



WELL TESTING SERVICE

Ray's Well Testing Service Inc.
 4853 Vine Hill Rd, Sebastopol Ca 95472
 Phone 707 823 3191 Fax 707 317 0057 Lic# 903708

CUSTOMER INFORMATION

REPORT #: 7797-2 By: Matt Owens	DATE OF TEST: 12/28/15
CUSTOMER NAME: Black Trust	CONTACT: Kyle Orth - 559 437 7648
AGENT NAME: Eric Frost - Century 21 Bundesen	CONTACT: 707 484 1292
PROPERTY ADDRESS: 3201 Napa Rd, Sonoma CA 95476	SENT TO: eric.frost@bundesen.com

WELL DATA

LOCATION OF WELL:	Pond Well - Between creek and tennis courts
TYPE OF WELL:	Drilled
DEPTH OF COMPLETED WELL:	765 Feet - as indicated by provided drill log
DIAMETER OF WELL CASING:	10 -1/2" O.D. Steel at surface, drill log not legible
SANITARY WELL SEAL (PLATE SEAL AT OPENING OF WELL CASING):	Yes
ANNULAR SEAL (IN-GROUND SEAL OF BOREHOLE):	35' cement seal
PUMP HP AND TYPE:	10 HP 460V 3PH Submersible, 4" Tee, #10-3 cable
DEPTH OF PUMP SUCTION:	Unknown, could not probe drop pipe

WATER PRODUCTION RESULTS

WATER LEVEL AT START (STATIC LEVEL):	111.7 Feet	FLOW RATE AT START:	53 GPM
FINAL PUMPING LEVEL:	182 Feet	FINAL FLOW RATE:	45 GPM
WATER LEVEL DRAWDOWN:	70.3 Feet	TOTAL LENGTH OF TEST:	4 Hours

CONSTANT PUMPING LEVEL INFORMATION

STABILIZED PUMPING LEVEL:	182 Feet	STABILIZED FLOW RATE (YIELD):	45 GPM
DURATION OF CONSTANT PUMPING LEVEL:	See pumping log	TOTAL YIELD:	See pumping log

WATER SYSTEM INSPECTION

WELL PUMP	Functional	TECHNICAL INFO: Control panel dated 1985, 12.4 amps
ELECTRICAL	Functional	TECHNICAL INFO: 70 amp fuse disconnect in control panel
PRESSURE TANK	See Comments	TECHNICAL INFO: See Comments
STORAGE TANK	None	TECHNICAL INFO: Pond is used as reservoir
BOOSTER PUMP	Deficient	TECHNICAL INFO: 20 HP 460V 3PH Cornell 2 1/2 W20-2 booster pump, 135 amps

WATER QUALITY TESTING

THE FOLLOWING SAMPLES ARE BEING ANALYZED. PLEASE REFER TO FOLLOW-UP REPORT FOR RESULTS.		
Residential + Irrigation Package	DATED: 12/28/15	TURNAROUND: Standard - Due 1/13/16
	DATED:	TURNAROUND:
	DATED:	TURNAROUND:
	DATED:	TURNAROUND:

SEE NEXT PAGE FOR FURTHER INFORMATION...

DATE: 12/28/15

ADDRESS: 3201 Napa Rd, Sonoma CA 95476

COMMENTS:

1. The recharge rate at the end of the test was 45 gallons per minute. This test may not represent the long term or seasonal yield.
2. This well is only used to fill the pond located on the property. There is a pipe protruding from the creek bank adjacent to the well and this is the only outlet pipe from the well. The pump is operated manually when needed.
3. There is a 20 HP 460V 3 Phase booster pump that draws water from the pond and pressurizes 2 - WX-350 pressure tanks dated 1989 with 0 and 42 psi air charges. The operating pressure range could not be determined as the pump was not functional. This system (when functional) pressurizes water for sprinklers at the various arenas on the property. The pump drew 135 amps, indicating a locked rotor.
4. There is a 4" Morrill 1000 series model 1010 horizontal filter installed on the main line leaving the booster pump.

PUMPING LOG:

TIME	WATER LEVEL	COLOR	SEDIMENT	ODOR	GPM
10:05 AM	111.7'	CLEAR	NO	NO	53
10:20 AM	174.6'	CLEAR	NO	NO	51.5
10:35 AM	177.1'	CLEAR	NO	NO	51.5
10:50 AM	180.1'	CLEAR	NO	NO	51
11:05 AM	182'	CLEAR	NO	NO	45
11:35 AM	182'	CLEAR	NO	NO	45
12:05 PM	182'	CLEAR	NO	NO	45
12:35 PM	182'	CLEAR	NO	NO	45
1:05 PM	182'	CLEAR	NO	NO	45
1:35 PM	182'	CLEAR	NO	NO	45
2:05 PM	182'	CLEAR	NO	NO	45

Thank you for allowing us to do your well inspection!

APPROVED BY: NICK BRASESCO



Water levels and well depth are measured as feet below top of well casing unless otherwise noted.

All wells and springs are subject to seasonal and yearly changes in regards to water yield, production and quality. Wells may be influenced by creeks or other water sources and are likely to yield less water during dry months of the year; typically August, September, & October. We make no predictions of future water production or water quality.

This report is for informational use only and is in lieu of and supercedes any other representation or statements of the agent or employee of the company, and all other such representations or statements shall be relied upon at the customer's own risk. The data and conclusions provided herein are based upon the best information available to the company using standard and accepted practices of the water well drilling industry. However, conditions in water wells are subject to dramatic changes in short periods of time. Therefore, the data and conclusions are valid only as of the date of the test and should not be relied upon to predict either the future quantity or quality the well will produce. The company makes no warranties either expressed or implied as to future water production and expressly disclaims and excludes any liability for consequential or incidental damages arising out of the breach of any expressed or implied warranty of future water production or out of any further use of the report by the customer.

RECOMMENDATIONS:

1. There is a broken pipe joint underground near the well. Recommend repair.
2. The pond booster pump is drawing locked rotor amps and is not functional at this time so the system could not be operated for further testing. Recommend repair. (254JP frame)
3. The pond pump pressure switch is worn and charred. Recommend replacement.
4. One of the pressure tanks is not holding an air charge. Recommend replacement.
5. A pressure test on the well pump could not be performed due to the underground leak. Recommend referring to installer records for the pump model to cross reference output of the pump to the manufacturers performance curve.

Well Head



Well Pump Control Panel



Pond / Pond Fill Pipe



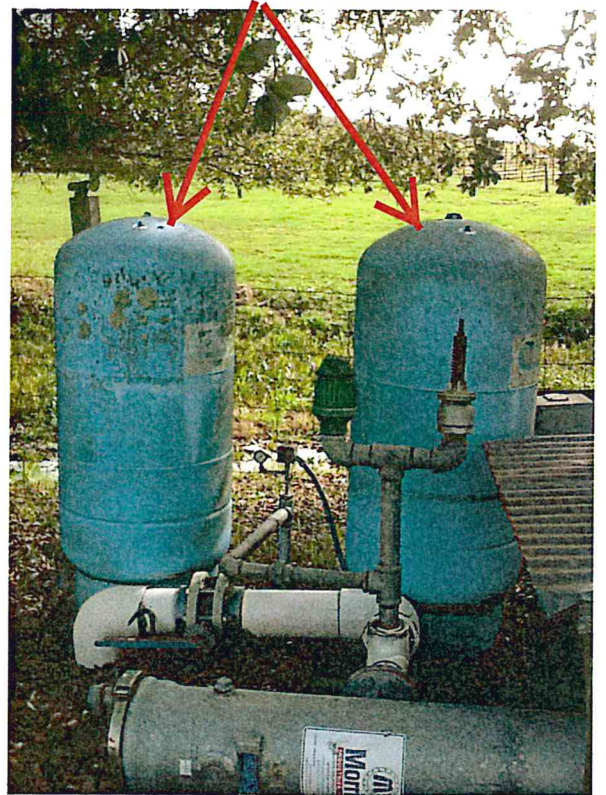
Pond Booster Pump



Pond Pump Disconnect



Pressure Tanks



Morrill Filter



Main Shut Off Valve





Analytical Sciences

Report Date: January 06, 2016

Laboratory Report

POND WELL

Nick Brasesco
Ray's Well Testing Service
4853 Vine Hill Rd
Sebastopol, CA 95472

Project Name: **3201 Napa Rd.**

Lab Project Number: **5122902**

This 5 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.

Laboratory Director



Total Coliform & E. Coli

Lab#	Sample ID	Compound Name	Result (MPN/100 mL)	RDL (MPN/100 mL)
5122902-01	Pond Well - Raw	Total Coliform	6	1
		E. Coli	<1 QT	1

Date Sampled:	12/28/15	Date Analyzed:	12/30/15	QC Batch:	B015329
Date Received:	12/29/15	Method:	SM 9223 B-2004		

Metals by Graphite Furnace

Lab#	Sample ID	Compound Name	Result (µg/L)	RDL (µg/L)
5122902-01	Pond Well - Raw	Arsenic (As)	14	2.0

Date Sampled:	12/28/15	Date Analyzed:	01/04/16	QC Batch:	B015322
Date Received:	12/29/15	Method:	EPA 200.9		

Metals (ug/L)

Lab#	Sample ID	Compound Name	Result (µg/L)	RDL (µg/L)
5122902-01	Pond Well - Raw	Zinc (Zn)	ND	50

Date Sampled:	12/28/15	Date Analyzed:	01/05/16	QC Batch:	B015344
Date Received:	12/29/15	Method:	EPA 200.7		

Metals (mg/L)

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5122902-01	Pond Well - Raw	Boron (B)	1.2	0.050
		Sodium (Na)	110	2.0

Date Sampled:	12/28/15	Date Analyzed:	01/05/16	QC Batch:	B015344
Date Received:	12/29/15	Method:	EPA 200.7		



Hardness

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5122902-01	Pond Well - Raw	Calcium (Ca)	4.0	0.25
		Magnesium (Mg)	1.3	0.10
		Hardness	16	1.0

Date Sampled:	12/28/15	Date Analyzed:	01/05/16	QC Batch:	B015344
Date Received:	12/29/15	Method:	SM 2340 B-2011		

Alkalinity

Lab#	Sample ID	Compound Name	Result (mg CaCO3/L)	RDL (mg CaCO3/L)
5122902-01	Pond Well - Raw	Total Alkalinity	180	5.0
		Bicarbonate Alkalinity	180	5.0
		Carbonate Alkalinity	ND	5.0
		Hydroxide Alkalinity	ND	5.0

Date Sampled:	12/28/15	Date Analyzed:	12/29/15	QC Batch:	B015316
Date Received:	12/29/15	Method:	SM 2320 B-2011		

Anions

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5122902-01	Pond Well - Raw	Chloride	45	1.0
		Sulfate as SO4	23	2.5

Date Sampled:	12/28/15	Date Analyzed:	12/31/15	QC Batch:	B015334
Date Received:	12/29/15	Method:	EPA 300.0		

Total Dissolved Solids

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5122902-01	Pond Well - Raw	Total Dissolved Solids	370	10

Date Sampled:	12/28/15	Date Analyzed:	01/04/16	QC Batch:	B015338
Date Received:	12/29/15	Method:	SM 2540 C-2011		



Sodium Absorption Ratio

Lab#	Sample ID	Compound Name	Result (SAR)	RDL (SAR)
5122902-01	Pond Well - Raw	Sodium Absorption Ratio (SAR)	12.6	0.00

Date Sampled:	12/28/15	Date Analyzed:	01/05/16	QC Batch: B015344
Date Received:	12/29/15	Method:	SAR by Calculation	



Notes and Definitions

QT	The bacterial test utilized is a quantitative test. A result of less than 1 (<1) is indicating bacteria are "absent" in 100 milliliters of sample water.
RDL	Reporting Detection Limit
ND	Analyte NOT DETECTED at or above the reporting detection limit (RDL)
RPD	Relative Percent Difference
NR	Not Reported

Please Note: The drinking water Maximum Contamination Limits (MCL) set by the California Department of Health Services are as follows:

- Arsenic (10 ug/L)
- Iron (300 ug/L)
- Manganese (50 ug/L)
- Nitrate (45 mg/L)
- Lead (15 ug/L)
- Total Coliform (<1 MPN/100 mL)



Phone: (707) 823-3191 Fax: (707) 317-0057 Email: rayswelltesting@gmail.com
 Address: 4853 Vine Hill Rd, Sebastopol Ca 95472 CA Lic. #: 903708

Report of Water Analysis

DATE: 12/21/15

CUSTOMER NAME: Black Trust

PROPERTY ADDRESS: 3201 Napa Rd Sonoma CA 95476

PARAMETER	RESULT		RESIDENTIAL STANDARDS
	Raw - Well	-	
PH	7.72		< 7 Increasingly acidic - may be corrosive 6.8 to 8.5 - Recommended Range >7 Increasingly alkaline - scaling may occur
TOTAL IRON	ND		0.3 mg/l - MCL
TOTAL MANGANESE	0.05 mg/l		0.05 mg/l - MCL
CONDUCTIVITY	554 us/cm		1600 us/cm- MCL
NITRATES	3.8 mg/l		45 mg/l (as N03)- MCL
SILICA	59 mg/l		*There is no drinking water MCL
VISUAL APPEARANCE	Clear		

*Silica is increasingly reported as a nuisance at levels above 50 mg/l. 30 mg/l to 70 mg/l is common.

Abbreviations: MCL = Maximum Contaminant Level
 mg/l = Milligrams Per Liter
 us/cm = Microsiemens per centimeter
 < = Less Than
 > = Greater Than
 NT = Not Tested
 ND = Not Detected

IMPORTANT INFORMATION ON THE LIMITATIONS OF THIS REPORT:

The purpose of this report is to provide information regarding the general mineralogical character of a water supply. Unless specifically noted, this report does not include analysis for bacteria or any other health related contaminants. This analysis alone is therefore not suitable for determining the safety of a drinking water supply. This report is intended for the sole and exclusive use of our client named above. Our liability for error or omissions is expressly limited to the amount paid for the analysis.