

December 4, 2022

Email Address

This could be your report

Subject: 4 Hour Exploratory Ground Water Survey of Property Located at

Anywhere in California

As per our agreement, Water Prospector is pleased to submit this report detailing our Exploratory Ground Water Survey of the Subject Property.

The field work was conducted on November 30, 2022, and consisted of 4 hours of exploratory ground water survey work. We scanned all accessible parts of the property. Very low frequency waves (VLF) were used to scan or survey the available areas of the property. Four different VLF frequencies were used during the survey.

As presented herein, a total of three (3) targets were marked as possible drilling locations.

Disclaimer: It is possible that electrical interference was experienced during the survey and could have had an effect on the target density readings.

The current drought in California may affect the signal strength of the ground water targets that we are locating. Our data is primarily based on Non Drought conditions. This drought is more severe than what we have encountered in the past. We cannot be sure what the overall effect will be on ground water sources.

VLF TECHNOLOGY

Electromagnetic surveys, using state of the art instrumentation and methodology, are ideal in assisting in identifying underlying fractures and the most likely locations for producing available ground water. In order to image the subsurface, a series of sections or profiles were collected across the property using the VLF instrument. This form of hydrogeologic exploration method makes use of electromagnetic fields generated from very low frequency (VLF) military transmitters located throughout the world. This method is very well suited for water prospecting in locating fractured zones in bedrock.

Each survey is subdivided into measured quadrants and several linear scans are conducted to collect subsurface data. The portable unit measures and records VLF waves at locations along a given traverse. The collected data are then downloaded onto our computer and analyzed. The analyzed data from each scan are presented graphically showing a cross section of the various geologic structures and differing lithologic units.

EQUIPMENT LIMITATIONS

In general, the longer the runs, the better the quality of the data. Some areas cannot be scanned. Data can be obliterated or badly skewed by the presence of overhead electric wires or buried metal conduits. Nearby metal fences and buildings also obscure data.

The VLF software utilizes metric measurements. Therefore, all field measurements are collected in meters and all generated profiles are shown in meters, both in terms of linear distance and in depth. The manufacturer specifies that the maximum depth of this instrument is >300 meters or >990 feet. However, the software we use has a depth limit of 100 meters or 330 feet. All information indicated in this report below about 350 feet is projected from available data.

One limitation of the software is the inability to differentiate between elevation changes. All profiles are assumed to be flat surfaces. Thus, quite naturally, drilling depths to ground water on hillsides may need to be deeper than if the same elevation were drilled in the valley area below.

<u>Caution</u>: The vertical depths of the fractures are only estimates. Depths are the minimum estimated depth for drilling, whereas the actual depth to encounter water may be deeper. Fractures do not always contain water and water levels in the fractures are not necessarily the same as the estimated depth of the fracture itself.

Warning: <u>Blue Clay</u> has been known to create false positive readings with our survey system. If you are in an area that is known to have Blue Clay, please let us know before drilling.

VLF DATA INTERPRETATION

From the scans conducted across the property, we selected possible targets for exploratory well drilling. Although these data are not absolute and are subject to interpretation, typically, the targets we interpret to be the best have density readings of 30% out of a possible 30%.



Figure 1 – Density Scale Used in Water Prospector Survey

Based upon our experience, the percentages listed on the density scale represent the approximate rate of success for each of the categories of targets.

Targets with a higher density percentage have the greatest chance of producing ground water. Likewise, the deepest targets usually have the best year–round flow. Shallow targets can be seasonal.

Once we have observed the distribution of the relative percentages across given profiles, we then select the locations we interpret to be the best to drill a well at each target based upon either the deepest point of the downward dipping fracture or on the most porous part of the fracture to ensure the best chance of encountering water. Ultimately, drilling is the only way to actually determine the presence or absence of ground water and, if present, the quantity and quality of ground water at any given target. Drilling depths are approximate only and may require deeper depths based upon the driller's input.

REVIEW OF PUBLISHED DATA

In addition to reviewing all electronic data collected during the survey, we also reviewed any topography and geology maps that are readily available for the Subject Property, as well as aerial and satellite images which may show lineament patterns as a result of regional faulting or fracturing. Water Prospector searched and reviewed the online well location and data files of the California Department of Water Resources to gather well and ground water data for this investigation. Water Prospector also conducted a visual evaluation of the local geology during the survey which included locating any nearby well and outcroppings that may be relevant to the survey.

From the available data, it appears that the depth to ground water in this area varies greatly depending upon the depths of the wells, the aquifers perforated, seasonal fluctuations, drawdowns associated with nearby pumping wells, ground surface elevation differences, and even effects of possible unmapped faults in the area. Based upon our review of the scans which are attached, we estimate that the depth to the fracture zone at the Subject Site ranges between about 65 and 100 meters deep (215 and 330 feet).

Depending upon the intended use of the water, we recommend that a water sample be collected and analyzed from each new well to determine the potability of the water.



Geologic Map and Summary

The generalized rock type is (grMz). The age of (grMz) is Mesozoic. The lithology is plutonic, which include granite, quartz monzonite, granodiorite, and quartz diorite. There is no evidence of faults within a 4-mile radius of this site.

Department of Water Resources Well Information

TEMECULA, CA

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Well Statistics by PLSS Section:	S08S04W26
PLSS Meridian Baseline	S
PLSS Township	08S
PLSS Range	04W
PLSS Section	26
PLSS MTRS	S08S04W26
Domestic Well Count	3
Average Domestic Well Depth	750
Minimum Domestic Well Depth	409
Maximum Domestic Well Depth	980
Production Well Count	4
Average Production Well Depth	1,182
Minimum Production Well Depth	800
Maximum Production Well Depth	1,510
Public Well Count	
Average Public Well Depth	
Minimum Public Well Depth	
Maximum Public Well Depth	
Production well record entry	1

Wells nearby are producing 5 to 35 gallons per minute.

SITE SURVEY

For this survey, we conducted 40 scans for a total of 8,600 meters or about 28,380 linear feet. Based upon these scans, we selected three (3) targets for future exploration and possible water well sites. The targets show potential fractures ranging from about 45 to 90 meters long for a total of about 215 meters (710 feet) for the 3 targets. We have concluded that there is about two (2) percent (710'/28,380') of the underlying bedrock that is sufficiently fractured and broken to allow water to accumulate and that will yield water to wells. The targets we located are within these fracture zones. In other words, there is about a 98 percent chance that, without using the scientific investigative tools that were used during this survey, a well drilled at the Subject Site would encounter hard rock that is either dry or that is not capable of yielding sufficient water to wells.

RESULTS AND TARGET SITE SELECTION

Each target was left with a ground marking and flagging, to identify its location for the driller. Additionally, GPS readings were taken at each target location for future reference using a Garmin GPS instrument with an accuracy of +/- 9 feet. **Figure 2** presents an aerial view of the property showing the selected Targets.



Figure 2 – Aerial Photo Showing Locations of Potential Drilling Targets All targets appear to be located at least 100 feet from any septic systems but should be verified by the Owner before drilling.

<u>Caution</u>: The vertical depths of the fractures are only estimates. Depths are the minimum estimated depth for drilling, whereas the actual depth to encounter water may be deeper. Fractures do not always contain water and water levels in the fractures are not necessarily the same as the estimated depth of the fracture itself.

DISCLAIMER AND LIMITATIONS

The field evaluation and analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by consultants performing similar investigations. No warranty, expressed or implied, is made regarding the conclusions, interpretations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed, or described in this report, may be encountered during further site investigations. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request.

Due to the limitations of the surveys performed for this study and the uncertainty of subsurface conditions and environments, no guarantee or warrantee as to the quality or quantity of ground water can be made or implied.

It must be realized that these data are not absolute and are subject to interpretation. Clearly, there are some risks involved with subsurface exploration. Even in areas where we find apparent fractures, it does not guarantee that they have water stored within them.

PROFESSIONAL CERTIFICATION

This report has been prepared by the individuals whose seals and signatures appear hereon. The data utilized in this report were interpreted or presented using professional formats. The report is based on professional opinions that have a basis in scientific fact. The findings, recommendations, specifications, and professional opinions contained in this report were prepared in accordance with generally accepted hydrogeologic principles and practice in this area of southern California. There is no warranty, either expressed or implied.

Everett Tabor

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Ferdinand Metz CEO Puwame Inc / Water Prospector 24303 Woolsey Canyon Road West Hills, CA 91304 (661) 714-0111 waterprospector@aol.com www.WaterProspector.com <u>Depths are the minimum estimated depth for drilling, whereas the actual depth to</u> encounter water may be deeper.

All of the scans or profiles conducted for Subject Property are attached.

The Targets are listed in order of preference. The targets are rated from strongest to weakest. The strongest target has the best characteristics based on the interpretation of our scanning data.

0122 @ 30 meters (strongest) Target X

The porous area of the target measures over 45 meters in width (149 feet) The estimated depth to the target is 100 meters (330 feet) The density level is 25% out of 30% Reference: scan 0122 @ 30 meters A ground marker has been placed at this site. GPS N 33 deg XX.XXX W 117 deg XX.XXX









Target Y0060 @ 150 metersThe porous area of the target measures over 90 meters in width (297 feet)The estimated depth to the target is 75 meters (248 feet) The density level is 20% out of 30% Reference: scan 0060 @ 150 meters A ground marker has been placed at this site. GPS N 33 deg XX.XXX W 117 deg XX.XXX





Target Y

Target Z 0100 @ 400 meters

The porous area of the target measures over 80 meters in width (264 feet) The estimated depth to the target is 65 meters (215 feet) The density level is 20% out of 30% Reference: scan 0100 @ 400 meters A ground marker has been placed at this site. GPS N 33 deg XX.XXX W 117 deg XX.XXX





Target Z

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ADDITIONAL SCANS THAT DID NOT PRODUCE ANY USABLE RESULTS































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