“F”

Water Availability Analysis

Dry Creek/Mount Veeder Winery P17-00343 & P17-00345
Planning Commission Hearing April 18, 2018

CONDOR EARTH
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Condor Project No. 7464A

September 8, 2017

Thomas F. Carey
c/o Law Office of Thomas F. Carey
PO Box 5662
Napa, CA 94581

Subject: Water Availability Analysis for Dry Creek-Mt Veeder Project
Oakville Winery, LLC
Napa County APN 027-310-039

Dear Mr. Carey:

Condor Earth (Condor) prepared this Water Availability Analysis (WAA) for your proposed project, located at the intersection of Dry Creek Road and Mt. Veeder Road, in Napa County, CA (Figure 1, Attachment A). Condor estimated groundwater recharge and evaluated well and spring interference criteria as described in the *Napa County Water Availability Analysis (WAA) – Guidance Document*, adopted May 12, 2015. The work was overseen by a California Certified Hydrogeologist.

The project parcel (APN 027-310-039) is not located within the Napa Valley Floor and Milliken-Sarco-Tulucay areas, so the WAA requires a Tier 2 evaluation that includes meeting criteria for estimated recharge, and well and spring interference. The recharge criterion is parcel-specific based on available annual recharge and parcel size. The well and spring interference criteria are presumptively met if setback from non-project wells is 500 feet, and setback from springs that are being used for domestic or agricultural purposes is 1,500 feet. In this, case records revealed a potential inactive well and potential spring within those setbacks (Figure 2, Attachment A). Further analysis was performed to assess the potential connectivity between the part of the aquifer system from which the project well produces groundwater and the off-site spring. The water use criterion, the well and spring interference criteria, and the potential hydraulic connection between the project well and potential surface water are discussed in the following sections. In summary, we find that no significant adverse effects from the project well.

Condor concludes that estimated groundwater use at the Dry Creek-Mt. Veeder Project will not exceed the natural recharge on the project parcel in normal and dry years, and that the project groundwater well (Well #2, Figure 2) will have no significant impact on the adjacent property owners' use of well and/or spring water.

Water Use Criterion Including Estimated Recharge

The proposed project water use will be 2.5 acre–feet (AF) annually (see estimate, Attachment B). To estimate the average and dry year annual recharge occurring on the project parcel, Condor used climate data from a 27-year record (1989 to 2016) listed in the California Irrigation Management Information System (CIMIS) for Station #77, Oakville, located approximately 3 miles northwest of the Site, (Attachment C). Condor used a water year of October 1 to September 30. The WAA guidance does not specify what defines a "dry" year, so Condor used the water year with the least precipitation since the

dataset began. Normal (average year) and dry year annual rainfall were 33.6 inches, and 13.9 inches respectively. Given the Site consists of a 55.5 acre parcel; the total volume of precipitation is 155.5 AF in a normal year and 64.3 AF in the dry year. Our groundwater recharge estimate uses a recharge ratio of 5 percent that is appropriate for hard rock aquifers in sloped terrain. This yields 7.8 AF in normal years and 3.2 AF in the dry year. Compared to the proposed water use, the parcel will recharge approximately 3.1 times more groundwater than will be used in a normal year and 1.3 times more water than will be used in the driest year. Condor concludes that the project meets the minimum water recharge/use criterion.

Well and Spring Setback

Condor performed a public records search for wells and springs within the prescriptive radii by requesting information from the California Department of Water Resources and Napa County Planning, Building & Environmental Services (PBES). Condor reviewed records of six wells in the area and attempted to locate them as specifically as possible relative to the project well, (Well #2 on Figure 2). Condor also reviewed published topographic maps and historical aerial photographs within the setbacks to identify wells and springs that might not be in the databases reviewed. Septic system records indicate that a well (Well #3 on Figure 2) exists within the 500-foot setback criteria on parcel APN 027-310-016 (Neighbor A), approximately 470 feet north of the project well. No driller's log or other record of this well is known. A review of documents provided by PBES indicates this well has not been used as a water source since at least April 2005. Records also show that a dry boring was drilled through shale to 400 feet below ground surface (bgs) on this parcel in 1998 (Well #4 on Figure 2). Information provided by PBES indicates Neighbor A's current water source is a spring, and an easement exists from APN 027-310-012 (Neighbor B). No documents to indicate the location of Neighbor B's spring were found but, scaling off the Napa County Assessor's Map, it appears the entire parcel is within the 1,500-foot setback criteria for springs. Therefore, additional analysis is warranted.

Hydrogeological Setting and Potential Hydraulic Connections to Existing Uses or Surface Water

Minor groundwater typically occurs in surficial landslide deposits and in alluvial material along creek beds. These resources can be developed from springs and shallow alluvial wells. Bedrock occurs from 15 to 50 feet bgs. The bedrock at the project site is the Great Valley Sequence, consisting of tilted layers of shale, mudstone, fractured mudstone, and sandstone. In-place rock beds at this location, as mapped by Fox (Figure 4), generally dip about 50 degrees to the northeast. Beds displaced in landslide deposits have been rotated to dip from 33 to 85 degrees southwest. These rocks are poor aquifers, with limited storage and transmissivity. The shales and mudstones weather to impermeable clay when wet. Groundwater is best developed from fractured sandstone layers, generally less than 15 feet thick. Well logs from the site in Attachment D provide useful information on the local occurrence of groundwater. Their locations are shown on Figure 2.

Well #1 was drilled in November 2014 to a total depth of 300 feet. First groundwater was encountered at 130 feet bgs in a confined aquifer. The driller's description of the water-bearing unit is "60 percent shale / 40 percent sandstone". Groundwater rose in the well to a static water level of 20 feet bgs. "Clay" is noted above and below the producing zone. The well was screened with 5-inch PVC between 118 to 158 feet bgs and sealed with bentonite tablets at 200 feet bgs, (plausibly to prevent loss of water to lower non-producing shale formations in the borehole). Driller's estimated well yield was 2 gpm after 2 hours of airlift pumping. This well will likely be destroyed as it is in the footprint of the winery development. Project water will be developed from Well #2.

Well #2 was drilled in May 2017, (County records indicate a previous dry hole was drilled about 125 feet to the southeast of Well #2, but there is no log for that boring). Groundwater was first encountered at 55 feet bgs in a 7-foot thick "Fractured Sandstone" below a clay sequence. Static water level rose to 48 feet bgs. "Hard fractured sandstone" was encountered at 230 to 245 feet bgs. A 5-inch well was screened from 55 to 205 feet and from 225 to 305 feet bgs. Driller's estimated well yield was 4 gpm after 4 hours of air lift pumping.

Well #3 is known only by its location on a plan for the repair of a failing septic system dated 1998, but it is situated relative to Dry Creek in similar fashion to a Well #5 on Neighbor B's parcel drilled in 1975, (Well #5, Figure 2).

Well #5 was drilled through 24 feet of alluvial material and penetrated into blue shale bedrock to a total depth of 40 feet. Groundwater was first encountered at 13 feet bgs. Neighbor A attempted to drill a useable well in 1998 with no success. The log from that boring (Well #4, Figure 2) shows the driller encountered shale bedrock at 14 feet bgs and drilled to a dry hole though shale to 400 feet bgs.

The project well is a very low capacity pumping rate well (as defined in the WAA Guidance) with diameter less than 6 inches. Based on the information from the well logs described above, groundwater at the project Well #2 is derived from fractured sandstone layers that dip steeply to the north. These water-bearing units would be more than 500 feet deep under Dry Creek. They were not encountered by a 400-foot deep dry hole (Well #4, Figure 2) on Neighbor A's land drilled in 1998. They are overlain by thick clay and shale that form barriers to hydraulic connection with the surface water, springs, or shallow groundwater at Dry Creek. Condor concludes that the potential connectivity between the part of the aquifer system from which the groundwater is planned to be produced and the well and/or spring serving Neighbors A and B is so remote as to be insignificant, and the proposed use will have no impact on surface water or neighboring groundwater users.

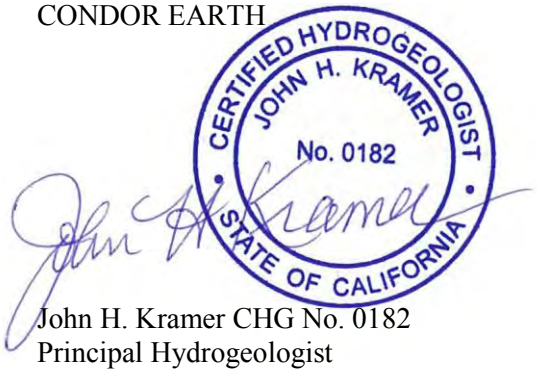
Limitations and Closure

Condor has endeavored to determine as much as practicable about the site using conventional practices given our scope of services. Conclusions presented in this report are professional opinions based on limited information obtained at the time work was performed. If changes are made or errors found in the information used for this report, the interpretations and conclusions contained herein shall not be considered valid unless the changes or errors are reviewed by Condor and either appropriately modified or re-approved in writing. Condor's involvement in the work performed at this site has been limited to evaluating published data provided by State, County and private sources. Condor is not responsible for the accuracy and completeness of information collected and developed by others.

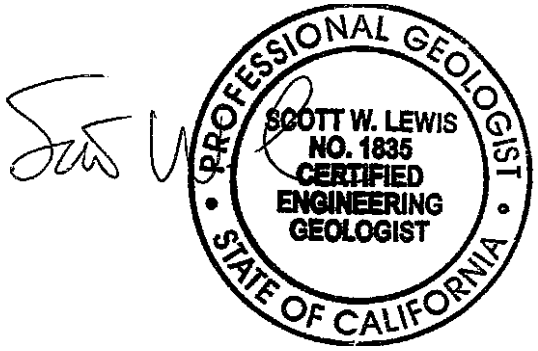
Condor prepared this report under the direct supervision of a Certified Hydrogeologist registered in the State of California. The report was prepared for Thomas F. Carey (Client). It is for the sole use of Client. The contents of this report may not be used or relied upon by any other person(s) without the express written consent and authorization of Client and Condor. Any questions regarding the content of this document should be addressed to John H. Kramer 209.536.7345.

Sincerely,

CONDOR EARTH



John H. Kramer CHG No. 0182
Principal Hydrogeologist



Scott Lewis, CEG No. 1835
Principal Engineering Geologist

Attachments:

Attachment A: Maps
Attachment B: Water Use Estimate
Attachment C: Historical Tabulated Climate Data and Recharge Calculations
Attachment D: Relevant Public Records

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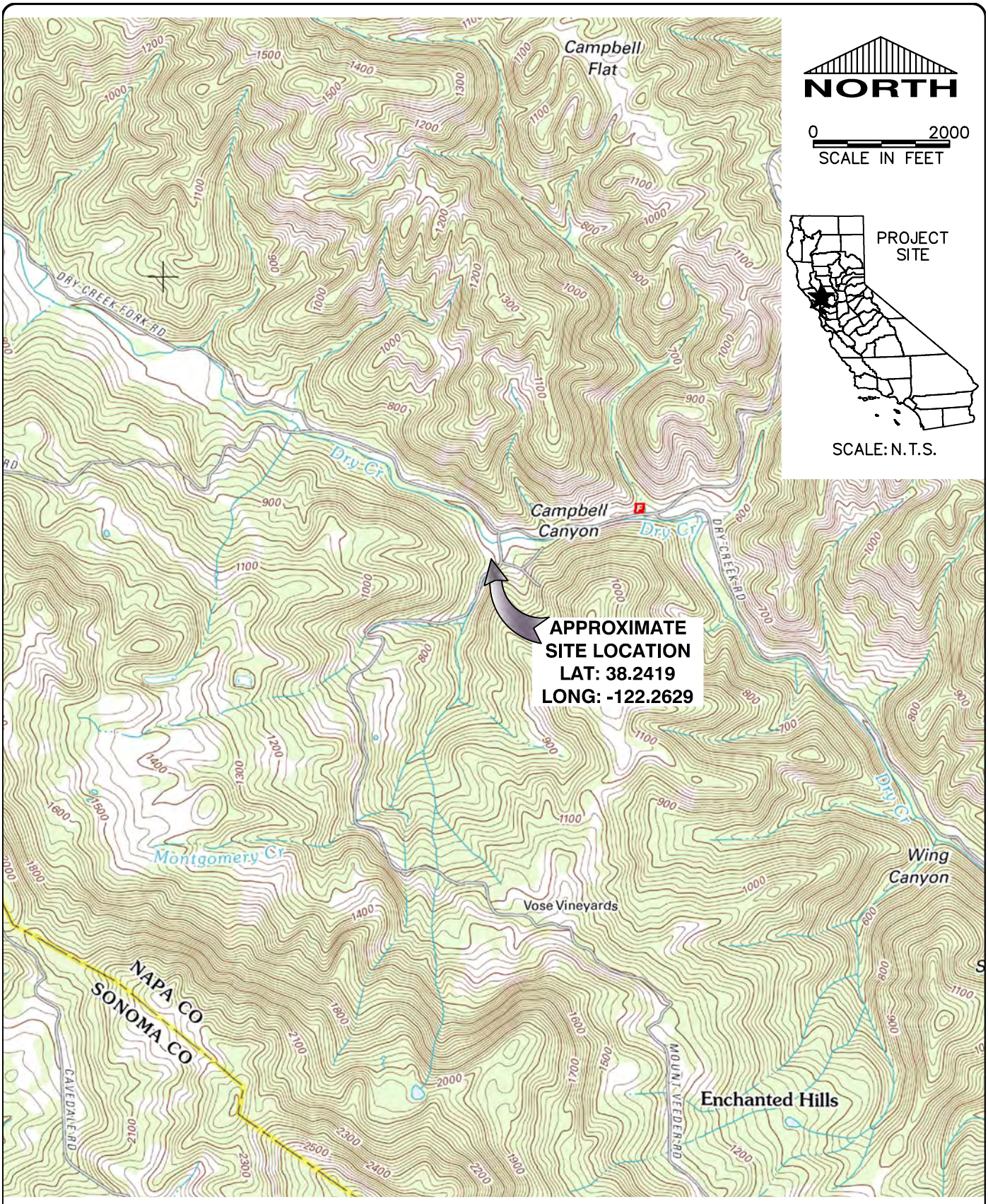
ATTACHMENT A
Maps



BACKGROUND IMAGE: USGS 7.5 MINUTE QUADRANGLE, RUTHERFORD 2012

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Job No.	7464A
Published Date	15 AUG 2017
Scale	AS SHOWN
Drawn / Chk'd	KGM / SWL

VICINITY MAP
OAKVILLE WINERY
APN 027-310-039
4290 MOUNT VEEDER ROAD
NAPA, CALIFORNIA 94558

FIGURE 1

File No. 7464_F1

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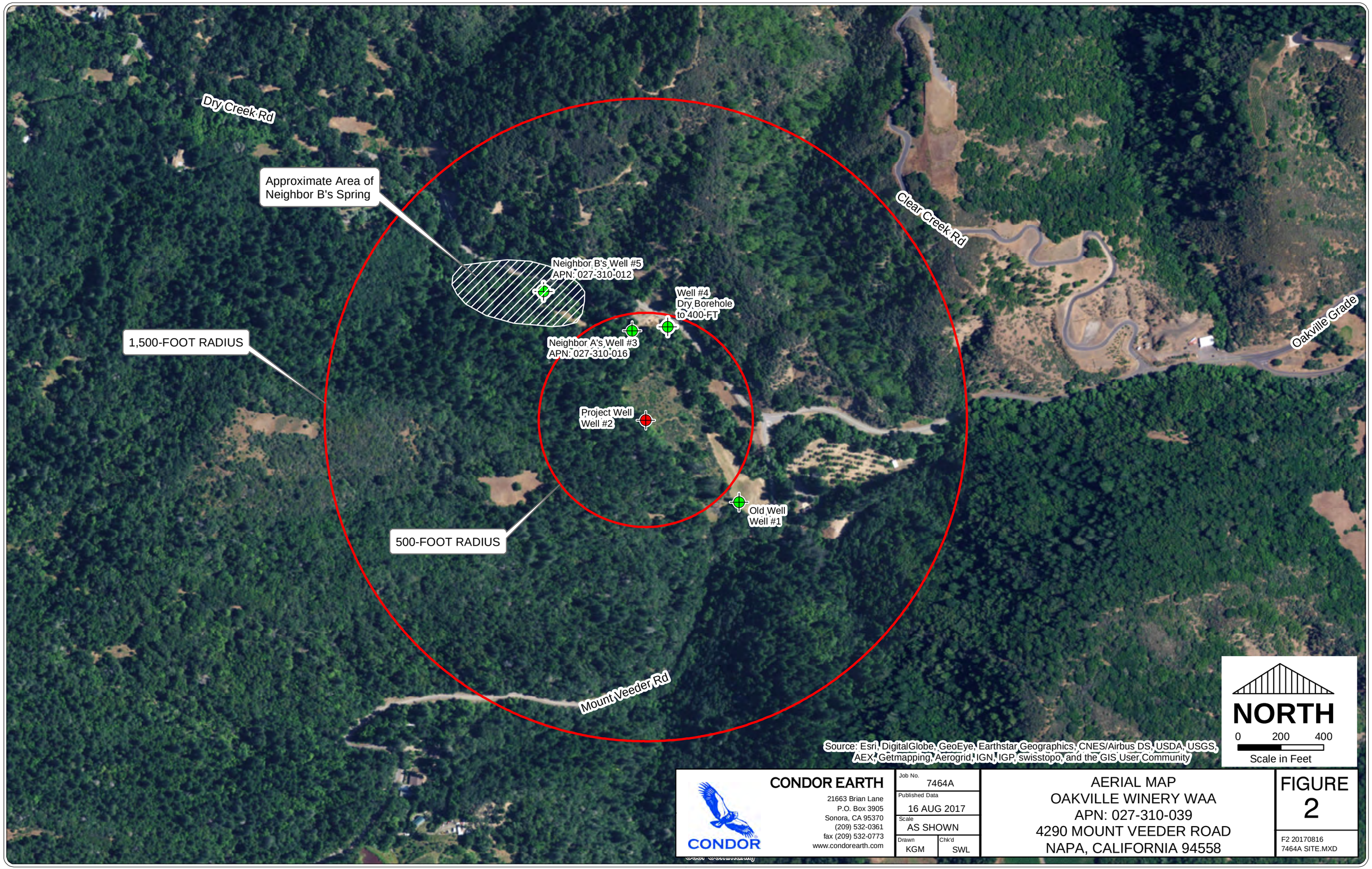

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Drawn	KGM
Chk'd	SWL

AERIAL MAP
OAKVILLE WINERY WAA
APN: 027-310-039
4290 MOUNT VEEDER ROAD
NAPA, CALIFORNIA 94558

FIGURE
2

F2 20170816
7464A SITE.MXD

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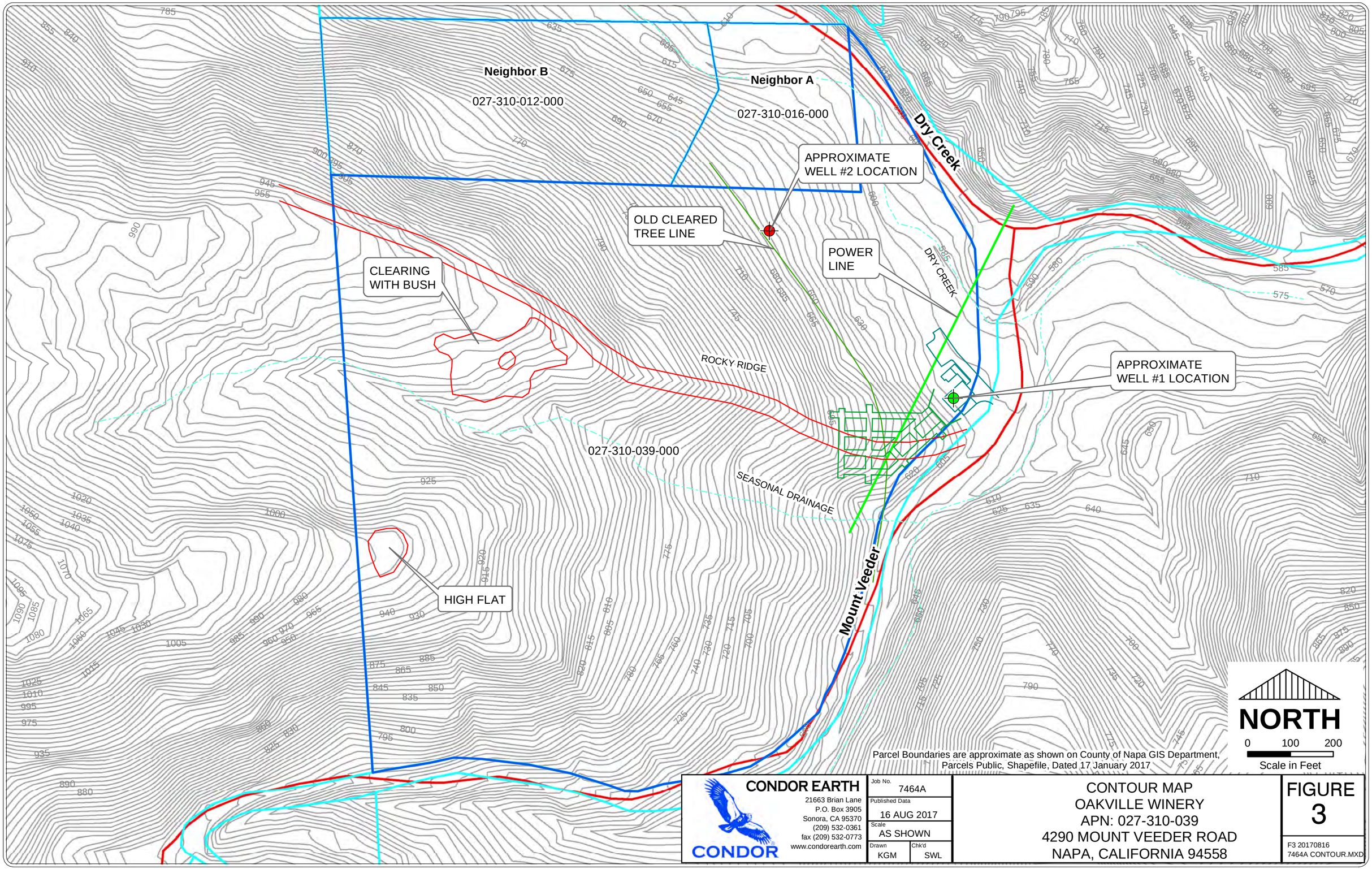

Parcel Boundaries are approximate as shown on County of Napa GIS Department, Parcels Public, Shapefile, Dated 17 January 2017

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Chk'd	SWL

CONTOUR MAP
OAKVILLE WINERY
APN: 027-310-039
4290 MOUNT VEEDER ROAD
NAPA, CALIFORNIA 94558

FIGURE
3

F3 20170816
7464A CONTOUR.MXD

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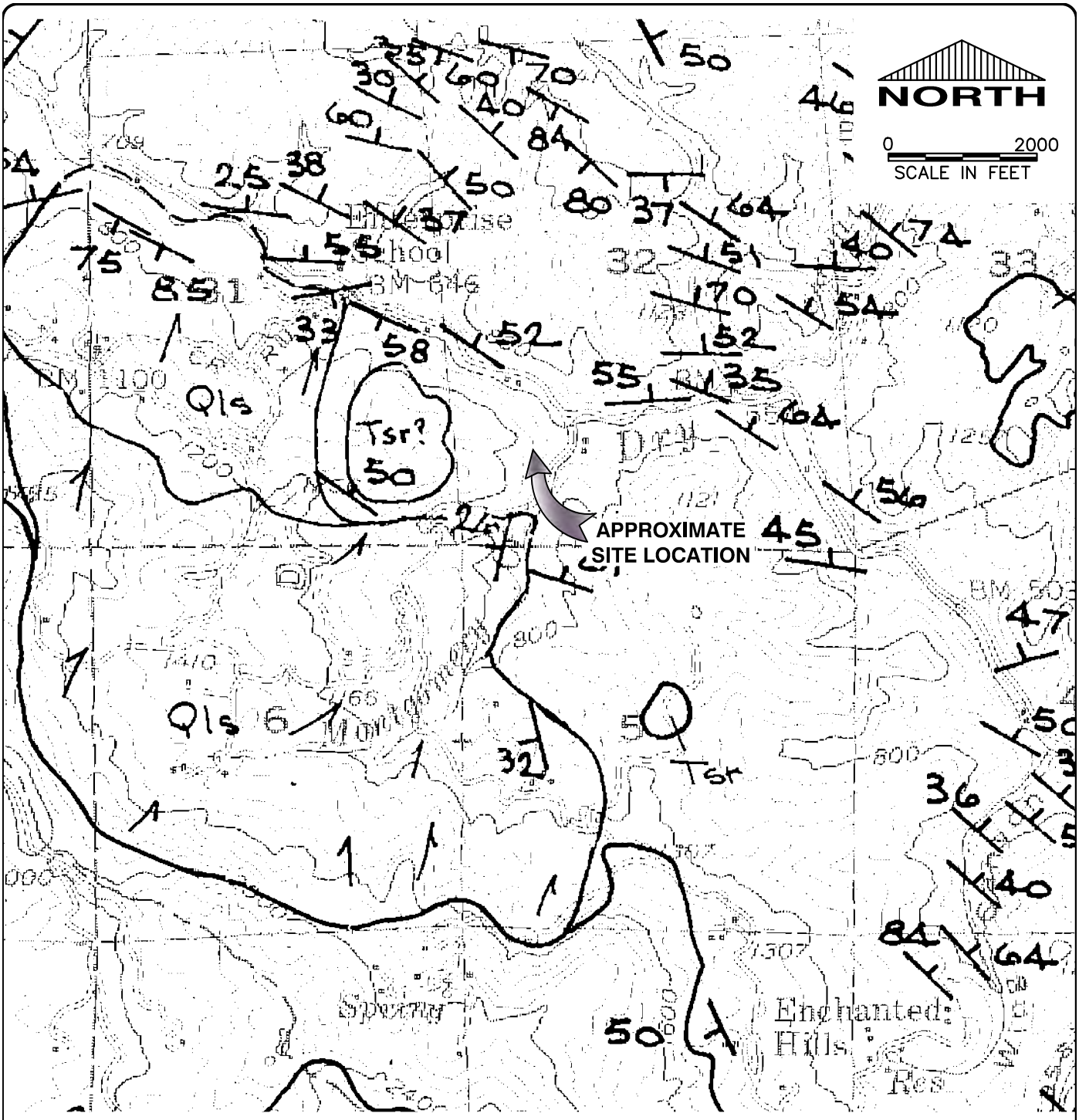

PRELIMINARY GEOLOGIC MAP OF EASTERN SONOMA COUNTY AND WESTERN NAPA COUNTY, FOX 1973

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OAKVILLE WINERY
APN 027-310-039
4290 MOUNT VEEDER ROAD
NAPA, CALIFORNIA 94558

FIGURE
4

File No.
7464A_F4

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ATTACHMENT B
Water Use Estimate

APPLIED CIVIL ENGINEERING INCORPORATED

Oakville Winery

Groundwater Use Estimate

	Estimated Water Use (Acre-Feet / Year)		
	Existing		Proposed
Residential Water Use			
Primary Residence	0.750		0.750
Pool - Not Applicable	0.000		0.000
Second Dwelling Unit - Not Applicable	0.000		0.000
Guest Cottage - Not Applicable	0.000		0.000
Total Residential Domestic Water Use	0.750		0.750
Winery Domestic & Process Water Use			
Winery - Daily Visitors[2][3]	0.000		0.034
Winery - Events with Meals Prepared Onsite[2][4]	0.000		0.000
Winery - Events with Meals Prepared Offsite[2][5]	0.000		0.008
Winery - Employees[2][6]	0.000		0.067
Winery - Event Staff[2][6]	0.000		0.002
Winery - Process[2][7]	0.000		0.645
Total Winery Water Use	0.000		0.756
Irrigation Water Use			
Lawn[8] - Not Applicable	0.000		0.000
Other Landscape[9]	0.000		1.000
Vineyard - Irrigation - Not Applicable	0.000		0.000
Vineyard - Frost Protection - Not Applicable	0		0
Vineyard - Heat Protection - Not Applicable	0		0
Total Irrigation Water Use	0.000		1.000
Total Combined Water Use	0.8		2.5

Estimates per Napa County Water Availability Analysis - Guidance Document, May 12, 2015 unless noted

[1] 0.5 to 0.75 ac-ft/yr for Primary Residence, includes some landscaping per Napa County WAA Guidance Document

[2] See attached Winery Production, Guest, Employee and Event Staff Statistics

[3] 3 gallons of water per guest per Napa County WAA Guidance Document

[4] 15 gallons of water per guest per Napa County WAA - Guidance Document

[5] 5 gallons of water per guest used because all food preparation, dishwashing, etc. to occur offsite

[6] 15 gallons per shift per Napa County WAA - Guidance Document

[7] 2.15 ac-ft per 100,000 gallons wine per Napa County WAA - Guidance Document

[8] 0.1 ac-ft/yr per 1,000 sf of lawn per Napa County WAA - Guidance Document - 0 sf lawn

[9] 0.1 ac-ft/yr per 2,000 sf landscape per Napa County WAA - Guidance Document - 20,000 +/- sf landscape assumed

APPLIED CIVIL ENGINEERING INCORPORATED

Oakville Winery

Winery Production, Visitor, Employee & Event Staff Statistics

Winery Production[1]	30,000	gallons per year

Tours and Tastings by Appointment[1]		
Monday through Thursday	10 guests max per day	
Friday through Sunday	10 guests max per day	
Total Guests Per Year		3,640

Events - Meals Prepared Offsite[1]		
10 per year	30 guests max	300
2 per year	100 guests max	200
0 per year	0 guests max	0
Total Guests Per Year		500

Events - Meals Prepared Onsite[1]		
0 per year	0 guests max	0
0 per year	0 guests max	0
0 per year	0 guests max	0
Total Guests Per Year		0

Winery Employees[2]		
4 employees	1 shift per day	
Total Employee Shifts Per Year		1,460

Event Staff[3]		
10 per year, 30 guests	3 event staff	30
2 per year, 100 guests	10 event staff	20
Total Event Staff Per Year		50

[1] Winery production, tours and tasting and event guest statistics per Winery Use Permit Application

[2] Employee counts per Winery Use Permit Application

[3] Assumes 1 event staff per 10 guests (in addition to regular winery employees)

ATTACHMENT C
Historical Tabulated Climate Data and Recharge Calculations

Historical Montly Data

Stn Id	Stn Name	Month Year	Total Precip (in)	Water Yearly Total (in)
77	Oakville	Aug-89	5.19	
77	Oakville	Sep-89	1.39	
77	Oakville	Oct-89	3.69	
77	Oakville	Nov-89	2.25	
77	Oakville	Dec-89	0.13	
77	Oakville	Jan-90	0.84	
77	Oakville	Feb-90	4.17	
77	Oakville	Mar-90	1.19	
77	Oakville	Apr-90	0.23	
77	Oakville	May-90	4.3	
77	Oakville	Jun-90	3.19	
77	Oakville	Jul-90	0	
77	Oakville	Aug-90	0	
77	Oakville	Sep-90	0.06	20.05
77	Oakville	Oct-90	0.42	
77	Oakville	Nov-90	0.46	
77	Oakville	Dec-90	0.95	
77	Oakville	Jan-91	0.52	
77	Oakville	Feb-91	4.29	
77	Oakville	Mar-91	17.41	
77	Oakville	Apr-91	0.69	
77	Oakville	May-91	0.21	
77	Oakville	Jun-91	0	
77	Oakville	Jul-91	0	
77	Oakville	Aug-91	0	
77	Oakville	Sep-91	0	24.95
77	Oakville	Oct-91	0.01	
77	Oakville	Nov-91	1.18	
77	Oakville	Dec-91	3.16	
77	Oakville	Jan-92	2.42	
77	Oakville	Feb-92	10.62	
77	Oakville	Mar-92	6.57	
77	Oakville	Apr-92	0.81	
77	Oakville	May-92	0	
77	Oakville	Jun-92	0.75	
77	Oakville	Jul-92	0	
77	Oakville	Aug-92	0	
77	Oakville	Sep-92	0	25.52
77	Oakville	Oct-92	3.56	
77	Oakville	Nov-92	1.17	
77	Oakville	Dec-92	11.11	
77	Oakville	Jan-93	14.66	
77	Oakville	Feb-93	8.89	
77	Oakville	Mar-93	2.69	
77	Oakville	Apr-93	1.77	

77	Oakville	May-93	0.5	
77	Oakville	Jun-93	0	
77	Oakville	Jul-93	0	
77	Oakville	Aug-93	0	
77	Oakville	Sep-93	0.08	44.43
77	Oakville	Oct-93	1.81	
77	Oakville	Nov-93	3.69	
77	Oakville	Dec-93	4.52	
77	Oakville	Jan-94	4.18	
77	Oakville	Feb-94	6.29	
77	Oakville	Mar-94	0.83	
77	Oakville	Apr-94	1.71	
77	Oakville	May-94	1.35	
77	Oakville	Jun-94	0	
77	Oakville	Jul-94	0	
77	Oakville	Aug-94	0	
77	Oakville	Sep-94	0.03	24.41
77	Oakville	Oct-94	2.13	
77	Oakville	Nov-94	7.64	
77	Oakville	Dec-94	3.89	
77	Oakville	Jan-95	27.24	
77	Oakville	Feb-95	0.62	
77	Oakville	Mar-95	19.45	
77	Oakville	Apr-95	3.19	
77	Oakville	May-95	1.81	
77	Oakville	Jun-95	0.48	
77	Oakville	Jul-95	0	
77	Oakville	Aug-95	0	
77	Oakville	Sep-95	0	66.45
77	Oakville	Oct-95	0.43	
77	Oakville	Nov-95	0.16	
77	Oakville	Dec-95	8.9	
77	Oakville	Jan-96	10.66	
77	Oakville	Feb-96	10.97	
77	Oakville	Mar-96	4.14	
77	Oakville	Apr-96	4.84	
77	Oakville	May-96	3.48	
77	Oakville	Jun-96	0	
77	Oakville	Jul-96	0	
77	Oakville	Aug-96	0	
77	Oakville	Sep-96	0	43.58
77	Oakville	Oct-96	1.28	
77	Oakville	Nov-96	4.18	
77	Oakville	Dec-96	17.85	
77	Oakville	Jan-97	13.25	
77	Oakville	Feb-97	0.65	
77	Oakville	Mar-97	0.98	

77	Oakville	Apr-97	0.46	
77	Oakville	May-97	0.5	
77	Oakville	Jun-97	0.27	
77	Oakville	Jul-97	0	
77	Oakville	Aug-97	0	
77	Oakville	Sep-97	0	39.42
77	Oakville	Oct-97	1.06	
77	Oakville	Nov-97	8.88	
77	Oakville	Dec-97	3.88	
77	Oakville	Jan-98	11.42	
77	Oakville	Feb-98	24.52	
77	Oakville	Mar-98	2.99	
77	Oakville	Apr-98	3.08	
77	Oakville	May-98	4.33	
77	Oakville	Jun-98	0	
77	Oakville	Jul-98	0	
77	Oakville	Aug-98	0	
77	Oakville	Sep-98	0.13	60.29
77	Oakville	Oct-98	0.8	
77	Oakville	Nov-98	7.74	
77	Oakville	Dec-98	1.28	
77	Oakville	Jan-99	3.34	
77	Oakville	Feb-99	10.73	
77	Oakville	Mar-99	4.36	
77	Oakville	Apr-99	2.88	
77	Oakville	May-99	0	
77	Oakville	Jun-99	0.14	
77	Oakville	Jul-99	0	
77	Oakville	Aug-99	0	
77	Oakville	Sep-99	0	31.27
77	Oakville	Oct-99	0	
77	Oakville	Nov-99	2.7	
77	Oakville	Dec-99	0.63	
77	Oakville	Jan-00	7.03	
77	Oakville	Feb-00	13.42	
77	Oakville	Mar-00	2.77	
77	Oakville	Apr-00	2.04	
77	Oakville	May-00	1.52	
77	Oakville	Jun-00	0.16	
77	Oakville	Jul-00	0	
77	Oakville	Aug-00	0.01	
77	Oakville	Sep-00	0.16	30.44
77	Oakville	Oct-00	3.4	
77	Oakville	Nov-00	1.19	
77	Oakville	Dec-00	1.13	
77	Oakville	Jan-01	6.46	
77	Oakville	Feb-01	8.84	

77	Oakville	Mar-01	3.23	
77	Oakville	Apr-01	1.06	
77	Oakville	May-01	0.03	
77	Oakville	Jun-01	0.05	
77	Oakville	Jul-01	0	
77	Oakville	Aug-01	0	
77	Oakville	Sep-01	0	25.39
77	Oakville	Oct-01	0.86	
77	Oakville	Nov-01	8.85	
77	Oakville	Dec-01	14.62	
77	Oakville	Jan-02	4.63	
77	Oakville	Feb-02	1.99	
77	Oakville	Mar-02	2.89	
77	Oakville	Apr-02	0.44	
77	Oakville	May-02	1.49	
77	Oakville	Jun-02	0	
77	Oakville	Jul-02	0.01	
77	Oakville	Aug-02	0.01	
77	Oakville	Sep-02	0	35.79
77	Oakville	Oct-02	0.03	
77	Oakville	Nov-02	4.44	
77	Oakville	Dec-02	21.28	
77	Oakville	Jan-03	2.97	
77	Oakville	Feb-03	2.45	
77	Oakville	Mar-03	3.83	
77	Oakville	Apr-03	7.09	
77	Oakville	May-03	2.42	
77	Oakville	Jun-03	0.03	
77	Oakville	Jul-03	0.05	
77	Oakville	Aug-03	0	
77	Oakville	Sep-03	0	44.59
77	Oakville	Oct-03	0	
77	Oakville	Nov-03	3.54	
77	Oakville	Dec-03	13.51	
77	Oakville	Jan-04	4.22	
77	Oakville	Feb-04	11.11	
77	Oakville	Mar-04	1.25	
77	Oakville	Apr-04	0.52	
77	Oakville	May-04	0	
77	Oakville	Jun-04	0.51	
77	Oakville	Jul-04	0	
77	Oakville	Aug-04	0.02	
77	Oakville	Sep-04	0.01	34.69
77	Oakville	Oct-04	4.22	
77	Oakville	Nov-04	2.6	
77	Oakville	Dec-04	12.78	
77	Oakville	Jan-05	7.01	

77	Oakville	Feb-05	5.73	
77	Oakville	Mar-05	5.47	
77	Oakville	Apr-05	0.99	
77	Oakville	May-05	4.91	
77	Oakville	Jun-05	0.58	
77	Oakville	Jul-05	0	
77	Oakville	Aug-05	0	
77	Oakville	Sep-05	0	44.29
77	Oakville	Oct-05	0	
77	Oakville	Nov-05	0.64	
77	Oakville	Dec-05	18.19	
77	Oakville	Jan-06	7.67	
77	Oakville	Feb-06	5.09	
77	Oakville	Mar-06	11.15	
77	Oakville	Apr-06	6.96	
77	Oakville	May-06	0.04	
77	Oakville	Jun-06	0.01	
77	Oakville	Jul-06	0	
77	Oakville	Aug-06	0	
77	Oakville	Sep-06	0	49.75
77	Oakville	Oct-06	0.29	
77	Oakville	Nov-06	3.04	
77	Oakville	Dec-06	6.7	
77	Oakville	Jan-07	0.58	
77	Oakville	Feb-07	8.23	
77	Oakville	Mar-07	0.4	
77	Oakville	Apr-07	1.48	
77	Oakville	May-07	0.5	
77	Oakville	Jun-07	0	
77	Oakville	Jul-07	0.04	
77	Oakville	Aug-07	0	
77	Oakville	Sep-07	0.58	21.84
77	Oakville	Oct-07	2.44	
77	Oakville	Nov-07	0.88	
77	Oakville	Dec-07	4.26	
77	Oakville	Jan-08	16.75	
77	Oakville	Feb-08	3.21	
77	Oakville	Mar-08	0.14	
77	Oakville	Apr-08	0.17	
77	Oakville	May-08	0	
77	Oakville	Jun-08	0	
77	Oakville	Jul-08	0	
77	Oakville	Aug-08	0	
77	Oakville	Sep-08	0	27.85
77	Oakville	Oct-08	0.66	
77	Oakville	Nov-08	1.06	
77	Oakville	Dec-08	3.38	

77	Oakville	Jan-09	0.44	
77	Oakville	Feb-09	13.19	
77	Oakville	Mar-09	3.53	
77	Oakville	Apr-09	0.48	
77	Oakville	May-09	2.48	
77	Oakville	Jun-09	0.03	
77	Oakville	Jul-09	0	
77	Oakville	Aug-09	0	
77	Oakville	Sep-09	0.22	25.47
77	Oakville	Oct-09	5.39	
77	Oakville	Nov-09	0.99	
77	Oakville	Dec-09	2.84	
77	Oakville	Jan-10	12.26	
77	Oakville	Feb-10	5.07	
77	Oakville	Mar-10	3.47	
77	Oakville	Apr-10	5.17	
77	Oakville	May-10	1.96	
77	Oakville	Jun-10	0	
77	Oakville	Jul-10	0	
77	Oakville	Aug-10	0	
77	Oakville	Sep-10	0	37.15
77	Oakville	Oct-10	3.81	
77	Oakville	Nov-10	3.53	
77	Oakville	Dec-10	10.96	
77	Oakville	Jan-11	2.7	
77	Oakville	Feb-11	7.5	
77	Oakville	Mar-11	13.53	
77	Oakville	Apr-11	0.32	
77	Oakville	May-11	2.48	
77	Oakville	Jun-11	2.77	
77	Oakville	Jul-11	0	
77	Oakville	Aug-11	0	
77	Oakville	Sep-11	0	47.60
77	Oakville	Oct-11	1.88	
77	Oakville	Nov-11	2.48	
77	Oakville	Dec-11	0.36	
77	Oakville	Jan-12	3.21	
77	Oakville	Feb-12	2.1	
77	Oakville	Mar-12	11.76	
77	Oakville	Apr-12	0.92	
77	Oakville	May-12	0	
77	Oakville	Jun-12	0	
77	Oakville	Jul-12	0	
77	Oakville	Aug-12	0	
77	Oakville	Sep-12	0	22.71
77	Oakville	Oct-12	0.9	
77	Oakville	Nov-12	10.55	

77	Oakville	Dec-12	11.39	
77	Oakville	Jan-13	0.95	
77	Oakville	Feb-13	0.36	
77	Oakville	Mar-13	1.98	
77	Oakville	Apr-13	0.78	
77	Oakville	May-13	0	
77	Oakville	Jun-13	0	
77	Oakville	Jul-13	0	
77	Oakville	Aug-13	0	
77	Oakville	Sep-13	0	26.91
77	Oakville	Oct-13	0	
77	Oakville	Nov-13	1.12	
77	Oakville	Dec-13	0.81	
77	Oakville	Jan-14	0.09	
77	Oakville	Feb-14	11.51	
77	Oakville	Mar-14	3.29	
77	Oakville	Apr-14	0.88	
77	Oakville	May-14	0	
77	Oakville	Jun-14	0	
77	Oakville	Jul-14	0	
77	Oakville	Aug-14	0	
77	Oakville	Sep-14	0.49	18.19
77	Oakville	Oct-14	0.88	
77	Oakville	Nov-14	2.51	
77	Oakville	Dec-14	9.75	
77	Oakville	Jan-15	0.07	
77	Oakville	Feb-15	5.43	
77	Oakville	Mar-15	0.05	
77	Oakville	Apr-15	1.84	
77	Oakville	May-15	0.21	
77	Oakville	Jun-15	0.09	
77	Oakville	Jul-15	0.07	
77	Oakville	Aug-15	0	
77	Oakville	Sep-15	0.18	21.08
77	Oakville	Oct-15	0	
77	Oakville	Nov-15	1.36	
77	Oakville	Dec-15	3.14	
77	Oakville	Jan-16	3.8	
77	Oakville	Feb-16	0	
77	Oakville	Mar-16	5.04	
77	Oakville	Apr-16	0.55	
77	Oakville	May-16	0.02	
77	Oakville	Jun-16	0	
77	Oakville	Jul-16	0	
77	Oakville	Aug-16	0	
77	Oakville	Sep-16	0	13.91
77	Oakville	Oct-16	5.13	

77	Oakville	Nov-16	2.72	
77	Oakville	Dec-16	6.88	
77	Oakville	Jan-17	19.94	
77	Oakville	Feb-17	11.75	
77	Oakville	Mar-17	3.82	
77	Oakville	Apr-17	0.98	
77	Oakville	May-17	0	
77	Oakville	Jun-17	0	
77	Oakville	Jul-17	0	51.22
			Average	33.63
			Min	13.91
			Max	66.45
			Count	27

				Water demand (acre-feet)	2.5
				Size of Parcel(acres)	55.5
				Infiltration ratio	0.05
	Annual Precipitiaton (inches)	Annual Precip (Feet)	Total volume (acre-feet)	Total recharge (acre-feet)	Recharge:demand
Normal year	33.6	2.80	155.5	7.8	3.1
Dry year	13.9	1.16	64.3	3.2	1.3

ATTACHMENT D
Relevant Public Records

Well No. 1

E14-00724 NF

ORIGINAL
File with DWR

Page 1 of 1

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. e0237618

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

Owner's Well No. 1-2014
Date Work Began 11/14/2014, Ended 11/21/2014
Local Permit Agency Napa County Environmental Mgmt
Permit No. E14-00724 Permit Date 9/15/2014

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL — HORIZONTAL — ANGLE ____ (SPECIFY)
DRILLING METHOD ROTARY FLUID AIR

DEPTH FROM SURFACE Ft. to Ft.	DESCRIPTION *Describe material, grain, size, color, etc.*
0 15	BROWN CLAY
15 30	SHALE & CLAY
30 45	SAND & GRAVEL
45 75	50% SANDSTONE / 50% SHALE
75 85	75% SANDSTONE / 25% SHALE
85 90	BROWN CLAY
90 120	SHALE
120 140	60% SHALE / 40% SANDSTONE
140 150	BROWN SANDY CLAY
150 240	90% BROWN SHALE / 10% SANDSTONE
240 300	90% GRAY SHALE / 10% SANDSTONE

RECEIVED
JAN 29 2015
Napa County Planning, Building & Environmental Services

TOTAL DEPTH OF BORING 300 (Feet)
TOTAL DEPTH OF COMPLETED WELL 178 (Feet)

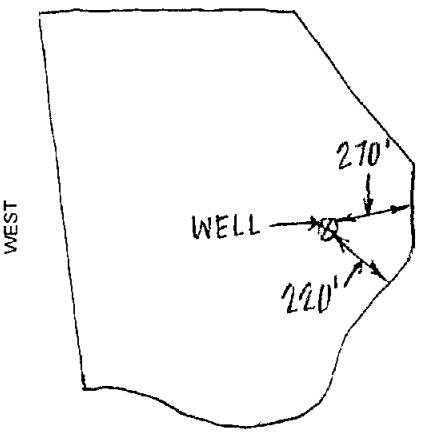
WELL OWNER

Name [redacted]
Mailing Address [redacted]
Napa CA 94558
CITY STATE ZIP

WELL LOCATION

Address 4290 Mt. Veeder Road
City Napa CA
County Napa
APN Book 027 Page 310 Parcel 039
Township ____ Range ____ Section ____
Latitude ____ DEG. MIN. SEC. ____ DEG. MIN. SEC.

LOCATION SKETCH



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 130 (Ft.) BELOW SURFACE 1
DEPTH OF STATIC WATER LEVEL 20 (Ft.) & DATE MEASURED 11/21/2014
ESTIMATED YIELD * 2 (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.

CASING (S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0 25	10								
25 300	9								
0 118		✓				PVC F480	5	SDR-21	
118 158			✓			PVC F480	5	SDR-21	.032
158 178		✓				PVC F480	5	SDR-21	

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0 4	✓			CONCRETE
4 23		✓		CHIPS
23 200			✓	PEA GRAVEL
200 205		✓		TABLETS
205 300			✓	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] 11/29/14 439-746
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

AG

Well No. 2

ORIGINAL
File with DWR

Page 1 of 1

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. e0339348

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

Owner's Well No. 2
Date Work Began 5/8/2017, Ended 5/31/2017
Local Permit Agency Napa County Environmental Mgmt
Permit No. OE17-00063 Permit Date 5/2/2017

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL — HORIZONTAL — ANGLE — (SPECIFY)
DRILLING METHOD ROTARY FLUID BENTONITE

DEPTH FROM SURFACE Ft. to Ft.	DESCRIPTION *Describe material, grain, size, color, etc.*
0 – 15	BROWN CLAY
15 – 35	TAN CLAY
35 – 40	GREEN CLAY
40 – 50	GRAY CLAY
50 – 57	FRACTURED SANDSTONE
57 – 80	50% SHALE / 50% CLAY
80 – 200	80% SHALE / 10% SANDSTONE / 10% CLAY
200 – 230	90% SHALE / 10% CLAY
230 – 245	HARD FRACTURED SANDSTONE
245 – 280	60% SHALE / 40% SANDSTONE
280 – 340	90% SHALE / 10% SANDSTONE

TOTAL DEPTH OF BORING 340 (Feet)
TOTAL DEPTH OF COMPLETED WELL 325 (Feet)

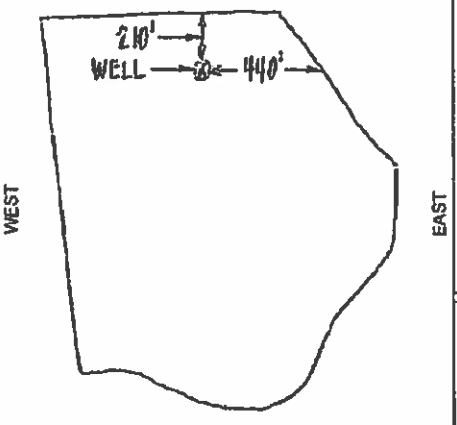
WELL OWNER

Name BD Morris Trust
Mailing Address 601 Rossi Road
St. Helena CA 94574
CITY STATE ZIP

WELL LOCATION

Address 4290 Mt. Veeder Road
City Napa CA
County Napa
APN Book 027 Page 310 Parcel 039
Township — Range — Section —
Latitude — DEG. MIN. SEC. — DEG. MIN. SEC.

LOCATION SKETCH



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 55 (Ft.) BELOW SURFACE 1
DEPTH OF STATIC WATER LEVEL 48 (Ft.) & DATE MEASURED 6/5/2017
ESTIMATED YIELD * 4 (GPM) & TEST TYPE AIR LIFT
TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN N/A (Ft.)
May not be representative of a well's long-term yield.

CASING (S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0 – 340	12								
0 – 55		✓				PVC F480	5	SDR-21	
55 – 205			✓			PVC F480	5	SDR-21	.032
205 – 225		✓				PVC F480	5	SDR-21	
225 – 305			✓			PVC F480	5	SDR-21	.032
305 – 325		✓				PVC F480	5	SDR-21	

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0 – 50	✓			CONCRETE
50 – 325			✓	#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.

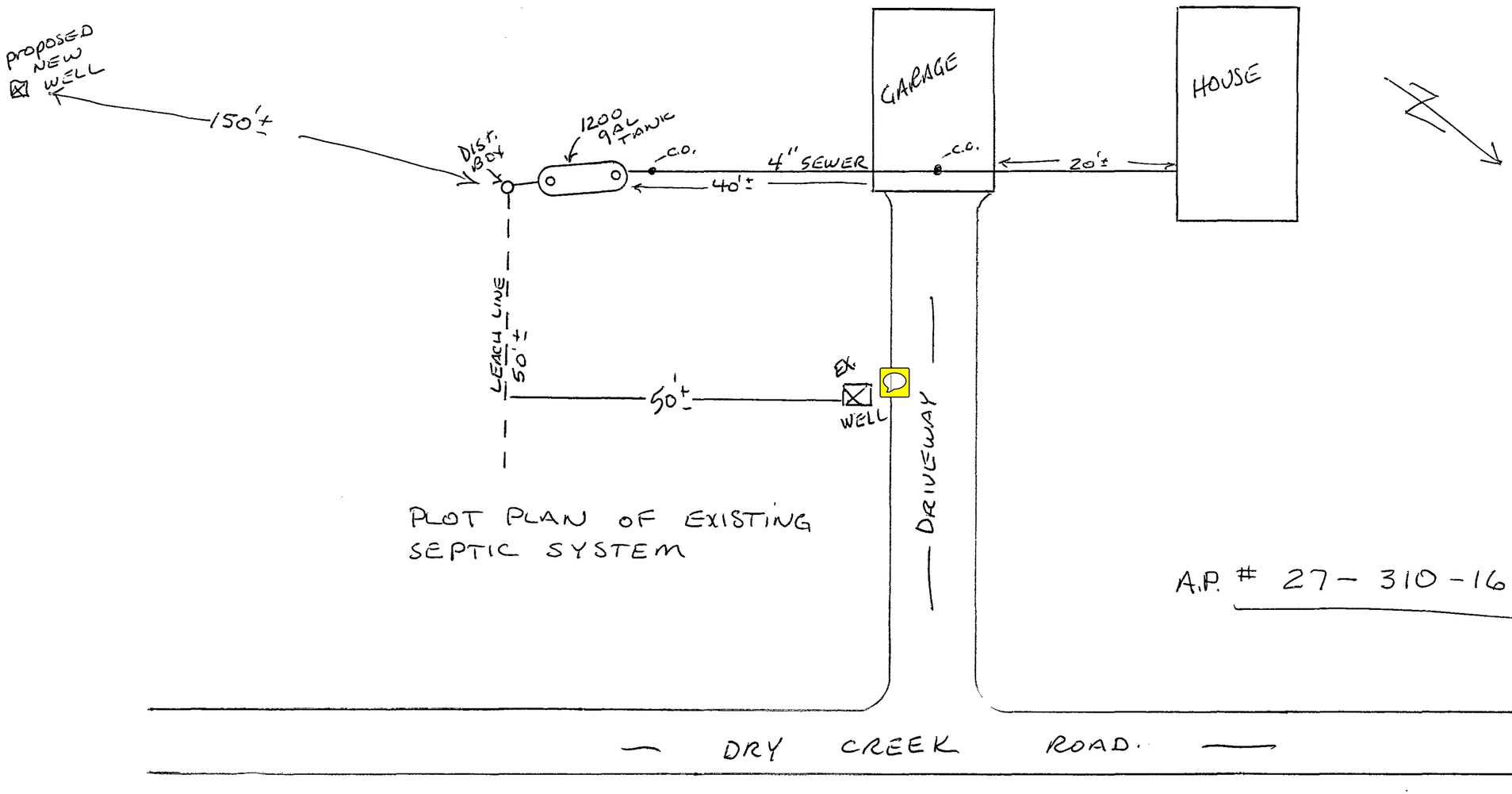
NAME HUCKFELDT WELL DRILLING, INC.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
2110 Penny Lane Napa CA 94559
ADDRESS CITY STATE ZIP
Signed [signature] 06/06/17 439-746
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well No. 3

DRY CREEK



PLOT PLAN OF EXISTING SEPTIC SYSTEM

RECEIVED
MAR 25 1998
DEPT. OF ENVIRONMENTAL MANAGEMENT

BURROUGHS PROPERTY

6061 DRY CREEK Rd

NAPA,

A.P. # 27 - 310 - 16

DATE 3-26-98
FEE
RECEIPT NO.
BY

A.P.# 27-310-16
RECORD #

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

NAME Ernie Burroughs (Owner) ADDRESS 6061 Dry Creek Road Napa (Job Location)
PHONE # 255-7923
NAME HUCKFELDT WELL DRILLING (Well Driller) ADDRESS 2110 Penny Lane Napa

on-site

TYPE OF WORK
New Class I PERMIT X Test Hole Date Called In 3/26/98 - VM
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 X IRRIGATION ____ INDUSTRIAL ____ MUNICIPAL ____
TEST WELL ____ HOT WATER ____ (D.O.G. Clearance ____) OTHER ____

Sewage Disposal System (existing or proposed) Public ____ Individual X Private ____
Distance from well to any part of nearest sewage disposal system 110' feet.
Septic System Location Determined By: Septic Contr., Well Contr. & Owner
Plot plan of well location received ____ County road setback ____ ft. from centerline.

WORKER'S COMPENSATION COVERAGE: (Check one of the following)

X 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: Since the Assessor's parcel maps are different than what the owner claims really exists a permit will be issued w/ a condition that the well driller takes full responsibility for siting the well on the correct parcel and property line set backs.

Signature of Applicant — March 26, 1998 Date

****

FOR OFFICE USE ONLY

	Date	By	Remarks
City Clearance			
Pub. Works Clearance			
Pre-Inspection			
Class II Approval			
Permit Issued			
Const. Insp.			
Well Log Rec.			
Final Insp.			

White-Office Yellow-Owner Pink-Contractor
EHM Form Letter#6 / 12-14-88

Well No. 4

27-310-016

QUADRUPLICATE
For Local Requirements

Page 1 of 1

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 536044

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

Owner's Well No. _____
Date Work Began 4-9-98 , Ended 4-10-98
Local Permit Agency Napa County Environmental Mgmt.
Permit No. _____ Permit Date _____

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER 14 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft. to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0 5	brown clay with embedded rock
5 16	sand & gravel/ alluvium
16 400	shale
	Backfilled test hole with cuttings from drilling procedure.

RECEIVED
MAY 18 1998
ENVIRONMENTAL MANAGEMENT

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

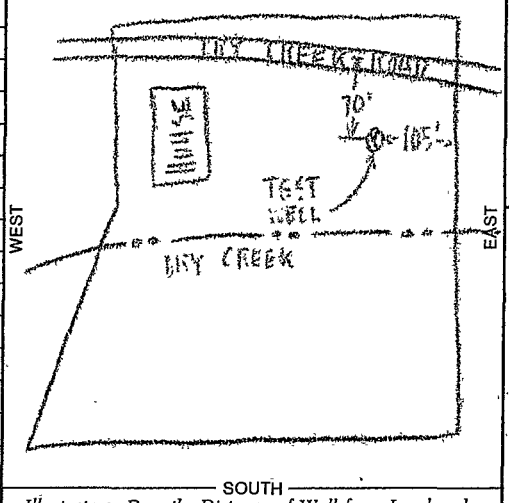
WELL OWNER

Name [redacted]
Mailing Address [redacted]
CITY [redacted] CA [redacted] STATE ZIP

WELL LOCATION

Address 6061 Dry Creek Road
City Napa
County Napa
APN Book 27 Page 310 Parcel 16
or Township _____ Range _____ Section _____
or Latitude _____ DEG. MIN. SEC. NORTH Longitude _____ DEG. MIN. SEC. WEST

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USE(S) (✓)
___ MONITORING
WATER SUPPLY
___ Domestic
___ Public
___ Irrigation
___ Industrial
X "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify)

DRILLING METHOD Rotary Air FLUID _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL _____ (Ft.) & DATE MEASURED _____
ESTIMATED YIELD* ½ (GPM) & TEST TYPE _____
TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Ft.)
** May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL/ GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0 400	8								

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0 400			X	cuttings

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

ADDRESS 2110 Penny Lane CITY Napa STATE CA ZIP 94559

Signed _____ WELL DRILLER/AUTHORIZED REPRESENTATIVE
DATE SIGNED 4-22-98
C-57 LICENSE NUMBER 439-746

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well No. 5

HEALTH DEPT. USE ONLY
FEE: 12.00
DATE: 9/23/75
RECEIPT NO: 2005
BY: R. Goulter

A.P. # 27-310-12

NAPA COUNTY HEALTH DEPARTMENT
DIVISION OF ENVIRONMENTAL HEALTH

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

NAME BELVA J. CARPENTER (Owner) ADDRESS 6067 DRY CREEK RD (Job Location) DATE 9/23/75

NAME RETTELA & PULLIAM (Well Driller) ADDRESS 1541 MARK WEST SPRGS RD. SANTA ROSA, CA. 95404

TYPE OF WORK

NEW WELL	X	RECONDITIONING		DEEPENING	
TEST HOLES		DESTROYING		OTHER	
TYPE I PERMIT		TYPE II PERMIT		FEE	

PROPOSED USE

DOMESTIC	X	IRRIGATION		INDUSTRIAL	MUNICIPAL
TEST WELL		OTHER			

Sewage Disposal On Site (Existing or Proposed) Public ___ Individual ___ Private X
Distance from well to any part of nearest sewage disposal system _____ feet.
(Sketch of site to accompany application.

TYPE OF EQUIPMENT TO BE USED

Rotary _____ Cable X Hand Dug _____ Other _____

CONSTRUCTION PROPOSED

Diameter of casing 8" Material STEEL Annular Space: Size 3"
Sealed with: Concrete ___ Grout X Neat Cement ___ Puddled Clay ___ Other ___
Conductor Casing: Yes ___ No X Material _____
Chlorination By: Owner X Pump Co ___ Driller ___

Belva J. Carpenter (SIGNATURE OF APPLICANT) 9/23/75 (DATE)

HEALTH DEPARTMENT USE ONLY

	Date	Initial	Remarks
Pre-Inspection	9/23/75	AW	
Const. Inspection			
Final Inspection	9/29/75	AW	Shallow - 40' - 20' SEAL ✓

PUMP AND STORAGE

Type of Pump: Shallow ___ Jet ___ Turbine ___ Submersible ___
Type of Storage: Pressure _____ gallons; Gravity _____ gallons
DESCRIBE _____
Well Cover Satisfactory Yes ___ No ___

Pink - Health Dept. Copy
Blue - Well Driller
Yellow - Owner

Form WWD/10/20/70.

HEALTH DEPT. USE ONLY
FEE: 12.00
DATE: 9/23/75
RECEIPT NO: 2005
BY: R. Goulter

A.P. # 27-310-12

7-5-32

NAPA COUNTY HEALTH DEPARTMENT
DIVISION OF ENVIRONMENTAL HEALTH

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

NAME Belva J. Carpenter (Owner) ADDRESS 6067 Dry Creek RD (Job Location) DATE 9/23/75

NAME Rettela & Pulliam (Well Driller) ADDRESS 1541 Mark West Spgs Rd. Santa Rosa, Ca. 95404

TYPE OF WORK
NEW WELL X | RECONDITIONING ___ | DEEPENING ___
TEST HOLES ___ | DESTROYING ___ | OTHER ___
TYPE I PERMIT ___ | TYPE II PERMIT ___ | FEE ___

PROPOSED USE
DOMESTIC X | IRRIGATION ___ | INDUSTRIAL ___ | MUNICIPAL ___
TEST WELL ___ | OTHER ___

Sewage Disposal On Site (Existing or Proposed) Public ___ Individual ___ Private X
Distance from well to any part of nearest sewage disposal system ___ feet.
(Sketch of site to accompany application.

TYPE OF EQUIPMENT TO BE USED
Rotary ___ Cable X Hand Dug ___ Other ___

CONSTRUCTION PROPOSED
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Sealed with: Concrete ___ Grout X Neat Cement ___ Puddled Clay ___ Other ___
Conductor Casing: Yes ___ No X Material ___
Chlorination By: Owner X Pump Co ___ Driller ___

AWM 10-10-75

Belva J Carpenter (SIGNATURE OF APPLICANT) 9/23/75 (DATE)

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

9/23/75 AW -

CASING
40' - 8"

CONSTRUCTION

Total Depth 40 Ft.
Surface Seal to 20 Ft.
Any Stratas sealed: Yes ___ No X
If yes, depth of Stratas
From ___ Ft. to ___ Feet
From ___ Ft. to ___ Feet
Perforations
From 20 Ft. to 32 Feet
From ___ Ft. to ___ Feet
From ___ Ft. to ___ Feet

WATER LEVELS
First water at 13 Feet
Static level at 13 Feet

WELL TESTS
How performed Bailer
Yield 6 GPM with 24 Feet
Drawdown ___ Ft. after ___ Hrs.

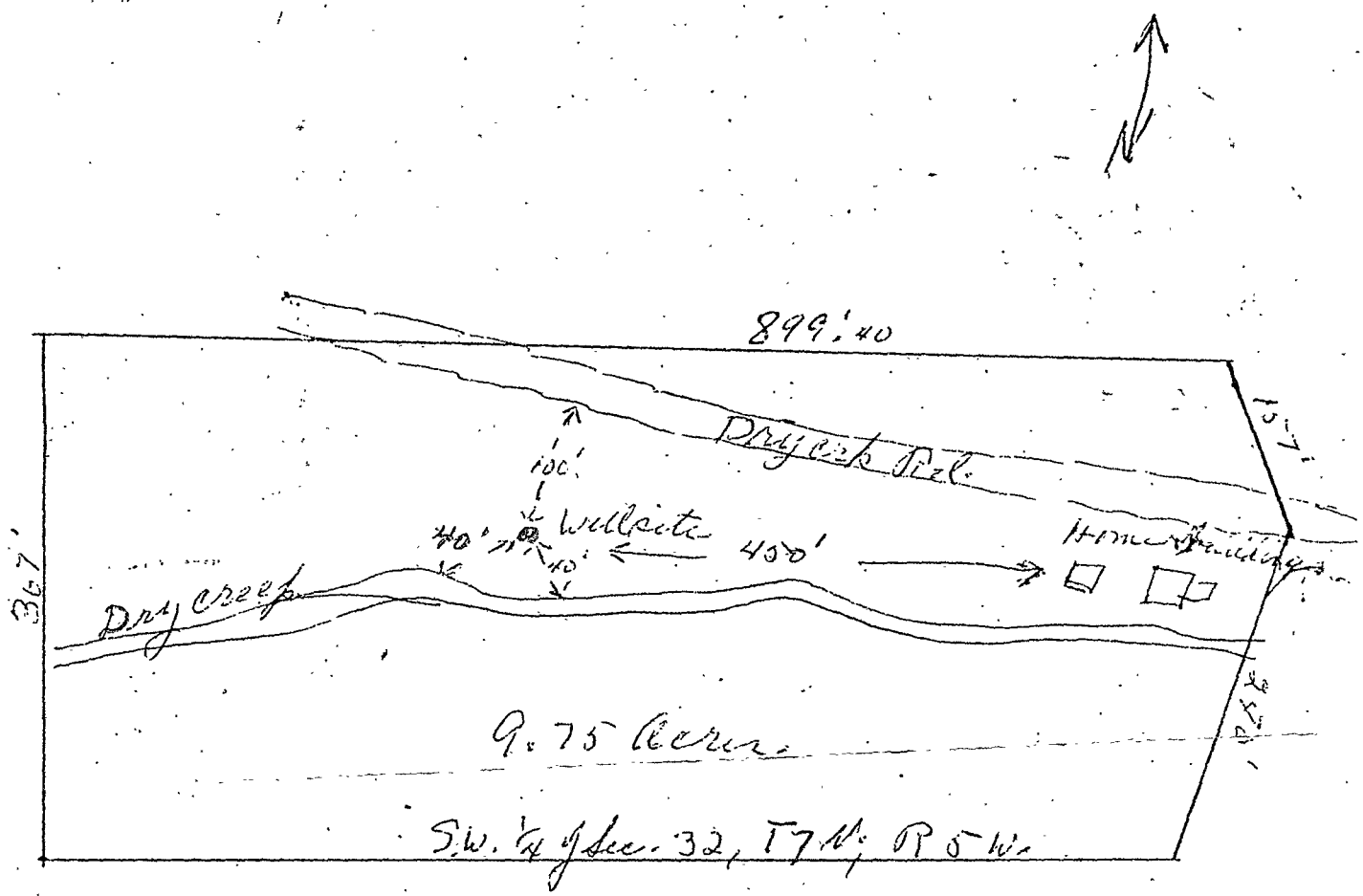
WELL LOG
(Formation; describe by color, size of material, structure)

Ft.	to Ft.	
0	13	Sandy Clay
13	24	Loose boulders & gravel
24	40	Blue Shale

RECEIVED
OCT 09 1975
DIVISION OF ENVIRONMENTAL HEALTH

Signed: Walter Rettela
License # 228649

RETTELA & PULLIAM
Lic. No. 163052
WELL DRILLING
1541 MARK WEST SPRINGS ROAD — SANTA ROSA, CALIFORNIA 95404
542-3606 - 224-9396



Belsen Carpentis
6067 Dry Creek Rd.
Napa, Calif.

A.P. 27-310-12

This portion of Dry Creek not under jurisdiction of WC/RC ord. pg 9/22/75