REPORT OF FINDINGS -
GROUNDWATER AVAILABILITY ANALYSIS

Site Information:
12194 White Rock Canyon Rd
Upper Lake, CA
APNs: 022-010-010-000

Prepared for:
Charles Collins
12194 White Rock Canyon Rd
Upper Lake, CA 95485

Prepared by:
Chico Environmental Science & Planning
333 Main Street, Suite 260
Chico, CA 95928
(530) 899-2900

Prepared: May 21, 2021

1.0 INTRODUCTION

Chico Environmental prepared this Report of Findings to determine groundwater availability at 12194 White Rock Canyon Rd, Upper Lake, CA ("subject property" or "site"). The approximately 78.84-acre site is situated in Upper Lake in the Middle Creek Groundwater Basin of a rural portion of southeastern Lake County, California **(Figure 1).** One 50' domestic groundwater well is located in the southwestern corner of APN 022-010-01. This well was installed on October 17, 2011. The well is used for irrigation and to service the housing area of the ranch. The purpose of this investigation is to determine the feasibility of installing additional wells and to ascertain if the aquifer has enough capacity to support 0.86 acres of outdoor cannabis cultivation on the 78.84-acre property.

2.0 BACKGROUND

Chico Environmental conducted a site visit to the site on May 17, 2021 **(Appendix A)**. Chico Environmental reviewed Well Completion Reports within Lake County from DWR **(Appendix B)**. Chico Environmental also reviewed Lake County groundwater ordinances, the California State Sustainable Groundwater Management Act (SGMA), geology maps **(Figure 2)**, topography maps **(Figure 3)** groundwater well locations **(Figure 4)**. The well log from the existing 50-foot domestic groundwater well is included in **Appendix C**.

3.0 GEOLOGY

The subject property is located in the Coast Range Geomorphic Province of California. The Coast Range is comprised largely of the Franciscan Complex which represents an accretionary complex formed by long-term subduction of an oceanic plate under the western margin of the North American craton. The Franciscan complex is composed of three distinguishable belts: the eastern belt, the central belt, and the coastal belt. Formation of the accretionary complex began during the late Jurassic in the eastern belt and has continued into the Miocene along the western coastal belt. The complex trends NNW and is bounded by the San Andreas Fault to the east and by the coastal range fault to the west. The coast range fault separates the Franciscan complex with the partly coeval Great Valley sequence.

The geologic evolution of the Coast Ranges includes underwater deposition, mountain building episodes, volcanism, and regional faulting. The Franciscan Formation was originally deposited 125 million years ago at the edge of the Pacific Ocean, and the fluctuating sea levels caused alternating deposition of shale and sandstone. After the formation was deposited, it was uplifted and squeezed by movement of tectonic plates, forming the majority of the Coast Ranges as we see it today. The Franciscan Formation forms the bedrock in the mountains and under other valley formations.

Faulting occurred in Lake County, lowering an area in the Coast Ranges. This area became filled with gravels and sands from creeks in the mountains and became the Cache Formation.

Toward the end of the Cache Formation's deposition, faulting created a depression that combined with lava flows created the basin that contains Clear Lake. Volcanic activity occurred intermittently through the Pleistocene with the extrusion of a number of separate lava flows, beginning the deposition of the Clear Lake Pleistocene Volcanics, including Mount Konocti and the surrounding area. Other depressions and valleys in the Coast Ranges began to be filled with sands, silts and gravels carried by streams, resulting in the deposition of alluvial basins.

The site is located in the Middle Creek Groundwater Basin (Basin) in the central portion of the county. The Middle Creek Groundwater Basin is a north-trending basin which is located to the west of Pitney Ridge and east of Middle Mountain and contains approximately 700 acres. The Basin is in the Middle Creek Inventory Unit and is bordered by the Franciscan Formation to the north and east. Lower Cretaceous Marine deposits border the basin to the west.

The Basin is made up primarily of Quaternary alluvium and is likely in hydraulic continuity with the Upper Lake Groundwater Basin. Quaternary Alluvium includes channel deposits, fan deposits, and gravel, sand and fine materials (ESA 1978). Middle Creek Valley is bordered by Pleistocene terrace deposits, which consist of poorly consolidated clay, silt and sand with some gravel lenses. The Middle Creek Valley floor contains fine-grained lacustrine sediments with coarser grained floodplain deposits. Sediments from the Middle Creek Valley area form a layer that confines the underlying artesian aquifer system. Wells drilled into the deposits typically produce 230 gpm (DWR 1957).

4.0 GROUNDWATER HYDROGEOLOGY

Groundwater Hydrogeology is unknown for the Middle Creek Groundwater Basin but is well documented in the Middle Creek Valley of the Upper Lake Basin. Middle Creek is the main groundwater recharge source for Basin in the area of the project site. Some recharge occurs from precipitation on the alluvial plain and some from side-stream runoff. The Upper Lake Basin fully recharges and contributes to stream flow during most wet seasons.

Groundwater levels in the Upper Lake Basin are shallow, generally around 5-15 ft bgs from spring to fall, and have stayed relatively constant over the past 40 years. Groundwater generally flows south to Clear Lake. In the Clover Valley groundwater typically flows northeast towards Middle Creek.

Groundwater Wells

As of March 2006, agricultural groundwater demand in the Middle Creek basin is 73 acre-feet per year. There are 39 domestic wells and 3 irrigation wells in the Basin. Half of the domestic wells are shallower than 100' bgs and half of the irrigation wells are shallower than 75' bgs. Hydrographs show groundwater levels in the Coyote Valley Basin are shallow in the spring, decrease over the summer, and recover during the winter. Water levels in the basin are between 10 to 15 feet below ground surface on average in the spring. Spring groundwater levels have been generally stable throughout the valley (Lake County 2012). On October 27,

2011 an irrigation well for domestic uses was completed at the site. The well drilled on the southwestern corner of the site was drilled in hard rock to a total depth of 52 feet with a completed static water level of 23 feet bgs. The estimated yield for the well was 30 gallons per minute.

5.0 FINDINGS

The site has approximately 3.33 acres of surface land that is located over alluvial aquifers in the Middle Creek Basin (Figure 3).

The 2019 SGMA report rates Middle Creek as a Very Low Priority groundwater basin. Current groundwater data suggests that the Middle Creek Groundwater Basin fully recharges annually.

Section 28.1 of the Lake County, California – Code of Ordinances - Regulation of the Extraction and Exportation of Groundwater from Lake County. Section 1.11 States:

"The County seeks to foster prudent water management practices to avoid significant adverse overdraft-related environmental, social, and economic impacts. It is therefore essential for the protection of the County's important groundwater resources that the County requires a Permit to extract or otherwise capture groundwater for any use outside the County. This chapter requires a Permit for the export and use of groundwater outside the County and is not intended to regulate groundwater in any other way."

Groundwater pumped for irrigation on the property will not be used for export out of the County.

The expected annual water use for the full buildout would be 3,000 gallons per day per acre (1 acre) within the 120-day growing season for a total 309,600 gallons or 0.95 acre-feet.

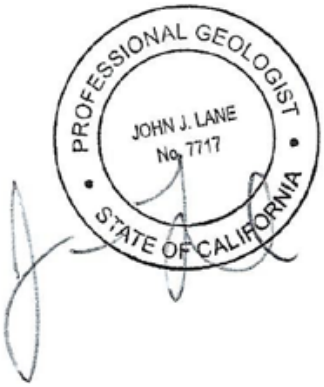
6.0 CONCLUSIONS AND RECOMMENDATIONS

It is Chico Environmental's opinion that it is within the site's overlying groundwater rights to install additional wells for seasonal irrigation to support outdoor cannabis cultivation for portions of the 78.84-acre property. The existing completed well is of sufficient yield to irrigate the 0.86 acres of cannabis and a residence at 12194 White Rock Canyon Road. Additionally, it appears that the overlying property possesses a sufficient quantity of groundwater for seasonal irrigation that would not adversely overdraft the Middle Creek Groundwater Basin, affect downgradient groundwater users or other well users in the vicinity.

7.0 QUALIFICATIONS AND SIGNATURE

I am a Professional Geologist with the State of California. Chico Environmental has performed this assessment under my supervision in accordance with generally accepted environmental practices and procedures, as of the date of this report. I have employed the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental professionals practicing in this area. The conclusions contained within this assessment are based upon site conditions readily observed or were reasonably ascertainable and present at the time of the site inspection.

The conclusions and recommendations stated in this report are based upon personal observations made by employees of Chico Environmental and upon information provided by others. I have no reason to suspect or believe that information provided is inaccurate.



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8.0 REFERENCES

California Department of Water Resources (DWR). 1960. Northeastern Counties Investigation. California Department of Water Resources. Bulletin 58.

Camp Dresser and McKee, In Cooperation with the California Department of Water Resources, Northern District, Lake County Watershed Protection District Lake County Groundwater Management Plan March 31th, 2006.

Department of Water Resources, 2019. Sustainable Groundwater Management Act 2019 Basin Prioritization.

Jennings, C.W., Strand, R.G., and Rogers, T.H., 1977, Geologic map of California: California Division of Mines and Geology, scale 1:750,000

Monitoring Plan Lake County, California by Lake County Watershed Protection District California Statewide Groundwater Elevation Monitoring System, March 20, 2012.

United States Geological Survey, 1993. Middleton Quadrangle, Calif., 1:24,000 Scale Topographic Map.

FIGURES

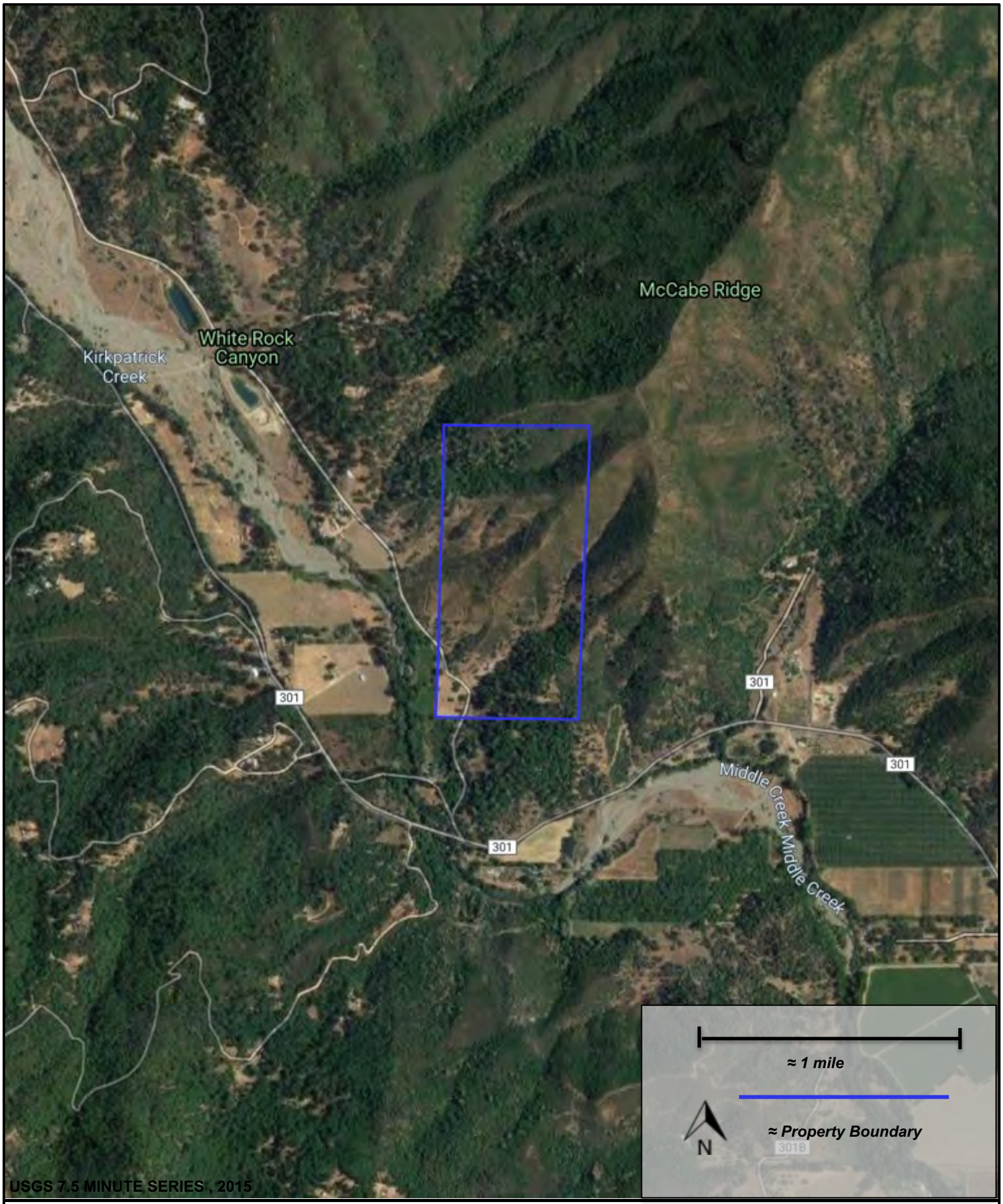

FIGURE 1: GENERAL LOCATION MAP
12194 WHITE ROCK CANYON RD
UPPER LAKE, CA
APNS: 022-010-010-000

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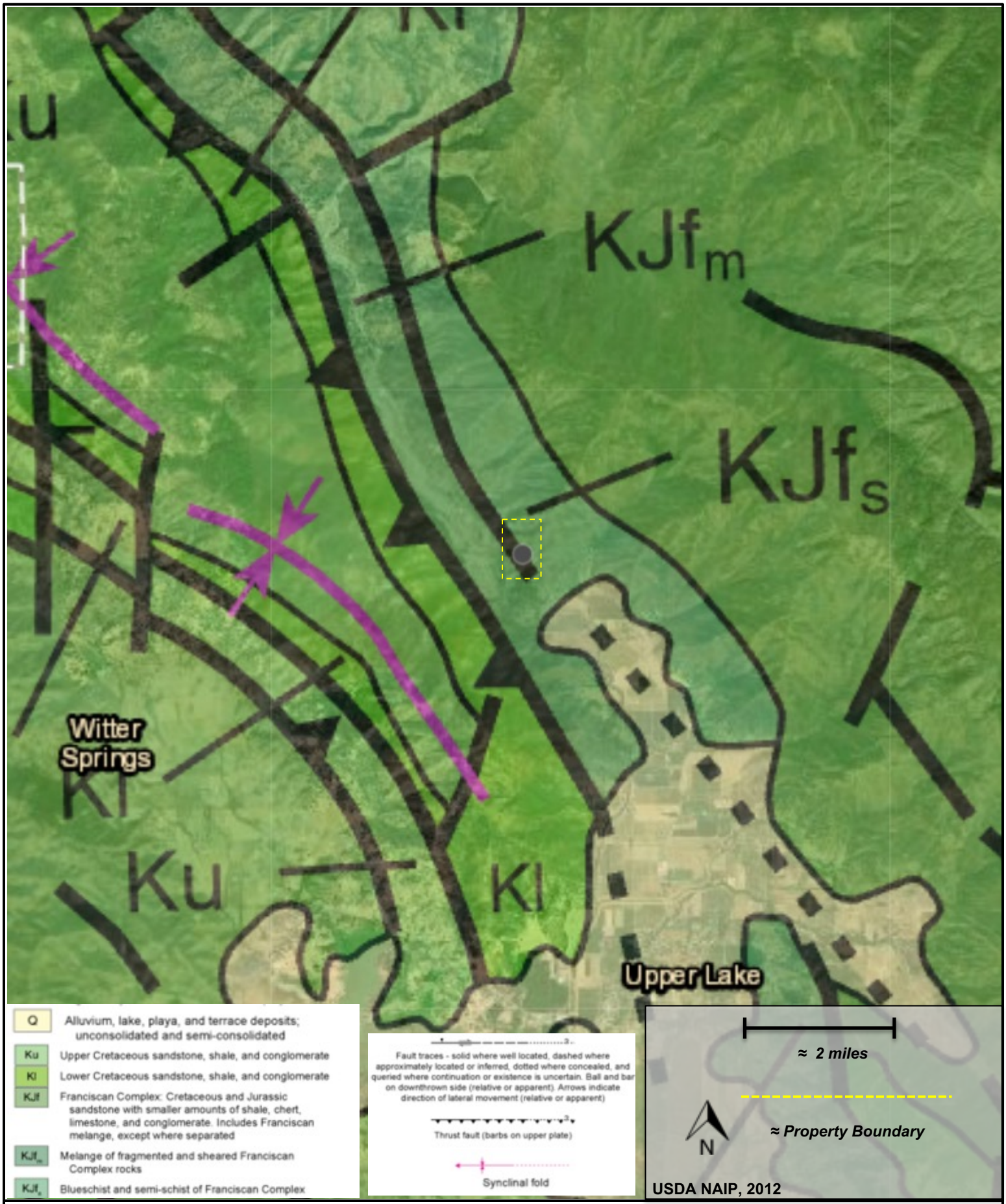

FIGURE 2: SITE GEOLOGY
12194 WHITE ROCK CANYON RD
UPPER LAKE, CA
APNS: 022-010-010-000

CHICO environmental

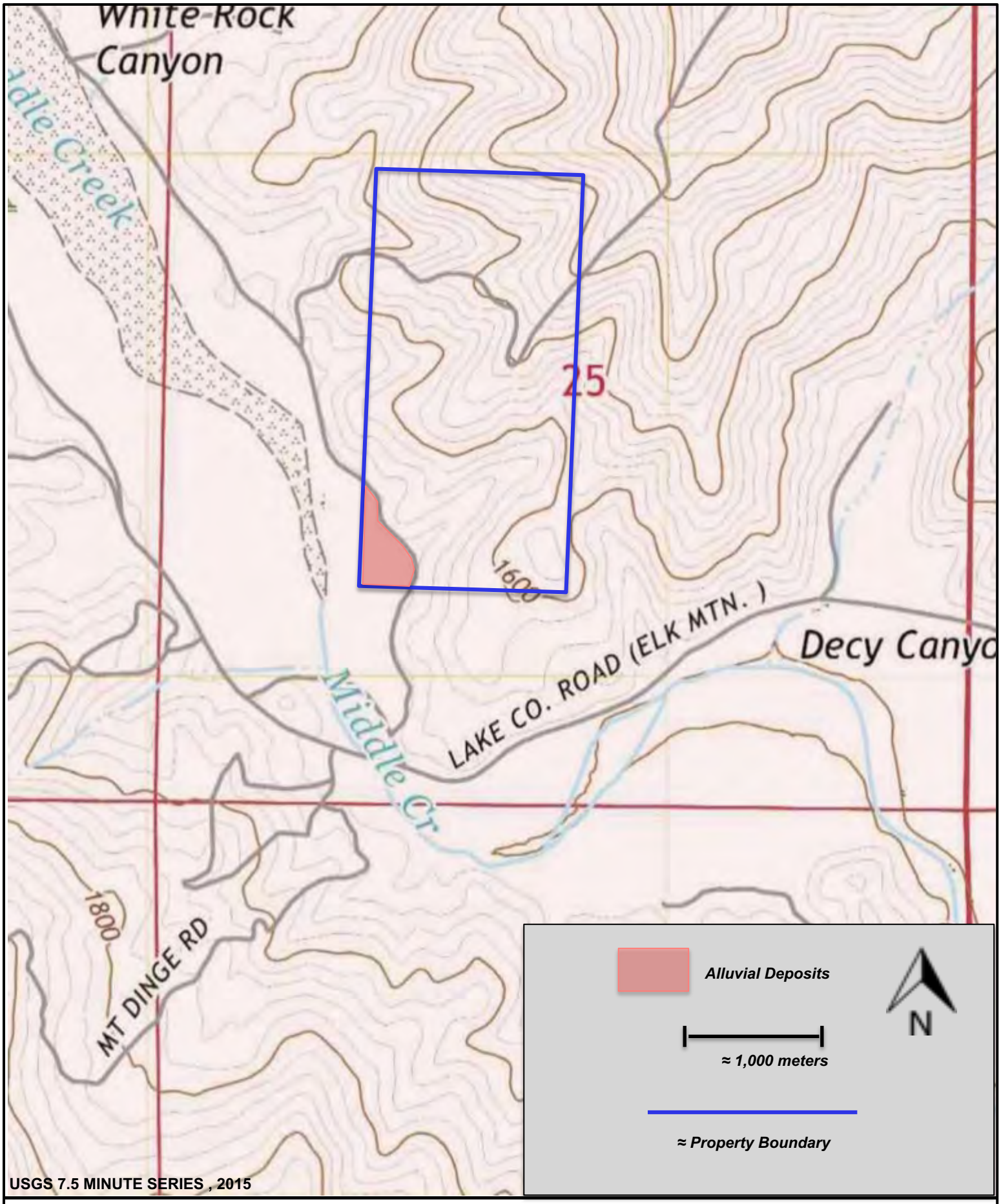

FIGURE 3: ALLUVIUM MAP
12194 WHITE ROCK CANYON RD
UPPER LAKE, CA
APNS: 022-010-010-000

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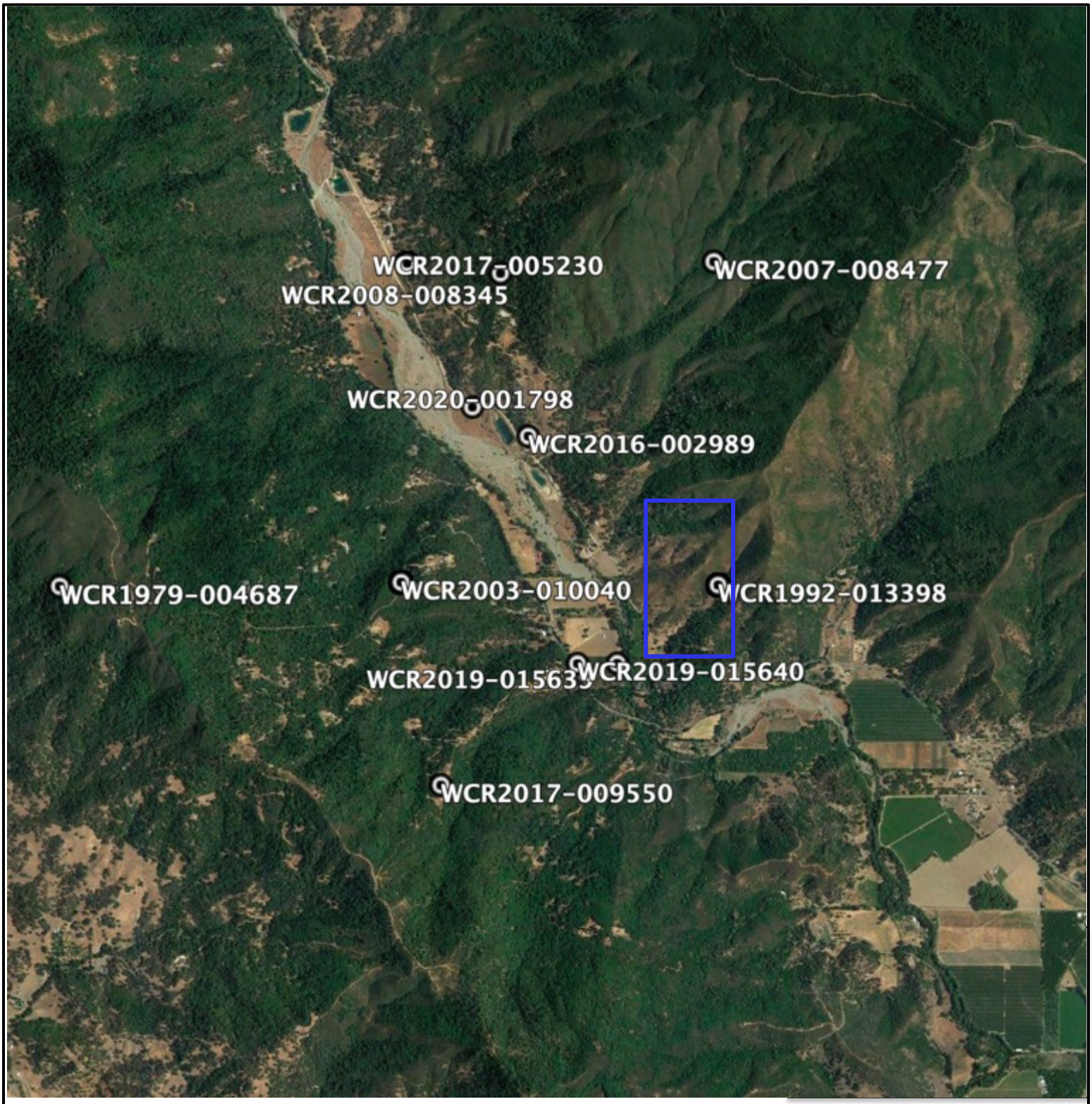

	WCR 1979-004687	WCR 2017-005230	WCR 2008-008345	WCR 2020-001798	WCR 2016-002989	WCR 2003-010040	WCR 2019-015633	WCR 2019-015640	WCR 2017-009550	WCR 2007-008477	WCR 1992-013398
Well depth (ft)	157	296	75	80	54	200	93	-	285	101	60
Water depth (ft)	-	20	-	10	9	-	26	-	65	-	-

FIGURE 4: WELL MAP
12194 WHITE ROCK CANYON RD
UPPER LAKE, CA
APNS: 022-010-010-000

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APPENDIX A: SITE PHOTOGRAPHS

SITE PHOTOGRAPHS – MAY 17, 2021
12194 WHITE ROCK CANYON RD
UPPER LAKE, CA
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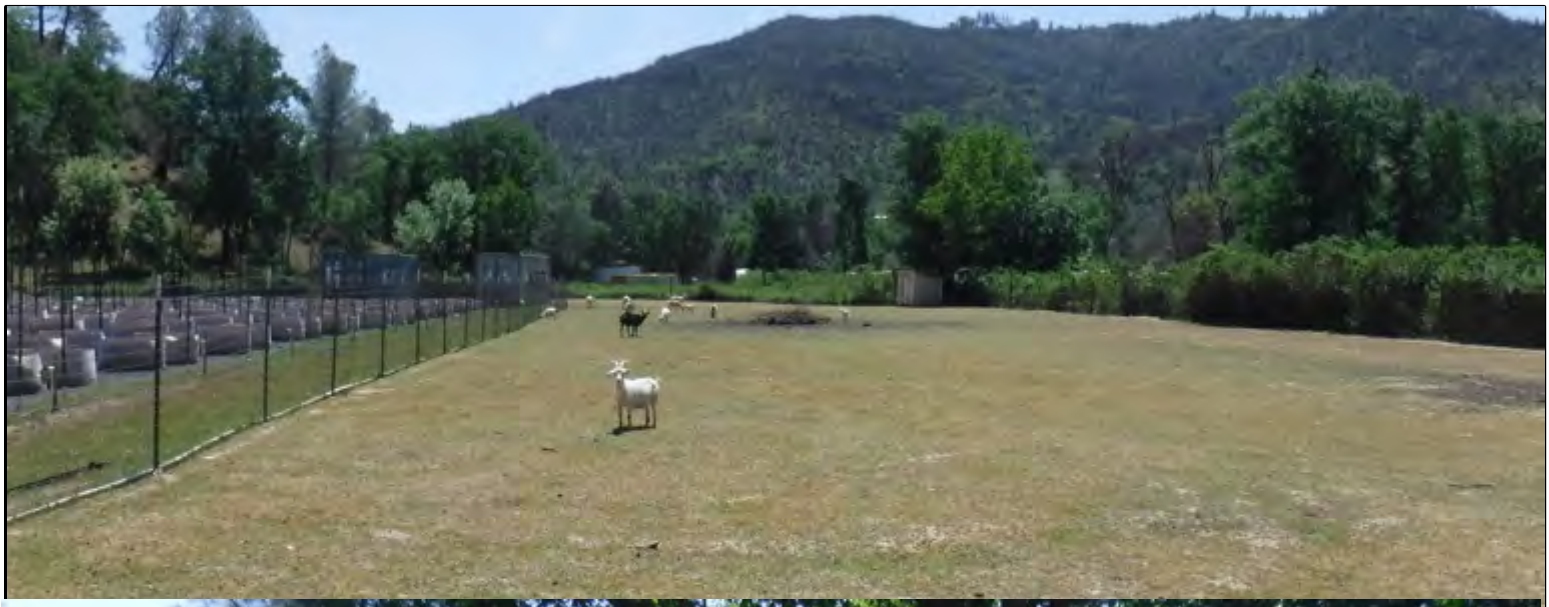

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APPENDIX B: WELL COMPLETION REPORTS

WCR Number	Legacy Log Number	Well Location	City	County Name	Permit Date	Permit Number	Region Office	Record Type	Planned Use/Former Use	Driller Name
WCR1980-006436	102679			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1993-009558	406878			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	MOSEGAARD WILLIAM GEORGE
WCR1991-015886	17995			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1990-016269	211261			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR1998-007823	705637			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	MC MULLEN DAN WELL DRILLING
WCR1992-013429	367360			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Irrigation - Agriculture	HUTTON J W
WCR2016-002989	996144	12596 White Ro	Upper Lake	Lake	10/7/2015	WE 4642	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	MCAULEY WELL DRILLING
WCR2014-006858	E0196398			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Other Unknown	FISCH BROS DRILLING INC
WCR1990-016171	17976			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1983-004935	239627			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR2004-009784	1075490			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	
WCR2002-010016	750686			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1990-016148	17953			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	LEWIS & SON
WCR2006-007639	1075516			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	
WCR2015-000709	E0260910			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR1980-006478	122504			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUMMEL WELL DRILLING
WCR1980-006423	102663			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR2002-010028	756154			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HERMAN LARRY DRILLING CO
WCR1989-015070	17937			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR2017-005230	e0345523	13424 White Ro	Upper Lake	Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WILL PETERSON WELL DRILLING
WCR1979-004687	83615			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR1980-006438	102681			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1971-001673	83004			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Test Well	HUTTON J W
WCR1977-007135	18813			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR1987-010667	210823			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR1985-008409	12213			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1992-013398	406856			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	MOSEGAARD WILLIAM GEORGE
WCR2020-001798		13198 WHITE R	UPPER LAKE	Lake	1/24/2020	WE-5289AG	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Irrigation - Agriculture	FISCH BROS DRILLING
WCR1991-016044	264524			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	GIESE DAVID WELL DRILLING
WCR2018-004267		14086 Ave 224	Tulare	Tulare	5/24/2018	1800653	DWR South Central Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	M L WELL DRILLING AND PUMPS CO
WCR2003-010040	824923			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HERMAN LARRY DRILLING CO
WCR1962-001228	74355			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Irrigation - Agriculture	HUTTON J W
WCR2008-008345	E0079054			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR2001-009505	775419			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR1990-016279	330276			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	MOSEGAARD WILLIAM GEORGE
WCR2019-015640		12206 Elk Moun	Upper Lake	Lake	8/22/2019	WE-5230	DWR Northern Region Office	WellCompletion/Drill and Destroy/NA/NA	Destruction Irrigation - Agriculture	WEEKS DRILLING AND PUMP CO
WCR1979-004811	122503			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUMMEL WELL DRILLING
WCR2003-009996	797709			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1975-002321	128714			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Test Well	GIESE DAVID WELL DRILLING
WCR1994-009304	406879			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	MOSEGAARD WILLIAM GEORGE
WCR1776-003510	797716			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1976-003843	124192			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	JAMES D KENNEMER KENNEMER WATER WELL * GEOTHERMAL DEVT SERVICE
WCR2000-008779	713375			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HERMAN LARRY DRILLING CO
WCR1975-002322	128715			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	GIESE DAVID WELL DRILLING
WCR1998-007743	502893			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Irrigation - Agriculture	HUTTON J W
WCR1977-007143	3041			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR1977-007149	3255			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Other Unknown	WEEKS DRILLING AND PUMP CO
WCR2019-015639		12206 Elk Moun	Upper Lake	Lake	8/22/2019	WE-5230	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Irrigation - Agriculture	WEEKS DRILLING AND PUMP CO
WCR2002-010026	750708			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	CAMPBELL WATER WELL CO
WCR2008-008921	1074486			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1991-015997	211511			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WEEKS DRILLING AND PUMP CO
WCR2007-008475	1075539			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR1994-009313	581378			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR2011-007792	1074544			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	HUTTON J W
WCR2017-009550	E0370914	12299 ELK MT.	UPPER LAKE	Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Domestic	WILL PETERSON WELL DRILLING
WCR2007-008477	1075540			Lake		None	DWR Northern Region Office	WellCompletion/New/Production or Monitoring/NA	Water Supply Irrigation - Agriculture	HUTTON J W

Well Completion Reports_WhiteRock

Driller License Number	Decimal Latitude	Decimal Longitude	Township	Range	Section	Baseline Meridian	APN	Date Work Ended	ReceivedDate	Total Drill Depth	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Casing Diameter	Drilling Method	Fluid
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo		8/31/1980			89				Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	2-23-21	11/30/1993			140	50	140		Other not specified	Other not specified
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo	22-10-2	6/30/1991			56	27	56		Other not specified	Other not specified
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo	2-25-5	11/30/1990			66	26	66		Other not specified	Other not specified
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-4-1	11/17/1998			165	105	165	4	Direct Rotary	Air
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	2-23-26	12/31/1991			54	34	54		Other not specified	Other not specified
1004331	39.22061	-122.93222	16N	10W	26	Mount Diablo	022-009-050	2/8/2016	2/21/2016, 4:00 PM	56	54	34	54	5	Cable Tool	Water
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo	022-009-040	1/19/2014			95	35	95	11	Other not specified	Other not specified
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-4-2	11/30/1990			199	96	199		Other not specified	Other not specified
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo		7/31/1983			170				Other not specified	Other not specified
	39.21399579	-122.9214111	16N	10W	25	Mount Diablo	2-25-48	9/19/2004			100	40	100	6	Auger	
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	2-23-190	6/27/2002			43	25	43	8	Auger	
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	2-23-39	1/31/1990			195	155	195		Other not specified	Other not specified
	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	022-002-006	4/30/2006			200	80	202	6	Cable Tool	
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	022-001-060	3/15/2015			115	40	100	5	Direct Rotary	Bentonite
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo		9/30/1980			50				Other not specified	Other not specified
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo		3/31/1980			56				Other not specified	Other not specified
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-5-7	3/10/2002			215	135	215	6	Direct Rotary	Air
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-6-9	6/30/1989			105	35	95		Other not specified	Other not specified
1009053	39.22761763	-122.9337696	16N	10W	23	Mount Diablo	002-023-690	2/22/2017	3/9/2017, 4:00 PM	300	296			9		
CONV	39.21391371	-122.9576678	16N	10W	27	Mount Diablo		6/30/1979			157				Other not specified	Other not specified
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo		9/30/1980			204				Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo		12/31/1970			140				Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo		3/31/1977			31				Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo		4/30/1987			153				Other not specified	Other not specified
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo		8/31/1985			78				Other not specified	Other not specified
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo	22-9-3	9/30/1992			60	30	60		Other not specified	Other not specified
399226	39.221901	-122.9354212	16N	10W	23	Mount Diablo	002-023-72	2/6/2020	2/6/2020, 4:00 PM	80	80				Direct Rotary	Bentonite
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo	22-10-5	1/31/1991			80	40	70		Other not specified	Other not specified
1014500	39.225074	-122.8795544	16N	09W	20	Mount Diablo	195-090-016	5/25/2018	5/29/2018, 5:00 PM	423	400				Direct Rotary	Water
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-3-30	10/9/2003			200	120	180	6	Direct Rotary	Air
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo		1/31/1962			100				Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	002-023-023	9/2/2008			75	20	75	5	Direct Rotary	Bentonite
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-6-1	8/2/2001			292	112	292	6	Direct Rotary	Air
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-5-5	8/31/1990			125	78	125		Other not specified	Other not specified
177681	39.2105083	-122.9293917	16N	10W	25	Mount Diablo	022-010-05	8/25/2019	10/31/2019, 5:00 PM	240					Direct Rotary	Polymer
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo		10/31/1979			60				Other not specified	Other not specified
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-5-6	2/14/2003			200	80	200	6	Auger	
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo		2/28/1975			60				Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	2-23-40	12/31/1993			100	55	100		Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	2-23-25				201	81	205	6	Auger	
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo		7/31/1976			64				Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	2-23-66	3/31/2000			95	20	75	6	Direct Rotary	Air
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo		3/31/1975			52				Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	2-23-47	4/26/1998			56	30	57	12	Cable Tool	
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo		7/31/1977			142				Other not specified	Other not specified
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo		4/30/1977			93				Other not specified	Other not specified
177681	39.2105222	-122.9271111	16N	10W	25	Mount Diablo	022-010-05	8/29/2019	10/31/2019, 5:00 PM	110	93				Direct Rotary	Polymer
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo	2-25-35	7/15/2002			80	50	80	5	Direct Rotary	Air
CONV	39.22825446	-122.9391509	16N	10W	23	Mount Diablo	002-023-091	11/6/2008			200	65	203	8	Cable Tool	
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-3-1	4/30/1991			204	122	202		Other not specified	Other not specified
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	022-003-004	8/23/2007			251	82	252	6	Cable Tool	
CONV	39.21411178	-122.9393709	16N	10W	26	Mount Diablo	22-7-4	12/22/1994			171	111	171	6	Cable Tool	
CONV	39.21399579	-122.9214111	16N	10W	25	Mount Diablo	022-010-001	10/30/2011			50	30	50	8	Cable Tool	
1009083	39.205308	-122.937077				M	002-025-11				285	220	280	4.5	AIR ROTARY	
CONV	39.22785651	-122.9218906	16N	10W	24	Mount Diablo	002-025-046	9/24/2007			101	55	101	8	Cable Tool	

Static Water Level	Total Draw Down	Test Type	Pump Test Length	Well Yield	Well Yield Unit of Measure
	35			8	GPM
	1			120	GPM
	45			8	GPM
				12	GPM
	2			75	GPM
9	0	Bailing	1	10	GPM
				5	GPM
	10			10	GPM
	2			30	GPM
	8			25	GPM
	59			70	GPM
	36			16	GPM
	113			20	GPM
				10	GPM
	1			5	GPM
20		Air Lift	1	15	GPM
				40	GPM
10		Air Lift	2	80	GPM
	1			32	GPM
158	20	Air Lift	8	60	GPM
				23	GPM
				20	GPM
	280			10	GPM
				15	GPM
	20			20	GPM
	50			6	GPM
	30			20	GPM
				8	GPM
26	67	Air Lift	4	45	GPM
				6	GPM
	37			10	GPM
	60			30	GPM
	20			8	GPM
	3			8	GPM
	4			30	GPM
65				25	GPM
	56			37	GPM

APPENDIX C: WELL LOG

022-010-01

QUADRUPLICATE
For Local Requirements

Page 1 **of** 1

Owner's Well No. ______

Date Work Began 10-27-11, Ended 10-31-11

Local Permit Agency Lake

Permit No. 21-15[illegible] Permit Date 10-26-11

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 1074544

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DRILLING METHOD Cable FLUID ______

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	2	Soil
2	15	Tan Clay
15	34	Brown Clay + Embedded Gravel
34	45	Brown [illegible] (Coarse) And Gravel
45	52	Brown Shale

TOTAL DEPTH OF BORING 52 (Feet)

TOTAL DEPTH OF COMPLETED WELL 50 (Feet)

WELL OWNER

Name [illegible] Fernandez

Mailing Address [illegible] White Rock Cyn Rd

Upper Lake CA 95485

CITY STATE ZIP

WELL LOCATION

Address [illegible] White Rock Cyn Rd

City Upper Lake

County Lake

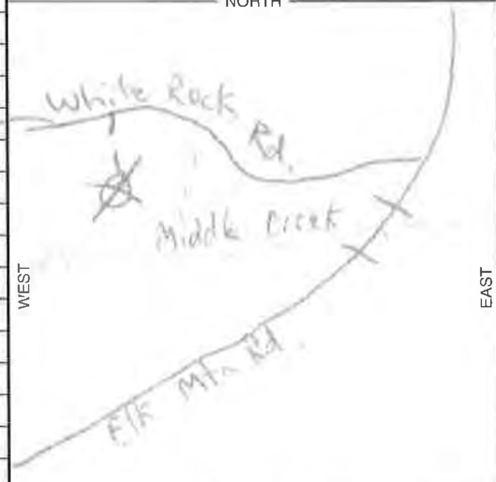
APN Book 022 Page 010 Parcel 01

Township ______ Range ______ Section ______

Lat 39 DEG. 17 MIN. [illegible] SEC. N Long 122 DEG. 55 MIN. 54 SEC. W

LOCATION SKETCH

NORTH



WEST EAST

SOUTH

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"*)

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 ______ (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 23 (Ft.) & DATE MEASURED 10-29-11

ESTIMATED YIELD * 30 (GPM) & TEST TYPE Pump

TEST LENGTH 3 (Hrs.) TOTAL DRAWDOWN 4 (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)
+1	30	13	X				PVC	8	CL200	
30	50	13		X			"	"	"	.032

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	20	X			
20	50				Pea 3/8" Gravel

ATTACHMENTS (✓)

___ Geologic Log

___ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

___ Other ______

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

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

NAME [illegible] Well Drilling
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

1466 S. Pitney Ln Upper Lake Ca 95485
ADDRESS CITY STATE ZIP

Signed [signature] 10-31-11 153612
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