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## Water Availability Analysis

**DDYM Corporation**  
540 Technology Way  
Napa CA 94558

**Date:** October 6, 2025

**To:** Napa County Planning, Building and Environmental Services Department  
1195 Third Street, Suite 210  
Napa, CA 94559

**Subject:** Notice of Sale – Parcel Containing Well #2

**APN:** 031-120-042

**Reference:** EBA Report dated August 6, 2025 – Water Availability Report, Well #2

Dear Planning Department,

DDYM Corporation hereby provides notice to Napa County that it has completed the sale of the parcel identified as Assessor's Parcel Number (APN) 031-120-042, which contains Well #2 referenced in EBA's Water Availability Report dated August 6, 2025.

The sale closed on February 28, 2025, transferring ownership of the property to Bob Mueller, Bloom Holding, LLC and DDYM waiving all rights to the well.

Sincerely,



Dave Del Dotto  
President  
DDYM Corporation



August 26, 2025

Mr. Bob Mueller  
Bloom Holding, LLC  
731 S. Hwy 101, Suite 12  
Solana Beach, CA 92075  
bmueller@rmcigroup.com

**SUBJECT: WATER AVAILABILITY ANALYSIS REPORT**  
**1201 YOUNT MILL ROAD**  
**NAPA COUNTY, CALIFORNIA 94558**  
**APN 031-120-042**  
***EBA Project No. 25-3770***

EBA Engineering (EBA) is pleased to present this Water Availability Analysis (WAA) in connection with permitting services for the planned development located at the subject site identified by Napa County Assessor's Parcel Number (APN) 031-120-042 in Napa, California (herein referred to as the project site). The intent of this WAA is to provide required information to obtain a water use permit for the planned development in conformance to the requirements of Napa County's WAA Guidance Document, adopted May 12, 2015 (Napa County, 2015).

This WAA concludes that site groundwater demands are less than the estimated volume of water available for groundwater recharge on the project site under average precipitation years. Further, the existing groundwater well at the project site, is located less than 500 feet to an existing nearby well(s), is located greater than 1,500 feet to a nearby spring(s) and located less than 1,500 to a nearby Significant Stream(s). As such, Tier 1, 2, and 3 analyses will be evaluated in conformance with the following Napa County permitting guidance documentation.

- Well Permit Standards – Applicable Tables available on the Napa County website on the Groundwater Sustainability page;
- *Draft GSA Response to the Governor's Emergency Executive Order*, prepared by Napa County, dated June 2, 2022; and
- *WAA Guidance Document*, prepared by Napa County, adopted May 12, 2015.

## 1.0 BACKGROUND INFORMATION

### 1.1 Project Site Description

The project site is located on Yount Mill Road approximately two miles northwest of Yountville in Napa County (Figure 1, Appendix A). The project site is approximately 14.40-acres (AC) in size and is currently comprised of one parcel with an access road, an existing groundwater supply well, and undeveloped grasslands and oak tree land cover. A site plan illustrating the general project site features is presented as Figure 2, Appendix A. Ground elevations across the project site range from approximately 130 to 420 feet above mean sea level (MSL). The project site is mapped as Forward silt loam, Boomer-Forward-Felta complex, and the Hambright-Rock outcrop complex with hydrologic soil group ratings of C, B-C, and D, respectively (NRCS, 2020).

There is one existing water supply well on the project site, hereinafter referred to as “Well #2”. A Well Completion Report (WCR), archived by the California Department of Water Resources (DWR), for Well #2 (WCR No. e0290239) was found. A Copy of the WCR for Well #2 can be found in Appendix B. Please refer to Figure 2 (Appendix A) for the location of Well #2. The total depth of the well is 400 feet below ground surface (BGS) and is completed in fractured volcanics. The well is constructed with 8.625-inch diameter F480 polyvinyl chloride (PVC) casing and is screened at alternating depth intervals of 100 to 120 feet BGS, 160 to 260 feet BGS, 280 to 360 feet BGS, and 380 to 400 feet BGS. At the time of installation (2015), static water level was measured to be 85 feet below top of casing (TOC) and well yield was estimated to be 110 gallons per minute (GPM) during a three-hour air lift test. At the time of EBA’s site visit on July 17, 2025, static water level in Well #2 was measured to be 75.13 feet below TOC. During a November 2015 well performance test, Well #2 was reported to have a sustained yield of 42.0 GPM with 33.0 feet of drawdown measured following 21 hours of sustained pumping. The November 2015 pump test is included in Appendix B. Well #2 was drilled in September 2015 by McLean & Williams, Inc. of Napa, California.

The proposed new development consists of the installation of a primary residence with minor to moderate landscaping, additional landscaping (olive and oak trees), a secondary residence, and a pool. Upon installation of the proposed development on the project site, water from the existing on-site well (Well #2) will be used to supply water for the proposed new development. Please refer to Figure 2 (Appendix A) for the approximate location of the proposed development.

### 1.2 Hydrogeologic Setting

The Coast Ranges geomorphic province encapsulates the greater north bay area with northwest-trending ridges and valleys that run subparallel to the San Andreas Fault Zone. Regional geology surrounding the project site has been mapped to generally consist of late Pleistocene to Holocene alluvial fan deposits overlying the Pliocene to Miocene aged Sonoma Volcanics (California Geological Survey, 2005). In the immediate vicinity of the project site, Well #2 is located at the base of a hill in an area where the surface geology has been mapped to consist of the Miocene aged andesite flows of Stags Leap (Tsvasl).

Please refer to the Geologic Map included herein as Figure 4 (Appendix A). Mapped geology in the vicinity of the project site is consistent with the lithology described in the WCR for Well #2 as well as the regional hydrogeology described by Luhdorff and Scalmanini in the *Updated Hydrogeologic Conceptualization and Characterization of Conditions* for Napa County (Luhdorff and Scalmanini, 2013).

Water Well Completion Reports (WCRs) for nearby wells are also generally consistent with mapped geology, wherein drillers described encountering ash, volcanic rock, and fractured rock. Groundwater is contained within rock fractures, which are expected to be stochastically distributed and likely to have a wide range of transmissivity values depending on the extents of fracture networks. According to Bulletin 118-4 (CDWR, 1975 and 1982), groundwater yields for the Sonoma Volcanic formation range from slight to moderate and have specific yields ranging from 0 to 15 percent. Regional groundwater flow direction is expected to generally mirror regional topography, which generally slopes downward from the project site towards the northwest, around the Tsvasl formation, and subsequently east towards the Napa River and south towards the San Francisco Bay.

A mapped Significant Stream, Lincoln Creek, is located approximately 1,345 feet to the north of Well #2. Please refer to Figure 3 (Appendix A) for a map of Well #2 in relation to Lincoln Creek.

In an effort to locate wells within 500 feet of the Well #2, EBA performed a literature search of WCRs archived by the California Department of Water Resources and Environmental Permitting documentation archived within the Napa County Electronic Document Retrieval database. The scope of the research encompassed available records for wells located within a 500-foot radius of the project site. Publicly available septic system design drawings were used to further identify well locations on neighboring properties. After EBA personnel conducted a site visit and a literature search, three water supply wells were identified within 500 feet of Well #2. Please refer to Figure 3 (Appendix A) for an illustration of all identified well locations and Appendix B and C for the respective WCRs. A summary of well characteristics for the neighboring wells within 500 feet of the Well #2 location is presented in Table 1.

<b>TABLE 1 – SUMMARY OF WELL CHARACTERISTICS FOR NEIGHBORING WELL(S) WITHIN 500 FEET OF WELL #2</b>					
<b>Legacy WCR<sup>1</sup> Number</b>	<b>Distance to Well #2 (feet)</b>	<b>Planned Use</b>	<b>Drilling Depth (feet BGS)</b>	<b>Static Water Level (feet BGS)</b>	<b>Estimated Yield (GPM)</b>
Well #1 (0900858)	260	Domestic	350	54	100
e039634	445	Public	396	66	100
013292	460	Domestic	500	98	100

<sup>1</sup> WCR: Well Completion Report

### 1.3 Local Climate

Review of published data by the Parameter-Elevation Regressions on Independent Slopes Model (PRISM) Climate Group, indicates the 10-year (2012 – 2021) average annual rainfall in the vicinity of the project site as defined by correspondence with Napa County is 29.62 inches per year (Prism, 2025). EBA understands the 10-year rainfall is considered average as defined by correspondence with Napa County. The 10-year data were evaluated using the 4 km spatial resolution and the interpolate grid cell values function.

Mean annual potential evapotranspiration ( $ET_o$ ) was estimated to be 48.86 inches per year based on reference  $ET_o$  tables for Oakville provided in the California Irrigation Management Information System (CIMIS) Reference Evapotranspiration Website (CIMIS, 2025).

## 2.0 PROPOSED ON-SITE GROUNDWATER DEMANDS

### 2.1 Proposed Groundwater Demand

The proposed project groundwater demand was estimated to be 1.62 acre-feet per year (AFY) (Appendix D). Proposed water use is associated with a primary residence with minor to moderate landscaping, additional landscape irrigation for the proposed olive and oak trees, a secondary residence, and a pool with a cover. Water use for the primary residence (which includes minor to moderate landscaping) and a secondary residence was estimated to be 0.75 AFY and 0.50 AFY, respectively. The pool with cover was estimated to be 0.05 AFY. These water demands were estimated based on the *WAA Guidance Document*. The annual water use for the proposed olive trees was estimated to be 0.31 AFY, based on an irrigation rate of approximately 4 GPM for one hour per week for each of the 16 olive trees, 26 weeks per year. This olive tree water use estimate is based on a recent water use from a nearby property owner east of the City of Napa. The annual water use for the proposed 14 oak trees was estimated to be 0.01 AFY, calculated using the Water Use Classification of Landscape Species (WUCOLS) site specific model as described in *A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California* (UC Cooperative Extension, 2000). Please refer to Table 2 on the following page for a summary of proposed water demands and Table 1 *Proposed Water Usage* in Appendix D for a detailed accounting of the proposed water demand calculations.

<b>TABLE 2 – PROPOSED WATER DEMANDS</b>		
<b>Water Use</b>	<b>Water Use Estimation Criteria</b>	<b>Water Demand (AFY)<sup>1</sup></b>
Primary Residence	0.75 AFY <sup>1</sup>	0.75
Pool w/cover	0.05 AFY <sup>1</sup>	0.05
Secondary Residence	0.50 AFY <sup>1</sup>	0.50
Additional Irrigation (Olive Trees)	See Subsection 2.1 above <sup>2</sup>	0.31
Additional Irrigation (Oak Trees)	See Subsection 2.1 above <sup>3</sup>	0.01
<b>TOTAL</b>		<b>1.62</b>

<sup>1</sup> AFY: Acre-Feet per Year

<sup>2</sup> Communications with owner of a nearby property indicates annual irrigation for 104 mature olive trees is 4 GPM for each tree for one hour per week for 26 weeks. Water use for the proposed 16 olive trees on the project site were based on this estimate.

<sup>3</sup> Water use estimate for the 14 oak trees is based on WUCOLS site specific model.

### **3.0 GROUNDWATER RECHARGE ANALYSES**

#### **3.1 Project Site Groundwater Recharge Methodology**

EBA analyzed the project site groundwater budget by comparing estimated inflows and outflows from the fractured-rock aquifer complex. The volume available for recharge was estimated based on precipitation as the principal source of inflow while outflows were estimated based on run-off, evapotranspiration, canopy interception, and spring losses. While secondary sources of inflow (such as upgradient boundary flow), and secondary sources of outflow (such as downgradient boundary flow, and surface-water-groundwater interaction) potentially contribute to the groundwater budget, they are assumed to be equal and resultant in no net gain or loss. Based on this approach, the following equation was used to calculate potential volume of water available for recharge:

$$\text{Volume of Water Available for Recharge} = P - (R + ET_a + E_{Cl} + S)$$

where “P” is equal to precipitation (in acre-feet per year [AFY]), “R” is equal to run-off (in AFY), “ET<sub>a</sub>” is equal to actual evapotranspiration (in AFY), “E<sub>Cl</sub>” is equal to evaporative losses related to canopy interception (in AFY) and “S” is equal to spring flow (in AFY). The groundwater recharge analysis was performed during average precipitation years (10-year period from 2012 to 2021). Details regarding the calculation of each of these variables are presented below.

#### ***Precipitation (P)***

The total volume of precipitation that falls within the area of the project site was calculated by multiplying the average annual precipitation rate (29.62 inches per year) by the sum of the area of the project site (14.40 AC). The total annual precipitation over this area corresponds to approximately 35.54 AFY during average precipitation years.

### Run-off (R)

The percentage of the total precipitation that results as outflow (i.e., run-off) was estimated by comparing the ground slopes within the project site to run-off coefficients (RCs) for various types of developed and natural settings (Napa County Road & Street Standards, 2023). In general, slope surfaces were separated by areas identified as “low” (0 to 5 percent), “normal” (5 to 10 percent), “high” (10 to 30 percent), and “extreme” (greater than 30 percent). In this regard, the relative percentages of slopes within the project site that align with these categories are approximately 0, 0, 27, and 73 percent, respectively. These areas, in turn, were further separated by the types of settings. Table 3 below provides a breakdown of the setting types and range of RCs used in the analysis:

<b>TABLE 3 (PROJECT SITE) RUNOFF COEFFICIENTS AND AREAS</b>		
<b>Land Type</b>	<b>Area (AC)</b>	<b>Runoff Coefficient (RC)</b>
Oak Woodland	10.50	0.40 - 0.48
Proposed Trees for Landscaping	0.15	0.40
Seasonal Grasses	2.90	0.43 - 0.51
Gravel Driveway	0.25	0.60
Residence/Paved Driveway	0.60	0.80
<b>TOTAL</b>	<b>14.40</b>	-

Using the aforementioned variables, the annual run-off volume for each area was calculated by multiplying the respective areas by the annual precipitation volume, followed by multiplying the corresponding products by the applicable RC. Please note that the acreages summarized in Table 3 correspond to future land use of the project site parcel. The summation of all the area run-off volumes equates to the total annual run-off volume for the entire project site. The average annual run-off volume was calculated to be approximately 17.22 AFY during average precipitation years.

### Actual Evapotranspiration ( $ET_a$ )

As previously noted in Subsection 1.3 (*Local Climate*), the mean annual potential evapotranspiration ( $ET_o$ ) for the area is estimated to be 48.86 inches per year, which translates to a total  $ET_o$  volume of approximately 58.63 AFY within the area of the project site parcel. Actual Evapotranspiration ( $ET_a$ ) in turn, was calculated using a Water Use Classification of Landscape Species (WUCOLS) site specific model as described in *A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California* (UC Cooperative Extension, 2000). The WUCOLS model estimates  $ET_a$  for the native vegetation and landscaping. A review of aerial photography was utilized to determine appropriate species factors ( $K_s$ ) and density factors ( $K_D$ ) as outlined in the WUCOLS Guidance Documentation. A microclimate factor ( $K_{MC}$ ) of 1 was selected based upon review of available climate data. Resulting landscape coefficients ( $K_L$ ) were then multiplied by respective unit areas to determine an estimated  $ET_a$  for these vegetation types within the project site parcel.

The total  $ET_a$  within the project site parcel was then calculated to represent approximately 7.13 AFY during average precipitation years.

### *Canopy Interception (EC<sub>i</sub>)*

Canopy interception corresponds to the fraction of rainfall that is intercepted by the canopy of trees and shrubs and subsequently lost to evaporation. This fraction was estimated using equations developed by Helvey and Patric (Helvey & Patric, 1965) that utilize gross rainfall, throughput (i.e., rainfall that reaches the ground through spaces in the vegetative canopy and as drip from leaves, twigs, and stems), and stemflow (i.e., rainfall that is caught on the canopy and reaches the ground by running down stems) variables. The calculation excluded grassland, vineyard, surface water bodies, pavement, and roof areas as the fraction of canopy interception for these areas is assumed to be negligible or not applicable. All other areas within the project site covered by tree canopy (approximately 10.50 AC) were subjected to canopy interception losses. Canopy interception losses were calculated to be approximately 1.53 AFY during average precipitation years.

### *Springs*

Published data regarding spring flow discharges in the area were not available (Napa County, 2022a). It should be noted that no springs were observed during EBA's site inspection.

### *Water Budget Results*

Using each of the calculated values in the groundwater recharge equation, the corresponding estimated volume of water available for groundwater recharge on the project site is approximately 9.66 AFY during average precipitation years. EBA estimated the volume of water available for groundwater recharge to be approximately 27% of the annual precipitation volume of 35.54 AFY. EBA's estimated recharge rate is within the range of recharge rates modeled for the Napa River near Napa Watershed in the 2013 *Updated Hydrogeologic Conceptualization and Characterization of Conditions* report (LSCE, 2013). Further, the proposed groundwater demand for the project site is 1.62 AFY. Based on the estimated groundwater demand of 1.62 AFY, this total groundwater use equates to approximately 17 percent of the water available for recharge in the area of the project site during average precipitation years. Results from the project water budget analysis are summarized in Table 4 on the following page.

<b>TABLE 4 RESULTS FROM PROJECT SITE RECHARGE CALCULATIONS AVERAGE RAINFALL YEAR</b>		
<i>Description</i>	<i>Inflow/Outflow</i>	<i>Volume (AFY)</i>
Precipitation	Inflow	+35.54
Run-off	Outflow	- 17.22
Actual Evapotranspiration	Outflow	- 7.13
Canopy Interception	Outflow	- 1.53
Springs	Outflow	-
<b>TOTALS</b>	<b>-</b>	<b>9.66</b>

AFY: Acre-Feet per year.

## 4.0 WELL INTERFERENCE

Tier 2, outlined in the *WAA Guidance document* and the *Well Permit Standards – Applicable Tables*, requires that a well interference evaluation be conducted for a project well, located less than 500 feet to a nearby well(s). The existing on-site well (Well #2) is located less than 500 feet to a nearby well(s). Therefore, the following Tier 2 evaluation to assess the potential drawdown in the existing nearby well(s) is described below in the following sections.

### 4.1 Drawdown Characteristics

One well exists on the project site. However, no data exists to conduct an empirical distance-drawdown analysis which would require a pumping test with observation well data.

The nearest well (Well #1 [WCR No. 0900858]) to Well #2 is approximately 260 feet away and will be used for the Tier 2 analyses.

The on-site well performance data is summarized on the following page in Table 5. Data for Well #2 was derived from a pump test performed by McLean & Williams Well Drilling & Pump Service on November 2, 2015.

<b>TABLE 5 SITE WELL PERFORMANCE DATA</b>	
<b>Well Characteristic</b>	<b>Site Well</b>
Well Depth	400 feet
Sustained Flow Rate	42.0 GPM
Static Water Level	81.0 feet from top of casing
Drawdown	33.0 feet
Specific Capacity	1.27 GPM / foot
Well Diameter	8.625-inch
Screened Interval	100 to 120, 160 to 260, 280 to 360, and 380 to 400 feet

#### **4.2 Daily Water Demand**

In accordance with the estimates outlined earlier, the total annual groundwater use for the project is 1.62 AFY. The total annual groundwater use for the proposed primary residence of 0.75 AFY (244,388 gallons), a pool with a cover of 0.05 AFY (16,293 gallons), and a secondary residence of 0.50 AFY (162,926 gallons) is equivalent to a maximum daily water demand of approximately 1,161 gallons per day (GPD), assuming a 365-day use frequency. The total annual groundwater use for the additional landscape irrigation for the olive and oak trees of 0.31 AFY (101,014 gallons) and 0.01 AFY (3,259 gallons), respectively, is equivalent to a maximum daily water demand of approximately 579 GPD, assuming 26 weeks (180-days) of irrigation. Therefore, the total annual groundwater use for the proposed project of 1.62 AFY is equivalent to a maximum daily water demand of approximately 1,740 GPD.

#### **4.3 Pumping Rate and Duration**

As presented above, the daily water demand is approximately 1,740 GPD. Whereas the demand would likely occur intermittently throughout the day, the total volume was assumed to be pumped at one time as a conservative measure.

There is one existing water supply well on the project site. The pumping duration required to meet the maximum daily water demand was estimated based on the yield (42.0 GPM) from the pumping test conducting on the on-site water supply well (Well #2). Well #2 (WCR No. e0290239) appears to be completed in similar lithology as the water supply wells located in close proximity to the project site.

At an average conservative pumping rate of 42.0 GPM, approximately 41 minutes of pumping is required to reach the maximum daily water demand. It should be noted that the analysis conducted herein regarding well interference and stream depletion assumes that all groundwater will be pumped from Well #2.

#### 4.4 Aquifer Transmissivity

Determination of aquifer transmissivity was accomplished using available data from the pumping test conducting on Well #2. The yield (42.0 GPM) and drawdown (33.0 feet) from the pumping test data was used in empirical transmissivity equations published in the *Groundwater and Wells* (Driscoll, 1986) and the *Manual of Applied Field Hydrogeology* (Weight & Sonderegger, 2001). The methods used to calculate transmissivity are presented below:

##### Method I:

$$\frac{Q}{s} = \frac{T}{2000}$$

for a confined aquifer, where “Q” is discharge rate (GPM), “s” is feet of drawdown in the well, and “T” is transmissivity (gallons per day per foot [GPD/ft]). For the purpose of this analysis, the aquifer is assumed to be partially confined based on the description given by the well driller at the time of well installation. The corresponding results from the calculation indicated a transmissivity value of 2,545 GPD/ft (340 square feet per day [ft<sup>2</sup>/day]).

##### Method II:

$$T = 38.9(S_c)^{1.18}$$

where  $T$  = transmissivity (ft<sup>2</sup>/day)

$S_c$  = specific capacity (gallons per minute per foot)

The specific capacity was defined as the quotient of 42.0 GPM as the pumping rate and the measured drawdown of 33.0 feet. The corresponding results from the calculation indicated a transmissivity value of approximately 51.7 ft<sup>2</sup>/day (387 GPD/ft).

Based on the methods used above, aquifer transmissivity estimated from water supply wells in the vicinity of the project site ranges between approximately 387 and 2,545 GPD/ft.

#### 4.5 Well Interference Characteristics

The evaluation of well interference was conducted utilizing a distance-drawdown analytical computer model. Given a discharge rate and estimates of aquifer characteristics, the analytical model predicts groundwater drawdown as a function of distance from a pumping well. For this study, the classic nonequilibrium equation of Theis (1935) and the modified nonequilibrium equation of Jacob (1946) were used as the basis of our analysis.

Aquifer characteristics for the model were based on pump test data, WCR data, and literature values. As discussed previously in *Section 4.4*, a range of aquifer transmissivity values were calculated using available data from the pumping test and empirical

transmissivity equations. A range of aquifer storage coefficient values were also calculated for the model, using available data from the WCR data and literature values. EBA calculated an approximate range of aquifer storage coefficient values by multiplying the range of specific storage values (Fissured Rock,  $1.0 \times 10^{-6}$  to  $2.1 \times 10^{-5}$ ) provided on Table F-3 in Appendix F of the *WAA Guidance document* by the approximate saturated aquifer thickness in the project site area. The saturated aquifer thickness (585 feet) in the project site area was estimated based on the average static groundwater level and the deepest well completion depth from values recorded on WCRs of wells located in close proximity to the project site. This corresponds to storage coefficient values ranging from 0.0006 to 0.012. In an effort to further refine the estimated transmissivity and storage coefficient values, EBA integrated the ranges presented above into the Theis equation in order to further calibrate the transmissivity and storage coefficient as observed in the wells in the area. The resultant transmissivity value was calculated to be 1,760 GPD/ft.

The following input parameters were used in the analytical model:

- *Pumping Rate:* 42.0 GPM
- *Aquifer Transmissivity:* 1,760 GPD/ft
- *Aquifer Storage Coefficient:* 0.012
- *Pumping Duration:* 41 minutes

According to Table 2B of the *WAA Guidance document* and the Napa County *Well Permit Standards – Applicability Tables*, any neighboring well(s) ( $\leq 6$ -inch diameter casing) within 500 feet of a project well, screened within the same aquifer as the project well, must have an estimated drawdown of 10 feet or less. EBA conducted the distance-drawdown analytical computer model for the on-site well (Well #2), utilizing the aquifer transmissivity and aquifer storage coefficient provided above. Based on these aquifer characteristics and the pumping duration required to meet the proposed project maximum daily water demand (41 minutes), the analytical computer model predicts approximately ten feet of drawdown at a distance of six (6) feet, with a foot of drawdown at 40 feet, and zero feet of drawdown at 78 feet. As a conservative measure, EBA conducted a second distance-drawdown analytical computer model for Well #2, utilizing the aquifer transmissivity and aquifer storage coefficient provided above. However, the second model assumed a conservative pumping duration of one day at the same pumping rate (42.0 GPM). Results from the second model predicts approximately ten feet of drawdown at a distance of 34 feet, less than a foot of drawdown at 260 feet, and zero feet of drawdown at 464 feet. Please note that the above calculations assume 95% recovery within the pumping well before beginning the next pumping cycle.

According to Table 2B of the *WAA Guidance document* and Napa County *Well Permit Standards – Applicability Tables*, any neighboring well(s) ( $\leq 6$ -inch diameter casing) within 500 feet of a project well, screened within the same aquifer as the project well, must have an estimated drawdown of 10 feet or less. As predicted by the distance-drawdown model presented above, Well #2 on the project site must be located no less than approximately six (6) feet from any nearby groundwater well(s) to be in conformance with Napa County Guidelines ( $\leq 10$  feet of drawdown). Thus, Well #2 shown on Figure 3 (Appendix A), satisfies this 6-foot distance to a nearby well, and is therefore in conformance with Napa

County Guidelines. It should be noted that the second distance-drawdown model, assuming a conservative pumping duration of one day, resulted in less than one foot of drawdown at a distance (260 feet) to the closest well (Well #1 [WCR No. 0900858]).

## **5.0 SURFACE WATER DEPLETION FROM GROUNDWATER PRODUCTION**

Tier 3, outlined in the *WAA Guidance document* and the *Well Permit Standards – Applicability Tables*, requires that a groundwater/surface water interaction evaluation be conducted for project wells located within 1,500 feet of a Significant Stream. As previously mentioned, a mapped Significant Stream, Lincoln Creek, is located approximately 1,345 feet to the north of Well #2, at its closest point.

EBA has recently observed Lincoln Creek in its entirety from Hwy 29 east to the Napa River. Observations include the fact that Lincoln Creek is generally very shallow (less than five feet deep) with a relatively small embankment (less than 10 feet). The bank of Lincoln Creek appears to be alluvial in nature and does not appear to intersect hard rock. A review of WCR's of wells located south of and proximal to Lincoln Creek (i.e., e0176210 and 1073612) suggests that first encountered water and/or static depth to water at the time of drilling was greater than 75 feet BGS. While it is acknowledged that these aforementioned wells are located further down the reach of Lincoln Creek than the location of the Well #2, the information strongly suggests that that Lincoln Creek is a "losing" Creek and serves more as a surface drainage feature than an outlet to shallow groundwater to the Napa River.

Given Lincoln Creek is shallow in depth and is cut into the shallower layers of sedimentary deposits that overly the Sonoma Volcanic aquifer, it is EBA's opinion that this stream is a losing stream and not recharged by shallow groundwater. This information suggests that the hydraulic connectivity between the underlying deeper aquifer system and Lincoln Creek is low to non-existent, and groundwater that will be pumped from Well #2 completed primarily in the Sonoma Volcanics will not be connected to Lincoln Creek.

Previous studies of surface water and groundwater interaction in Napa Valley have concluded that groundwater recharge from percolating surface water was greatest where tributaries overly alluvium along valley margins (Faye, 1973). Based on the hydrogeologic setting of wells in the vicinity of the project site primarily completed in fractured Sonoma Volcanics and the distance of Lincoln Creek outside of the calculated radius of influence for the on-site pumping well (464 feet), it is EBA's opinion that pumping from Well #2 will not contribute to streamflow depletion in the nearby Significant Stream (Lincoln Creek).

## **6.0 CONCLUSIONS**

The results of the WAA have indicated that the groundwater demand (1.62 AFY) associated with the project site is not expected to have a significant impact on current

and future groundwater availability, surface water, or neighboring wells under existing or foreseeable future use conditions. This conclusion is based on the following:

- According to the water recharge analyses conducted herein, the amount of water available for recharge over the project site area, during average precipitation years, was calculated to be approximately 9.66 AFY. Based on the estimated groundwater demand of 1.62 AFY, this total groundwater use equates to approximately 17 percent of the water available for recharge in the area of the project site during average precipitation years.
- Based on the analysis presented herein, it does not appear that pumping in the on-site well (Well #2), will be able to substantially influence any existing neighboring wells. As predicted by the distance-drawdown model presented herein, Well #2 must be located no less than approximately six (6) feet from any nearby groundwater well(s) to be in conformance with Napa County Guidelines ( $\leq 10$  feet of drawdown).
- With regards to the effects of groundwater pumping at the project site on flow of water in Lincoln Creek, surface water depletion as a result of on-site groundwater extraction is expected to be de minimis.

Based on the results of this evaluation, it is EBA's professional opinion that the Tier 1, 2, and 3 analyses are in conformance with the requirements outlined in Napa County's *WAA Guidance Document* and *Well Permit Standards*.

## 7.0 LIMITATIONS

This report was prepared in accordance with generally accepted standards of professional hydrogeologic and engineering principles and practices at the place and time this study was performed. This warranty is in lieu of all other warranties, either expressed or implied. The conclusions presented herein are based solely on information made available to us by others, and includes professional interpretations based on limited research and data. Based on these circumstances, the decision to conduct additional investigative work to substantiate the findings and conclusions presented herein is the sole responsibility of the Client. No guarantee is made that groundwater of sufficient quantity or quality will be found in any specific depth or interval nor that pumping will not affect quality nor quantity of water found, streamflow, and/or subsidence. This report has been prepared solely for the Client and any reliance on this report by third parties shall be at such party's sole risk.

## 8.0 CLOSING

EBA appreciates the opportunity to be of service on this project. If you should have any questions regarding the information contained herein, please do not hesitate to contact our office at (707) 544-0784.

Sincerely,  
**EBA ENGINEERING**

*Prepared by*



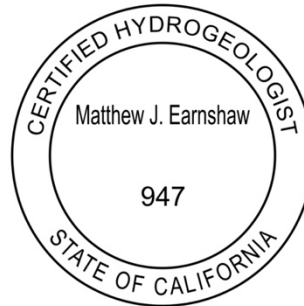
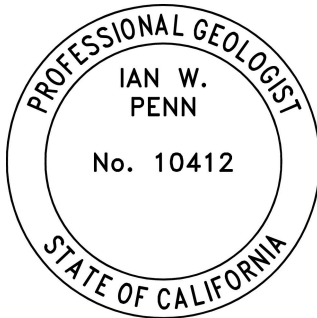
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Ian Penn, M.S., P.G.  
Project Geologist

*Reviewed by*

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Matthew Earnshaw, P.G., C.E.G., C.Hg., QSD  
Vice President – Senior Hydrogeologist



Appendices: Appendix A: Figures  
Appendix B: On-Site Well - Water Well Completion Report and Pump Test  
Appendix C: Nearby Wells - Water Well Completion Reports  
Appendix D: Proposed Water Usage

## 9.0 REFERENCES

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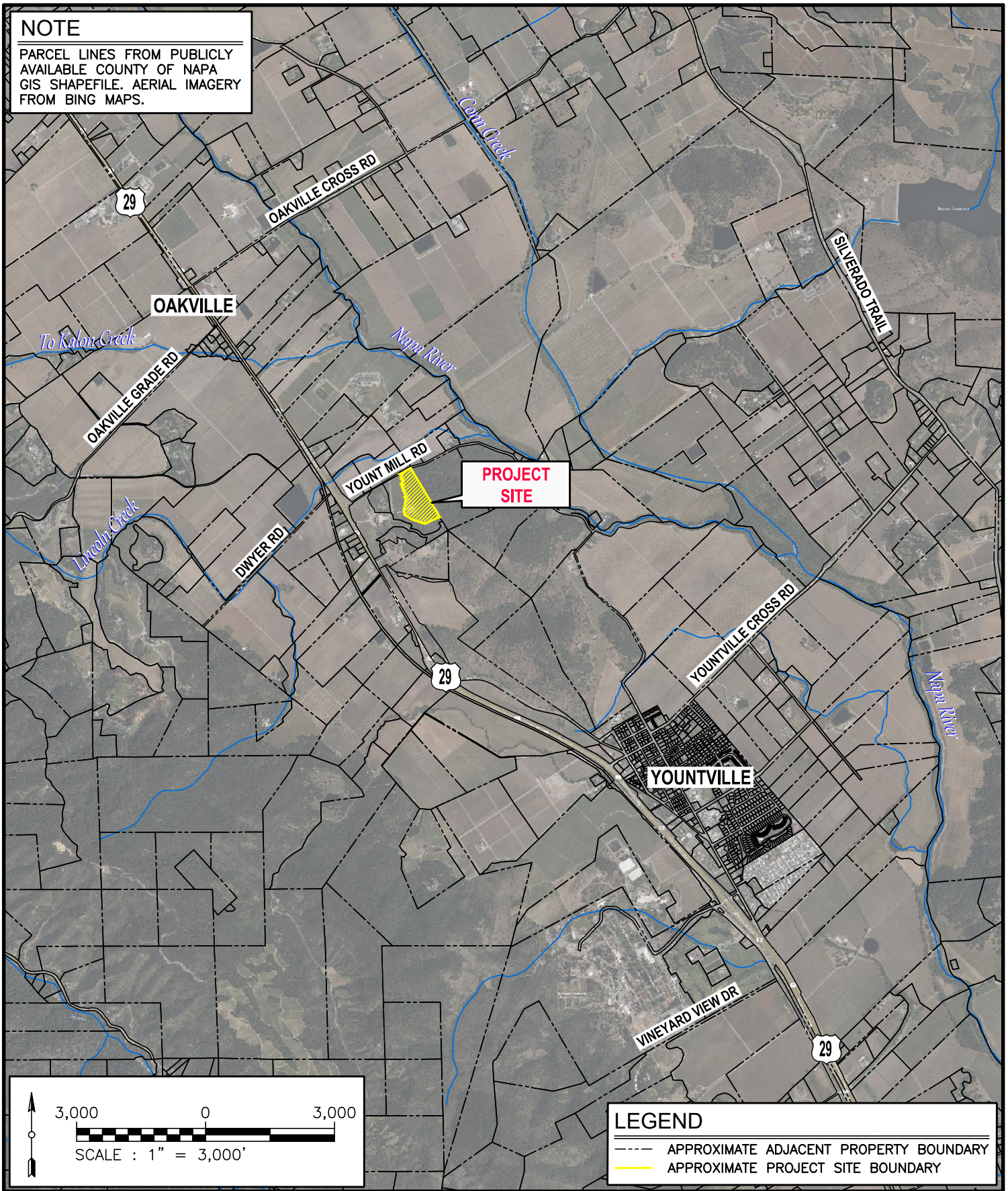
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**APPENDIX A**

**FIGURES**

**NOTE**

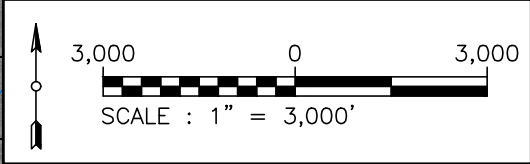
PARCEL LINES FROM PUBLICLY AVAILABLE COUNTY OF NAPA GIS SHAPEFILE. AERIAL IMAGERY FROM BING MAPS.



**PROJECT SITE**

**LEGEND**

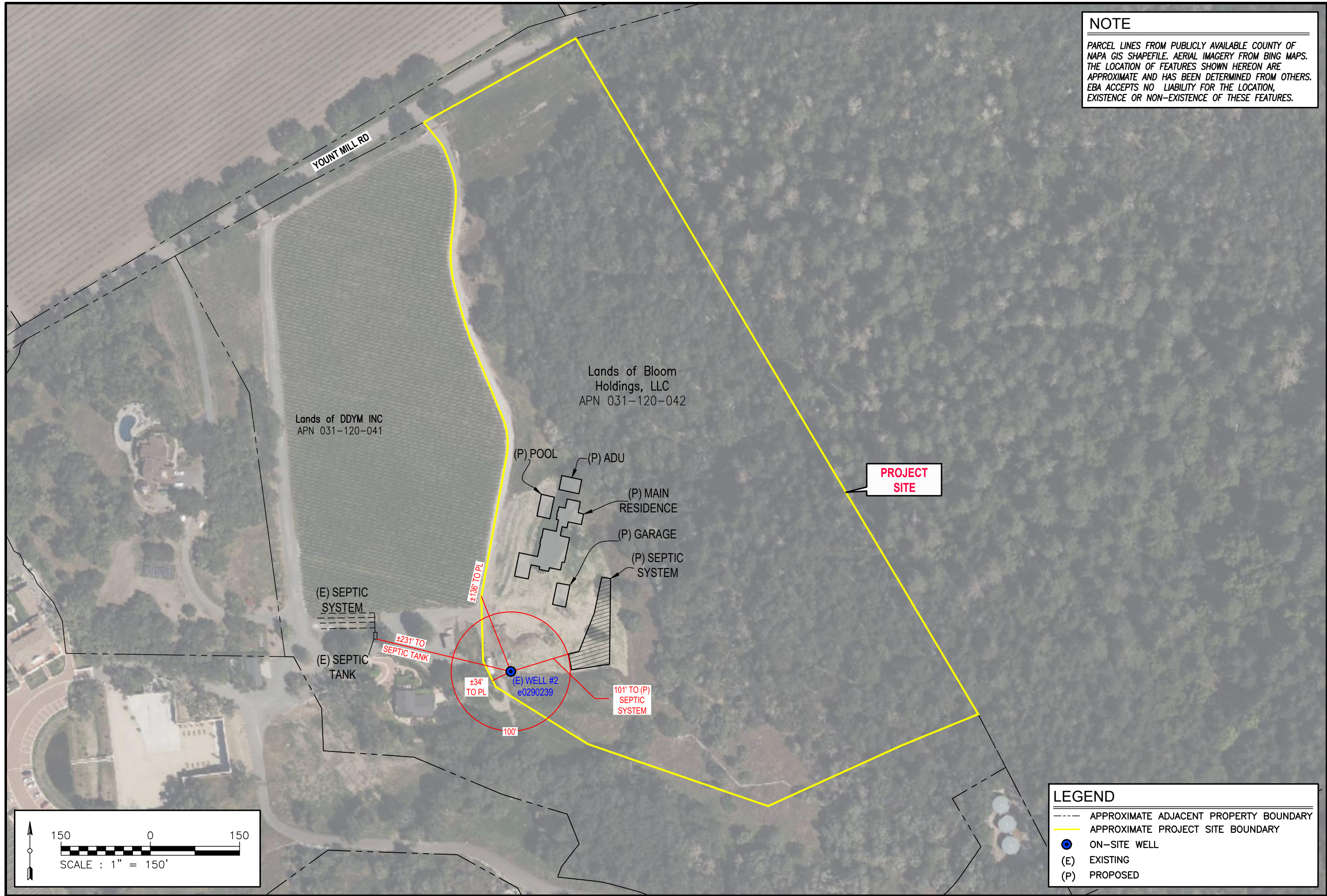
- - - - - APPROXIMATE ADJACENT PROPERTY BOUNDARY
- APPROXIMATE PROJECT SITE BOUNDARY



**EBA**  
ENGINEERING  
825 SONOMA AVENUE  
SUITE C  
SANTA ROSA, CA 95404  
TEL: (707) 544-0784

**LOCATION MAP**  
1201 YOUNT MILL ROAD  
NAPA, CALIFORNIA  
APN 031-120-042

**FIGURE**  
**1**  
25-3770



**NOTE**

PARCEL LINES FROM PUBLICLY AVAILABLE COUNTY OF NAPA GIS SHAPEFILE. AERIAL IMAGERY FROM BING MAPS. THE LOCATION OF FEATURES SHOWN HEREON ARE APPROXIMATE AND HAS BEEN DETERMINED FROM OTHERS. EBA ACCEPTS NO LIABILITY FOR THE LOCATION, EXISTENCE OR NON-EXISTENCE OF THESE FEATURES.

FIGURE  
**2**  
25-3770

**SITE MAP**

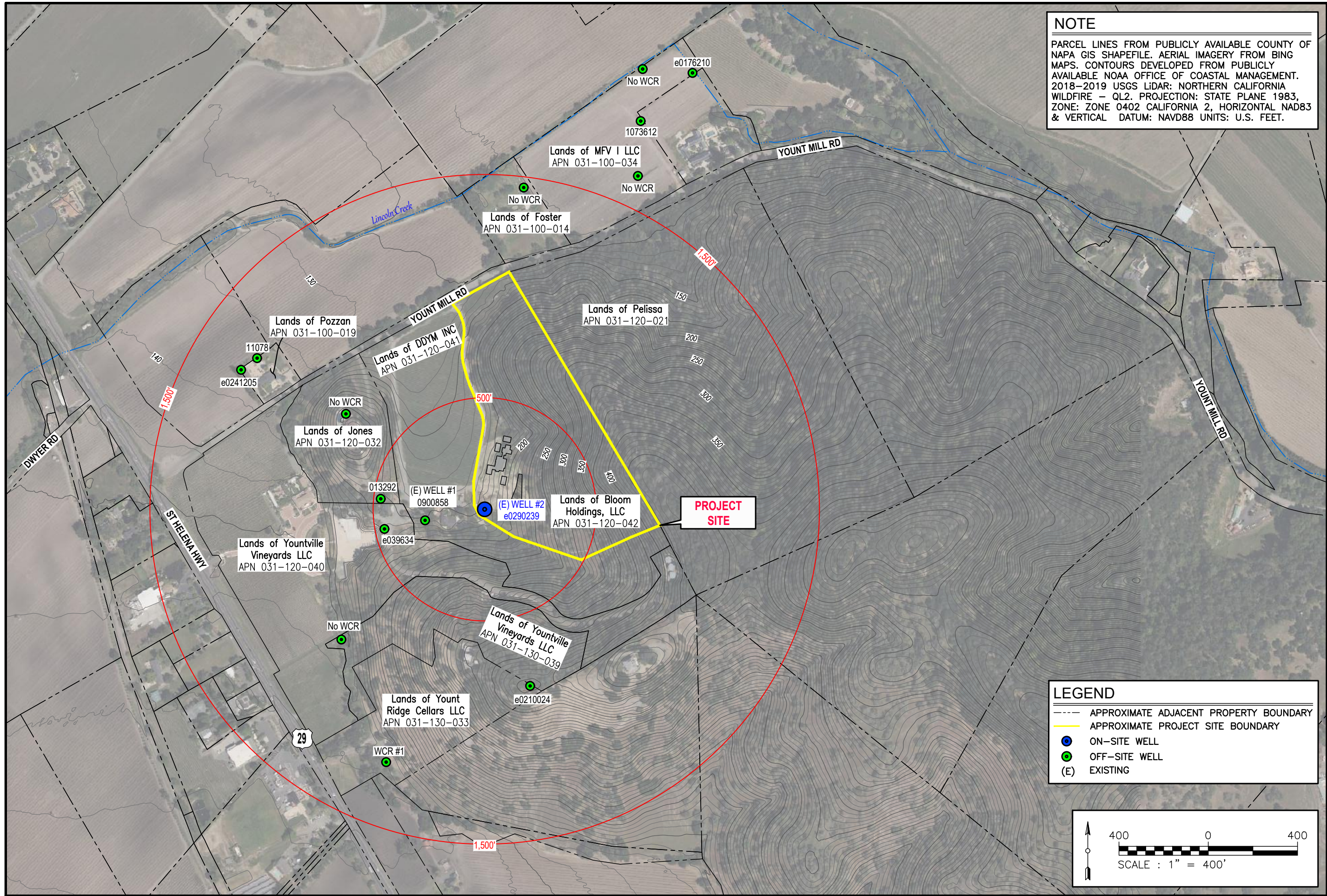
1201 YOUNT MILL ROAD  
NAPA, CALIFORNIA  
APN 031-120-042

**LEGEND**

- APPROXIMATE ADJACENT PROPERTY BOUNDARY
- APPROXIMATE PROJECT SITE BOUNDARY
- ON-SITE WELL
- (E) EXISTING
- (P) PROPOSED

**EBA**  
ENGINEERING

825 SONOMA AVENUE  
SUITE C  
SANTA ROSA, CA 95404  
TEL: (707) 544-0784



**NOTE**  
 PARCEL LINES FROM PUBLICLY AVAILABLE COUNTY OF NAPA GIS SHAPEFILE. AERIAL IMAGERY FROM BING MAPS. CONTOURS DEVELOPED FROM PUBLICLY AVAILABLE NOAA OFFICE OF COASTAL MANAGEMENT. 2018-2019 USGS LIDAR: NORTHERN CALIFORNIA WILDFIRE - QL2. PROJECTION: STATE PLANE 1983, ZONE: ZONE 0402 CALIFORNIA 2, HORIZONTAL NAD83 & VERTICAL DATUM: NAVD88 UNITS: U.S. FEET.

**LEGEND**  
 - - - - - APPROXIMATE ADJACENT PROPERTY BOUNDARY  
 ——— APPROXIMATE PROJECT SITE BOUNDARY  
 ● ON-SITE WELL  
 ● OFF-SITE WELL  
 (E) EXISTING

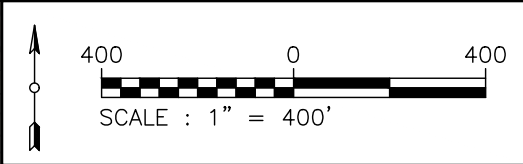


FIGURE  
**3**  
 25-3770

**WELL INTERFERENCE MAP**  
 1201 YOUNT MILL ROAD  
 NAPA, CALIFORNIA  
 APN 031-120-042

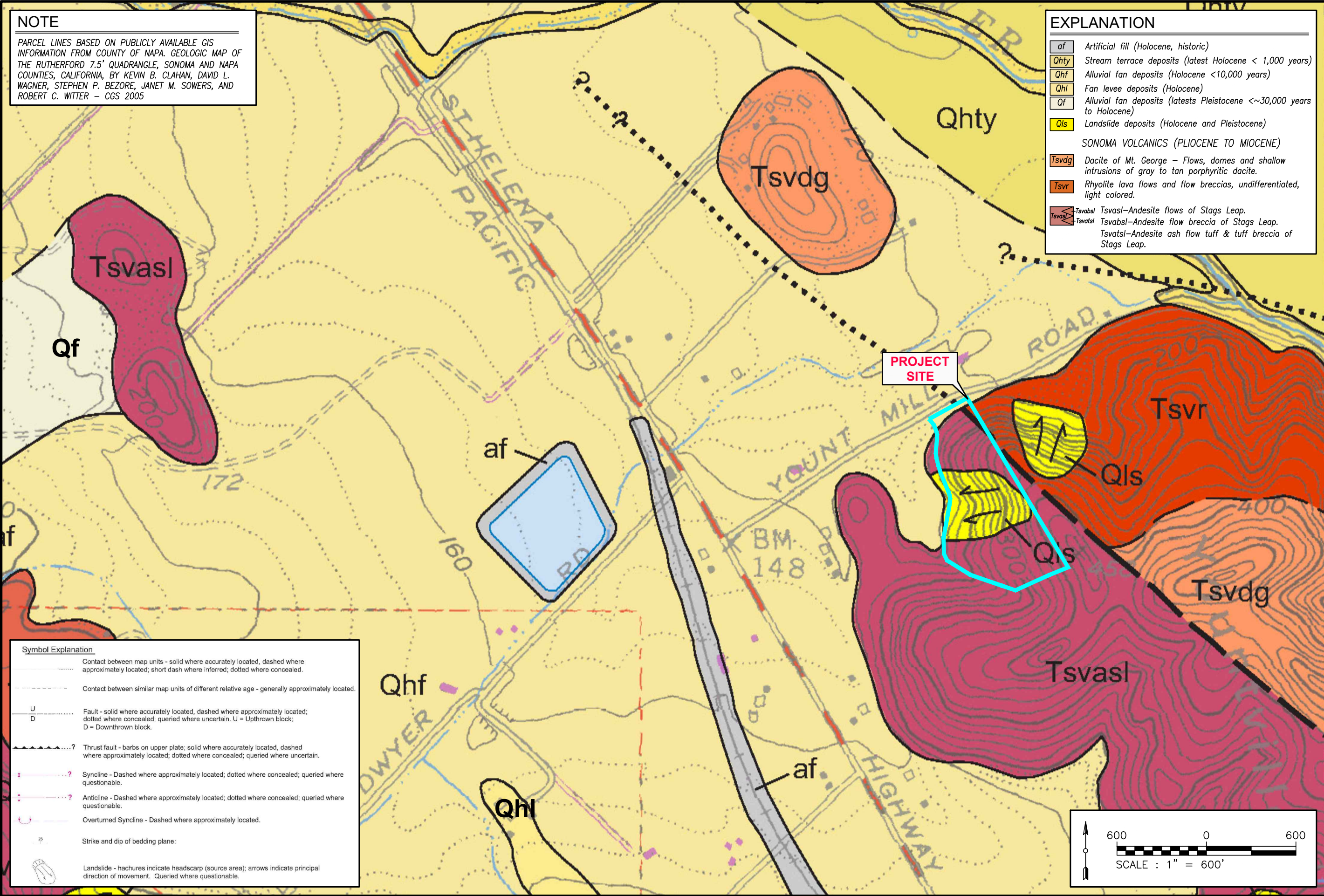


**NOTE**

PARCEL LINES BASED ON PUBLICLY AVAILABLE GIS INFORMATION FROM COUNTY OF NAPA. GEOLOGIC MAP OF THE RUTHERFORD 7.5' QUADRANGLE, SONOMA AND NAPA COUNTIES, CALIFORNIA, BY KEVIN B. CLAHAN, DAVID L. WAGNER, STEPHEN P. BEZORE, JANET M. SOWERS, AND ROBERT C. WITTER - CGS 2005

**EXPLANATION**

- af Artificial fill (Holocene, historic)
- Qhty Stream terrace deposits (latest Holocene < 1,000 years)
- Qhf Alluvial fan deposits (Holocene <10,000 years)
- Qhl Fan levee deposits (Holocene)
- Qf Alluvial fan deposits (latests Pleistocene <~30,000 years to Holocene)
- Qls Landslide deposits (Holocene and Pleistocene)
- SONOMA VOLCANICS (PLIOCENE TO MIOCENE)**
- Tsvdg Dacite of Mt. George - Flows, domes and shallow intrusions of gray to tan porphyritic dacite.
- Tsvr Rhyolite lava flows and flow breccias, undifferentiated, light colored.
- Tsvasl Tsvasl - Andesite flows of Stags Leap.
- Tsvasl Tsvasl - Andesite flow breccia of Stags Leap.
- Tsvasl Tsvasl - Andesite ash flow tuff & tuff breccia of Stags Leap.

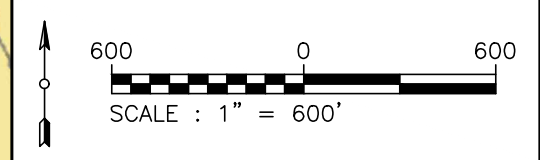


**Symbol Explanation**

	Contact between map units - solid where accurately located, dashed where approximately located; short dash where inferred; dotted where concealed.
	Contact between similar map units of different relative age - generally approximately located.
	Fault - solid where accurately located, dashed where approximately located; dotted where concealed; queried where uncertain. U = Uplifted block; D = Downthrown block.
	Thrust fault - bars on upper plate; solid where accurately located, dashed where approximately located; dotted where concealed; queried where uncertain.
	Syncline - Dashed where approximately located; dotted where concealed; queried where questionable.
	Anticline - Dashed where approximately located; dotted where concealed; queried where questionable.
	Overtuned Syncline - Dashed where approximately located.
	Strike and dip of bedding plane:
	Landslide - hachures indicate headscarp (source area); arrows indicate principal direction of movement. Queried where questionable.

FIGURE  
**4**  
25-3770

**GEOLOGIC MAP**  
1201 YOUNT MILL ROAD  
NAPA, CALIFORNIA  
APN 031-120-042



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**APPENDIX B**

**ONSITE WELL  
WATER WELL COMPLETION REPORT  
AND PUMP TEST**

\*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

E 11/23/15

File Original with DWR

State of California

**Well Completion Report**

Refer to Instruction Pamphlet  
No. e0290239

DWR Use Only - Do Not Fill In

07N05W26  
State Well Number/Site Number

382521 N 1222304 W  
Latitude Longitude

APN/TRS/Other

Page \_\_\_\_\_ of \_\_\_\_\_

Owner's Well Number \_\_\_\_\_

Date Work Began 09/03/2015 Date Work Ended 9/17/2015

Local Permit Agency Napa Planning, Building & Environmental Services

Permit Number E15-00641 Permit Date 8/6/15

Geologic Log		
Orientation <input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Angle Specify _____		
Drilling Method Air Drilling _____ Drilling Fluid Foam _____		
Depth from Surface		Description
Feet to Feet		Describe material, grain size, color, etc
0	20	Hard rock and sandstone.
20	60	Hard rock, brown clay, and sandstone.
60	120	Hard black volcanic with brown rock.
120	180	Hard black volcanic, brown rock and sandstone.
180	320	Hard multicolor volcanic rock.
320	360	Hard multicolor and red volcanic rock.
360	380	Hard multicolor volcanic rock.
380	420	Grey and black soft rock.
*****CONTINUED CASING LIST*****		
280	360	16 PERF F480 PVC .316 8.625 MILLED 0.032
360	380	16 BLANK F480 PVC .316 8.625
380	400	16 PERFF F480 PVC .316 8.625 MILLED 0.032
Total Depth of Boring <u>420</u> Feet		
Total Depth of Completed Well <u>400</u> Feet		

**Well Owner**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Well Location**

Address 1201 Yount Mill Road

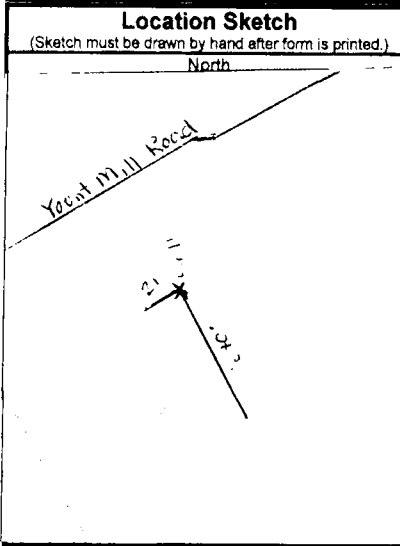
City Yountville Road County Napa

Latitude \_\_\_\_\_ Dec. Min. Sec. \_\_\_\_\_ N Longitude \_\_\_\_\_ Dec. Min. Sec. \_\_\_\_\_ W

Datum \_\_\_\_\_ Dec. Lat. \_\_\_\_\_ Dec. Long. \_\_\_\_\_

APN Book 031- Page 120 Parcel 009-000

Township T07N Range R05W Section M07N05W35



**Activity**

New Well

Modification/Repair

Deepen

Other \_\_\_\_\_

Destroy

Describe procedures and materials under "GEOLOGIC LOG"

**Planned Uses**

Water Supply

Domestic  Public

Irrigation  Industrial

Cathodic Protection

Dewatering

Heat Exchange

Injection

Monitoring

Remediation

Sparging

Test Well

Vapor Extraction

Other \_\_\_\_\_

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

**Water Level and Yield of Completed Well**

Depth to first water 83 (Feet below surface)

Depth to Static \_\_\_\_\_

Water Level 85 (Feet) Date Measured 09/17/2015

Estimated Yield \* 110 (GPM) Test Type Air Lift

Test Length 3.0 (Hours) Total Drawdown \_\_\_\_\_ (Feet)

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

Casings							
Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size if Any
Feet to Feet	(Inches)			(Inches)	(Inches)		(Inches)
0	65	Blank	F480 PVC	.316	8.625		
65	100	Blank	F480 PVC	.316	8.625		
100	120	Screen	F480 PVC	.316	8.625	Milled Slots	0.032
120	160	Blank	F480 PVC	.316	8.625		
160	260	Screen	F480 PVC	.316	8.625	Milled Slots	0.032
260	280	Blank	F480 PVC	.316	8.625		

Annular Material			
Depth from Surface	Fill	Description	
Feet to Feet			
0	65	Cement	
65	85	Bentonite	
85	400	Filter Pack	Pea 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 McLean & Williams, Inc.

Person, Firm or Corporation

878 El Centro Ave. Napa CA 94558

Address City State Zip

Signed \_\_\_\_\_ Date Signed 11-11-2015 396352

C-57 Licensed Water Well Contractor Date Signed C-57 License Number



**Well Drilling & Pump Service**  
 878 El Centro Ave. Napa Ca, 94558  
 Office 707-255-6450  
 Fax 707-255-6489  
 Lic. #396352

**YOUTMILL NEW WELL # 2**

SINCE 1949

**WELL INSPECTION REPORT FOR:**

Attn: Yountmill Vineyards Date of test: November 2<sup>nd</sup>-4<sup>th</sup>, 2015

Upon your request, we have checked the well and/or pressure system at  
1201 Yountmill Rd., Napa 94558 Well #2 – New well

Our findings are as follows:

**WELL INFORMATION**

Casing Size: 8" PVC Certalok SDR 17 well casing  
 Static Water Level: 81' from top of well casing at time of test  
 Well Depth: 390' draw down during test: 114' from top of well casing  
 Total water draw down in feet from static water level at end of flow test 33'  
 How tested: Open discharge using test pumping equipment  
 Well yield after test: 42 gallons per minute after 21 hours @ 114' pumping level  
 Well Comments: Well was constructed 09-17-2015 with an estimated yield of 110 gpm.

**WELL EQUIPMENT INFORMATION**

Pump Make: Goulds HP 20 Pump Setting: 315'  
 Type: Submersible Voltage: 460 Pipe Size: 4" galvanized  
 Pump Model: 120L15 Phase: 1 Wire Size: #4-3/wg submersible flat jacket  
 Pressure tank: None  
 Comments: All equipment was removed upon completion of testing.

**WELL TEST INFORMATION**

<u>Date</u>	<u>Time</u>	<u>Static</u>	<u>Water Meter</u>		
11/2/2015	11:40:05	81.055	88.6	309.127	Start pumping
11/2/2015	11:41:05	92.415	87.2		
11/2/2015	11:42:05	99.517	86.4		
11/2/2015	11:43:05	107.92	85		
11/2/2015	11:44:05	113.224	85		
11/2/2015	11:45:05	119.04	85.63333	309.3039	
11/2/2015	11:47:05	122.9	83		
11/2/2015	11:52:05	134.96	83.1	310.1548	
11/2/2015	11:57:05	136.78	83.1	310.5664	

11/2/2015	12:02:05	120.59	82.46667	310.9817	
11/2/2015	12:07:05	116.328	41.26667	311.3941	Trim to 40gpm
11/2/2015	12:12:05	114.518	41.26667	311.6	
11/2/2015	12:17:05	113.751	41.26667	311.8065	
11/2/2015	12:22:05	113.321	41.43333	312.0133	
11/2/2015	12:27:05	112.883	40.53333	312.219	
11/2/2015	12:32:05	112.919	41.4	312.4258	
11/2/2015	12:37:05	112.892	42.4	312.6354	
11/2/2015	12:42:05	112.965	41.43333	312.8441	
11/2/2015	12:47:05	112.855	41.33333	313.0523	
11/2/2015	12:52:05	112.947	41.43333	313.2569	
11/2/2015	12:57:05	112.956	41.5	313.4635	
11/2/2015	13:02:05	112.883	41.56667	313.6707	
11/2/2015	13:07:05	113.056	41.16667	313.8779	
11/2/2015	13:12:05	113.093	41.26667	314.0834	
11/2/2015	13:17:05	113.001	41.5	314.2926	
11/2/2015	13:22:05	113.038	41.46667	314.5006	
11/2/2015	13:27:05	112.974	41.1	314.7071	
11/2/2015	13:32:05	113.074	41.86666	314.915	
11/2/2015	13:37:05	113.184	40.73333	315.1213	
11/2/2015	13:42:05	113.184	41.36666	315.3284	
11/2/2015	13:47:05	113.001	41.2	315.535	
11/2/2015	13:52:05	113.029	41.43333	315.7416	
11/2/2015	13:57:05	113.148	41.4	315.949	
11/2/2015	14:02:05	113.148	41.56667	316.1575	
11/2/2015	14:07:05	113.257	41.4	316.364	
11/2/2015	14:12:05	113.275	41.16667	316.5707	
11/2/2015	14:17:05	113.12	41.7	316.7789	
11/2/2015	14:22:05	113.157	41.5	316.9863	
11/2/2015	14:27:05	113.349	41.53333	317.1949	
11/2/2015	14:32:05	113.449	41.8	317.404	
11/2/2015	14:37:05	113.385	41.36666	317.6096	
11/2/2015	14:42:05	113.239	41.5	317.8179	
11/2/2015	14:47:05	113.321	41.8	318.027	
11/2/2015	14:52:05	113.376	41.93333	318.2372	
11/2/2015	14:57:05	113.321	42.13334	318.4492	
11/2/2015	15:02:05	113.376	42.6	318.66	
11/2/2015	15:07:05	113.467	42.33333	318.8715	
11/2/2015	15:12:05	113.467	42.8	319.0843	
11/2/2015	15:17:05	113.358	42.7	319.2979	
11/2/2015	15:22:05	113.467	43.23333	319.5123	
11/2/2015	15:27:05	113.458	43.2	319.7273	
11/2/2015	15:32:05	113.623	42.4	319.9416	
11/2/2015	15:37:05	113.467	43.06667	320.1556	
11/2/2015	15:42:05	113.522	43.03333	320.3699	
11/2/2015	15:47:05	113.568	42.96667	320.5846	
11/2/2015	15:52:05	113.55	43.1	320.8001	
11/2/2015	15:57:05	113.604	43.33333	321.0165	

11/2/2015	16:02:05	113.495	43.36666	321.2334
11/2/2015	16:07:05	113.742	42.83333	321.4494
11/2/2015	16:12:05	113.623	43.2	321.6658
11/2/2015	16:17:05	113.668	43.46667	321.8825
11/2/2015	16:22:05	113.614	43.56667	322.0992
11/2/2015	16:27:05	113.659	43.16667	322.3156
11/2/2015	16:32:05	113.586	42.96667	322.5317
11/2/2015	16:37:05	113.595	43.3	322.7473
11/2/2015	16:42:05	113.641	42.7	322.962
v11/2/2015	16:47:05	113.76	42.53333	323.1764
11/2/2015	16:52:05	113.614	42.56667	323.3897
11/2/2015	16:57:05	113.641	42.83333	323.6034
11/2/2015	17:02:05	113.65	42.73333	323.8166
11/2/2015	17:07:05	113.696	42.73333	324.0296
11/2/2015	17:12:05	113.632	42.46667	324.2427
11/2/2015	17:17:05	113.76	42.56667	324.4551
11/2/2015	17:22:05	113.714	42.36666	324.6674
11/2/2015	17:27:05	113.742	42.26667	324.8795
11/2/2015	17:32:05	113.796	41.36666	325.0895
11/2/2015	17:37:05	113.796	42.73333	325.3013
11/2/2015	17:42:05	113.44	42.43333	325.5142
11/2/2015	17:47:05	113.805	42.56667	325.7266
11/2/2015	17:52:05	113.815	42.33333	325.9386
11/2/2015	17:57:05	113.778	42.46667	326.1504
11/2/2015	18:02:05	113.632	42.76667	326.3633
11/2/2015	18:07:05	113.678	42.5	326.5757
11/2/2015	18:12:05	113.76	42.56667	326.7881
11/2/2015	18:17:05	113.678	42.33333	327.0004
11/2/2015	18:22:05	113.933	42.43333	327.2123
11/2/2015	18:27:05	113.842	42.16667	327.4236
11/2/2015	18:32:05	113.86	42.53333	327.636
11/2/2015	18:37:05	113.879	42.5	327.8476
11/2/2015	18:42:05	113.805	42.06667	328.0594
11/2/2015	18:47:05	113.952	42.26667	328.2704
11/2/2015	18:52:05	113.76	41.9	328.4812
11/2/2015	18:57:05	113.787	42.43333	328.6925
11/2/2015	19:02:05	113.869	42.33333	328.9044
11/2/2015	19:07:05	113.805	42.06667	329.1162
11/2/2015	19:12:05	113.86	42.36666	329.3284
11/2/2015	19:17:05	113.915	42.46667	329.5399
11/2/2015	19:22:05	113.933	42.5	329.7514
11/2/2015	19:27:05	113.915	42.13334	329.9622
11/2/2015	19:32:05	113.897	42.43333	330.1738
11/2/2015	19:37:05	113.796	42.23333	330.3845
11/2/2015	19:42:05	113.943	42.3	330.5962
11/2/2015	19:47:05	114.125	42.23333	330.807
11/2/2015	19:52:05	113.714	42.23333	331.0191
11/2/2015	19:57:05	113.851	42.26667	331.2314

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11/2/2015	21:07:05	114.153	42.26667	334.1914
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11/2/2015	21:42:05	113.952	42.53333	335.6753
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11/2/2015	22:07:05	114.189	42.33333	336.7342
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11/3/2015	22:22:05	81.2101	0	363.66
11/3/2015	22:27:05	81.2193	0	363.66
11/3/2015	22:32:05	-81.1645	0	363.66
11/3/2015	22:37:05	81.1919	0	363.66
11/3/2015	22:42:05	81.1919	0	363.66
11/3/2015	22:47:05	81.2285	0	363.66
11/3/2015	22:52:05	81.1645	0	363.66
11/3/2015	22:57:05	81.201	0	363.66
11/3/2015	23:02:05	81.1736	0	363.66
11/3/2015	23:07:05	81.1828	0	363.66
11/3/2015	23:12:05	81.1645	0	363.66
11/3/2015	23:17:05	81.1919	0	363.66
11/3/2015	23:22:05	81.1553	0	363.66
11/3/2015	23:27:05	81.1828	0	363.66
11/3/2015	23:32:05	81.1919	0	363.66
11/3/2015	23:37:05	81.201	0	363.66
11/3/2015	23:42:05	81.2193	0	363.66
11/3/2015	23:47:05	81.2285	0	363.66

11/3/2015	23:52:05	81.2833	0	363.66
11/4/2015	23:57:05	81.3198	0	363.66
11/4/2015	0:02:05	81.3381	0	363.66
11/4/2015	0:07:05	81.329	0	363.66
11/4/2015	0:12:05	81.329	0	363.66
11/4/2015	0:17:05	81.3381	0	363.66
11/4/2015	0:22:05	81.3655	0	363.66
11/4/2015	0:27:05	81.3198	0	363.66
11/4/2015	0:32:05	81.3015	0	363.66
11/4/2015	0:37:05	81.2741	0	363.66
11/4/2015	0:42:05	81.2924	0	363.66
11/4/2015	0:47:05	81.2741	0	363.66
11/4/2015	0:52:05	81.2558	0	363.66
11/4/2015	0:57:05	81.2558	0	363.66
11/4/2015	1:02:05	81.2467	0	363.66
11/4/2015	1:07:05	81.265	0	363.66
11/4/2015	1:12:05	81.2285	0	363.66
11/4/2015	1:17:05	81.2741	0	363.66
11/4/2015	1:22:05	81.2558	0	363.66
11/4/2015	1:27:05	81.2467	0	363.66
11/4/2015	1:32:05	81.2101	0	363.66
11/4/2015	1:37:05	81.1645	0	363.66
11/4/2015	1:42:05	81.1828	0	363.66
11/4/2015	1:47:05	81.2558	0	363.66
11/4/2015	1:52:05	81.1828	0	363.66
11/4/2015	1:57:05	81.2101	0	363.66
11/4/2015	2:02:05	81.1919	0	363.66
11/4/2015	2:07:05	81.1553	0	363.66
11/4/2015	2:12:05	81.1736	0	363.66
11/4/2015	2:17:05	81.201	0	363.66
11/4/2015	2:22:05	81.1919	0	363.66
11/4/2015	2:27:05	81.2285	0	363.66
11/4/2015	2:32:05	81.2193	0	363.66
11/4/2015	2:37:05	81.265	0	363.66
11/4/2015	2:42:05	81.2833	0	363.66
11/4/2015	2:47:05	81.329	0	363.66
11/4/2015	2:52:05	81.3472	0	363.66
11/4/2015	2:57:05	81.4112	0	363.66
11/4/2015	3:02:05	81.4112	0	363.66
11/4/2015	3:07:05	81.4386	0	363.66
11/4/2015	3:12:05	81.4112	0	363.66
11/4/2015	3:17:05	81.3838	0	363.66
11/4/2015	3:22:05	81.3838	0	363.66
11/4/2015	3:27:05	81.3564	0	363.66
11/4/2015	3:32:05	81.3472	0	363.66
11/4/2015	3:37:05	81.3381	0	363.66
11/4/2015	3:42:05	81.2833	0	363.66
11/4/2015	3:47:05	81.3107	0	363.66

11/4/2015	3:52:05	81.2741	0	363.66
11/4/2015	3:57:05	81.2833	0	363.66
11/4/2015	4:02:05	81.2741	0	363.66
11/4/2015	4:07:05	81.2285	0	363.66
11/4/2015	4:12:05	81.201	0	363.66
11/4/2015	4:17:05	81.2285	0	363.66
11/4/2015	4:22:05	81.2285	0	363.66
11/4/2015	4:27:05	81.1828	0	363.66
11/4/2015	4:32:05	81.1736	0	363.66
11/4/2015	4:37:05	81.1462	0	363.66
11/4/2015	4:42:05	81.2193	0	363.66
11/4/2015	4:47:05	81.2193	0	363.66
11/4/2015	4:52:05	81.1828	0	363.66
11/4/2015	4:57:05	81.1736	0	363.66
11/4/2015	5:02:05	81.1919	0	363.66
11/4/2015	5:07:05	81.1553	0	363.66
11/4/2015	5:12:05	81.1462	0	363.66
11/4/2015	5:17:05	81.1279	0	363.66
11/4/2015	5:22:05	81.1828	0	363.66
11/4/2015	5:27:05	81.1553	0	363.66
11/4/2015	5:32:05	81.1279	0	363.66
11/4/2015	5:37:05	81.1462	0	363.66
11/4/2015	5:42:05	81.1736	0	363.66
11/4/2015	5:47:05	81.1553	0	363.66
11/4/2015	5:52:05	81.1371	0	363.66
11/4/2015	5:57:05	81.1462	0	363.66
11/4/2015	6:02:05	81.1279	0	363.66
11/4/2015	6:07:05	81.1188	0	363.66
11/4/2015	6:12:05	81.1462	0	363.66
11/4/2015	6:17:05	81.1005	0	363.66
11/4/2015	6:22:05	81.1279	0	363.66
11/4/2015	6:27:05	81.1188	0	363.66
11/4/2015	6:32:05	81.1005	0	363.66
11/4/2015	6:37:05	81.1462	0	363.66
11/4/2015	6:42:05	81.1462	0	363.66
11/4/2015	6:47:05	81.0822	0	363.66
11/4/2015	6:52:05	81.1005	0	363.66
11/4/2015	6:57:05	81.064	0	363.66
11/4/2015	7:02:05	81.0457	0	363.66
11/4/2015	7:07:05	81.0731	0	363.66
11/4/2015	7:12:05	81.064	0	363.66
11/4/2015	7:17:05	81.0731	0	363.66
11/4/2015	7:22:05	81.0548	0	363.66
11/4/2015	7:27:05	81.0731	0	363.66
11/4/2015	7:32:05	81.0548	0	363.66
11/4/2015	7:37:05	81.0274	0	363.66
11/4/2015	7:42:05	81.064	0	363.66

11/4/2015	7:47:05	81.0457	0	363.66
11/4/2015	7:52:05	81.0914	0	363.66
11/4/2015	7:57:05	81.0183	0	363.66
11/4/2015	8:02:05	81.0274	0	363.66
11/4/2015	8:07:05	81.0183	0	363.66
11/4/2015	8:12:05	81.0548	0	363.66
11/4/2015	8:17:05	81.0822	0	363.66
11/4/2015	8:22:05	81.0365	0	363.66
11/4/2015	8:27:05	81.0365	0	363.66
11/4/2015	8:32:05	81.0274	0	363.66
11/4/2015	8:37:05	81.0183	0	363.66
11/4/2015	8:42:05	81.0274	0	363.66
11/4/2015	8:47:05	81.0091	0	363.66
11/4/2015	8:52:05	81.0274	0	363.66
11/4/2015	8:57:05	81.0091	0	363.66
11/4/2015	9:02:05	81	0	363.66
11/4/2015	9:07:05	80.9817	0	363.66
11/4/2015	9:12:05	81.0183	0	363.66
11/4/2015	9:17:05	81.0091	0	363.66
	9:22:05	81	0	363.66

42 gallons per minute is the final pump flow after 21 hours of continuous pumping. All measurements were taken to the top of wellhead using a submersible pressure transducer with data logger and an electronic water level indicator 1-1/10<sup>th</sup> of an inch measurement.

### FINAL COMMENTS

Please note that flow test results by McLean and Williams Inc. represents the well water yield and system condition for the time of the test only.

Thank you, *Gonzalo Salinas*

Gonzalo Salinas  
 Mclean & Williams Inc.  
[Gonzalo.mwinc@sbcglobal.net](mailto:Gonzalo.mwinc@sbcglobal.net)

**APPENDIX C**

**NEARBY WELLS**  
**WATER WELL COMPLETION REPORTS**

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

Driller's Copy

Page 1 of 1

Owner's Well No. \_\_\_\_\_

No. 0900858

Date Work Began 02/04/04, Ended 02/16/04

Local Permit Agency Napa

Permit No. 96-12536 Permit Date 1/20/04

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

GEOLOGIC LOG

Table with columns: ORIENTATION, DRILLING METHOD, FLUID, DESCRIPTION, DEPTH FROM SURFACE (Fl. to Ft.). Contains detailed geological descriptions from 0 to 350 feet depth.

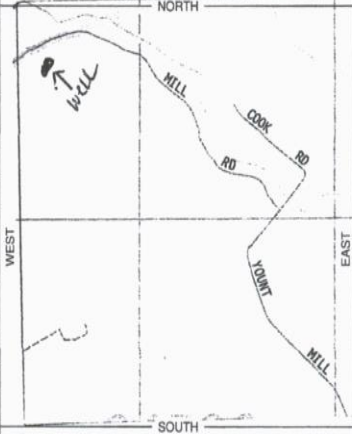
WELL OWNER

Name: Arthur Stephen Jones
Mailing Address: 1201 Yountville Road
Yountville, CA 94590

WELL LOCATION

Address: 1201 Yountville Road
City: Yountville
County: Napa
APN Book 031 Page 120 Parcel 009

LOCATION SKETCH



ACTIVITY

- NEW WELL
MODIFICATION/REPAIR: Deepen, Other
DESTROY
USES: WATER SUPPLY (Domestic, Public, Irrigation, Industrial), MONITORING, TEST WELL, CATHODIC PROTECTION, HEAT EXCHANGE, DIRECT PUSH, INJECTION, VAPOR EXTRACTION, SPARGING, REMEDIATION, OTHER

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: \_\_\_\_\_ (Fl.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL: 54 (Fl.) & DATE MEASURED: 02/16/04
ESTIMATED YIELD: 100 (GPM) & TEST TYPE: air
TEST LENGTH: 6 (Hrs.) TOTAL DRAWDOWN: 130' (Fl.)

TOTAL DEPTH OF BORING: 350 (Feet)
TOTAL DEPTH OF COMPLETED WELL: 350 (Feet)

Table with columns: DEPTH FROM SURFACE, BORE-HOLE DIA., CASING (S) TYPE, MATERIAL / GRADE, INTERNAL DIAMETER, GAUGE OR WALL THICKNESS, SLOT SIZE, ANNULAR MATERIAL TYPE, CE-MENT, BEN-TONITE, FILL, FILTER PACK.

- 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: McKeen & Williams, Inc.
ADDRESS: 878 El Centro Ave., Napa, CA 94558
Signed: [Signature] DATE SIGNED: 03/11/04 C-57 LICENSE NUMBER: 296352

31-120-27

2/8/07

ORIGINAL  
File with DWR

# WELL COMPLETION REPORT

STATE OF CALIFORNIA

Refer to Instruction Pamphlet

No. **e039634**

DWR USE ONLY - DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

Page 1 of 1

Owner's Well No. 1-06

Date Work Began 9/12/2006, Ended 9/15/2006

Local Permit Agency Napa County Environmental Mgmt

Permit No. E06-01313

Permit Date 8/31/2006

## GEOLOGIC LOG

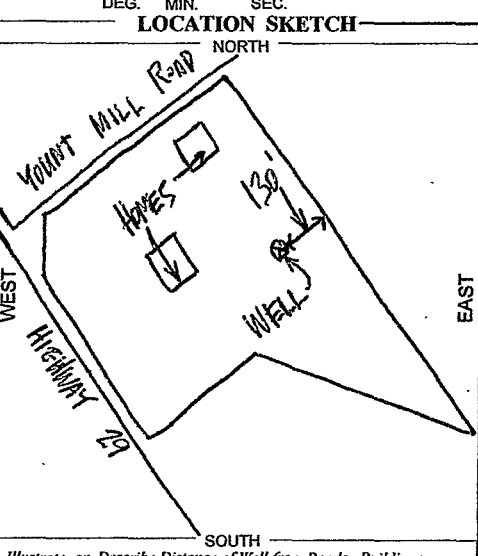
DEPTH FROM SURFACE		DESCRIPTION
Ft.	to Ft.	
0	15	GRAY/TAN VOLCANICS
15	30	BLACK VOLCANICS
30	40	GRAY/BROWN VOLCANICS
40	100	BLACK VOLCANICS
100	120	BLACK/GRAY VOLCANICS
120	220	BLACK/RED VOLCANICS
220	240	BLACK VOLCANICS
240	400	BLACK/GREEN VOLCANICS
CONTINUED CASING LAYOUT		
316	376	SCREEN PVC 6" .032 SLOT
376	396	BLANK PVC 6"

### WELL OWNER

Name: [REDACTED]  
Mailing Address: [REDACTED]  
City: Helena STATE: CA ZIP: 94574

### WELL LOCATION

Address: 7466 Highway 29  
City: Yountville CA  
County: Napa  
APN Book: 031 Page: 120 Parcel: 010  
Township: Range: Section:  
Latitude: 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)

TOTAL DEPTH OF BORING 400 (Feet)  
TOTAL DEPTH OF COMPLETED WELL 396 (Feet)

### WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 135 (Ft.) BELOW SURFACE  
DEPTH OF STATIC WATER LEVEL 66 (Ft.) & DATE MEASURED 9/15/2006  
ESTIMATED YIELD \* 100 (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.*

RECEIVED  
NOV 07 2006  
DEPT. OF ENVIRONMENTAL MANAGEMENT

DEPTH FROM SURFACE	BORE-HOLE DIA. (Inches)	CASING (S)					
		TYPE (✓)	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	
0 to 60	12	BLANK					
60 to 400	9	SCREEN					
0 to 116	✓		PVC F480	6	SDR-21		
116 to 236	✓		PVC F480	6	SDR-21	.032	
236 to 316	✓		PVC F480	6	SDR-21		

DEPTH FROM SURFACE	ANNULAR MATERIAL			
	TYPE	CEMENT (✓)	BENTONITE (✓)	FILL (✓)
0 to 57		✓		
57 to 396	CONCRETE PEA GRAVEL			✓

### 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 *[Signature]* DATE SIGNED **09/15/06** C-57 LICENSE NUMBER **439-746**  
WELL DRILLER/AUTHORIZED REPRESENTATIVE

State of California  
**Well Completion Report**  
 Form DWR 188 Submitted 11/10/2022  
 WCR2022-013292

Owner's Well Number \_\_\_\_\_ Date Work Began 05/09/2022 Date Work Ended 05/19/2022  
 Local Permit Agency Napa County Planning Building and Environmental Services  
 Secondary Permit Agency \_\_\_\_\_ Permit Number E19-00194 Permit Date \_\_\_\_\_

Well Owner (must remain confidential pursuant to Water Code 13752)	Planned Use and Activity
	Activity <u>New Well</u> Planned Use <u>Water Supply Domestic</u>

Well Location					
Address <u>1181 YOUNTMILL RD</u>			APN <u>031-120-032-000</u>		
City <u>NAPA</u>	Zip <u>94558</u>	County <u>Napa</u>	Township <u>07 N</u>		
Latitude <u>38 25 20.5932 N</u>	Longitude <u>-122 23 12.2171 W</u>	Range <u>05 W</u>			
Deg. Min. Sec.	Deg. Min. Sec.	Section <u>26</u>			
Dec. Lat. <u>38.422387</u>	Dec. Long. <u>-122.386727</u>	Baseline Meridian <u>Mount Diablo</u>			
Vertical Datum _____	Horizontal Datum <u>WGS84</u>	Ground Surface Elevation _____			
Location Accuracy _____	Location Determination Method _____	Elevation Accuracy _____			
		Elevation Determination Method _____			

Borehole Information	
Orientation <u>Vertical</u>	Specify _____
Drilling Method <u>Direct Rotary</u>	Drilling Fluid <u>Bentonite</u>
Total Depth of Boring <u>500</u> Feet	
Total Depth of Completed Well <u>500</u> Feet	

Water Level and Yield of Completed Well	
Depth to first water <u>80</u>	(Feet below surface)
Depth to Static _____	
Water Level <u>98</u> (Feet)	Date Measured _____
Estimated Yield* <u>100</u> (GPM)	Test Type <u>Air Lift</u>
Test Length <u>4</u> (Hours)	Total Drawdown <u>172</u> (feet)
*May not be representative of a well's long term yield.	

Geologic Log - Free Form		
Depth from Surface	Feet to Feet	Description
0	60	TOPSOIL, GRAY, RED, WHITE ROCK
60	100	MIXED LARGE ROCK, SAND INBEDED
100	140	MIXED BIG ROCK, RED, ORANGE, GRAY ROCK
140	180	LT GRAY, DK GRAY ROCK
180	240	DK GRAY, RED, YELLOW, LT GRAY ROCK
240	320	HARD GRAY, GREEN ROCK
320	340	GRAY, GREEN, RED ROCK, ASH INBEDED
340	420	GRAY ASH, RED, GRAY, BLACK SAND INBEDED
420	460	GRAY ROCK, RED ROCK, SOME ASH
460	480	HARD GRAY ROCK BLACK SAND
480	500	GRAY ASH, GRAY ROCK

### Casings

Casing #	Depth from Surface Feet to Feet		Casing Type	Material	Casings Specificatons	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if any (inches)	Description
1	0	80	Blank	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625			
1	80	160	Screen	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625	Milled Slots	0	
1	160	180	Blank	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625			
1	180	240	Screen	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625	Milled Slots	0	
1	240	280	Blank	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625			
1	280	380	Screen	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625	Milled Slots	0	
1	380	400	Blank	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625			
1	400	420	Screen	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625	Milled Slots	0	
1	420	440	Blank	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625			
1	440	480	Screen	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625	Milled Slots	0	
1	480	500	Blank	PVC	OD: 6.625 in.   SDR: 21   Thickness: 0.316 in.	0.316	6.625			

### Annular Material

Depth from Surface Feet to Feet		Fill	Fill Type Details	Filter Pack Size	Description
0	61	Cement	Other Cement		6 SACK
61	500	Filter Pack	Other Gravel Pack		PEA GRAVEL

Other Observations:





RECEIVED # 31-13029  
29  
MAY 2 1974

NAPA COUNTY HEALTH DEPARTMENT  
DIVISION OF ENVIRONMENTAL HEALTH

APPLICATION & PERMIT TO CONSTRUCT  
A WATER WELL  
(ORDINANCE # )

DIVISION OF ENVIRONMENTAL HEALTH

HEALTH DEPT. USE ONLY

DATE: 4-11-74

RECEIPT NO: 0959

BY: [Signature]

NAME [Redacted] ADDRESS [Redacted] DATE 4-11-74  
(Owner) (Job Location)  
NAME [Redacted] ADDRESS [Redacted]  
(Well Driller)

TYPE OF WORK: NEW WELL  RECONDITIONING  DEEPENING   
TEST HOLES  DESTROYING  OTHER   
TYPE I PERMIT  TYPE II PERMIT  FEE

PROPOSED USE: DOMESTIC  IRRIGATION  INDUSTRIAL  MUNICIPAL   
TEST WELL  OTHER

Sewage Disposal On Site (Existing or Proposed) Public  Individual  Private   
Distance from well to any part of nearest sewage disposal system  feet.  
(Sketch of site to accompany application. *None*)

TYPE OF EQUIPMENT TO BE USED: Rotary  Cable  Hand Dug  Other

CONSTRUCTION PROPOSED: Diameter of casing 6" Material  Annular Space: Size 2"  
Sealed with: Concrete  Grout  Neat Cement  Puddled Clay  Other   
Conductor Casing: Yes  No  Material   
Chlorination By: Owner  Pump Co  Driller

[Signature] (SIGNATURE OF APPLICANT) 4/11/74 (DATE)

NOTICE TO DRILLER: COMPLETE THIS PORTION AND PROVIDE OWNER WITH THIS COPY.

CASING

CONSTRUCTION: Total Depth 300' Ft. Completed  
Surface Seal to 23' Ft.  
Any Stratas sealed: Yes  No   
If yes, depth of Stratas  
From      Ft. to      Feet  
From      Ft. to      Feet  
Perforations None  
From      Ft. to      Feet  
From      Ft. to      Feet  
From      Ft. to      Feet

WATER LEVELS

First water at 167' Feet  
Static level at 18' Feet

WELL TESTS

How performed Bailing  
Yield 20 GPM with 172' Feet  
Drawdown      Ft. after 6 Hrs.

WELL LOG

(Formation; describe by color, size of material, structure)

		Ft.	to	Ft/
0	3			Top Soil
3	18			Pumice & Boulders
18	117			Green & Yellow Pum.
117	135			Black Pumice
135	167			Fractured Dark Br. Rock
167	178			Fractured Black Rock
178	191			Fractured Black Rock w/Soft Gray Rock Str.
191	217			Dark Gray Volcanic, w/Soft Brown Strgrs.
217	224			Dark Brown Frtd Volcanic Rock
224	231			Hard Dk Gr. Frtd Rk.

Signed: [Signature] (cont'd, reverse side)  
License # 258826

Formation Continuation:

231	243	Hard Dark Brown & Gray Fractured Rock
243	251	Hard Dark Gray Rock w/White Stringers
251	262	Dark Gray Granular w/Yellow Stringers
262	271	Brown Gray & Fractured Yellow Sandrock
271	302	Hard Black Rock

\*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

# State of California Well Completion Report

Refer to Instruction Pamphlet  
No. **e0241205**

Page \_\_\_\_\_ of \_\_\_\_\_

Owner's Well Number \_\_\_\_\_

Date Work Began 05/22/2014

Date Work Ended 5/31/2014

Local Permit Agency Napa County Planning, Building & Environmental Services

Permit Number E-1400268

Permit Date 4/10/14

DWR Use Only - Do Not Fill In			
State Well Number/Site Number			
Latitude	N	W	Longitude
APN/TRS/Other			

## Geologic Log

Orientation  Vertical  Horizontal  Angle Specify \_\_\_\_\_  
 Drilling Method Direct Rotary Drilling Fluid Bentonite mud

Depth from Surface		Description
Feet	to Feet	Describe material, grain size, color, etc
0	40	Multicolor gravel and rock.
40	60	Grey clay and multicolor rock.
60	80	Sandstone, multicolor hard rock.
80	220	Medium hard rock with multicolors.
220	300	Multicolor medium hard rock and brown clay.
300	380	Multicolor hard rock with brown clay.

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DEC 15 2014

Napa County Planning, Building  
& Environmental Services

\*\*\*\*\*CONTINUE CASING LIST\*\*\*\*\*

Depth	to	Material	Thickness	Outside Diameter	Slot Size
220	240	10. Blank F480 PVC	.316	6.625	
240	300	10. Screen F480 PVC	.316	6.625	0.032
300	320	10. Blank F480 PVC	.316	6.625	
320	340	10. Screen F480 PVC	.316	6.625	0.032
340	360	10. Blank F480 PVC	.316	6.625	
360	380	10. Screen F480 PVC	.316	6.625	0.032

Total Depth of Boring 380 Feet

Total Depth of Completed Well 380 Feet

## Well Owner

Name Michael Pozzan  
 Mailing Address 1140 Yountmill Road  
 City Yountville State CA Zip 94599

## Well Location

Address 1140 Yountmill Road  
 City Yountville County Napa  
 Latitude \_\_\_\_\_ N Longitude \_\_\_\_\_ W  
 Datum \_\_\_\_\_ Dec. Lat. \_\_\_\_\_ Dec. Long. \_\_\_\_\_  
 APN Book 031- Page 100- Parcel 019-000  
 Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_

## Location Sketch

(Sketch must be drawn by hand after form is printed.)

North

## Water Level and Yield of Completed Well

Depth to first water \_\_\_\_\_ (Feet below surface)  
 Depth to Static \_\_\_\_\_  
 Water Level 36 (Feet) Date Measured 05/31/2014  
 Estimated Yield \* 75 (GPM) Test Type Air Lift  
 Test Length 6.0 (Hours) Total Drawdown \_\_\_\_\_ (Feet)  
 \*May not be representative of a well's long term yield.

## Casings

Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size
0	60	Blank	F480 PVC	.316	6.625		
60	80	Screen	F480 PVC	.316	6.625	Milled Slots	0.032
80	100	Blank	F480 PVC	.316	6.625		
100	160	Screen	F480 PVC	.316	6.625	Milled Slots	0.032
160	180	Blank	F480 PVC	.316	6.625		
180	220	Screen	F480 PVC	.316	6.625	Milled Slots	0.032

## Annular Material

Depth from Surface	Fill	Description
0	60	Cement
60	62	Bentonite
62	380	Filter Pack Pea gravel

## Attachments

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

## Certification Statement

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

Name McLean & Williams, Inc.  
 Person, Firm or Corporation  
878 El Centro Ave. Napa CA 94558  
 Address City State Zip  
 Signed [Signature] Date Signed 11/12/2014 396352  
 C-57 Licensed Water Well Contractor License Number

WATER WELL DRILLERS REPORT

(Sections 7079, 7080, 7081, 7082, Water Code)

7N/5W-20

Do Not Fill In

No. 11078

CONFIDENTIAL LOG  
Water Code Sec. 13752

THE RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES

State Well No. \_\_\_\_\_  
Other Well No. \_\_\_\_\_

(1) Name \_\_\_\_\_  
Address \_\_\_\_\_

(2) LOCATION OF WELL: U  
County Napa Owner's number, if any \_\_\_\_\_  
Township, Range, and Section 1140 Mount Mill Park  
Distance from cities, roads, railroads, etc. Mount Mill Calif.

(3) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Destroying   
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):  
Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

(5) EQUIPMENT:  
Rotary   
Cable   
Other

(6) CASING INSTALLED:

STEEL:  OTHER: \_\_\_\_\_  
SINGLE  DOUBLE

If gravel packed

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	64	8	188			
62	133	7	189			

Size of shoe or well ring: \_\_\_\_\_ Size of gravel: \_\_\_\_\_  
Describe joint Butt weld

(7) PERFORATIONS OR SCREEN:  
Type of perforation or name of screen Machine sawed

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
54	64	2	10	1/8 x 3
62	133	2	8	1/8 x 3

(8) CONSTRUCTION:  
Was a surface sanitary seal provided? Yes  No  To what depth 25 ft.  
Were any strata sealed against pollution? Yes  No  If yes, note depth of strata \_\_\_\_\_  
From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Method of sealing Cement grout.

(9) WATER LEVELS:  
Depth at which water was first found, if known ft. 52  
Standing level before perforating, if known ft. \_\_\_\_\_  
Standing level after perforating and developing ft. 8

(10) WELL TESTS:  
Pump test made? Yes  No  If yes, by whom? Driller  
40 gal./min. with 30 ft. drawdown after 1 hrs.  
Temperature of water \_\_\_\_\_ Was a chemical analysis made? Yes  No   
Was electric log made of well? Yes  No  If yes, attach copy \_\_\_\_\_

(11) WELL LOG:  
Total depth 133 ft. Depth of completed well \_\_\_\_\_ ft.  
Formation: Describe by color, character, size of material, and structure  
0 - 1 Top soil ft.  
1 - 6 Hard volcanic clay  
6 - 15 Soft brown clay  
15 - 35 Blue clay & gravel  
35 - 52 Blue clay & shale  
52 - 62 Water Brown silt & gravel  
62 - 78 Hard black rock & ash  
78 - 96 Red ash  
96 - 133 Hard gray ash

CONFIDENTIAL LOG  
Water Code Sec. 13752

Work started Sept 11 1969, Completed Sept 16 1969  
WELL DRILLER'S STATEMENT:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
NAME Walter Pittler  
(Person, firm, or corporation) (Typed or printed)  
Address 1544 Mark West Hwy Rd. Santa Rosa, Calif.  
[SIGNED] Walter Pittler  
(Well Driller)  
License No. 163052 Dated Sept 17, 1969

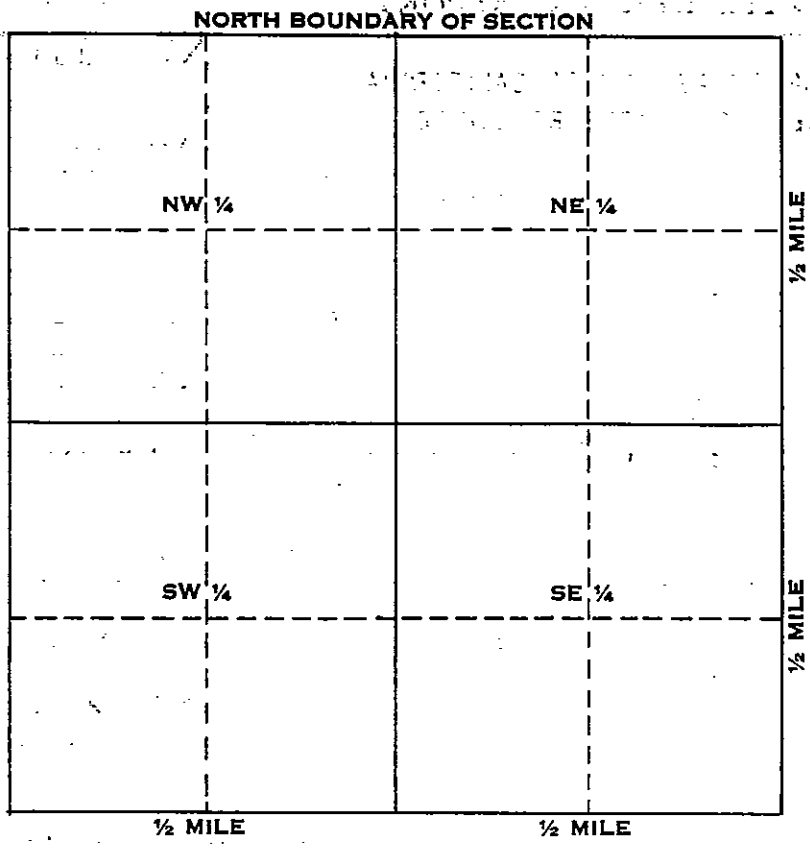
SKETCH LOCATION OF WELL ON REVERSE SIDE

WELL LOCATION SKETCH

11078

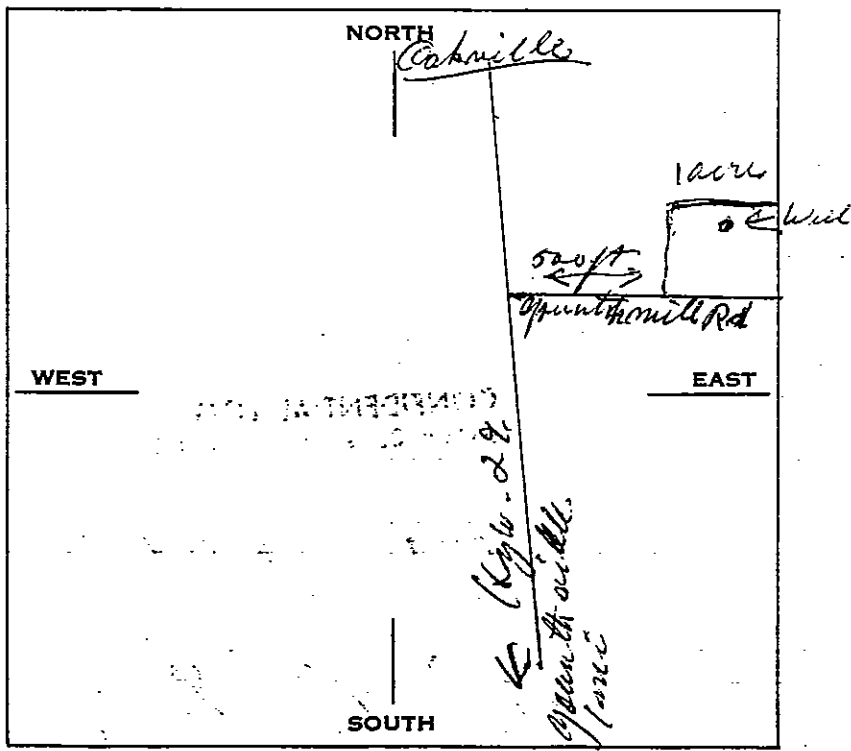
ORIGINAL FILE WITH BUREAU

CONFIDENTIAL FOR INTERMEDIC



Township 7 N/X  
 Range 5 W/W  
 Section No. 26

A. Location of well in sectionized areas.  
 Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized.  
 Sketch roads, railroads, streams, or other features as necessary.  
 Indicate distances.

1969 SEP 29 AM 11 32

DEPT. OF WATER RESOURCES

STATE OF CALIFORNIA  
**WELL COMPLETION REPORT**  
Refer to Instruction Pamphlet

Page      of     

Owner's Well No.     

No. **1073612**

Date Work Began 10/10/2008, Ended 10/16/2008

Local Permit Agency Napa County

Permit No. 108-10578 Permit Date 10/07/2008

DWR USE ONLY — DO NOT FILE IN —

STATE WELL NO./STATION NO.     

LATITUDE      LONGITUDE     

APN/TRS/OTHER     

**GEOLOGIC LOG**

DEPTH FROM SURFACE		DESCRIPTION
Ft.	to Ft.	
0	25	Brown Clay & Gravel
25	38	Gravel
38	65	Brown Clay & Gravel
65	80	Yellow Clay
80	100	Yellow Ash
100	120	Gray Clay
120	140	Gray Gravel, some Clay
140	180	Gray Clay
180	220	Gray Rock & Gray Clay
220	320	Gray Rock & some Gray Clay
320	390	Gray & Green Fractured Rock
390	404	Gray Clay & some Rock

**WELL OWNER**

Name     

Mailing Address     

CITY      STATE      ZIP     

**WELL LOCATION**

Address 150 Yount Mill Road

City Napa County Napa

APN Book Napa Page      Parcel 035

Township 031 Range 100 Section 032-000

Lat.      N Long.      W

**LOCATION SKETCH**

NORTH

SOUTH

**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)     

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.

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JAN 05 2009

TOTAL DEPTH OF BORING 404 (Feet)

TOTAL DEPTH OF COMPLETED WELL 117 (Feet)

DEPT. OF ENVIRONMENTAL MANAGEMENT

**WATER LEVEL & YIELD OF COMPLETED WELL**

DEPTH TO FIRST WATER 117 (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 75 (Ft.) & DATE MEASURED 10-16-08

ESTIMATED YIELD 30 (GPM) & TEST TYPE 1.5 hr

TEST LENGTH 5 (Hrs.) TOTAL DRAWDOWN 117 (Ft.) GPM at day of Test

\* 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	CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)
0	55	11	Plastic	5	1/80	0	55	✓			
55	104	8 3/4				55	100				Red Gravel
104	110	8 1/4									

- 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 J.P.M. DATE SIGNED 11-11-08 802-509  
C-57 LICENSED WATER WELL CONTRACTOR C-57 LICENSE NUMBER

# Well Completion Report

Refer to Instruction Pamphlet

No. **e0176210**

Page \_\_\_\_\_ of \_\_\_\_\_

Owner's Well Number \_\_\_\_\_

Date Work Began 04/23/2013

Date Work Ended 5/3/2013

Local Permit Agency Napa County

Permit Number E12-00447

Permit Date 8/1/12

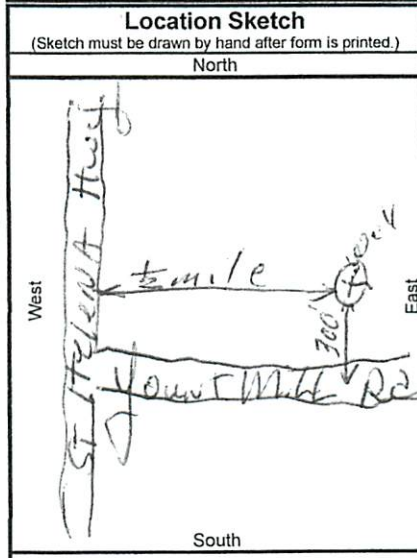
DWR Use Only - Do Not Fill In

State Well Number/Site Number			
N	W		
Latitude		Longitude	
APN/TRS/Other			

Geologic Log		
Orientation <input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Angle Specify _____		
Drilling Method <input checked="" type="checkbox"/> Direct Rotary <input type="checkbox"/> Drilling Fluid <input type="checkbox"/> Polymer mud		
Depth from Surface	Feet	Description
	Feet to Feet	Describe material, grain size, color, etc
0	20	Brown Clay
20	40	Brown Clay & Gravel
40	60	Brown Clay
60	120	Blue Rock
120	280	Blue Rock with Blue Clay
280	390	Fractured Blue Rock
390	540	Gray Clay
540	580	Green Clay
580	595	Fractured Green Rock
595	625	Green Clay
Perforation Layout 302 ft		
P = Perforation P		
B = Blank B		
0 to 102 Blank P		
P B		
B P 402 ft		
P B		
B P		
P 202 ft B		
B P		
P B 502 ft		
B P		
P B		
B 302 ft P		
P B		
P B		
P 622 ft		
Total Depth of Boring <u>625</u> Feet		
Total Depth of Completed Well <u>622</u> Feet		

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AUG 13 2013  
Napa County Planning, Building & Environmental Services

Well Owner	
Name <u>Barbara Hoopes</u>	
Mailing Address <u>1350 Yount Mill Road</u>	
City <u>Napa</u> State <u>CA</u> Zip <u>94558</u>	
Well Location	
Address <u>1350 Yount Mill Rd</u>	
City <u>Napa</u> County <u>Napa</u>	
Latitude _____ N Longitude _____ W	
Datum _____ Decimal Lat. _____ Decimal Long. _____	
APN Book <u>031</u> Page <u>100</u> Parcel <u>035-000</u>	
Township _____ Range _____ Section _____	



Activity
<input checked="" type="radio"/> New Well
<input type="radio"/> Modification/Repair
<input type="radio"/> Deepen
<input type="radio"/> Other _____
<input type="radio"/> Destroy
<small>Describe procedures and materials under "GEOLOGIC LOG"</small>
Planned Uses
<input checked="" type="radio"/> Water Supply
<input type="checkbox"/> Domestic <input type="checkbox"/> Public
<input checked="" type="checkbox"/> Irrigation <input type="checkbox"/> Industrial
<input type="radio"/> Cathodic Protection
<input type="radio"/> Dewatering
<input type="radio"/> Heat Exchange
<input type="radio"/> Injection
<input type="radio"/> Monitoring
<input type="radio"/> Remediation
<input type="radio"/> Sparging
<input type="radio"/> Test Well
<input type="radio"/> Vapor Extraction
<input type="radio"/> Other _____

Water Level and Yield of Completed Well	
Depth to first water <u>100</u> (Feet below surface)	
Depth to Static _____	
Water Level <u>25</u> (Feet) Date Measured <u>05/03/2013</u>	
Estimated Yield * <u>150</u> (GPM) Test Type <u>Air Lift</u>	
Test Length <u>2.0</u> (Hours) Total Drawdown <u>275</u> (Feet)	
*May not be representative of a well's long term yield.	

Casings							
Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size if Any
Feet to Feet	(Inches)			(Inches)	(Inches)		(Inches)
0	55	12	Blank	PVC Sch. 40	R21	6	
55	102	10	Blank	PVC Sch. 40	R21	6	
102	622	10	Screen	PVC Sch. 40	R21	6	Milled Slots 0.032

Annular Material			
Depth from Surface	Fill	Description	
Feet to Feet			
0	52	Cement	cement/Vol Clay
52	622	Filter Pack	#6 Well Pack

Attachments
<input type="checkbox"/> Geologic Log
<input type="checkbox"/> Well Construction Diagram
<input type="checkbox"/> Geophysical Log(s)
<input type="checkbox"/> Soil/Water Chemical Analyses
<input type="checkbox"/> Other _____
<small>Attach additional information, if it exists.</small>

Certification Statement			
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief			
Name <u>Pulliam Well Exploration, Inc</u>			
<small>Person, Firm or Corporation</small>			
<u>4371 Cantelow Road</u>	<u>Vacaville</u>	<u>CA</u>	<u>95688</u>
<small>Address</small>		<small>City</small>	<small>State</small> <small>Zip</small>
Signed <u>[Signature]</u>	<u>5/8/2013</u>	<u>808-508</u>	<u>808-508</u>
<small>C-57 Licensed Water Well Contractor</small>		<small>Date Signed</small>	<small>C-57 License Number</small>

**APPENDIX D**  
**PROPOSED WATER USAGE**

1201 YOUNT MILL ROAD, NAPA CA  
APN 031-120-042  
PROPOSED WATER USAGE  
TABLE 1



WATER USAGE			
Description	Water Usage Rate <sup>1</sup>	Detailed Description	Water Demand (acre-feet/year)
<b>Residential</b>			
Primary Residence	0.5 to 0.75 acre-feet per year (plus additional usage from landscaping and/or pools)	Includes pool with cover	0.80
Secondary Residence or Farm Labor Dwelling	0.20 to 0.50 acre-feet per year		0.50
Additional Landscaping Irrigation		Includes additional landscape irrigation for 16 olive & 14 oak trees	0.32
<b>Agricultural</b>			
Vineyards			
Irrigation Only	0.2 to 0.5 acre-feet per acre per year		NA
Heat Protection	0.25 acre-feet per acre per year		NA
Frost Protection	0.25 acre-feet per acre per year		NA
Irrigated Pastures	4.0 acre-feet per acre per year		NA
Orchards	4.0 acre-feet per acre per year		NA
Livestock (sheep or cows)	0.01 acre-feet per acre per year		NA
<b>Winery</b>			
Process Water	2.15 acre-feet per 100,000 gal. of wine		NA
Domestic and Landscaping	0.50 acre-feet per 100,000 gal. of wine		NA
Employees	15 gallons per shift		NA
Tasting Room Visitation	3 gallons per visitor		NA
Events and Marketing, with on-site catering	15 gallons per visitor		NA
<b>Industrial</b>			
Food Processing	31.0 acre-feet per employee per year		NA
Printing/Publishing	0.60 acre-feet per employee per year		NA
<b>Commercial</b>			
Office Space	0.01 acre-feet per employee per year		NA
Warehouse	0.05 acre-feet per employee per year		NA
<b>Estimated Annual Water Demand (acre-feet per year)</b>			<b>1.62</b>

<sup>1</sup>

Water usage rates from Napa County WAA Guidance Document - Appendix B. Adopted May 12, 2015

## Response to Matt's comment and Engineering

Hi Matthew,

We have reviewed your comment in the attached letter regarding the WAA which states,

*1. Please update the Tier III portion of the WAA to meet the analysis requirements of the County's WAA Guidance Document, available at:*

*<https://www.countyofnapa.org/DocumentCenter/View/1056/Water-Availability-AnalysisAdopted-Policy-May-12-2015-PDF>. Please include a detailed analysis of how the stream compares to the construction assumptions and comparison to Tables 3, 4, and 5 for hydraulic conductivity values.*

We would like to note that Tables 3, 4, and 5 are specific to unconsolidated sediments and are not to be used in consolidated sediments unless there are certain conditions that are not applicable to this case, hence the site specific evaluation.

In order to perform a Tier III, the first item is listed in the WAA Guidelines for a Tier III is as follows,

*When Tier 3 analysis is required<sup>16</sup>, it shall be conducted as described below. The analysis will first determine whether the project well(s) are, or are proposed to be, screened in an aquifer unit hydraulically connected to the surface water(s) within the applicable distance specified by Tables 3, 4, and 5 for unconsolidated aquifers (see also Figure F-2). (pp 29, WAA, 2015)*

The project well is located in consolidated sediments (volcanics), while the nearest Significant Stream, Lincoln Creek, is a losing stream in unconsolidated alluvium. The project well is therefore not screened in the same aquifer as the nearest significant stream but is within the 1,500 foot setback used for both unconsolidated (and consolidated sediments), thereby negating the need for the Tier III quantitative analyses, hence the site specific qualitative analyses.

Response to Engineering comment 2.

See attached grading plan that was submitted in pervious exhibit with the document number.

Response to Engineering comment 3, 4. See attached letter from previous owner.

Response to Engineering comment 5.

I am writing in response to item 5 of the attached memorandum. Per EBA Engineering's submitted report (attached), dated August 26, 2025, we reported an average annual rainfall in the vicinity of the project site of 29.62 inches/year. This precipitation value is based on the same criteria as the Napa County website, using the PRISM dataset and the 10 year period from 2012 to 2021. Please note that EBA has discussed our precipitation methodology with a Napa County Representative (Raulton Haye) regarding a prior Water Availability Analysis Report. Mr. Haye found EBA's precipitation methodology sound and appropriate for this application. We request that you please consult with Mr. Haye regarding this matter and accept this precipitation value.

Please also find a link to the prism website where you can download a spreadsheet and calculate the average annual rainfall for yourself. <https://prism.oregonstate.edu/explorer/>. Use latitude 38.4226 and longitude -122.3851. I am also including a copy of the downloaded spreadsheet from the Prism website. See # 5 attachments.

PRISM Time Series Data

Location: Lat: 38.4226 Lon: -122.3851 Elev: 236ft

Climate variable: ppt

Spatial resolution: 4km

Period: 2012 - 2021

Dataset: AN91m

PRISM day definition: 24 hours ending at 1200 UTC on the day shown

Grid Cell Interpolation: On

Time series generated: 2025-Aug-14

Details: [http://www.prism.oregonstate.edu/documents/PRISM\\_datasets.pdf](http://www.prism.oregonstate.edu/documents/PRISM_datasets.pdf)

Date ppt (inches)

2012 40.59

2013 6.79

2014 36.84

2015 13.92

2016 39.79

2017 45.72

2018 26.1

2019 47.27

2020 10.39

2021 28.78

avg = 29.619