“G”

Water Availability Analysis & Water System Feasibility Report

Hyde Winery P17-00026
Planning Commission Hearing Date (September 2, 2020)

CMP Civil Engineering & Land Surveying
1607 Capell Valley Road
Napa, CA 94558
(707) 815-0988
Cameron@CMPEngineering.com
CMPEngineering.com

Water Availability Analysis & Report

for the

Larry Hyde & Son Winery

1044 Los Carneros Ave

Napa, CA 94558

APN: 047-220-013

Prepared By:

CMP Civil Engineering & Land Surveying

1607 Capell Valley Road

Napa, CA 94558

(707) 815-0988

Date: 10/31/2016

Rev1: 8/31/2017, Rev2: 2/22/2018, Rev3: 1/28/2020

Jan 28, 2020

REGISTERED PROFESSIONAL ENGINEER
CAMERON PRIDMORE
NO. 76691
CIVIL
STATE OF CALIFORNIA

Table of Contents

Owner Information	
Property Owner:	Larry Hyde
Owner Address:	1024 Bayview Ave Napa, CA 94559
Owner Phone:	(707) 861-8100

Site Map

Please see the Use Permit Site Plan for the Larry Hyde & Son Winery which has been included with this submittal. The said map shows the proposed water source (existing well) for the winery and its proximity to other water sources.

Narrative

This project involves an existing winery located on a 12.27 acre parcel at 1044 Los Carneros Ave in Napa County. The winery owners are not planning to increase the wine production above the existing permitted 30,000 gallons, however they are planning to increase visitation. Please see the use permit application for the details of this increase. On the property there is one residence and an existing winery. There are 7.86 acres of vineyard. There are four existing 10,000 gallon tanks that provide water storage for the winery. Two of the tanks provide fire protection storage, while the other two provide potable water storage. All four of the tanks are filled by an existing onsite well which has a capacity of 4 gallons per minute which is equivalent to 6.45 acre feet per year. The well is located near the center of the lot. There is another well on the parcel which has a 10 gallon per minute (16.13 AF) capacity however this other well will not be utilized for the winery except in emergencies. There are several neighboring wells that exist within 500 feet of the subject winery well. Please see the well location map in exhibit “C”.

Water Use

The existing calculated annual water use for the subject parcel is 4.83 acre feet. Of this 4.83 acre feet, 0.75 is used by the residence, 3.93 is used by the existing vineyard and 0.61 is used by the winery. Of the winery’s 0.61 acre feet per year, 0.46 is from process water which is recycled and used for irrigation, the other 0.15 acre feet is from domestic water. The proposed increase in visitation is expected to increase the winery annual water use up to 0.91 acre feet. Of this 0.91 acre feet per year, 0.46 is from process water which is recycled and used for irrigation, the other 0.45 acre feet per year is from domestic water. Thus the total proposed annual water use for the entire parcel will increase from 4.83 acre feet to 5.13 acre feet.

Available Groundwater

Given that the project is located outside of a defined groundwater recharge area a groundwater recharge analysis was conducted to establish the annual groundwater recharge. The details of this analysis are included in this attachment. The calculated groundwater recharge rate for this property is 0.76 acre feet of water a year per acre of land. Given this the maximum available groundwater for this parcel would be 9.33 acre feet of water per year. Comparing the proposed use of 5.13 acre feet per year to the above 9.33 acre feet value as well as the combined well capacity value of 22.58 acre feet per year, it is clear that the subject parcel and wells have more than enough capacity to serve the proposed use.

Calculations

Please see the attached calculations below.

Attachment "A"

Water Use Calculations

CMP Civil Engineering & Land Surveying
1607 Capell Valley Road
Napa, CA 94558
(707) 815-0988
Cameron@CMPEngineering.com
CMPEngineering.com

Ground Water Recharge Analysis

for the

Larry Hyde & Son Winery

Located at:
1044 Los Carneros Ave
Napa, CA 94558

Date: 1/28/2020

Project # 00084

Legend
Requires Input
Automatically Calculates
Important Value Automatically Calculates
Important Value Requires Input

Hit ctrl+alt+shift+F9 when finished.

GROUND WATER RECHARGE CALCULATIONS

PARCEL VARIABLES

Parcel size =	12.27	ac
Average annual rainfall (P) =	23.00	in (from napa county RSS)
Total parcel average rainfall volume =	23.52	ac-ft/yr

EVAPOTRANSPIRATION (E)

Crop Type	Area (ac)	E (ac-ft)	
Vineyard =	7.86	3.93	
Orchard =			
Hay =			
Other Crops =			
Totals =	7.86	3.93	

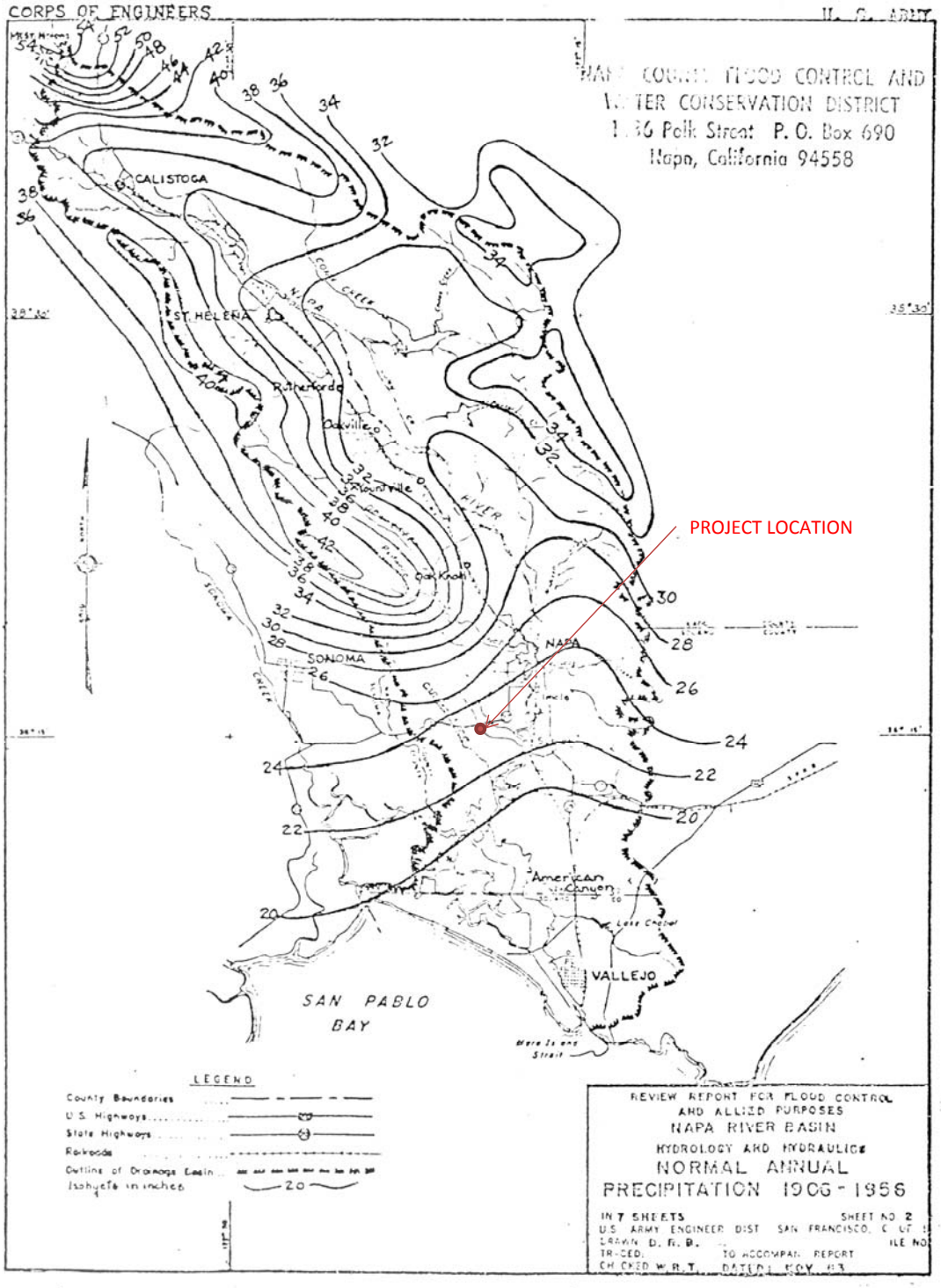
Native plants area =	4.41	ac
Native plants estimated coefficient =	0.35	coefficient
Plant density =	75%	percent
Native Plant Growth Cycle Factor =	0.70	factor
Grass refernce ETo =	45.34	in (from Zone 8 ITRC value typ yr)
Native plant ETc =	11.11	in
Total annual native plant E =	3.06	ac-ft
Total annual E for parcel =	**6.99**	**ac- ft**

RUNOFF (R)

Average runoff relief coefficient =	12%	%
Average runoff soil coefficient =	11%	%
Average runoff vegitation coefficient =	8%	%
Average runoff surface coefficient =	7%	%
Total Runoff Coefficient =	38%	%
Average annual rainfall =	23.52	ac-ft
Runoff producing rainfall =	80%	%
Total Annual Runoff (R) =	**7.15**	**ac-ft**

ANNUAL GROUND WATER RECHARGE STORAGE (S) = P-(R+E)

Total Annaul Precipitation (P) =	23.52	ac-ft
Total Annual Runoff (R) =	7.15	ac-ft
Total Annual Evapotranpiration (E) =	6.99	ac-ft
Total Annual Ground Recharge (S) =	**9.38**	ac-ft
Annual Recharge Rate Per Acre =	**0.76**	**ac-ft / yr / ac**


CORPS OF ENGINEERS
U. S. ARMY
NAPA COUNTY FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
1136 Polk Street P. O. Box 690
Napa, California 94558
CALISTOGA
ST. HELENA
Rutherford
Oakville
Yountville
Oak Knoll
NAPA
SONOMA
American Canyon
VALLEJO
SAN PABLO
BAY
PROJECT LOCATION
LEGEND
County Boundaries
U.S. Highways
State Highways
Railroads
Outline of Drainage Basin
Isohyets in inches
REVIEW REPORT FOR FLOOD CONTROL
AND ALLIED PURPOSES
NAPA RIVER BASIN
HYDROLOGY AND HYDRAULICS
NORMAL ANNUAL
PRECIPITATION 1906 - 1956
IN 7 SHEETS
SHEET NO. 2
U.S. ARMY ENGINEER DIST. SAN FRANCISCO, C. OF E.
DRAWN D. R. B.
FILE NO.
TRACED
TO ACCOMPAN. REPORT
CHECKED W. R. T.
DATED NOV. 63

RUN-OFF PRODUCING CHARCTERISTICS OF WATERSHEDS SHOWING FACTORS FOR EACH CHARACTERISTIC FOR VARIOUS WATERSHED TYPES

WATERSHED TYPES AND FACTORS				
Run-off Producing Features	Extreme	High	Normal	Low
Relief	0.28-0.36 Steep, rugged terain, with average slopes above 30%.	0.20 - 0.28 Rolling, with average slopes of 10 to 30%.	0.14 - 0.20 Rolling, with average slopes of 5 to 10%.	0.08 - 0.14 Relatively flat land, with average slopes of 0 to 5%.
Soil Infiltration	0.12 - 0.16 No effective soil cover either rock or thin soil mantle of negligible infiltration capacity.	0.08 - 0.12 Slow to take up water; clay or shallow loam soils of low infiltration capacity imperfectly or poorly drained	0.06 - 0.08 Normal; well drained light and medium textured soils sandy loams, silt, and silt loams.	0.04 - 0.06 High; deep sand or other soil that takes up water readily; very light, well drained soils.
Vegtal Cover	0.12-0.16 No effective plant cover; bare or very sparse cover.	0.08-0.12 Poor to fair; clean cultivation crops or poor natural cover; less than 20% of drainage area under good cover.	0.06-0.08 Fair to good; about 50% of area in good grassland or woodland; not more than 50% of area in cultivated crops.	0.04-0.06 Good to excellent; about 90% of drainage area in good grassland, woodland, or equivalent crop.
Surface	0.10-0.12 Negligible; surface depressions, few and shallow; drainageways steep and small; no marshes.	0.08 - 0.10 Low; well-defined system of small drainageways; no ponds or marsh.	0.06 - 0.08 Normal; considerable surface depression storage; lakes, ponds, and marshes	0.04 - 0.06 High; surface storage high; drainage system not sharply defined; large floodplain storage or large number of ponds or marshes.

THE RUNOFF FACTOR IS DETERMINED BY THE SUM OF THE FACTORS FOR RELIEF INFILTRATION, COVER, AND SURFACE. NOT APPLICABLE TO BUILT UP AREAS.

FIGURE 3

CMP Civil Engineering & Land Surveying
1607 Capell Valley Road
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Water Availability Calculations

for the

Larry Hyde & Son Winery

Located at:
1044 Los Carneros Ave
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Date: 10/31/2016
Rev1: 8/31/2017
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Rev3: 1/28/2020

Project # 00084

Legend
Requires Input
Automatically Calculates
Important Value Automatically Calculates
Important Value Requires Input

Hit ctrl+alt+shift+F9 when finished to recalc a

WATER AVAILABILITY ANALYSIS- PHASE ONE STUDY

WATER USE CALCULATIONS FOR EXISTING USE

RESIDENTIAL	#	FACTOR	AF/YR
PRIMARY RESIDENCES=	1	0.75	0.75
SECONDARY RESIDENCES=	0	0.3	0.00
FARM LBR DWELLING (# OF PPL) =	0	0.06	0.00
		SUB TOTAL=	0.75

NON- RESIDENTIAL CALCULATIONS

AGRICULTURAL	# ACRE	FACTOR	AF/YR
VINEYARD IRRIGATION ONLY=	7.86	0.5	3.93
VINEYARD HEAT PROTECTION=	0	0.25	0.00
VINEYARD FROST PROTECTION=	0	0.25	0.00
IRRIGATED PASTURE=	0	4	0.00
ORCHARDS=	0	4	0.00
LIVESTOCK (SHEEP/COWS)=	0	0.01	0.00
		SUB TOTAL=	3.93
WINERY	**# GAL**	**FACTOR**	**AF/YR**
PROCESS WATER=	30000	SEE WW CALC	0.46
DOMESTIC AND LANDSCAPING=	30000	0.000005	0.15
		SUB TOTAL=	0.61
INDUSTRIAL	**# EMPL**	**FACTOR**	**AF/YR**
FOOD PROCESSING=	0	31	0.00
PRINTING/ PUBLISHING=	0	0.6	0.00
		SUB TOTAL=	0.00
COMMERCIAL	**# EMPL**	**FACTOR**	**AF/YR**
OFFICE SPACE=	0	0.01	0.00
WAREHOUSE=	0	0.05	0.00
		SUB TOTAL=	0.00

EXISTING USE TOTALS

RESIDENTIAL=	0.75	AF/YR
AGRICULTURAL=	3.93	AF/YR
WINERY=	0.61	AF/YR
INDUSTRIAL=	0.00	AF/YR
COMMERCIAL=	0.00	AF/YR
OTHER USAGE (LIST BELOW)		
RECYCLED WASTE WATER =	-0.46	AF/YR
		AF/YR
		AF/YR
		AF/YR
		AF/YR
TOTAL EXISTING WATER USE=	**1573753**	**G/YR**
TOTAL EXISTING WATER USE=	**4.83**	**AF/YR**

WATER AVAILABILTY CALCULATIONS FOR EXISTING USE			
WELL NUMBER	Q - GPM	AF/YR	
1	4	6.452	
2	10	16.131	
3		0.000	
4		0.000	
5		0.000	
TOTAL=	14	22.584	
SPRING NUMBER	Q - GPM	AF/YR	
1		0.000	
2		0.000	
3		0.000	
4		0.000	
5		0.000	
TOTAL=	0	0.000	
TANK #	GAL	AF	
1	10000	0.031	
2	10000	0.031	
3	10000	0.031	
4	10000	0.031	
5		0.000	
TOTAL=	40000	0.123	
RESERVOIR #	GAL	AF	
1	0.000		
2	0.000		
3	0.000		
4	0.000		
5	0.000		
TOTAL=	0.000	0	
GROUND WATER RECHARGE	AF/YR/ACRE	PARCEL AC	AF/YR
CALCULATED RECHARGE RATE	0.76	12.27	9.33
TOTAL AVAILABLE WATER =	**3038418.73**	**G/YR**	
TOTAL AVAILABLE WATER =	**9.33**	**AF/YR**	
TOTAL EXISTING WATER USE=	**4.83**	**AF/YR**	
REMAINING AVAILABLE WATER =	**4.50**	**AF/YR**	

WATER USE CALCULATIONS FOR PROPOSED USE

RESIDENTIAL	#	FACTOR	AF/YR
PRIMARY RESIDENCES=	1	0.75	0.75
SECONDARY RESIDENCES=	0	0.3	0.00
FARM LBR DWELLING (# OF PPL) =	0	0.06	0.00
		SUB TOTAL=	0.75

NON- RESIDENTIAL CALCULATIONS

AGRICULTURAL	# ACRE	FACTOR	AF/YR
VINEYARD IRRIGATION ONLY=	7.86	0.5	3.93
VINEYARD HEAT PROTECTION=	0	0.25	0.00
VINEYARD FROST PROTECTION=	0	0.25	0.00
IRRIGATED PASTURE=	0	4	0.00
ORCHARDS=	0	4	0.00
LIVESTOCK (SHEEP/COWS)=	0	0.01	0.00
		SUB TOTAL=	3.93
WINERY	**# GAL**	**FACTOR**	**AF/YR**
PROCESS WATER=	30000	SEE WW CALC	0.46
DOMESTIC AND LANDSCAPING=	30000	SEE WW CALC	0.45
		SUB TOTAL=	0.91
INDUSTRIAL	**# EMPL**	**FACTOR**	**AF/YR**
FOOD PROCESSING=	0	31	0.00
PRINTING/ PUBLISHING=	0	0.6	0.00
		SUB TOTAL=	0.00
COMMERCIAL	**# EMPL**	**FACTOR**	**AF/YR**
OFFICE SPACE=	0	0.01	0.00
WAREHOUSE=	0	0.05	0.00
		SUB TOTAL=	0.00

PROPOSED USE TOTALS

RESIDENTIAL=	0.75	AF/YR
AGRICULTURAL=	3.93	AF/YR
WINERY=	0.91	AF/YR
INDUSTRIAL=	0.00	AF/YR
COMMERCIAL=	0.00	AF/YR
OTHER USAGE (LIST BELOW)		
RECYCLED WASTE WATER =	-0.46	AF/YR
		AF/YR
		AF/YR
		AF/YR
		AF/YR
TOTAL PROPOSED WATER USE=	**1671502**	**G/YR**
TOTAL PROPOSED WATER USE=	**5.13**	**AF/YR**

WATER AVAILABILTY CALCULATIONS FOR PROPOSED USE

WELL NUMBER	Q - GPM	AF/YR
1	4	6.452
2	10	16.131
3		0.000
4		0.000
5		0.000
TOTAL=	14	22.584
SPRING NUMBER	Q - GPM	AF/YR
1		0.000
2		0.000
3		0.000
4		0.000
5		0.000
TOTAL=	0	0.000
TANK #	GAL	AF
1	10000	0.031
2	10000	0.031
3	10000	0.031
4	10000	0.031
5		0.000
TOTAL=	40000	0.123
RESERVOIR #	GAL	AF
1	0	
2	0	
3	0	
4	0	
5	0	
TOTAL=	0	0.000

GROUND WATER RECHARGE	AF/YR/ACRE	PARCEL AC	AF/YR
CALCULATED RECHARGE RATE	0.76	12.27	9.33

TOTAL WATER AVAILABLE =	**3038418.73**	**G/YR**
TOTAL WATER AVAILABLE =	**9.33**	**AF/YR**
TOTAL PROPOSED WATER USE=	**5.13**	**AF/YR**
REMAINING AVAILABLE WATER =	**4.20**	**AF/YR**

Attachment “B”

Well Yield Reports

ATE
r's Copy

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 0913065

Page ___ of ___
Owner's Well No. ___
Date Work Began 11/15/05 , Ended 11/21/05
Local Permit Agency Napa
Permit No. 05-0095 Permit Date 11/14/05

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

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD mud FLUID betonite

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	2	topsoil
2	30	brown & gray clay
30	50	hard gray shale
50	70	hard & soft shale
70	90	hard gray shale
90	130	hard gray shale, gray rock
130	150	hard shale
150	190	hard gray shale
190	210	hard gray shale, gray sand

TOTAL DEPTH OF BORING 210 (Feet)
TOTAL DEPTH OF COMPLETED WELL 210 (Feet)

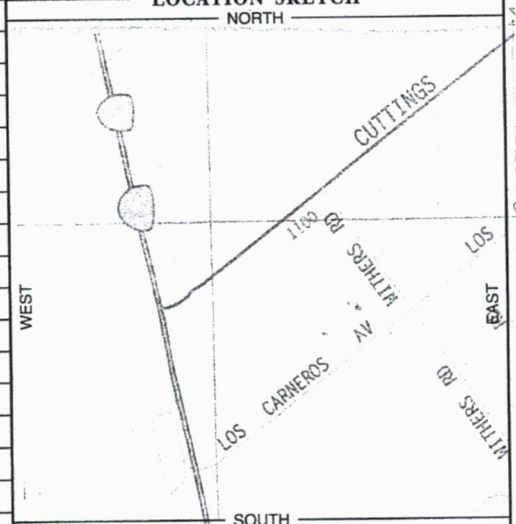
WELL OWNER

Name CP Family Partnership, LP
Mailing Address 1024 Bayview Ave.
Napa, CA 94559
CITY STATE ZIP

WELL LOCATION

Address 1044 Los Carneros
City Napa
County Napa
APN Book 47 Page 220 Parcel 007
Township ___ Range ___ Section ___
Lat ___ N DEG. MIN. SEC. Long ___ W 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 (✓)

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

USES (✓)

WATER SUPPLY
X Domestic ___ Public
___ Irrigation ___ Industri
___ 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 ___ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 55 (Ft.) & DATE MEASURED 11/21/05
ESTIMATED YIELD * 10. (GPM) & TEST TYPE air
TEST LENGTH 8 (Hrs.) TOTAL DRAWDOWN 190 (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	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	52	12 3/4	X				B430	6"	200	
52	70	9 7/8	X	X			B430	6"	200	
70	150	9 7/8		X			B430	6"	300	factory
150	190	9 7/8	X				B430	6"	200	
190	210	9 7/8		X			B430	6"	200	factory

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	52	X			
52	210				#3 sand 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 Nelson & Williams, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 873 El Camino Ave., Napa, CA 94558 CITY STATE ZIP

Signed ___ 1/26/06 306332
C-57 LICENSED WATER WELL CONTRACTOR DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 05-03

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

CUSTOMER #: H175
NAME: CP Family Partnership
STREET: 1044 Los Carneros
CITY: Napa
WELL LOCATION:
New well #2

HOME PHONE:
WORK PHONE:
OTHER PHONE:

COMMENTS:

WELL #: A P #: 47-220-007
CLASS: 1 DEPTH: 210'
CASING SIZE AND TYPE: 6"pvc
CASING DEPTH: 210'
PERF: 70'-210' SEAL: 52'
STATIC LEVEL: 55'
DRAWDOWN: 190' AFTER: 8 hrs
YIELD: 10.gpm TESTED: air
TEST PIPE SETTING: 1"-200'-4"-210'
EQUIPMENT: TH60
WELL DRILLED DATE: 11/21/05
WELL CLEANED DATE:
CLEANED WELL FROM:
BOOSTER PUMP:
STORAGE TANK:

PUMP MAKE: grundfos
PUMP TYPE: submersible
PUMP MODEL 10S10-15
H P: 1 VOLT 230 PH: 1
PUMP SERIAL #: B09010015
WARRANTY: p10516US
PUMP INSTALL DATE: 06/07/06
PUMP SETTING: 190'
CHECK VALVE(S):
PUMP SAVER: 233&231
PIPE SIZE: 1 1/4" TYPE / SCH: pvc80
WIRE: #8-3wg
PRESSURE TANK:
TANK INSTALL DATE:
OPEN DISCHARGE DATE:
LAB WORK boron

BACKFLOW MAKE PSI: METER #:
BF SERIAL #: BF MODEL: BF SIZE:

LOCATION:

PURPOSE:
WELL LOG:
0 - 2 topsoil
2 - 30 brown & gray clay
30 - 50 hard gray shale
50 - 70 hard & soft shale
70 - 90 hard gray shale
90 - 130 hard gray shale, gray rock
130 - 150 hard shale
150 - 190 hard gray shale
190 - 210 hard gray shale, gray sand

GENERAL INFORMATION:
6-1,2,5,6,7,-06 Install pump and open trench. Build electrical panel
Install water and electric supply line. Pull wire hook
start and flush system and close trench
6-15-06 Labor to finish panel and do flow test on two wells
09-14-06 install flow meter ck next day, average 10gpm
06-19-09 Install dole valve @ well,ck air in pressure tank,recalibrate
motor saver on well, sys work o.k.

4 gpm
Dole Valve

DUPLICATE
Driller's Copy

Page ____ **of** ____
Owner's Well No. _____

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 0913066

Date Work Began 11/2/05, Ended 11/14/05
Local Permit Agency Napa
Permit No. E05-0962 Permit Date 11/10/05

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

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD Mud FLUID bentonite

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	30	brown clay
30	50	brown & gray clay
50	70	gray clay & gravel
70	90	gravel
90	150	gray clay rock stringers
150	170	gray rock
170	190	shale, soft, hard
190	230	shale
230	290	shale, gray rock
290	330	shale
330	370	sandy gray shale
370	390	shale
390	410	stringer white rock, shale
410	450	shale

TOTAL DEPTH OF BORING 450 (Feet)
TOTAL DEPTH OF COMPLETED WELL 450 (Feet)

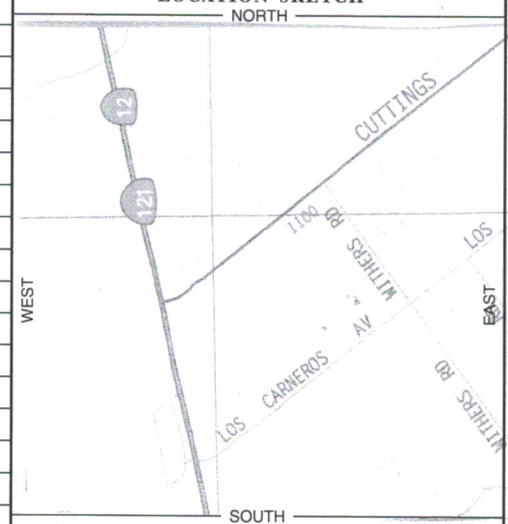
WELL OWNER

Name CPFamily Partnership, LP
Mailing Address 1024 Bayview Ave.
CITY Napa, CA 94558 STATE ZIP

WELL LOCATION

Address 1044 Los Carneros
City Napa
County Napa
APN Book 47 Page 220 Parcel 007
Township ____ Range ____ Section ____
Lat ____ DEG. ____ MIN. ____ SEC. N
Long ____ DEG. ____ MIN. ____ SEC. W

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 (✓)

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

USES (✓)

WATER SUPPLY
X 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 ____ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 60 (Ft.) & DATE MEASURED 11/14/05
ESTIMATED YIELD * 4. (GPM) & TEST TYPE air
TEST LENGTH 8 (Hrs.) TOTAL DRAWDOWN 400 (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	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	52	12 3/4	X				F480	6"	200	
52	70	9 7/8	X				F480	6"	200	
70	170	9 7/8		X			F480	6"	200	factory
170	230	9 7/8	X				F480	6"	200	
230	290	9 7/8		X			F480	6"	200	factory
290	390	9 7/8	X				F480	6"	200	
390	410	9 7/8		X			F480	6"	200	factory
410	430	9 7/8	X				F480	6"	200	
430	[illegible]	[illegible]	X				F480	6"	200	factory

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	52	X			
52	450				#6 sand 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 McLean & Williams, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

878 El Centro Ave., Napa, CA 94558
ADDRESS CITY STATE ZIP

Signed [signature] 1/26/06 396352
C-57 LICENSED WATER WELL CONTRACTOR DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 05-03

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

CUSTOMER #: H175
NAME: CP Family Partnership
STREET: 1044 Los Carneros
CITY: Napa
WELL LOCATION:
New well #1

HOME PHONE:
WORK PHONE:
OTHER PHONE:

COMMENTS:

WELL #: A P #: 47-220-007
CLASS: 1 DEPTH: 450'
CASING SIZE AND TYPE: 6"pvc
CASING DEPTH: 450'-438'
PERF: 70'-450' SEAL: 52'
STATIC LEVEL: 60'-10
DRAWDOWN: 400' AFTER: 8hrs
YIELD: 4.gpm TESTED: air
TEST PIPE SETTING: 1"-420'-4"-445'
EQUIPMENT: TH60
WELL DRILLED DATE: 11/14/05
WELL CLEANED DATE:
CLEANED WELL FROM:
BOOSTER PUMP:
STORAGE TANK:

PUMP MAKE: grundfos
PUMP TYPE: sub
PUMP MODEL 10S20-27
H P: 2 VOLT 230 PH: 1
PUMP SERIAL #: B09010027
WARRANTY:
PUMP INSTALL DATE: 6-5-06
PUMP SETTING: 420
CHECK VALVE(S):
PUMP SAVER:
PIPE SIZE: 1 1/4 TYPE / SCH: 80
WIRE: #8 wg
PRESSURE TANK:
TANK INSTALL DATE:
OPEN DISCHARGE DATE:
LAB WORK 2-boron

BACKFLOW MAKE PSI: METER #:
BF SERIAL #: BF MODEL: BF SIZE:

LOCATION:

PURPOSE:
WELL LOG:
0 - 30 brown clay
30 - 50 brown & gray clay
50 - 70 gray clay & gravel
70 - 90 gravel
90 - 150 gray clay rock stringers
150 - 170 gray rock
170 - 190 shale, soft, hard
190 - 230 shale
230 - 290 shale, gray rock

GENERAL INFORMATION:
7-15-06 Install pump, wter and electric lines, start pump, flush
and run 6 Hrs to check flow (june 1,2,5,6,7 and 15)

09-14-06 install flow meter, ck next day

11-01-06 readjust cock valve,test well signals

06-19-09 Install dole valve @ well,ck air in pressure tank,recalibrate
motor saver on well, sys work o.k.

20 gpm
Dole Valve

290 - 330 shale

330 - 370 sandy gray shale

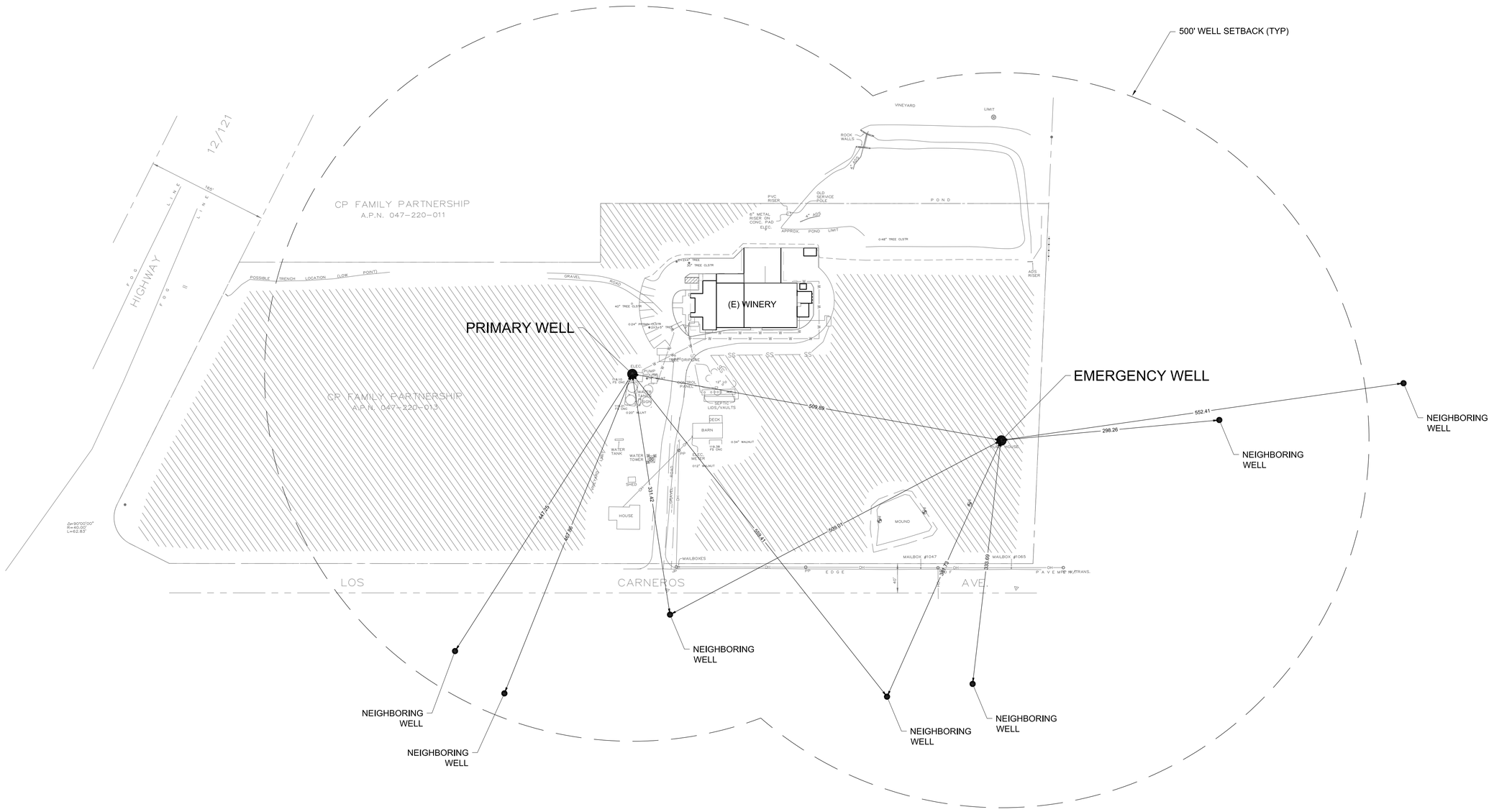
370 - 390 shale

390 - 410 stringer white rock, shale

410 - 450 shale

Attachment “C”

Well Location Map



CMP CIVIL LAND ENGINEERING & SURVEYING

PREPARED BY:
CAMERON PRIDMORE PE, PLS
1607 CAPELL VALLEY ROAD
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(707) 815-0988
CAMERON@CMPENGINEERING.COM
CMPENGINEERING.COM

PROJECT #: 00084 DATE: 7/13/2016

REV. #	DESCRIPTION	DATE

PROJECT INFO:
LARRY HYDE & SON WINERY
1044 LOS CARNEROS AVE
NAPA, CA 94558
APN: 047-220-013

SHEET NAME:
WELL LOCATION MAP

SHEET:
1
OF 1

CMP Civil Engineering & Land Surveying
1607 Capell Valley Road
Napa, CA 94558
(707) 815-0988
Cameron@CMPengineering.com
CMPengineering.com

Water System Feasibility Report

for the

Larry Hyde & Son Winery

1044 Los Carneros Ave

Napa, CA 94558

APN: 047-220-013

Prepared By:

CMP Civil Engineering & Land Surveying

1607 Capell Valley Road

Napa, CA 94558

(707) 815-0988

Date: 10/31/2016

Rev1: 10/31/2019, Rev2: 1/28/2020

REGISTERED PROFESSIONAL ENGINEER
CAMERON PRIDMORE
NO. 76691
CIVIL
STATE OF CALIFORNIA

Jan 28, 2020

Table of Contents

Water System General Descriptions

The proposed water system, officially called the Larry Hyde & Son Winery Water System, will supply potable water to the proposed Larry Hyde & Son Winery along with the existing home on the parcel. The water source will be an existing onsite well.

Water System Technical Description and Feasibility

The water source for this system is one of the two existing wells on the property. The subject source well is located near the center of the property. See Attachment “A” for a map showing the exact location. The well is currently used to provide potable water to the existing winery and has a capacity of 4 gallons per minute (GPM). The other well is located at the southeast end of the parcel and serves the vineyard and will act as an emergency water source if the subject well should fail for some reason. Please see the well logs and other pertinent information in Attachment “E”. The well is currently fitted with a 52’ deep seal with a minimum 3” annular space. The well water is currently being tested for adverse and hazardous constituents as required by local, state and federal permitting agencies. If any are found then an appropriate treatment and filtration system will be installed to treat the water and make it suitable for human consumption (the constituents to be tested for are shown in Attachment “D”). The results of this test will be provided as soon as the testing is complete. From the well the water will then be pumped through a network of PVC pipes rated for potable water to four 10,000 gallon storage tanks. Of these four tanks, two will be used to store potable water. The other two will be storing water for fire protection. From here the potable water is then routed to the winery building.

There is a total of one winery structure connected to this water system. Looking at the winery domestic and process wastewater calculations shown in Attachment “B”, the maximum day demand (MDD) on this water system is 1134 gallons per day (GPD). The peak hourly demand (PHD) is (1134 x 1.5) = 1701 gallons per hour (GPH). Given that the subject well has a capacity of 4 GPM, at this rate it can provide a maximum of 5,760 GPD. Comparing this to the above MDD of 1134 GPD, there is more than enough daily capacity for the winery. Moving on to the PHD requirements. The code states that a water system must be able to provide the PHD for four consecutive hours which in this case is (1701 GPH x 4 H) = 6804 gallons. Given that the well can pump at 4 GPM this equals (4 GPM x 60 M x 4 H) = 960 gallons every four hours. Add this to the capacity of the two 10,000 gallon storage tanks and the maximum 4 hour capacity of this water system is 20,960 gallons. Comparing this to the required 6804 gallons, there is more than enough water available to meet the PHD requirements.

Looking at the entire parcels water use and availability, the proposed calculated annual water use for the subject parcel is 5.13 acre feet. See the Water Availability Calculations in Attachment “B”. Given that this parcel is 12.27 acres in size and is located near the valley floor region, a groundwater calculated recharge rate of 0.76 acre

feet of water use per acre is appropriate. Given this the maximum allowed water use for this parcel would be 9.33 acre feet of water per year. Comparing the proposed use of 5.13 acre feet per year to the above 9.33 acre feet value as well as the annual well capacity value of 22.58 acre feet per year, it is clear that the subject parcel and well has more than enough capacity to serve the proposed use.

In case of emergency, a backup water source is available. The emergency backup water source for this project is an existing 10 gallon per minute well located at the southeast end of the property. This emergency well will only be used if absolutely required and approved by the pertinent permitting agencies.

Water Quality and Testing

The existing wells are going to be tested for water quality. We expect the hazardous constituents tested to be below allowable local, state and federal drinking water quality levels. Attachment “C” shows both the EPA and California allowable constituent levels. Attachment “D” normally has the testing results, however it is blank now but the result of the testing will be provided as soon as possible. As long as the water quality for the project well meets local, state and federal requirements, then it is expected that this system will be placed in service once the appropriate permits and improvements have been obtained and completed. Once the system is placed in service then continued testing will be as follows: quarterly testing for bacteria’s, annual testing for nitrites, and nitrate testing once every three years.

Managerial Expectations

A qualified person will be hired to properly monitor, operate and maintain this water system. This persons responsibilities will be but are not limited to the following items:

1. Inspect the water system on a regular bases to make sure everything is operating properly and there are no possible points of contamination.
2. Personally fix any failures or components showing signs of wearing within the system or if necessary coordinate with service providers to fix such items.
3. Properly sample the water and send samples to the proper testing lab as required by the pertinent permitting agencies.
4. Notify winery owner and manager of any water system infrastructure needs and any planned water shutdown periods.
5. Develop emergency water system shutdown procedures and be able to implement them.

Financial Expectations

Currently it is estimated that the entire water system cost $80,000 to install. It is expected that the system will have a usable lifespan of 30 years. It is expected to cost $1000 annually to operate, maintain and properly sample and test the water. It is

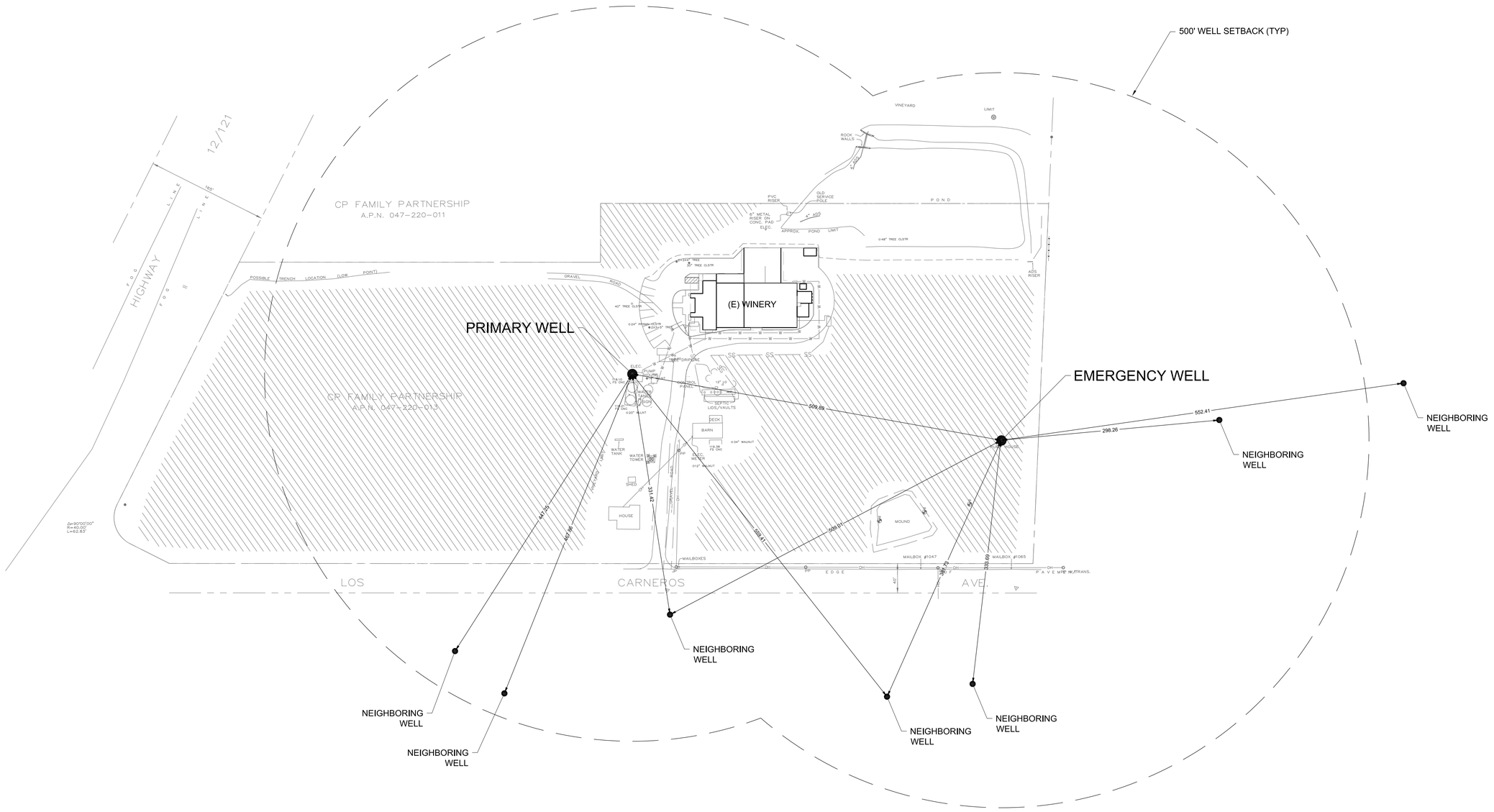
expected that the system will cost roughly $134,000 to replace 30 years from now. To have this money available 30 years from now, $4467 must be set aside in a 0% annual interest rate account for the next 30 years. Thus it will cost an estimated $5467 per year to own, operate, maintain and eventually replace the subject water system. The Larry Hyde and Son Winery has more than adequate funds to meet the financial demands of this water system.

Conclusions

Pending the results of the water quality testing, the Larry Hyde and Son Winery has an adequate water source for the proposed and existing uses on the subject parcel.

Attachment “A”

Well Location Map



CMP CIVIL LAND ENGINEERING & SURVEYING

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PROJECT #: 00084 DATE: 7/13/2016

REV. #	DESCRIPTION	DATE

PROJECT INFO:
LARRY HYDE & SON WINERY
1044 LOS CARNEROS AVE
NAPA, CA 94558
APN: 047-220-013

SHEET NAME:
WELL LOCATION MAP

SHEET:
1
OF 1

Attachment “B”

Water Availability Analysis Calculations,
Wastewater Calculations

CMP Civil Engineering & Land Surveying
1607 Capell Valley Road
Napa, CA 94558
(707) 815-0988
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Water Availability Calculations

for the

Larry Hyde & Son Winery

Located at:
1044 Los Carneros Ave
Napa, CA 94558

Date: 10/31/2016
Rev1: 8/31/2017
Rev2: 2/22/2018
Rev3: 1/28/2020

Project # 00084

Legend
Requires Input
Automatically Calculates
Important Value Automatically Calculates
Important Value Requires Input

Hit ctrl+alt+shift+F9 when finished to recalc a

WATER AVAILABILITY ANALYSIS- PHASE ONE STUDY

WATER USE CALCULATIONS FOR EXISTING USE

RESIDENTIAL	#	FACTOR	AF/YR
PRIMARY RESIDENCES=	1	0.75	0.75
SECONDARY RESIDENCES=	0	0.3	0.00
FARM LBR DWELLING (# OF PPL) =	0	0.06	0.00
		SUB TOTAL=	0.75

NON- RESIDENTIAL CALCULATIONS

AGRICULTURAL	# ACRE	FACTOR	AF/YR
VINEYARD IRRIGATION ONLY=	7.86	0.5	3.93
VINEYARD HEAT PROTECTION=	0	0.25	0.00
VINEYARD FROST PROTECTION=	0	0.25	0.00
IRRIGATED PASTURE=	0	4	0.00
ORCHARDS=	0	4	0.00
LIVESTOCK (SHEEP/COWS)=	0	0.01	0.00
		SUB TOTAL=	3.93
WINERY	**# GAL**	**FACTOR**	**AF/YR**
PROCESS WATER=	30000	SEE WW CALC	0.46
DOMESTIC AND LANDSCAPING=	30000	0.000005	0.15
		SUB TOTAL=	0.61
INDUSTRIAL	**# EMPL**	**FACTOR**	**AF/YR**
FOOD PROCESSING=	0	31	0.00
PRINTING/ PUBLISHING=	0	0.6	0.00
		SUB TOTAL=	0.00
COMMERCIAL	**# EMPL**	**FACTOR**	**AF/YR**
OFFICE SPACE=	0	0.01	0.00
WAREHOUSE=	0	0.05	0.00
		SUB TOTAL=	0.00

EXISTING USE TOTALS

RESIDENTIAL=	0.75	AF/YR
AGRICULTURAL=	3.93	AF/YR
WINERY=	0.61	AF/YR
INDUSTRIAL=	0.00	AF/YR
COMMERCIAL=	0.00	AF/YR
OTHER USAGE (LIST BELOW)		
RECYCLED WASTE WATER =	-0.46	AF/YR
		AF/YR
		AF/YR
		AF/YR
		AF/YR
TOTAL EXISTING WATER USE=	**1573753**	**G/YR**
TOTAL EXISTING WATER USE=	**4.83**	**AF/YR**

WATER AVAILABILTY CALCULATIONS FOR EXISTING USE			
WELL NUMBER	Q - GPM	AF/YR	
1	4	6.452	
2	10	16.131	
3		0.000	
4		0.000	
5		0.000	
TOTAL=	14	22.584	
SPRING NUMBER	Q - GPM	AF/YR	
1		0.000	
2		0.000	
3		0.000	
4		0.000	
5		0.000	
TOTAL=	0	0.000	
TANK #	GAL	AF	
1	10000	0.031	
2	10000	0.031	
3	10000	0.031	
4	10000	0.031	
5		0.000	
TOTAL=	40000	0.123	
RESERVOIR #	GAL	AF	
1	0.000		
2	0.000		
3	0.000		
4	0.000		
5	0.000		
TOTAL=	0.000	0	
GROUND WATER RECHARGE	AF/YR/ACRE	PARCEL AC	AF/YR
CALCULATED RECHARGE RATE	0.76	12.27	9.33
TOTAL AVAILABLE WATER =	**3038418.73**	**G/YR**	
TOTAL AVAILABLE WATER =	**9.33**	**AF/YR**	
TOTAL EXISTING WATER USE=	**4.83**	**AF/YR**	
REMAINING AVAILABLE WATER =	**4.50**	**AF/YR**	

WATER USE CALCULATIONS FOR PROPOSED USE

RESIDENTIAL	#	FACTOR	AF/YR
PRIMARY RESIDENCES=	1	0.75	0.75
SECONDARY RESIDENCES=	0	0.3	0.00
FARM LBR DWELLING (# OF PPL) =	0	0.06	0.00
		SUB TOTAL=	0.75

NON- RESIDENTIAL CALCULATIONS

AGRICULTURAL	# ACRE	FACTOR	AF/YR
VINEYARD IRRIGATION ONLY=	7.86	0.5	3.93
VINEYARD HEAT PROTECTION=	0	0.25	0.00
VINEYARD FROST PROTECTION=	0	0.25	0.00
IRRIGATED PASTURE=	0	4	0.00
ORCHARDS=	0	4	0.00
LIVESTOCK (SHEEP/COWS)=	0	0.01	0.00
		SUB TOTAL=	3.93
WINERY	**# GAL**	**FACTOR**	**AF/YR**
PROCESS WATER=	30000	SEE WW CALC	0.46
DOMESTIC AND LANDSCAPING=	30000	SEE WW CALC	0.45
		SUB TOTAL=	0.91
INDUSTRIAL	**# EMPL**	**FACTOR**	**AF/YR**
FOOD PROCESSING=	0	31	0.00
PRINTING/ PUBLISHING=	0	0.6	0.00
		SUB TOTAL=	0.00
COMMERCIAL	**# EMPL**	**FACTOR**	**AF/YR**
OFFICE SPACE=	0	0.01	0.00
WAREHOUSE=	0	0.05	0.00
		SUB TOTAL=	0.00

PROPOSED USE TOTALS

RESIDENTIAL=	0.75	AF/YR
AGRICULTURAL=	3.93	AF/YR
WINERY=	0.91	AF/YR
INDUSTRIAL=	0.00	AF/YR
COMMERCIAL=	0.00	AF/YR
OTHER USAGE (LIST BELOW)		
RECYCLED WASTE WATER =	-0.46	AF/YR
		AF/YR
		AF/YR
		AF/YR
		AF/YR
TOTAL PROPOSED WATER USE=	**1671502**	**G/YR**
TOTAL PROPOSED WATER USE=	**5.13**	**AF/YR**

WATER AVAILABILTY CALCULATIONS FOR PROPOSED USE

WELL NUMBER	Q - GPM	AF/YR
1	4	6.452
2	10	16.131
3		0.000
4		0.000
5		0.000
TOTAL=	14	22.584
SPRING NUMBER	Q - GPM	AF/YR
1		0.000
2		0.000
3		0.000
4		0.000
5		0.000
TOTAL=	0	0.000
TANK #	GAL	AF
1	10000	0.031
2	10000	0.031
3	10000	0.031
4	10000	0.031
5		0.000
TOTAL=	40000	0.123
RESERVOIR #	GAL	AF
1	0	
2	0	
3	0	
4	0	
5	0	
TOTAL=	0	0.000

GROUND WATER RECHARGE	AF/YR/ACRE	PARCEL AC	AF/YR
CALCULATED RECHARGE RATE	0.76	12.27	9.33

TOTAL WATER AVAILABLE =	**3038418.73**	**G/YR**
TOTAL WATER AVAILABLE =	**9.33**	**AF/YR**
TOTAL PROPOSED WATER USE=	**5.13**	**AF/YR**
REMAINING AVAILABLE WATER =	**4.20**	**AF/YR**

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CMPEngineering.com

Winery Wastewater Flow Calculations

for the

Larry Hyde & Son Winery

Located at:

1044 Los Carneros Ave

Napa, CA 94558

Date: 10/31/2016

Rev1: 8/31/2017

Rev2: 2/22/2018

Rev3: 1/28/2020

Project # 00084

Legend

Requires Input
Automatically Calculates
Important Value Automatically Calculates
Important Value Requires Input

Hit ctrl + alt + shift + F9 when finished to recalc all formulas

Combined Winery Waste Flow Summary

The existing system is designed to treat process waste from a 30,000 gallon per year winery & a peak domestic waste flow of 700 gallons per day.

Winery Process Waste Flow Calculations

Wine Production =	30000	gal/wine/yr
Crush Duration =	60.00	days (30 -60)
Peak Process Waste Flows During Crush =	750.00	gal/day ((1.5 x production)/crush days)
Average Process Flows (non crush) =	410.96	gal/day ((5 x production)/days in yr)
Additional Process Flow =	0.00	gal/day (usually 0)
Total Design Peak Process Waste Flows =	**750.00**	gal/day

Winery Domestic Waste Flows

% Water savings from low flow fittings =	20%	percent
Typical Crush Weekend		
Number of FT Employees =	5	#
Number of PT Employees =	4	#
Number of daily visitors =	125	#
Event people count serviced by this system =	0	#
FT employee daily domestic waste flow =	60.00	gal/day
PT employee daily domestic waste flow =	24.00	gal/day
Visitor daily domestic waste flow =	300.00	gal/day
Event daily domestic waste flow =	0.00	gal/day
Winery Dimestic Flow =	384.00	gal/day
Typical Non Crush Weekend Volumes		
Number of FT Employees =	5	#
Number of PT Employees =	4	#
Number of daily visitors =	125	#
Event people count serviced by this system =	0	#
FT employee daily domestic waste flow =	60.00	gal/day
PT employee daily domestic waste flow =	24.00	gal/day
Visitor daily domestic waste flow =	300.00	gal/day
Event daily domestic waste flow =	0.00	gal/day
Winery Dimestic Flow =	384.00	gal/day
Typical Weekday Volumes		
Number of FT Employees =	5	#
Number of PT Employees =	4	#
Number of daily visitors =	125	#
Event people count serviced by this system =	0	#
FT employee daily domestic waste flow =	60.00	gal/day
PT employee daily domestic waste flow =	24.00	gal/day
Visitor daily domestic waste flow =	300.00	gal/day
Event daily domestic waste flow =	0.00	gal/day
Winery Dimestic Flow =	384.00	gal/day

Total Domestic Waste Peak Flows =	**384.00**	**gal/day**

Combined Winery Waste Annual Volume Calculations

Winery Combined Process & Domestic Waste Flows

Typical Crush Weekend Volumes		
Number of FT Employees =	5	#
Number of PT Employees =	4	#
Number of daily visitors =	125	#
FT employee daily domestic waste flow =	60.00	gal/day
PT employee daily domestic waste flow =	24.00	gal/day
Visitor daily domestic waste flow =	300.00	gal/day
Number of Flow Days =	60.00	gal/day
Combined Process and Domestic Volume =	47698	gal/year

Typical Non Crush Weekend Volumes		
Number of FT Employees =	5	#
Number of PT Employees =	4	#
Number of daily visitors =	125	#
FT employee daily domestic waste flow =	60.00	gal/day
PT employee daily domestic waste flow =	24.00	gal/day
Visitor daily domestic waste flow =	300.00	gal/day
Number of Flow Days =	86.00	gal/day
Combined Process and Domestic Volume =	68366	gal/year

Typical Weekday Volumes		
Number of FT Employees =	5	#
Number of PT Employees =	4	#
Number of daily visitors =	125	#
FT employee daily domestic waste flow =	60.00	gal/day
PT employee daily domestic waste flow =	24.00	gal/day
Visitor daily domestic waste flow =	300.00	gal/day
Number of Flow Days =	219.00	gal/day
Combined Process and Domestic Volume =	174096	gal/year

Special Event Visitor Volumes	visitors	days/yr	flow/day	gallons
Large Events =	150	2	8	2400
Medium Events =	55	8	8	3520
Other =	0	0	8	0
Other 2 =	0	0	8	0
Total Annual Event Visitor Waste Volume =	5920	gal/year		

Total Annual Winery Domestic Waste =	146080	gal/year	0.45	
Total Annual Winery Process Waste =	150000	gal/year	0.46	
Total Winery Waste Annual Volume =	**296080**	**gal/yr**	**0.91**	**af**

Attachment “C”

EPA and California Allowable Drinking
Water Constituent Levels

MAXIMUM CONTAMINANT LEVELS AND REGULATORY DATES FOR DRINKING WATER U.S. EPA VS CALIFORNIA

NOVEMBER 2008

Contaminant	U.S. EPA		California	
	MCL (mg/L)	**Date**[a]	**MCL** (mg/L)	**Effective Date**
Inorganics				
Aluminum	0.05 to 0.2[b]	1/91	1 0.2[b]	2/25/89 9/8/94
Antimony	0.006	7/92	0.006	9/8/94
Arsenic	0.05 0.010	eff: 6/24/77 eff: 1/23/06	0.05 0.010	77 11/28/08
Asbestos	7 MFL[c]	1/91	7 MFL[c]	9/8/94
Barium	1 2	eff: 6/24/77 1/91	1	77
Beryllium	0.004	7/92	0.004	9/8/94
Cadmium	0.010 0.005	eff: 6/24/77 1/91	0.010 0.005	77 9/8/94
Chromium	0.05 0.1	eff: 6/24/77 1/91	0.05	77
Copper	1.3[d]	6/91	1[b] 1.3[d]	77 12/11/95
Cyanide	0.2	7/92	0.2 0.15	9/8/94 6/12/03
Fluoride	4 2[b]	4/86 4/86	2	4/98
Lead	0.05[e] 0.015[d]	eff: 6/24/77 6/91	0.05[e] 0.015[d]	77 12/11/95
Mercury	0.002	eff: 6/24/77	0.002	77
Nickel	Remanded		0.1	9/8/94
Nitrate	(as N) 10	eff: 6/24/77	(as N03) 45	77
Nitrite (as N)	1	1/91	1	9/8/94
Total Nitrate/Nitrite (as N)	10	1/91	10	9/8/94
Perchlorate	-	-	0.006	10/18/07
Selenium	0.01 0.05	eff: 6/24/77 1/91	0.01 0.05	77 9/8/94
Thallium	0.002	7/92	0.002	9/8/94
Radionuclides				
Uranium	30 ug/L	12/7/00	20 pCi/L 20 pCi/L	1/1/89 6/11/06
Combined Radium - 226+228	5 pCi/L	eff: 6/24/77	5 pCi/L 5 pCi/L	77 6/11/06
Gross Alpha particle activity (excluding radon & uranium)	15 pCi/L	eff: 6/24/77	15 pCi/L 15 pCi/L	77 6/11/06
Gross Beta particle activity	4 millirem/yr	eff: 6/24/77	50 pCi/L[f] 4 millirem/yr	77 6/11/06
Strontium-90	8 pCi/L	eff: 6/24/77 now covered by Gross Beta	8 pCi/L[f] 8 pCi/L[f]	77 6/11/06
Tritium	20,000 pCi/L	eff: 6/24/77 now covered by Gross Beta	20,000 pCi/L[f] 20,000 pCi/L[f]	77 6/11/06

Contaminant	U.S. EPA		California	
	MCL (mg/L)	**Date**[a]	**MCL** (mg/L)	**Effective Date**
VOCS				
Benzene	0.005	6/87	0.001	2/25/89
Carbon Tetrachloride	0.005	6/87	0.0005	4/4/89
1,2-Dichlorobenzene	0.6	1/91	0.6	9/8/94
1,4-Dichlorobenzene	0.075	6/87	0.005	4/4/89
1,1-Dichloroethane	-	-	0.005	6/24/90
1,2-Dichloroethane	0.005	6/87	0.0005	4/4/89
1,1-Dichloroethylene	0.007	6/87	0.006	2/25/89
cis-1,2-Dichloroethylene	0.07	1/91	0.006	9/8/94
trans-1,2-Dichloroethylene	0.1	1/91	0.01	9/8/94
Dichloromethane	0.005	7/92	0.005	9/8/94
1,3-Dichloropropene	-	-	0.0005	2/25/89
1,2-Dichloropropane	0.005	1/91	0.005	6/24/90
Ethylbenzene	0.7	1/91	0.68 0.7 0.3	2/25/89 9/8/94 6/12/03
Methyl-tert-butyl ether (MTBE)	-	-	0.005[b] 0.013	1/7/99 5/17/00
Monochlorobenzene	0.1	1/91	0.03 0.07	2/25/89 9/8/94
Styrene	0.1	1/91	0.1	9/8/94
1,1,2,2-Tetrachloroethane	-	-	0.001	2/25/89
Tetrachloroethylene	0.005	1/91	0.005	5/89
Toluene	1	1/91	0.15	9/8/94
1,2,4 Trichlorobenzene	0.07	7/92	0.07 0.005	9/8/94 6/12/03
1,1,1-Trichloroethane	0.200	6/87	0.200	2/25/89
1,1,2-Trichloroethane	0.005	7/92	0.032 0.005	4/4/89 9/8/94
Trichloroethylene	0.005	6/87	0.005	2/25/89
Trichlorofluoromethane	-	-	0.15	6/24/90
1,1,2-Trichloro-1,2,2-Trifluoroethane	-	-	1.2	6/24/90
Vinyl chloride	0.002	6/87	0.0005	4/4/89
Xylenes	10	1/91	1.750	2/25/89

Contaminant	U.S. EPA		California	
	MCL (mg/L)	**Date**[a]	**MCL** (mg/L)	**Effective Date**
SOCS				
Alachlor	0.002	1/91	0.002	9/8/94
Atrazine	0.003	1/91	0.003 0.001	4/5/89 6/12/03
Bentazon	-	-	0.018	4/4/89
Benzo(a) Pyrene	0.0002	7/92	0.0002	9/8/94
Carbofuran	0.04	1/91	0.018	6/24/90
Chlordane	0.002	1/91	0.0001	6/24/90
Dalapon	0.2	7/92	0.2	9/8/94
Dibromochloropropane	0.0002	1/91	0.0001 0.0002	7/26/89 5/3/91
Di(2-ethylhexyl)adipate	0.4	7/92	0.4	9/8/94
Di(2-ethylhexyl)phthalate	0.006	7/92	0.004	6/24/90
2,4-D	0.1 0.07	eff: 6/24/77 1/91	0.1 0.07	77 9/8/94
Dinoseb	0.007	7/92	0.007	9/8/94
Diquat	0.02	7/92	0.02	9/8/94
Endothall	0.1	7/92	0.1	9/8/94
Endrin	0.0002 0.002	eff: 6/24/77 7/92	0.0002 0.002	77 9/8/94
Ethylene Dibromide	0.00005	1/91	0.00002 0.00005	2/25/89 9/8/94
Glyphosate	0.7	7/92	0.7	6/24/90
Heptachlor	0.0004	1/91	0.00001	6/24/90
Heptachlor Epoxide	0.0002	1/91	0.00001	6/24/90
Hexachlorobenzene	0.001	7/92	0.001	9/8/94
Hexachlorocyclopentadiene	0.05	7/92	0.05	9/8/94
Lindane	0.004 0.0002	eff: 6/24/77 1/91	0.004 0.0002	77 9/8/94
Methoxychlor	0.1 0.04	eff: 6/24/77 1/91	0.1 0.04 0.03	77 9/8/94 6/12/03
Molinate	-	-	0.02	4/4/89
Oxamyl	0.2	7/92	0.2 0.05	9/8/94 6/12/03
Pentachlorophenol	0.001	1/91	0.001	9/8/94
Picloram	0.5	7/92	0.5	9/8/94
Polychlorinated Biphenyls	0.0005	1/91	0.0005	9/8/94
Simazine	0.004	7/92	0.010 0.004	4/4/89 9/8/94
Thiobencarb	-	-	0.07 0.001[b]	4/4/89 4/4/89
Toxaphene	0.005 0.003	eff: 6/24/77 1/91	0.005 0.003	77 9/8/94
2,3,7,8-TCDD (Dioxin)	$3x10^{-8}$	7/92	$3x10^{-8}$	9/8/94
2,4,5-TP (Silvex)	0.01 0.05	eff: 6/24/77 1/91	0.01 0.05	77 9/8/94

Contaminant	U.S. EPA		California	
	MCL (mg/L)	**Date**[a]	**MCL** (mg/L)	**Effective Date**
Disinfection Byproducts				
Total Trihalomethanes	0.100 0.080	11/29/79 eff: 11/29/83 eff: 1/1/02 [g]	0.100 0.080	3/14/83 6/17/06
Haloacetic acids (five)	0.060	eff: 1/1/02 [g]	0.060	6/17/06
Bromate	0.010	eff: 1/1/02 [g]	0.010	6/17/06
Chlorite	1.0	eff: 1/1/02 [g]	1.0	6/17/06
Treatment Technique				
Acrylamide	TT[h]	1/91	TT[h]	9/8/94
Epichlorohydrin	TT[h]	1/91	TT[h]	9/8/94

a. "eff." indicates the date the MCL took effect; any other date provided indicates when USEPA established (i.e., published) the MCL.
b. Secondary MCL.
c. MFL = million fibers per liter, with fiber length > 10 microns.
d. Regulatory Action Level; if system exceeds, it must take certain actions such as additional monitoring, corrosion control studies and treatment, and for lead, a public education program; replaces MCL.
e. The MCL for lead was rescinded with the adoption of the regulatory action level described in footnote d.
f. Gross beta MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ; Sr-90 MCL = 4 millirem/year to bone marrow; tritium MCL = 4 millirem/year to total body
g. Effective for surface water systems serving more than 10,000 people; effective for all others 1/1/04.
h. TT = treatment technique, because an MCL is not feasible.

Attachment “D”

Water Quality Testing Results
(PENDING)

California Transient Non-Community Recommended Water Quality Testing
Water System Name (System #)

Source Number: **Date of Report:**
Source Code: **Groundwater - NCWS**

***Note: Source water samples must be collected from the raw water source prior to any treatment.*

California Code of Regulations Section 64431- Primary Standards maximum contaminant levels, Nitrate/Nitrite

Chemical	Last Results	Units	MCL	Date of Last	Frequency	Notes
Nitrate (as NO3)		mg/L (ppm)	45		one time sample required	
Nitrite (as N)		mg/L (ppm)	1		one time sample required	
Nitrate + Nitrite (sum as nitrogen)		mg/L (ppm)	10		one time sample required	>30 ppm may lead to vine damage or yield loss

California Code of Regulations Section 64431- Maximum contaminant levels, inorganic chemicals

Chemical	Last Results	Units	MCL	Date of Last	Frequency	Notes
Aluminum		ug/L (ppb)	1000		one time sample required	
Antimony		ug/L (ppb)	6		one time sample required	
Arsenic		ug/L (ppb)	10		one time sample required	
Barium		ug/L (ppb)	1000		one time sample required	
Beryllium		ug/L (ppb)	4		one time sample required	
Cadmium		ug/L (ppb)	5		one time sample required	
Chromium		ug/L (ppb)	50		one time sample required	
Fluoride		ug/L (ppb)	2000		one time sample required	
Mercury		ug/L (ppb)	2		one time sample required	
Nickel		ug/L (ppb)	100		one time sample required	
Selenium		ug/L (ppb)	50		one time sample required	
Thallium		ug/L (ppb)	2		one time sample required	
Asbestos		MFL	7		one time sample required	MFL = million of fibers exceeding 10 um per liter
Bateria/Coliform			Present		one time sample required	
Cyanide		ug/L (ppb)	150		one time sample required	

California Code of Regulations Section 64449 and National Secondary Standards - Maximum contaminant levels, consumer accpetance levels

Chemical	Last Results	Units	MCL	Date of Last	Frequency	Notes
Aluminum		ug/L (ppb)	200		one time sample required	
Chloride		mg/L (ppm)	250		one time sample required	>500 ppm may lead to vine damage or yield loss
Color			15 color units		one time sample required	
Copper		ug/L (ppb)	1000		one time sample required	
Corrosivity			non-corrosive		one time sample required	
Foaming Agents (MBAS)		ug/L (ppb)	500		one time sample required	
Iron		ug/L (ppb)	300		one time sample required	
Manganese		ug/L (ppb)	50		one time sample required	
Methyl-tert-butyl ether (MTBE)		ug/L (ppb)	5		one time sample required	
Odor - threshold		3 threshold odor number			one time sample required	
pH			6.5-8.5		one time sample required	5.5-8.5 recommended for vine stability
Silver		ug/L (ppb)	100		one time sample required	
Sulfate		mg/L (ppm)	250		one time sample required	
Total Dissolved Solids (TDS)		mg/L (ppm)	500		one time sample required	
Turbidity		NTU	1		one time sample required	
Zinc		mg/L (ppm)	5		one time sample required	

Health Hazards - Additional National Primary Drinking Water Standards

Chemical	Last Results	Units	MCL	Date of Last	Frequency	Notes
Chlorine (as Cl_2)		mg/L (ppm)	4		one time sample required	
Chlorite		ug/L (ppb)	1000		one time sample required	
Lead		ug/L (ppb)	15		one time sample required	

Additional constituents of interest - Vineyard & Winery Use

Chemical	Last Results	Units	MCL	Date of Last	Frequency	Notes
Bicarbonate		mg/L (ppm)	7.5		one time sample required	>7.5 ppm may lead to vine damage or yield loss
Boron		mg/L (ppm)	3		one time sample required	>3 ppm may lead to vine damage or yield loss
Calcium		mg/L (ppm)			one time sample required	
Carbonate		mg/L (ppm)			one time sample required	
Hydroxide		mg/L (ppm)			one time sample required	
Magnesium		mg/L (ppm)			one time sample required	
Salinity		mmhos/cm	2.5		one time sample required	>2.5 mmhos/cm may lead to vine damage or yield loss
Silica		mg/L (ppm)	100		one time sample required	>50 ppm may lead to premature glass etching
Sodium		mg/L (ppm)	500		one time sample required	>500 ppm may lead to vine damage or yield loss
Total Alkalinity (as CaCO3)		mg/L (ppm)			one time sample required	
Total Hardness		mg/L (ppm)			one time sample required	

Attachment “E”

Existing and Historical Well Logs and Other
Miscellaneous Data

ATE
r's Copy

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 0913065

Page ___ of ___
Owner's Well No. ___
Date Work Began 11/15/05 , Ended 11/21/05
Local Permit Agency Napa
Permit No. 05-0095 Permit Date 11/14/05

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

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD mud FLUID betonite

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	2	topsoil
2	30	brown & gray clay
30	50	hard gray shale
50	70	hard & soft shale
70	90	hard gray shale
90	130	hard gray shale, gray rock
130	150	hard shale
150	190	hard gray shale
190	210	hard gray shale, gray sand

TOTAL DEPTH OF BORING 210 (Feet)
TOTAL DEPTH OF COMPLETED WELL 210 (Feet)

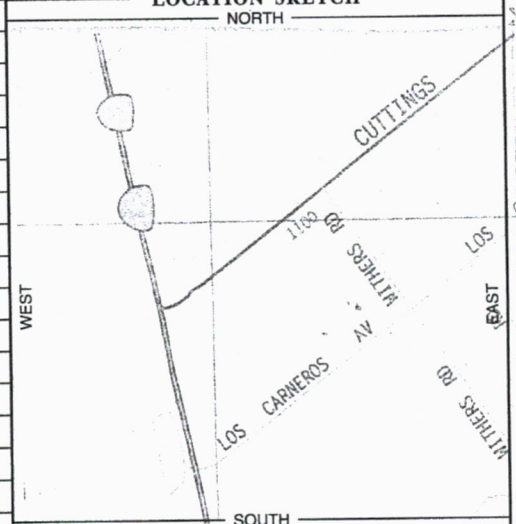
WELL OWNER

Name CP Family Partnership, LP
Mailing Address 1024 Bayview Ave.
Napa, CA 94559
CITY STATE ZIP

WELL LOCATION

Address 1044 Los Carneros
City Napa
County Napa
APN Book 47 Page 220 Parcel 007
Township ___ Range ___ Section ___
Lat ___ N DEG. MIN. SEC. Long ___ W 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 (✓)

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

USES (✓)

WATER SUPPLY
X Domestic ___ Public
___ Irrigation ___ Industri
___ 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 ___ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 55 (Ft.) & DATE MEASURED 11/21/05
ESTIMATED YIELD * 10. (GPM) & TEST TYPE air
TEST LENGTH 8 (Hrs.) TOTAL DRAWDOWN 190 (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	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	52	12 3/4	X				B430	6"	200	
52	70	9 7/8	X	X			B430	6"	200	
70	150	9 7/8		X			B430	6"	300	factory
150	190	9 7/8	X				B430	6"	200	
190	210	9 7/8		X			B430	6"	200	factory

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	52	X			
52	210				#3 sand 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 Nelson & Williams, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 873 El Camino Ave., Napa, CA 94558 CITY STATE ZIP

Signed ___ 1/26/06 306332
C-57 LICENSED WATER WELL CONTRACTOR DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 05-03

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

CUSTOMER #: H175
NAME: CP Family Partnership
STREET: 1044 Los Carneros
CITY: Napa
WELL LOCATION:
New well #2

HOME PHONE:
WORK PHONE:
OTHER PHONE:

COMMENTS:

WELL #: A P #: 47-220-007
CLASS: 1 DEPTH: 210'
CASING SIZE AND TYPE: 6"pvc
CASING DEPTH: 210'
PERF: 70'-210' SEAL: 52'
STATIC LEVEL: 55'
DRAWDOWN: 190' AFTER: 8 hrs
YIELD: 10.gpm TESTED: air
TEST PIPE SETTING: 1"-200'-4"-210'
EQUIPMENT: TH60
WELL DRILLED DATE: 11/21/05
WELL CLEANED DATE:
CLEANED WELL FROM:
BOOSTER PUMP:
STORAGE TANK:

PUMP MAKE: grundfos
PUMP TYPE: submersible
PUMP MODEL 10S10-15
H P: 1 VOLT 230 PH: 1
PUMP SERIAL #: B09010015
WARRANTY: p10516US
PUMP INSTALL DATE: 06/07/06
PUMP SETTING: 190'
CHECK VALVE(S):
PUMP SAVER: 233&231
PIPE SIZE: 1 1/4" TYPE / SCH: pvc80
WIRE: #8-3wg
PRESSURE TANK:
TANK INSTALL DATE:
OPEN DISCHARGE DATE:
LAB WORK boron

BACKFLOW MAKE PSI: METER #:
BF SERIAL #: BF MODEL: BF SIZE:

LOCATION:

PURPOSE:
WELL LOG:
0 - 2 topsoil
2 - 30 brown & gray clay
30 - 50 hard gray shale
50 - 70 hard & soft shale
70 - 90 hard gray shale
90 - 130 hard gray shale, gray rock
130 - 150 hard shale
150 - 190 hard gray shale
190 - 210 hard gray shale, gray sand

GENERAL INFORMATION:
6-1,2,5,6,7,-06 Install pump and open trench. Build electrical panel
Install water and electric supply line. Pull wire hook
start and flush system and close trench
6-15-06 Labor to finish panel and do flow test on two wells
09-14-06 install flow meter ck next day, average 10gpm
06-19-09 Install dole valve @ well,ck air in pressure tank,recalibrate
motor saver on well, sys work o.k.

4 gpm
Dole Valve

DUPLICATE
Driller's Copy

Page ____ **of** ____
Owner's Well No. _____

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 0913066

Date Work Began 11/2/05, Ended 11/14/05
Local Permit Agency Napa
Permit No. E05-0962 Permit Date 11/10/05

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

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD Mud FLUID bentonite

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	30	brown clay
30	50	brown & gray clay
50	70	gray clay & gravel
70	90	gravel
90	150	gray clay rock stringers
150	170	gray rock
170	190	shale, soft, hard
190	230	shale
230	290	shale, gray rock
290	330	shale
330	370	sandy gray shale
370	390	shale
390	410	stringer white rock, shale
410	450	shale

TOTAL DEPTH OF BORING 450 (Feet)
TOTAL DEPTH OF COMPLETED WELL 450 (Feet)

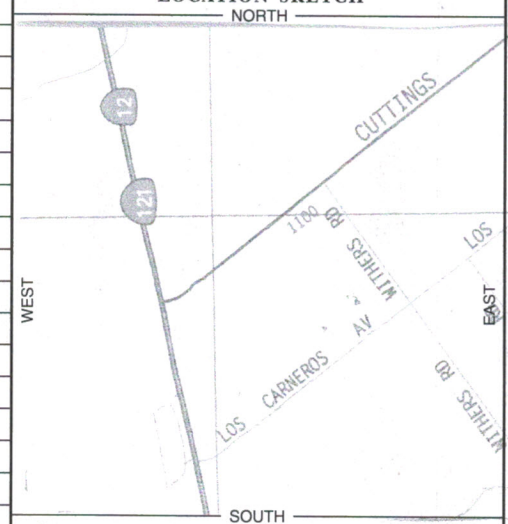
WELL OWNER

Name CPFamily Partnership, LP
Mailing Address 1024 Bayview Ave.
CITY Napa, CA 94558 STATE ZIP

WELL LOCATION

Address 1044 Los Carneros
City Napa
County Napa
APN Book 47 Page 220 Parcel 007
Township ____ Range ____ Section ____
Lat ____ DEG. ____ MIN. ____ SEC. N
Long ____ DEG. ____ MIN. ____ SEC. W

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 (✓)

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

USES (✓)

WATER SUPPLY
X 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 ____ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 60 (Ft.) & DATE MEASURED 11/14/05
ESTIMATED YIELD * 4. (GPM) & TEST TYPE air
TEST LENGTH 8 (Hrs.) TOTAL DRAWDOWN 400 (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	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	52	12 3/4	X				F480	6"	200	
52	70	9 7/8	X				F480	6"	200	
70	170	9 7/8		X			F480	6"	200	factory
170	230	9 7/8	X				F480	6"	200	
230	290	9 7/8		X			F480	6"	200	factory
290	390	9 7/8	X				F480	6"	200	
390	410	9 7/8		X			F480	6"	200	factory
410	430	9 7/8	X				F480	6"	200	
430	[illegible]	[illegible]	X				F480	6"	200	factory

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	52	X			
52	450				#6 sand 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 McLean & Williams, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

878 El Centro Ave., Napa, CA 94558
ADDRESS CITY STATE ZIP

Signed [signature] 1/26/06 396352
C-57 LICENSED WATER WELL CONTRACTOR DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 05-03

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

CUSTOMER #: H175
NAME: CP Family Partnership
STREET: 1044 Los Carneros
CITY: Napa
WELL LOCATION:
New well #1

HOME PHONE:
WORK PHONE:
OTHER PHONE:

COMMENTS:

WELL #: A P #: 47-220-007
CLASS: 1 DEPTH: 450'
CASING SIZE AND TYPE: 6"pvc
CASING DEPTH: 450'-438'
PERF: 70'-450' SEAL: 52'
STATIC LEVEL: 60'-10
DRAWDOWN: 400' AFTER: 8hrs
YIELD: 4.gpm TESTED: air
TEST PIPE SETTING: 1"-420'-4"-445'
EQUIPMENT: TH60
WELL DRILLED DATE: 11/14/05
WELL CLEANED DATE:
CLEANED WELL FROM:
BOOSTER PUMP:
STORAGE TANK:

PUMP MAKE: grundfos
PUMP TYPE: sub
PUMP MODEL 10S20-27
H P: 2 VOLT 230 PH: 1
PUMP SERIAL #: B09010027
WARRANTY:
PUMP INSTALL DATE: 6-5-06
PUMP SETTING: 420
CHECK VALVE(S):
PUMP SAVER:
PIPE SIZE: 1 1/4 TYPE / SCH: 80
WIRE: #8 wg
PRESSURE TANK:
TANK INSTALL DATE:
OPEN DISCHARGE DATE:
LAB WORK 2-boron

BACKFLOW MAKE PSI: METER #:
BF SERIAL #: BF MODEL: BF SIZE:

LOCATION:

PURPOSE:
WELL LOG:
0 - 30 brown clay
30 - 50 brown & gray clay
50 - 70 gray clay & gravel
70 - 90 gravel
90 - 150 gray clay rock stringers
150 - 170 gray rock
170 - 190 shale, soft, hard
190 - 230 shale
230 - 290 shale, gray rock

GENERAL INFORMATION:
7-15-06 Install pump, wter and electric lines, start pump, flush
and run 6 Hrs to check flow (june 1,2,5,6,7 and 15)

09-14-06 install flow meter, ck next day

11-01-06 readjust cock valve,test well signals

06-19-09 Install dole valve @ well,ck air in pressure tank,recalibrate
motor saver on well, sys work o.k.

20 gpm
Dole Valve

290 - 330 shale

330 - 370 sandy gray shale

370 - 390 shale

390 - 410 stringer white rock, shale

410 - 450 shale