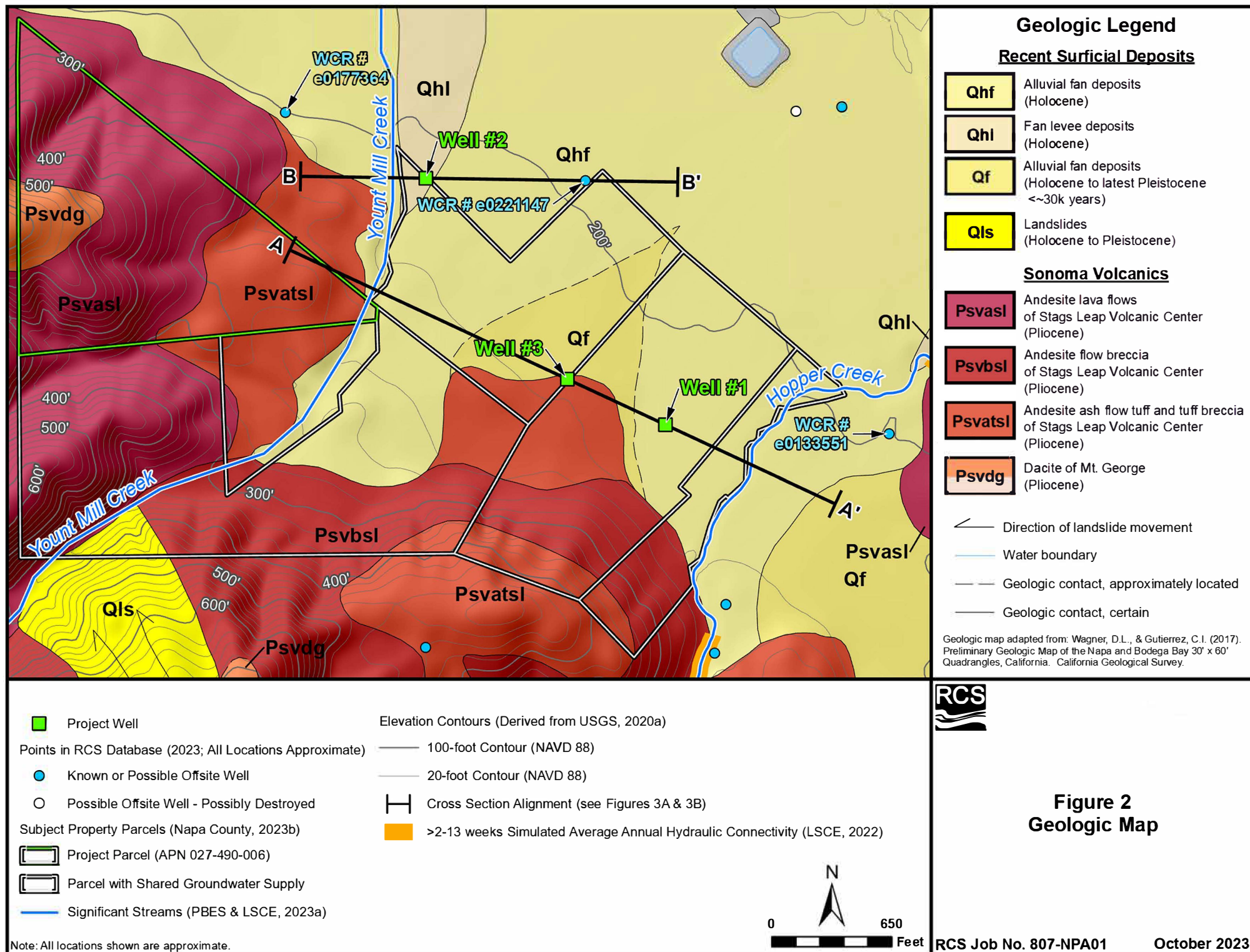


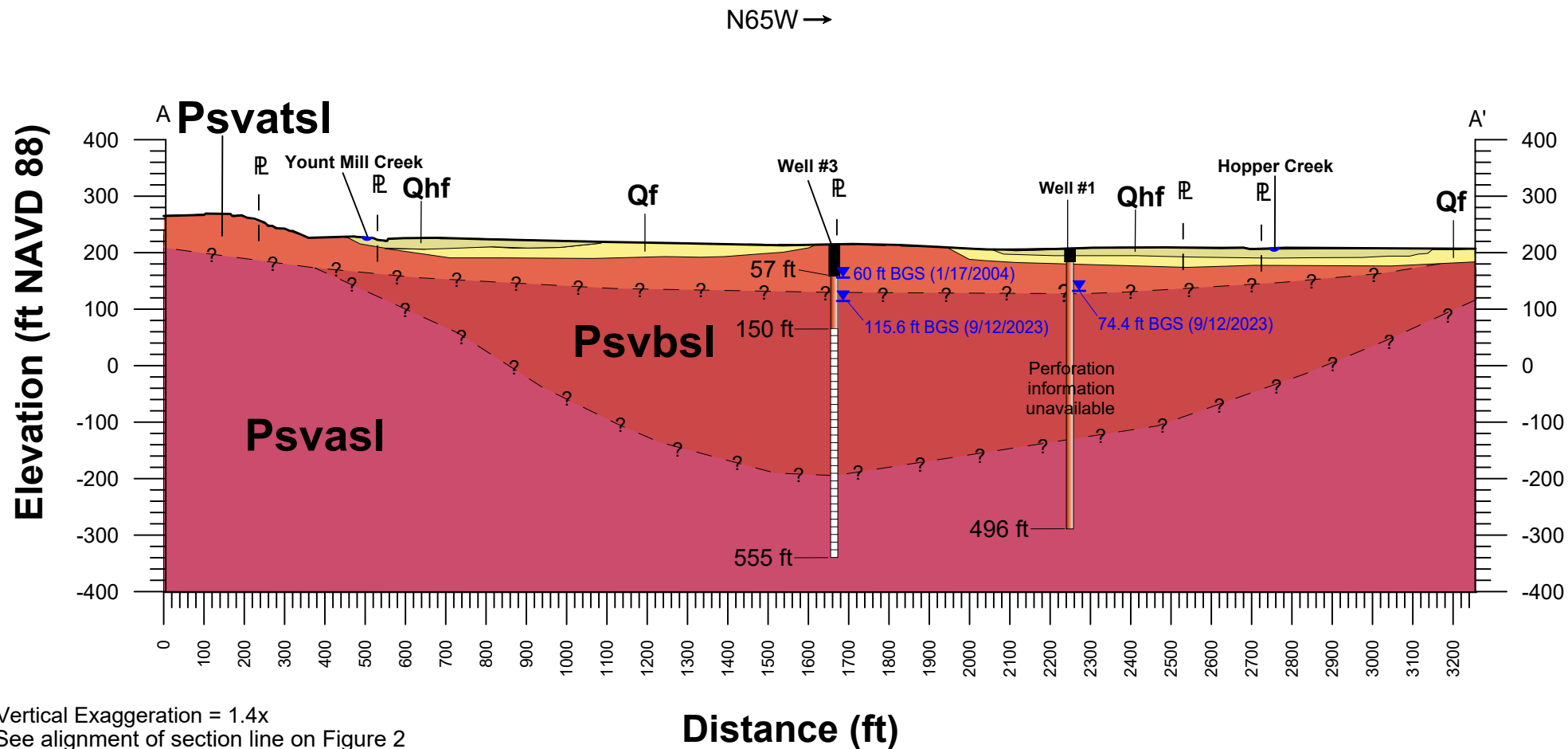
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**Figure 1
Property Map**

RCS Job No. 807-NPA01

October 2023



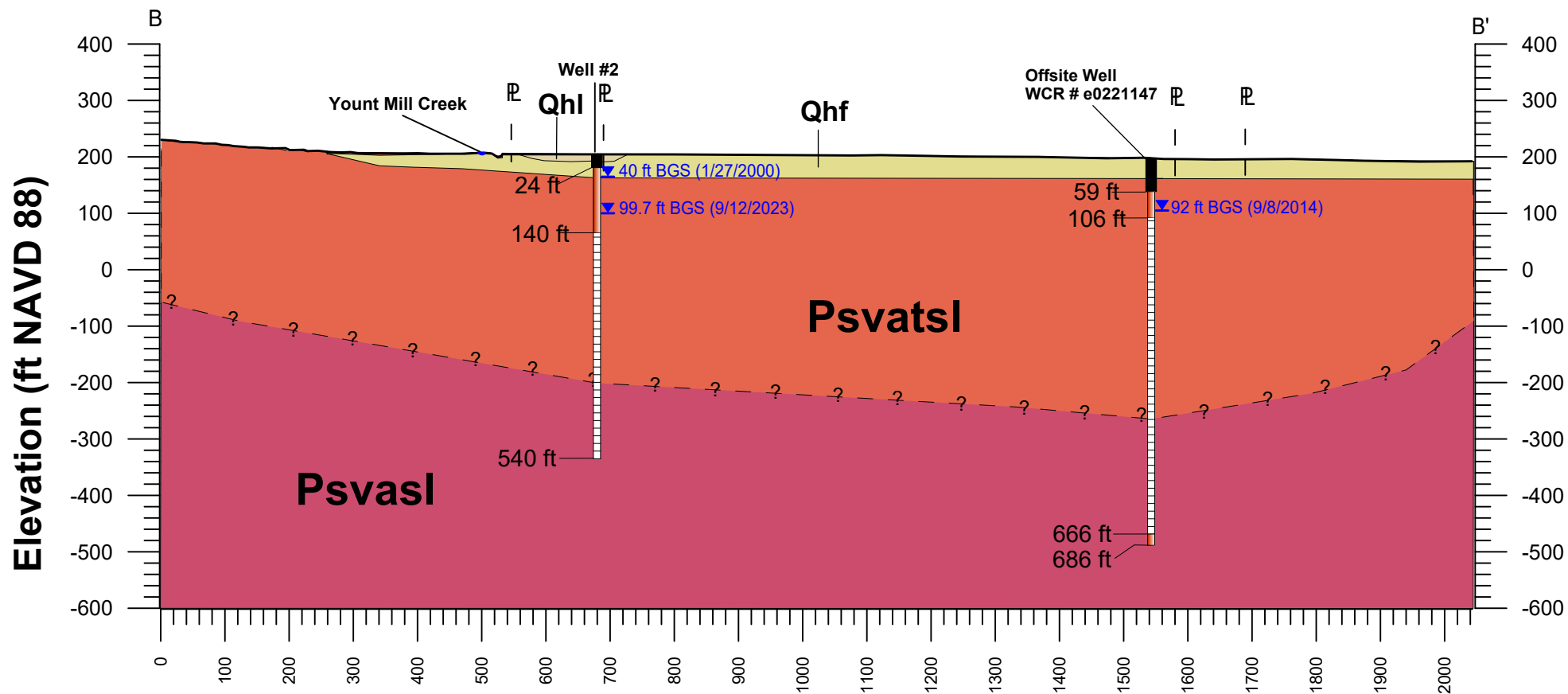


Vertical Exaggeration = 1.4x
 See alignment of section line on Figure 2
 ft NAVD 88 = Feet North American Vertical Datum of 1988.
 ft BGS = feet below ground surface
 Note:
 Casing depth for Well No. 1 was provided by
 Imboden Pumps of Napa, CA. No other
 well details provided.

Cross section based on Wagner & Gutierrez (2017)
 Elevation profile derived from USGS DEM (2020b)



S89E→



Vertical Exaggeration = 0.9x

See alignment of section line on Figure 2

ft NAVD 88 = Feet North American Vertical Datum of 1988.

ft BGS = feet below ground surface

Distance (ft)

Cross section based on Wagner & Gutierrez (2017)

Elevation profile derived from USGS DEM (2020b)

LEGEND

Perforated Casing

Blank Casing

Sanitary Seal

Static Water Level

Property Line

Contact

—?— Uncertain Contact

Qhl Holocene alluvial fan levee deposits

Qhf Holocene alluvial fan deposits

Psvasl Andesite lava flows of Stags Leap Volcanic Center (Pliocene)

Psvatsl Andesite ash flow tuff and tuff breccia of Stags Leap Volcanic Center (Pliocene)



FIGURE 3B CROSS SECTION B - B'

RCS Job No. 807-NPA01

October 2023



TECHNICAL MEMORANDUM

ATTACHMENTS

County Permit for Project Well #1

WCRs for Project Wells #2 & #3

WCRs for Selected Nearby Offsite Wells

Onsite Well #1

DATE 11/3/94
 FEE \$119.00
 RECEIPT NO. 37588
 BY me

A.P.# 27-381-001 ⁰¹⁵
 RECORD # 5285

NAPA COUNTY
 DEPT. OF ENVIRONMENTAL MANAGEMENT
 APPLICATION & PERMIT TO CONSTRUCT A WATER WELL

NAME Bob Phillips ADDRESS 7349 St. Helena Hwy Yountville
 (Owner) (Job Location)
 NAME Pulliam Drilling PHONE # 2249396
 (Well Driller) ADDRESS 2877 Piedmont Ave.

TYPE OF WORK New Class I PERMIT ☒ Test Hole Date Called In _____
New Class II PERMIT ☐ U.S.G.S. Map Received _____
Well Reconstruction ☐ Well Deepening _____ Horizontal Well _____
Well Destruction ☐ High Hazard _____ Low Hazard _____ Hand Dug _____

PROPOSED USE DOMESTIC ☐ IRRIGATION ☒ INDUSTRIAL ☐ MUNICIPAL ☐
TEST WELL ☐ HOT WATER ☐ (D.O.G. Clearance _____) OTHER _____

Sewage Disposal System (existing or proposed) Public _____ Individual ☒ Private _____
 Distance from well to any part of nearest sewage disposal system 500+ feet.
 Septic System Location Determined By: owner
 Plot plan of well location received yes County road setback _____ ft. from centerline.

WORKER'S COMPENSATION COVERAGE: (Check one of the following)
☒ A certificate of current Worker's Compensation Insurance coverage is presently on file with this office.
☐ A certificate of current Worker's Compensation Insurance is being filed with this application.
☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation laws in California.

TERMS OF PERMIT

- 1) Call at least 24 hours in advance to schedule an inspection.
 - 2) Prior to receiving a Final Clearance on the well, a copy of the Department of Water Resources "Water Well Drillers Report" (DWR-188) must be returned to our Department.
- Old Wells to be Destroyed: _____
 Other Remarks: no Haz. Sites

Bob Pulliam 11-3-94
 Signature of Applicant Date

 FOR OFFICE USE ONLY

	Date	By	Remarks
City Clearance			
Pub. Works Clearance			
Pre-Inspection			
Class II Approval			
Permit Issued	<u>11/3/94</u>	<u>gm</u>	
Const. Insp.	<u>11/9/94</u>	<u>GWDP</u>	<u>SEAL TO 23'</u>
Well Log Rec.			
Final Insp.			

CAYMUS RANCHO
T.7N., R.5W., M.D.B.&M.

50

381

41

WELL

LINE

SMALL

TPM 365
11/11/11
24.10 AC. ±

1	S 22-01-22E	127.20
2	N 37-16-19E	193.66
3	N 62-53-01E	79.02
4	N 89-51-51E	233.80
5	N 62-56-16E	146.55
6	S 77-49-24E	115.16
7	S 77-49-44E	20.34
8	N 33-53-22E	116.39

381

③

②

⑦

41

1	522-01-22E	127.20
2	N37-16-19E	193.66
3	NG2-53-01E	79.02
4	N89-51-51E	233.80
5	NG2-56-16E	146.55
6	S77-49-24E	115.16
7	S77-49-44E	20.34
8	N33-53-22E	116.39

Page 1 of 1

Owner's Well No. 1-16100

Date Work Began 1-27-00

Local Permit Agency 1-16100

Permit No. 1-16100

Permit Date 1-27-00

No. 774341

027-500-032

DWR USE ONLY DO NOT FILL IN

STATE WELL NO./STATION NO. 1-16100

LATITUDE _____ LONGITUDE _____

APN/TRS/OTHER _____

GEOLOGIC LOG

ORIENTATION (°) rotary VERTICAL rotary HORIZONTAL rotary ANGLE (SPECIFY) _____ FLUID mud

DEPTH FROM SURFACE (Feet) to _____

DRILLING METHOD rotary

DESCRIPTION Describe material, grain size, color, etc.

0-95 brown clay, Brown rock

95-140 purple rock

140-300 gray sandstone

300-405 gray sandstone with purple rock

405-490 purple rock

490-560 gray rock

RECEIVED

AUG 31 2000

DEPT. OF ENVIRONMENTAL MANAGEMENT

TOTAL DEPTH OF BORING 560 (Feet)

TOTAL DEPTH OF COMPLETED WELL 540 (Feet)

WELL OWNER

Name [Redacted]

Mailing Address [Redacted]

CITY [Redacted] STATE [Redacted] ZIP [Redacted]

Address 9535 St Helens Hwy

City [Redacted]

County [Redacted]

APN Book _____ Page _____ Parcel 027-500-032

Township _____ Range _____ Section _____

Latitude _____ DEG. MIN. SEC. _____ Longitude _____ DEG. MIN. SEC. _____

LOCATION SKETCH

Yountmill Rd

be knitt

WEST EAST NORTH SOUTH

ACTIVITY (°)

☒ NEW WELL

☐ MODIFICATION/REPAIR

☐ Deepen

☐ Other (Specify) _____

☐ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (°)

WATER SUPPLY

☒ Domestic ☐ Public

☐ Irrigation ☐ Industrial

☐ MONITORING

☐ TEST WELL

☐ CATHODIC PROTECTION

☐ HEAT EXCHANGE

☐ DIRECT PUSH

☐ INJECTION

☐ VAPOR EXTRACTION

☐ SPARGING

☐ REMEDIATION

☐ OTHER (SPECIFY) _____

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 140 (Ft.) BELOW SURFACE

DEPTH OF STAT 40

WATER LEVEL 40 (Ft.) & DATE MEASURED 1-27-00

ESTIMATED YIELD 2 (GPM) & TEST TYPE 1-11FT

TEST LENGTH 2 (Hrs.) TOTAL DRAWDOWN 500 (Ft.)

* May not be representative of a well's long-term yield.

DEPTH FROM SURFACE			BORE-HOLE DIA. (Inches)	CASING (S)							DEPTH FROM SURFACE			ANNULAR MATERIAL				
				TYPE (✓)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS				SLOT SIZE IF ANY (Inches)	TYPE			
Fl.	to	Fl.	BLANK	SCREEN	CON- DUCTOR	FILL PIPE									Fl.	to	Fl.	CE- MENT (✓)
0	140	12 1/4	✓				1/4" slot	8	200			0	24	✓				
140	540	12 1/4	✓				..	8	200	Factor 1 1/32		24	540				Red gravel	

ATTACHMENTS (°)

☐ Geologic Log

☐ Well Construction Diagram

☐ Geophysical Log(s)

☐ Soil/Water Chemical Analyses

☐ Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Fuller Well Drilling

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 2817 Piedmont Ave Napa CA 94558

CITY Napa STATE CA ZIP 94558

Signed Tom Fuller WELL DRILLER/AUTHORIZED REPRESENTATIVE

DATE SIGNED 3-8-00 C-57 LICENSE NUMBER 248677

QUADRUPPLICATE
For Local RequirementsSTATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 1073606

DWR USE ONLY — DO NOT FILL IN	
STATE WELL NO./STATION NO.	
LATITUDE	LONGITUDE
APN/TRS/OTHER	

Page ____ of ____

Owner's Well No. _____

Date Work Began 01/07/2009, Ended 01/17/2009

Local Permit Agency Napa County

Permit No. E03-00689 Permit Date 11/25/2006

GEOLOGIC LOG

WELL OWNER

 ORIENTATION () ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE _____ (SPECIFY)
 DRILLING METHOD Rotary FLUID Mud

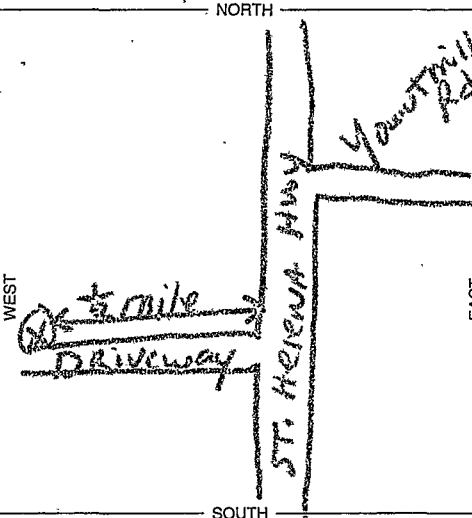
 Name _____
 Mailing Address _____
 City _____ ZIP _____

 DEPTH FROM SURFACE
 Ft. to Ft. DESCRIPTION
 Describe material, grain size, color, etc.

 WELL LOCATION
 Address 7353 St. Helena Highway
 City Yountville
 County Napa
 APN Book 021 Page 500 Parcel 032-000
 Township Range Section
 Lat. _____ N Long. _____ W
 DEG. MIN. SEC. DEG. MIN. SEC.

0	52	Brown Clay & Gravel
52	85	Light Brown Ash
85	410	Hard Purple Fractured Rock
410	500	Hard Fractured Brown & Gray Rock
500	555	Hard Gray Rock

LOCATION SKETCH



ACTIVITY ()

☒ NEW WELL
☐ MODIFICATION/REPAIR
☐ Deepen
☐ Other (Specify) _____

☐ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

USES ()

 WATER SUPPLY
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial

☐ MONITORING

☐ TEST WELL

☐ CATHODIC PROTECTION

☐ HEAT EXCHANGE

☐ DIRECT PUSH

☐ INJECTION

☐ VAPOR EXTRACTION

☐ SPARGING

☐ REMEDIATION

☐ OTHER (SPECIFY) _____

RECEIVED

MAY 06 2009

DEPT. OF
ENVIRONMENTAL MANAGEMENT

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER unk (Ft.) BELOW SURFACEDEPTH OF STATIC WATER LEVEL 60 (Ft.) & DATE MEASURED 1-17-09ESTIMATED YIELD 500+ (GPM) & TEST TYPE Alt. TestTEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN unk (Ft.) GPM at day of Test

* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING _____ (Feet)

TOTAL DEPTH OF COMPLETED WELL _____ (Feet)

DEPTH FROM SURFACE			BORE-HOLE DIA. (Inches)	CASING (S)						DEPTH FROM SURFACE			ANNULAR MATERIAL					
				TYPE ()				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)				GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE			
Ft.	to	Ft.	BLANK	SCREEN	CON- DUCTOR	FILL PIPE									Ft.	to	Ft.	CE- MENT ()
0	55	14	✓				PLASTIC	8	#400		0	57	✓	✓				
55	150	12 1/4	✓				"	"	"		57	555					Well Pack GRAVEL	
150	555	12 1/4	✓				"	"	"	.032								

ATTACHMENTS ()

- ☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME William Well Exploration
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

5110 Highway 128 Napa, CA 94558

ADDRESS CITY STATE ZIP

Signed Y. P. H.
C-57 LICENSED WATER-WELL CONTRACTORDATE SIGNED 01/20/09 808-508
C-57 LICENSE NUMBER

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

Page 1 of 1

Owner's Well No. 1-2011

No. **e0133551**

Date Work Began 7/9/2011, Ended 8/5/2011

Local Permit Agency Napa County Environmental Mgmt

Permit No. E11-00278

Permit Date 7/7/2011

DWR USE ONLY		DO NOT FILL IN	
STATE WELL NO. / STATION NO.			
LATITUDE		LONGITUDE	
APN/TRS/OTHER			

GEOLOGIC LOG

ORIENTATION (✓) <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/> ANGLE (SPECIFY)	
DRILLING METHOD <u>ROTARY</u> FLUID <u>BENTONITE</u>	
DESCRIPTION	
DEPTH FROM SURFACE Ft. to Ft.	Describe material, grain, size, color, etc.
0 to 40	BROWN SANDY CLAY
40 to 55	REDDISH, BROWN SANDY CLAY
55 to 77	SAND & GRAVEL
77 to 80	TAN CLAY
80 to 95	SAND & GRAVEL
95 to 118	REDDISH, TAN SANDY CLAY
118 to 150	SAND & GRAVEL
150 to 165	REDDISH, BROWN SANDY CLAY
165 to 180	SAND & GRAVEL
180 to 203	BROWN SANDY CLAY
203 to 240	HARD BLACK FRACTURED ROCK
240 to 265	BLACK, RED VOLCANICS
265 to 280	HARD BLACK FRACTURED ROCK
280 to 310	BLACK VOLCANICS WITH TAN ASH
310 to 350	BLACK, GRAY VOLCANICS
350 to 360	HARD BLACK FRACTURED ROCK
360 to 450	BLACK & GRAY VOLCANICS
450 to 485	BLACK VOLCANICS WITH GRAY ASH
485 to 490	HARD BLACK FRACTURED ROCK
490 to 550	BLACK VOLCANICS WITH GRAY ASH
550 to 640	BLACK, RED VOLCANICS

CONTINUED CASING LAYOUT

477 to 627 SCREEN PVC 8" .032" SDR-21
627 to 637 BLANK PVC 8"

SEP 29 2011

DEPT. OF
ENVIRONMENTAL MANAGEMENT

TOTAL DEPTH OF BORING 640 (Feet)

TOTAL DEPTH OF COMPLETED WELL 637 (Feet)

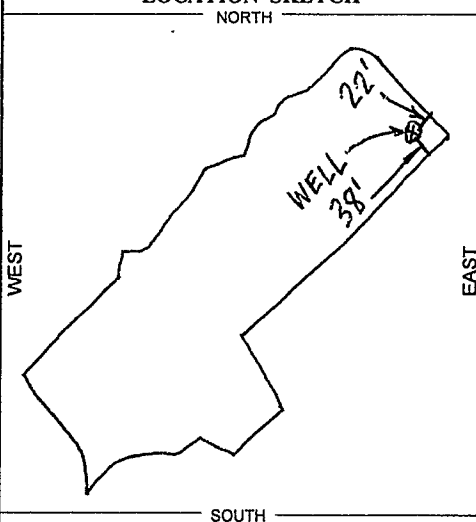
WELL OWNER

Name [REDACTED]
Mailing Address [REDACTED]
CITY [REDACTED] STATE [REDACTED] ZIP [REDACTED]

WELL LOCATION

Address 7313 St. Helena Hwy
City Yountville CA
County Napa
APN Book 027 Page 381 Parcel 013
Township Range Section
Latitude DEG. MIN. SEC.

LOCATION SKETCH



ACTIVITY (✓)

☒ NEW WELL
☐ MODIFICATION/REPAIR
 — Deepen
 — Other (Specify)
☐ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")
PLANNED USES (✓)
WATER SUPPLY
 ☒ Domestic ☐ Public
 ☒ Irrigation ☐ Industrial
MONITORING ☐
TEST WELL ☐
CATHODIC PROTECTION ☐
HEAT EXCHANGE ☐
DIRECT PUSH ☐
INJECTION ☐
VAPOR EXTRACTION ☐
SPARGING ☐
REMEDICATION ☐
OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER N/A (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 62 (Ft.) & DATE MEASURED 8/5/2011
ESTIMATED YIELD 300 (GPM) & TEST TYPE AIR LIFT
TEST LENGTH 2 (Hrs.) TOTAL DRAWDOWN N/A (Ft.)
May not be representative of a well's long-term yield.

DEPTH FROM SURFACE			BORE - HOLE DIA. (Inches)	CASING (S)						
				TYPE (✓)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS
Fl.	to	Fl.	BLANK	SCREEN	CON-DUCTOR	FILL PIPE				
0	640	15								
0	117		✓				PVC F480	8	SDR-21	
117	277			✓			PVC F480	8	SDR-21	.032
277	297		✓				PVC F480	8	SDR-21	
297	457			✓			PVC F480	8	SDR-21	.032
457	477		✓				PVC F480	8	SDR-21	

DEPTH FROM SURFACE Ft. to Ft.	ANNULAR MATERIAL TYPE			
	CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0 to 61	✓			10 SK/SAND
61 to 640			✓	#6 SAND

ATTACHMENTS (✓)

- ☐ Geologic Log
- ☐ Well Construction Diagram
- ☐ Geophysical Log(s)
- ☐ Soil/Water Chemical Analysis
- ☐ Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME HUCKFELDT WELL DRILLING, INC.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

2110 Penny Lane
ADDRESS

Napa
CITY

CA
STATE

94559
ZIP

Signed [Signature]
WELL DRILLER/AUTHORIZED REPRESENTATIVE

08/11/11
DATE SIGNED

439-746
C-57 LICENSE NUMBER

ORIGINAL
File with DWR

Page 1 of 1

Owner's Well No. 1-2014

Date Work Began 8/13/2014, Ended 9/8/2014

Local Permit Agency Napa County Environmental Mgmt

Permit No. E14-00167

Permit Date 4/7/2014

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **e0221147**

DWR USE ONLY -- DO NOT FILL IN

STATE WELL NO / STATION NO	
LATITUDE	LONGITUDE
APN/TRS/OTHER	

GEOLOGIC LOG

ORIENTATION (✓) ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE (SPECIFY)

DRILLING METHOD **ROTARY** FLUID **BENTONITE**

DEPTH FROM SURFACE
Ft. to Ft. DESCRIBE material, grain, size, color, etc.

0	30	BROWN, TAN CLAY
30	35	SAND & GRAVEL
35	85	BROWN, TAN SANDY CLAY
85	160	BLACK VOLCANICS WITH 5% GRAY ASH
160	170	HARD BLACK VOLCANIC ROCK
170	240	BLACK VOLCANICS WITH 10% GRAY ASH
240	255	HARD BLACK VOLCANIC ROCK
255	275	BLACK VOLCANICS WITH 20% GRAY ASH
275	320	BLACK VOLCANICS WITH 30% GRAY ASH
320	460	BLACK VOLCANICS WITH 5% GRAY ASH
460	470	RED, BLACK VOLCANIC ROCK
470	480	HARD BLACK VOLCANICS
480	497	HARD RED, BLACK VOLCANICS
497	502	RED VOLCANIC ROCK
502	510	HARD BLACK VOLCANIC ROCK
510	550	BLACK VOLCANIC ROCK
550	565	BLACK, TAN VOLCANICS
565	585	BLACK, RED VOLCANICS
585	595	BLACK VOLCANICS WITH 40% GRAY ASH
595	645	HARD BLACK VOLCANICS
645	655	BLACK, TAN, RED VOLCANICS
655	680	BLACK VOLCANIC ROCK

CONTINUED CASING LAYOUT

426	506	SCREEN PVC 8" .032 SLOT
506	526	BLANK PVC 8"
526	586	SCREEN PVC 8" .032 SLOT
586	606	BLANK PVC 8"
606	666	SCREEN PVC 8" .032 SLOT
666	686	BLANK PVC 8"

TOTAL DEPTH OF BORING 690 (Feet)

TOTAL DEPTH OF COMPLETED WELL 686 (Feet)

WELL OWNER

Name **Autres Rivages Vineyards, LLC**

Mailing Address **2570 Napanook Road**

Yountville

CA

94599

CITY

STATE

ZIP

WELL LOCATION

Address **7387 St. Helena Hwy**

City **Oakville CA**

County **Napa**

APN Book **027** Page **500** Parcel **018**

Township

Range

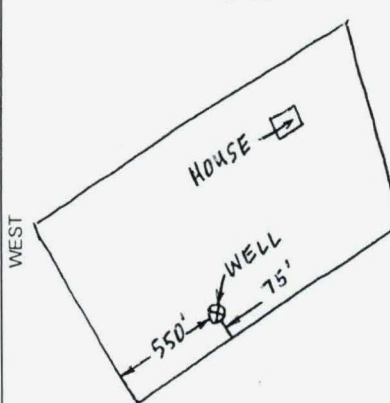
Section

Latitude

DEG MIN. SEC.

LOCATION SKETCH

NORTH



Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

DEG MIN. SEC.

ACTIVITY (✓)

☒ NEW WELL

MODIFICATION/REPAIR

— Deepen

— Other (Specify)

— DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY

☒ Domestic ☐ Public

☒ Irrigation ☐ Industrial

MONITORING

TEST WELL

CATHODIC PROTECTION

HEAT EXCHANGE

DIRECT PUSH

INJECTION

VAPOR EXTRACTION

SPARGING

REMEDIATION

OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER **N/A** (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL **92** (Ft.) & DATE MEASURED **9/8/2014**

ESTIMATED YIELD **140** (GPM) & TEST TYPE **AIR LIFT**

TEST LENGTH **2** (Hrs.) TOTAL DRAWDOWN **N/A** (Ft.)

May not be representative of a well's long-term yield.

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	CASING (S)					
		TYPE (✓)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)
		BLANK	SCREEN	CON- DUCTOR	FILL PIPE		
0	690	15					
0	106		✓			PVC F480	8
106	286		✓			PVC F480	8
286	326		✓			PVC F480	8
326	406		✓			PVC F480	8
406	426		✓			PVC F480	8

DEPTH FROM SURFACE Ft. to Ft.	ANNULAR MATERIAL			
	TYPE			
	CE- MENT (✓)	BEN- TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	59	✓		10 SK SAND
59	686		✓	#6 SAND

ATTACHMENTS (✓)

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analysis
- Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME **HUCKFELDT WELL DRILLING, INC.**

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

2110 Penny Lane

ADDRESS

Napa

CITY

CA

STATE

94559

ZIP

Signed

WELL DRILLER/AUTHORIZED REPRESENTATIVE

09/15/14

DATE SIGNED

439-746

C-57 LICENSE NUMBER

Owner's Well No. 1-2013

Date Work Began 4/22/2013, Ended 5/27/2013

Local Permit Agency Napa County Environmental Mgmt

Permit No. E13-00034

Permit Date 2/6/2013

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. **e0177364**

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.	
LATITUDE	LONGITUDE
APN/TRS/OTHER	

GEOLOGIC LOG

ORIENTATION (✓) ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE (SPECIFY) _____

DRILLING METHOD ROTARY FLUID BENTONITE

DEPTH FROM SURFACE FL. to FL.	DESCRIPTION Describe material, grain, size, color, etc.
0: 10	BROWN SANDY CLAY
10: 150	FRACTURED MIXED VOLCANICS
150: 195	BROWN, GRAY VOLCANICS
195: 205	80% RED VOLCANICS / 20% RED ASH
205: 220	80% RED ASH / 20% BLACK VOLCANICS
220: 235	DARK RED VOLCANIC ROCK
235: 275	70% RED VOLCANICS / 30% TAN ASH
275: 300	50% RED VOLCANICS / 50% TAN ASH
300: 340	70% MIXED VOLCANICS / 30% TAN ASH
340: 360	60% BLACK VOLCANICS / 40% GRAY ASH
360: 415	50% MIXED VOLCANICS / 50% TAN ASH
415: 420	50% BLACK VOLCANICS / 50% TAN ASH
420: 450	BLACK VOLCANIC ROCK
450: 470	BLACK RED VOLCANICS
470: 540	BLACK VOLCANIC ROCK
540: 555	SANDY RED, TAN VOLCANIC ASH
555: 560	HARD BLACK VOLCANIC ROCK
560: 580	RED, BROWN VOLCANIC SANDS
580: 635	BLACK VOLCANIC SANDS
635: 640	TAN VOLCANIC ASH
640: 680	BLACK, RED VOLCANICS
680: 710	70% BLACK, RED VOLCANICS/30% GRAY ASH

CONTINUED CASING LAYOUT

DEPTH FROM SURFACE FL. to FL.	SCREEN	PVC 10"	.032 SLO
420: 540	SCREEN	PVC 10"	.032 SLO
540: 560	BLANK	PVC 10"	
560: 640	SCREEN	PVC 10"	.032 SLO
640: 660	BLANK	PVC 10"	
660: 680	SCREEN	PVC 10"	.032 SLO
680: 700	BLANK	PVC 10"	

TOTAL DEPTH OF BORING 710 (Feet)

TOTAL DEPTH OF COMPLETED WELL 700 (Feet)

WELL OWNER

Name Kelham Vineyards

Mailing Address 360 Zinfandel Lane St. Helena CA 94574

CITY STATE ZIP

WELL LOCATION

Address 1467 Dwyer Road

City Oakville CA

County Napa

APN Book 027 Page 500 Parcel 037

Township _____ Range _____ Section _____

Latitude _____

DEG. MIN. SEC. _____

LOCATION SKETCH

NORTH

WEST

EAST

SOUTH

House

WELL

325'

150'

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

☒ NEW WELL

MODIFICATION/REPAIR

— Deepen

— Other (Specify) _____

— DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY

☒ Domestic ☐ Public

☒ Irrigation ☐ Industrial

MONITORING _____

TEST WELL _____

CATHODIC PROTECTION _____

HEAT EXCHANGE _____

DIRECT PUSH _____

INJECTION _____

VAPOR EXTRACTION _____

SPARGING _____

REMEDIATION _____

OTHER (SPECIFY) _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER N/A (FL) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 65 (FL) & DATE MEASURED 5/27/2013

ESTIMATED YIELD • 50 (GPM) & TEST TYPE AIR LIFT

TEST LENGTH 3 (Hrs.) TOTAL DRAWDOWN N/A (FL)

May not be representative of a well's long-term yield.

DEPTH FROM SURFACE FL. to FL.	BORE HOLE DIA. (Inches)	CASING (S)					
		TYPE (✓)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)
		BLANK	SCREEN	CON- DUCTOR	FILL PIPE		
0: 710	18						
0: 220		✓				PVC F480	10
220: 280			✓			PVC F480	10
280: 300		✓				PVC F480	10
300: 400			✓			PVC F480	10
400: 420		✓				PVC F480	10

DEPTH FROM SURFACE FL. to FL.	ANNULAR MATERIAL TYPE			
	CE- MENT (✓)	BEN- TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0: 54	✓			10 SK SAND
54: 700			✓	#6 SAND

ATTACHMENTS (✓)

— Geologic Log

— Well Construction Diagram

— Geophysical Log(s)

— Soil/Water Chemical Analysis

— Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME HUCKFELDT WELL DRILLING, INC.

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

2110 Penny Lane Napa CA 94559

ADDRESS CITY STATE ZIP

Signed _____ DATE SIGNED 06/03/13 439-746

WELL DRILLER/AUTHORIZED REPRESENTATIVE C-57 LICENSE NUMBER