LINDBERG GEOLOGIC CONSULTING
David N. Lindberg, CEG
Post Office Box 306
Cutten California 95534
(707) 442-6000

February 16, 2023 Project No: 0488.00

Ms. Petya Ivanova
Cherrytree LLC
10121 Basalt Hollow Avenue
Las Vegas, Nevada 89148

Subject: Hydrologic Isolation of Well e0353403, from Surface Waters
Timberline Ranch Estates, Dinsmore, CA APN: 208-201-017

To Whom It May Concern:

As requested, Lindberg Geologic Consulting has assessed an existing permitted well on the above-referenced parcel to estimate its potential for hydrologic connectivity with any adjacent wetlands and or surface waters, and if pumping well e0353403 might affect nearby surface waters. The nearest tributaries in the vicinity of this well is an unnamed ephemeral tributary of the Mad River (Figure 1). Some streams in this part of eastern Humboldt county drain to the Van Duzen River.

A California-Certified Engineering Geologist visited this site on January 19, 2023, to observe the subject well and local site conditions. Based on our research, observations, and our professional experience, it is our opinion the subject well has a low likelihood of being hydrologically connected to nearby surface waters in any manner that could affect adjacent springs, wetlands and or surface waters in the vicinity. We define the "vicinity" as the area within a 1,000-foot radius of the subject well (Figures 1 and 3), an area of approximately 72 acres. The proposed use of this well is irrigation of cannabis. We are not aware of the volume of water to be extracted or what the pumping schedule might be but expect that that information is provided elsewhere in the application.

Based on Humboldt County's WebGIS and the Assessor's Parcel Map (Figure 2), parcel 208-201-017 (Figure 2,) encompasses approximately 40 acres. Our GPS located the subject well at latitude 40.52363° north, and longitude 123.6523° west (±9'). This well is in Section 30, T2N, R5E, and is 110 feet deep. The wellhead is at an elevation of approximately 3,440 feet (Figure 1) and the elevation of the bottom of the well is therefore 3,330 feet.

The Humboldt County WebGIS shows three watercourses within one mile of the well site. To the southeast 1,100 feet is an ephemeral tributary of the Mad River. Approximately 3,400 feet to the north is an ephemeral tributary of Bear Creek which also flows to the Mad River. To the northwest more than 5,100 feet is Mule Basin Creek, tributary to the Van Duzen River. As stated, based on interpolation from the Showers Mountain, topographic map, (Figure 1), and the Humboldt County WebGIS, the well site elevation is 3,440 feet. The elevation of the nearest watercourse, the ephemeral tributary of Mad River, is 3,120 feet. The bottom elevation of well e0353403 is 3,330 feet, making the ephemeral tributary of Mad River, 210 feet below the bottom of the well.

The well location is shown approximately on the attached figures, and was drilled by 3D Drilling, of Rock Springs, Wyoming, in August 2017, under Humboldt County well permit #16/17-1372. 3D Drilling is a licensed well-drilling contractor (C-57 #10015033). 3D Drilling submitted their attached well completion report (DWR 188) on August 30, 2017. The driller estimated a yield of 10 gpm on August 28, 2017, based on a 4-hour air lift pump test. Total drawdown during the pump test was unreported.

Again, total drilled depth of this well is 110 feet. The borehole diameter is 5 9/16-inches from grade to 110-feet. From the surface to 110 (or 120) feet, a 5 9/16-inch diameter low carbon steel casing was installed. Per County requirements, a bentonite surface sanitary seal was installed, in this case bentonite chips were installed from the surface to 104 feet. The well is cased and sealed through any potential shallow subsurface aquifers in the uppermost 104 feet, more than the county requirement. Depth to first water is unreported, and depth to static water in the completed developed well was 90 feet bgs when the driller conducted the pump test on August 28, 2017.

There are no surface waters within 1,000 feet of the subject well, and there are no springs mapped in Section 30 on the Showers Mountain USGS topographic map, (Figure 1). There are several springs mapped in adjacent sections. The nearest spring is approximately 4,300 feet to the northwest, in the southwest corner of Section 19 (elevation ≅ 3,560 feet). The next nearest spring is approximately 5,300 feet southwest of the subject well in Section 31, at an estimated elevation of 3,300 feet. All other mapped springs are greater than one mile from the subject well. Also more than a mile away in the Van Duzen River watershed, a pond is mapped southwest of the well, in Section 36 at an elevation of 3090 feet.

This parcel is located within California's Coast Range Geomorphic Province, in the Central Belt of the Franciscan Complex (McLaughlin et al., 2000), a seismically active region in which large earthquakes are expected to occur during the economic life span (70 years) of any developments on the subject property. Geologic mapping by Alto et al, (1988) shows this well site is underlain by KJfv, Franciscan mélange (Figure 4). McLaughlin in the adjacent quadrangles to the south, by extension of his nomenclature, the subject well site is underlain by mélange (cm1) of the Central Belt of the Franciscan Complex, as shown in the geologic cross section, Figure 5.

According to the NRCS Web Soil Survey, the near-surface soils consist of loam to a depth of 24-inches, gravelly loam to 43-inches, and gravelly clay loam to 79-inches. Soils are interpreted to be uniformly distributed across similarly sloping areas of this parcel underlain by the Central Belt mélange.

Materials reported on the geologic log of the driller's well completion report (attached) include 0-10-feet of "Brown Silt". From 10- to 90-feet the driller logged "Grey Shell" followed by 20-feet (90- to 110-feet), of "Grey Quartz/Shell". With no perforated casing or well screen, and a bentonite chip seal to 104 feet, this well draws water from the formation through the open lower end of the

casing. In the subject well, the elevation of the first water-bearing aquifer unit is thus at an elevation of approximately 3,350 feet, based on the driller's report.

Below the surface, the earth materials encountered in the boring are mélange of the Central Belt Franciscan Complex, as mapped by Alto et al, (1988) and McLaughlin et al., (2000). Sheared, fractured, and folded metasedimentary rock materials can have variable hydraulic conductivity, but can constitute significant aquifers. We interpret the sequence "Grey Shell" and "Grey Quartz Shell" as described by the driller, to be within the central belt mélange (cm1) of the Franciscan Complex. The deepest section of this well apparently encountered rock with favorable hydraulic conductivity, making the "Grey Quartz Shell", in our interpretation, the primary water bearing unit(s) in this well. We presume the "Grey Quartz Shell" is a fractured sandstone section of the mélange with shale interbeds.

A geologic cross section of the area after McLaughlin et al., (2000) shows the structural and stratigraphic relationships between the regional geologic units (Figure 5). The central belt mélange is shown dipping steeply to the east and bounded by thrust fault plane contacts. On-site, no dip of the rock units could be observed because they are mantled with soil and colluvium and obscured by vegetation. We interpret the faults in the subsurface to be hydrologic boundaries of reduced permeability (due to grinding and shearing along the fault planes), effectively separating some rock units from each other hydrologically, limiting groundwater flow between the faulted units.

Based on observations, review of pertinent and available information, and our experience, it is our professional opinion that this well has a low potential of having any direct or significant connection to proximal surface waters. Static water was reportedly encountered at 90. This well is sealed through the upper 104 feet of any potential unconfined, near-surface aquifers with which it might communicate hydraulically through the borehole. No surface waters are mapped within 1,000 feet of this well.

When considered with the stratigraphy, and the underlying geologic structure, plus the distances (horizontal and vertically) from the nearest surface waters, and the depth of the producing zone of this well 90- to 110-feet), as well as the position of the well relative to the nearest surface waters in the vicinity, we conclude that the 104 foot depth of the bentonite chip seal, is sufficient to preclude the potential for hydraulic connectivity with surface waters, of which there are none closer than 1,100 feet an unnamed ephemeral tributary of Mad River, at an elevation below 3,300 feet. Thus, the water source from which this well draws appears to be a subsurface aquifer not demonstrably connected to any surface waters or unconfined, near-surface aquifer(s). This well appears, in our professional opinion, likely to be hydraulically isolated from nearby wells, surface waters, springs or wetlands.

According to the driller, the estimated yield of this well was 10 gallons per minute (gpm) on August 28, 2017. Drawdown was not reported after 3D Drilling's four-hour air-lift pump test. At 10 gpm, this well would potentially produce 14,400 gallons per day. As noted in the well completion report,

the 10-gpm capacity may not necessarily be representative of a well's long-term yield. Additional drawdown and recovery testing would be necessary to estimate a sustainable long-term yield of the site well.

This subject well does not appear to be hydrologically connected to, or capable of influencing surface water flows in any perennial tributaries of Mad River, or the ephemeral streams Bear Creek, and Mule Basin Creek. Nor does this well appear likely to be hydrologically connected to any local springs or ephemeral wetlands. Given the horizontal distances involved, and the elevation differences between the subject well, and the surface waters of the nearest watercourses, springs, and ponds, the potential for significant hydrologic connectivity between surface water and the groundwater in this well seems unlikely.

As mentioned, on the Showers Mountain USGS topographic quadrangle map, there are springs mapped in sections adjacent to Section 30, where well e0353403 is located. The closest spring is in Section 19, to the northwest, approximately 4,300 feet distant, at elevation 3,560 feet. There are no other significant (mapped) springs or wetlands within one mile of this subject well.

We researched the California Department of Water Resources' database for permitted wells within 1,000 feet of the subject well. Based on the information available, there are no wells that meet that criterion. The closest well (WCR e0234785) is on parcel 208-201-011, more than 3,600 feet to the east. Well e0234785 is in Section 29, and is 200 feet deep, at an elevation of 2,800 feet.

As groundwater mimics topography and responds to the force of gravity, in general any near surface unconfined aquifer will flow down slope in a direction subparallel to topography. The ground surface slopes primarily to the northeast; thus, any near surface unconfined aquifer is expected to flow to the northeast toward Mad River. When we visited, there was a pump installed in the subject well.

In our professional opinion, it appears that the aquifer tapped by the subject well is recharged by precipitation infiltrating through the soil and mélange bedrock from upslope source areas both proximal and distal to the well site. Ephemeral streams in the vicinity of the well may also contribute recharge when they flow during runoff generating storm events.

The United States Department of Agriculture's (USDA), Natural Resources Conservation Service's (NRCS), online Web Soil Survey, shows the subject well within soils of the Tannin-Burgsblock-Rockyglen complex, on slopes of 30 to 50 percent, (#461, Figure 7), which the NRCS describes as a well-drained soil. The Web Soil Survey's unit description is attached to this report. Mean annual precipitation is listed by the NRCS as 49 to 90 inches per year. Capacity of the most limiting soil layer to transmit water (Ksat) is described as moderately high to high (0.20 to 2.00 in/hr) with a depth to the water table of greater than 80 inches.

If ten percent of the smaller precipitation estimate (49") is absorbed by the soils/bedrock and does not flow to local watercourses (or be lost to evapotranspiration), then approximately 16.3 acre-

feet, more than 5.3 million gallons of water per year (MGPY), should recharge the aquifer below this 40-acre property. Given the same precipitation (49") and 10 percent partitioned to recharge, then within a 1,000-foot radius of the subject well, then recharge within the 72 acres enclosed by a circle having a 1,000-foot radius, is more than 29 acre-feet, and or 9.5 MGPY. Our estimates are conservative; United States Geological Survey (USGS) researchers estimate that in northwest California, approximately 33 percent of precipitation goes to recharge (Flint, et al., 2103).

On March 28, 2022, Governor Newsom issued an executive order (N-7-22) relating to the ongoing drought in California. In executive order N-7-22, the governor outlined measures the state will undertake to avoid and ameliorate the negative impacts of the current drought. Among these measures, it was ordered that counties, cities, and other public agencies have been prohibited from approving permits for new groundwater wells (or alteration of existing wells) in basins "*subject to the Sustainable Groundwater Management Act and classified as medium- or high-priority without first obtaining written verification from a Groundwater Sustainability Agency managing the basin or area of the basin where the well is proposed*". This well at Timberline Ranch Estates, Dinsmore, is not within a basin subject to the Act, and there has been no Groundwater Sustainability Agency established with authority over the area where this permitted well is sited.

The Governor's order states that counties, cities, and other public agencies are prohibited from issuing permits for new groundwater wells (or altering existing wells) "*without first determining that extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure*". The conditions in the Order are not applicable to "*wells that provide less than two acre-feet per year of groundwater for individual domestic users, or that will exclusively provide groundwater to public water supply systems*."

Based on our observations, research, and experience, it is our professional opinion that well e0353403, located at on APN 208-201-017, has a low likelihood of being hydrologically connected to nearby surface waters or neighboring wells in any manner that might significantly have a negative impact or effect on proximal wetlands, wells, and or surface waters.

Please contact us if you have questions or concerns regarding our findings and conclusions.

Sincerely,

David N. Lindberg, CEG
Lindberg Geologic Consulting

DNL:sll

Attachments:

Figure 1: Topographic Well Location Map
Figure 2: Humboldt County Assessor's Parcel Map
Figure 3: Satellite Image of Well location
Figure 4: Geologic Map
Figure 4a: Geologic Map Explanation
Figure 5: Generalized Geologic Cross Section
Figure 6: Hydrogeologic Cross Section
Figure 7: USDA-NRCS Soils Map

State of California Well Completion Report:
WCR E0353403, APN: 208-201-017 (Subject Well)
WCR E0234785, APN: 208-201-011, more than 3,600 feet east

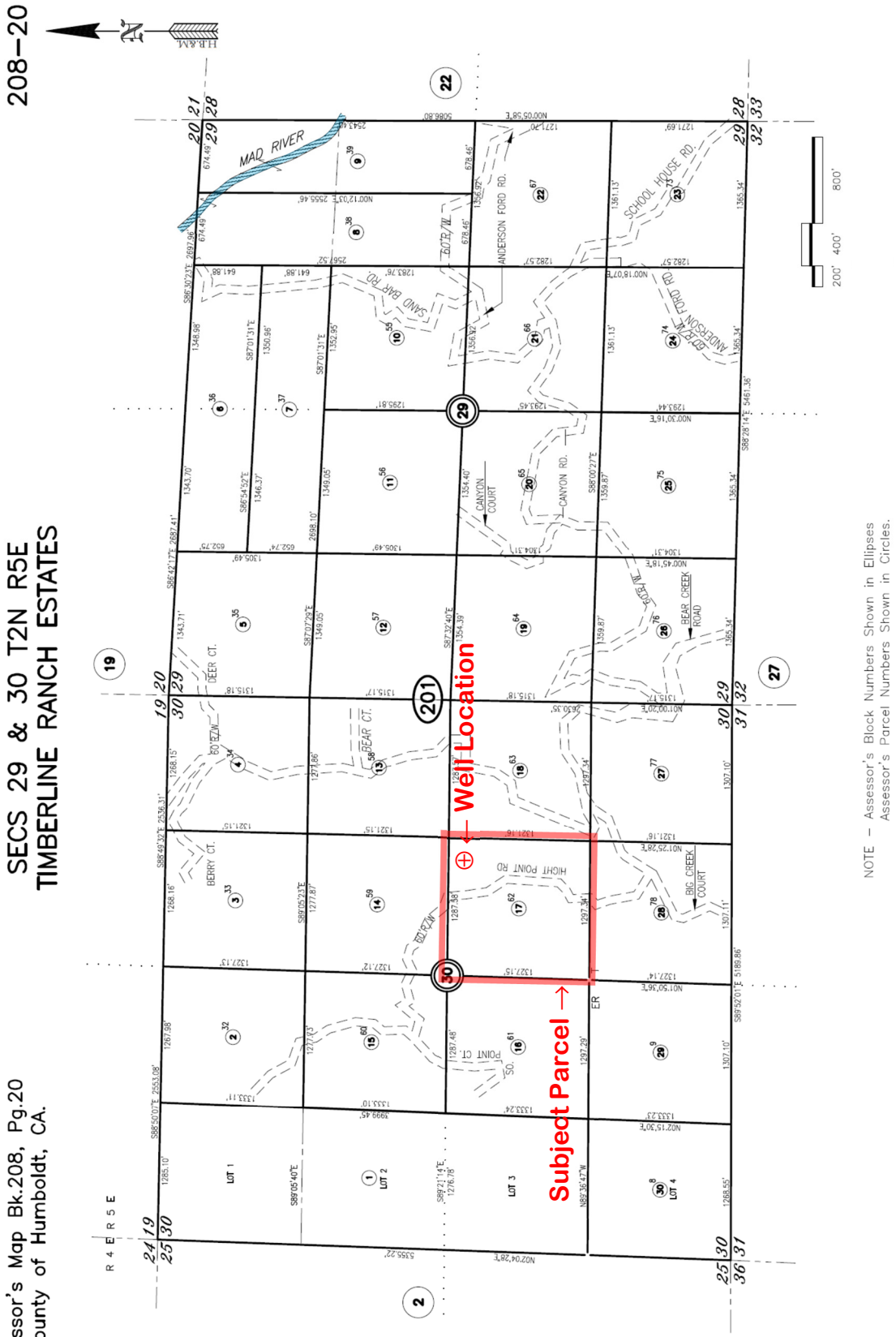
Web Soil Survey, NRCS Map Unit Description:
Tannin-Burgsblock-Rockyglen complex, #461, 30 to 50 percent slopes.

Reference:
Flint et al.: Fine-scale hydrologic modeling for regional landscape applications: the California Basin Characterization Model development and performance. Ecological Process, 2013, 2:25. (doi:10.1186/2192-1709-2-25)

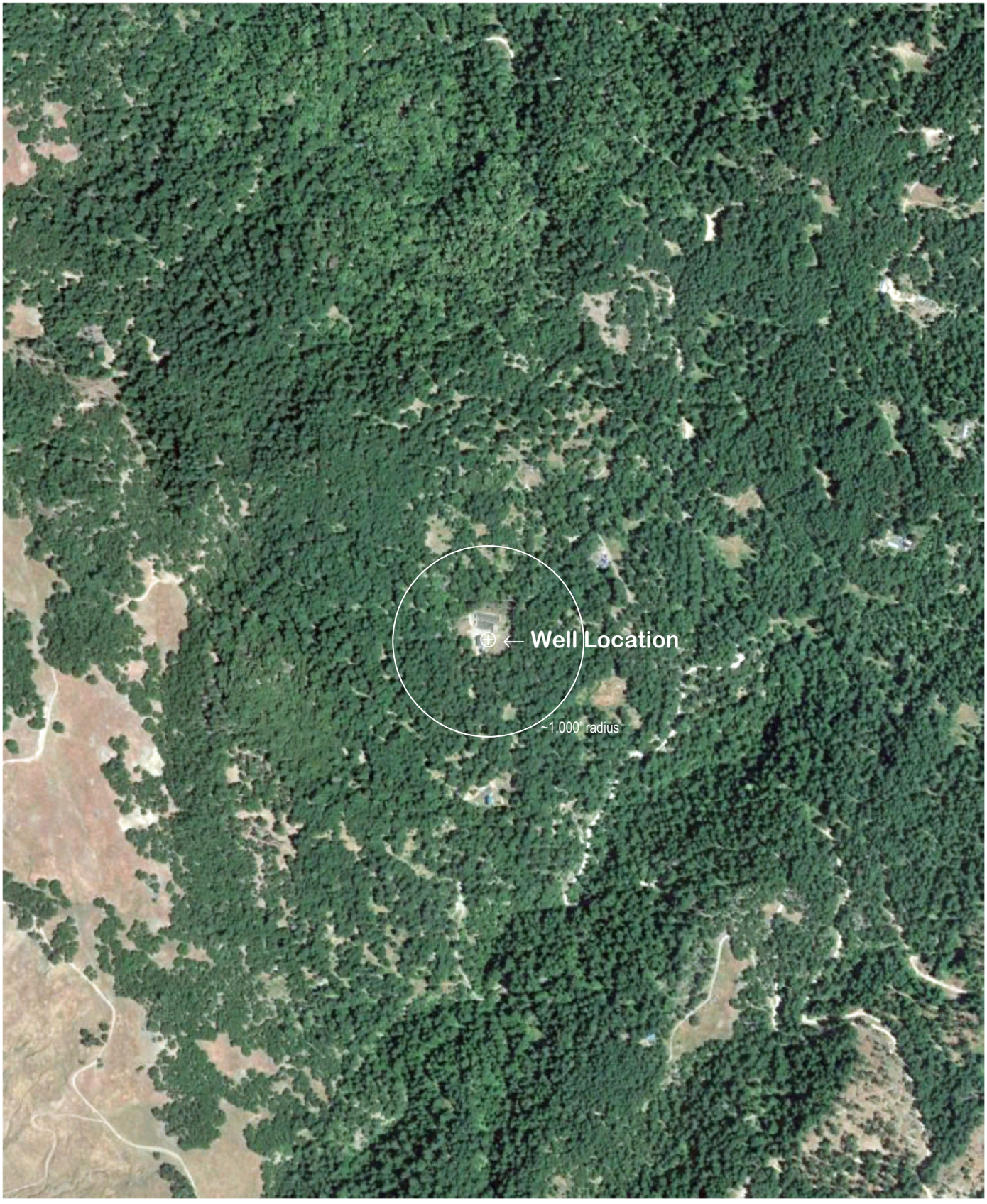
Lindberg Geologic Consulting	Engineering-Geologic Well Connectivity Assessment Report	Figure 1
Post Office Box 306	High Point Road, Dinsmore, APN: 208-201-017	February 16, 2023
Cutten, CA 95534	Well e0353403, Ms. Petya Ivanova, Cherrytree LLC, Client	Project 0488.00
(707) 442-6000	Topographic Well Location Map (locations approximate)	1" ≈ 2,400'

Modified from: USGS "Showers Mountain, Calif.", 7.5' Quadrangle Map (1978). N ≅

Lindberg Geologic Consulting	Engineering-Geologic Well Connectivity Assessment Report	Figure 2
Post Office Box 306	High Point Road, Dinsmore, APN: 208-201-017	February 16, 2023
Cutten, CA 95534	Well e0353403, Ms. Petya Ivanova, Cherrytree LLC, Client	Project 0488.00
(707) 442-6000	Humboldt County Assessor's Parcel Map (locations approximate)	Scale as Shown

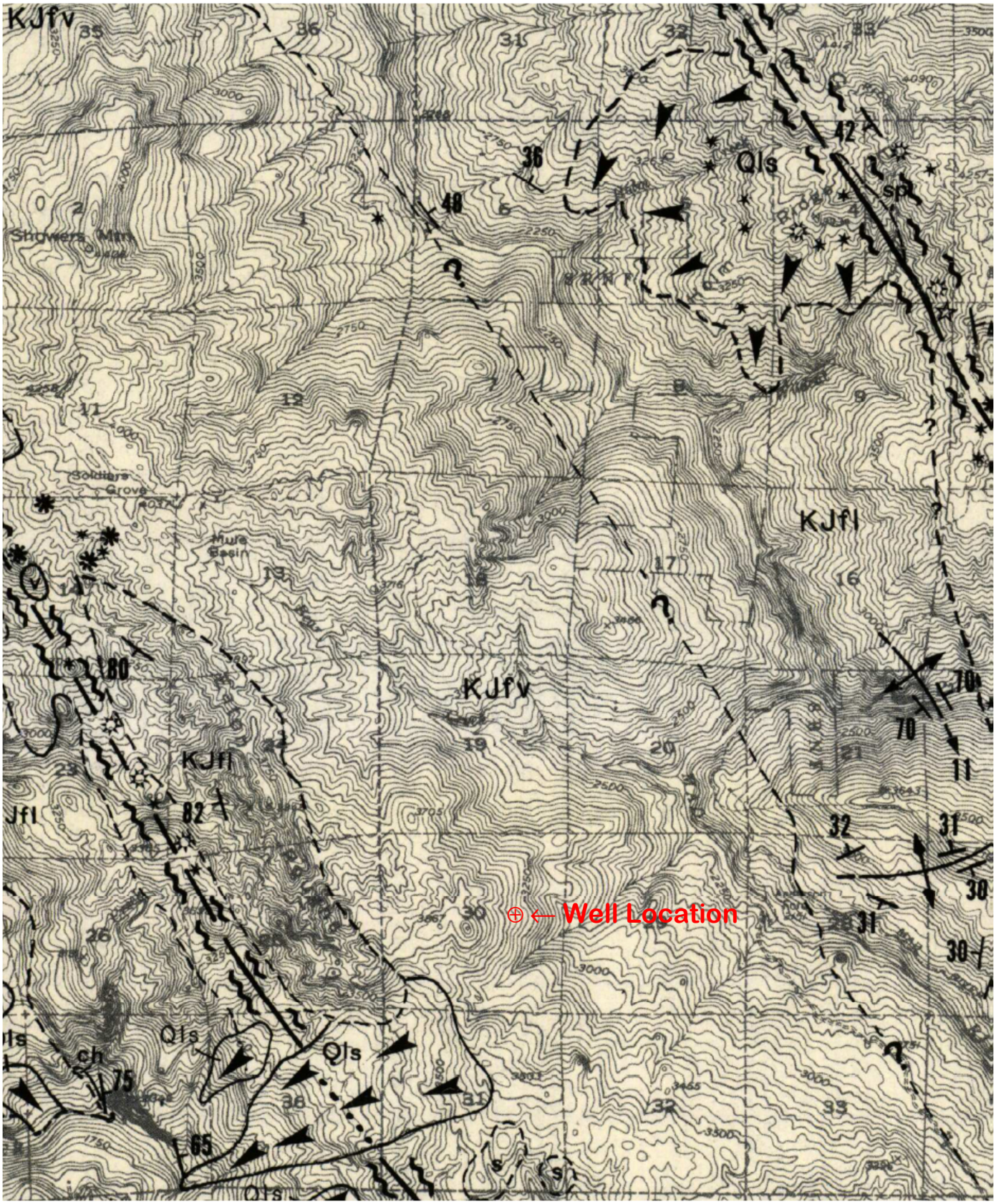


Lindberg Geologic Consulting	Engineering-Geologic Well Connectivity Assessment Report	Figure 3
Post Office Box 306	High Point Road, Dinsmore, APN: 208-201-017	February 16, 2023
Cutten, CA 95534	Well e0353403, Ms. Petya Ivanova, Cherrytree LLC, Client	Project 0488.00
(707) 442-6000	Humboldt County Assessor's Parcel Map (locations approximate)	1" ≈ 700'



Modified from: Google Earth Imagery of July 17 2022. N ≈

Lindberg Geologic Consulting	Engineering-Geologic Well Connectivity Assessment Report	Figure 4
Post Office Box 306	High Point Road, Dinsmore, APN: 208-201-017	February 16, 2023
Cutten, CA 95534	Well e0353403, Ms. Petya Ivanova, Cherrytree LLC, Client	Project 0488.00
(707) 442-6000	Geologic Map (locations approximate)	1" ≈ 4,000'



Modified from: Aalto and Others, 1988 N ≈

DESCRIPTION OF MAP UNITS

QUATERNARY UNITS:

Qls LANDSLIDE AND EARTHFLOW DEBRIS: Downslope movement resulting from mass wasting is widespread. However, only major slides and earthflows are shown. Mass movement is common in all terranes, especially in shear zones, melange, and schistose units.

FRANCISCAN COMPLEX (Upper Jurassic-Lower Cretaceous):

KJfu DOMINANTLY SEDIMENTARY ROCKS (TEXTURAL ZONE 1 OF BLAKE AND OTHERS, 1967): Dominantly pervasively sheared, interbedded graywacke, shale and conglomerate, with minor intercalated lenses of greenish-black mafic volcanic rock (v) and red, green or dark gray ribbon chert (ch), which in places is in apparent depositional contact with the volcanic rock. Graywacke ranges in composition (*cf.* Folk, 1974) from litharenites to lithic arkoses (Aalto, 1987), lacks K feldspar, but commonly contains small amounts of pumpellyite within plagioclase grains. This unit is part of the Yolla Bolly terrane of Jayko and Blake (1987). Rocks of this unit are relatively coherent and sustain moderate relief, but contain localized shear zones that fail in earthflows.

KJfv MELANGE: Contains blocks chiefly composed of graywacke (large blocks labeled S) and mafic volcanic rock (large blocks labeled V; also see compositional key below), with less abundant chert pebble conglomerate, red and green ribbon chert, partially to wholly recrystallized light gray limestone, serpentinized ultramafic rock, foliated textural zone 2 metagraywacke (z2) and glaucophane-bearing schistose rock, all dispersed in a sheared shaly matrix. Graywacke is similar in composition to that of unit KJfu. Blocks are commonly ellipsoidal and range in size from centimeters to tens of meters in maximum dimension. Based on its location west of the Grogan fault, this unit is probably a melange within the Central Franciscan belt (Aalto, 1987; Aalto and Murphy, 1984; Jayko and Blake, 1987). This unit is incompetent and commonly fails in earthflows creating a low relief topography.

KJfl DOMINANTLY SEDIMENTARY ROCKS (TEXTURAL ZONE 1 OF BLAKE AND OTHERS, 1967): Dominantly moderately to pervasively sheared graywacke and shale with minor conglomerate. Graywacke is similar in composition to that of unit KJfu. Intercalated chert and volcanic rock are less common than in unit KJfu. Based on its location west of the Grogan fault, this unit is probably part of the Central Franciscan belt (Aalto, 1987; Jayko and Blake, 1987). This unit typically sustains moderate to high relief.

KJ_2 METASEDIMENTARY ROCK (TEXTURAL ZONE 2 OF BLAKE AND OTHERS, 1967): Chiefly gray to gray-green phyllite with minor platy to semi-schistose graywacke and stretched pebble conglomerate. These rocks are in gradational contact with superjacent rocks of textural zone 3 (Aalto, 1983) and herein are considered to be part of the Pickett Peak terrane.

KEY TO SYMBOLS

CONTACTS:

Depositional or of unknown character; dashed where inferred, dotted where concealed.

Thrust fault; dashed where inferred, dotted where concealed. Sawteeth on upper plate.

High angle fault; dashed where inferred, dotted where concealed. Arrows indicate relative horizontal movement.

Shear zones along the Grogan fault, Snow Camp Creek fault, and Eaton Roughs fault zone; zones commonly contain clastic sedimentary rocks, chert, limestone, volcanic rocks , and glaucophane-bearing schistose rocks dispersed in argillite that has subvertical folds and foliation (Aalto, 1983).

ORIENTATION OF BEDDING AND FOLIATION:

16 Inclined

32 Overturned

Vertical

Horizontal unright

23 12 Strike and dip of inclined foliation; arrow depicts trend and plunge of lineation defined by the intersection of two metamorphic foliations.

Strike of vertical foliation

FOLD ORIENTATION:

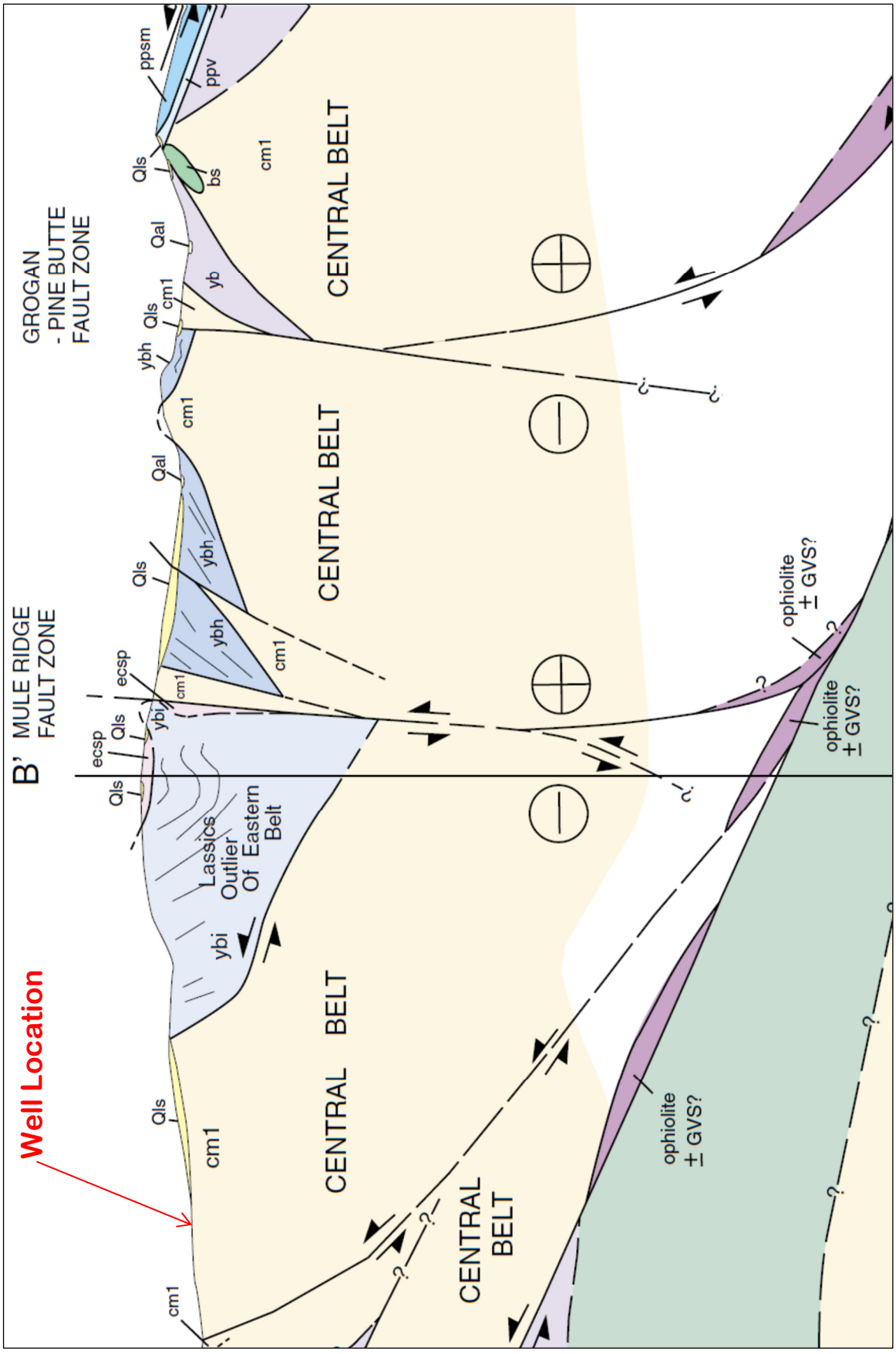
9 Anticline showing trace of axial plane and plunge of axis; dashed where located approximately

44 Overturned anticline showing trace of axial plane and plunge of axis; dashed where located approximately

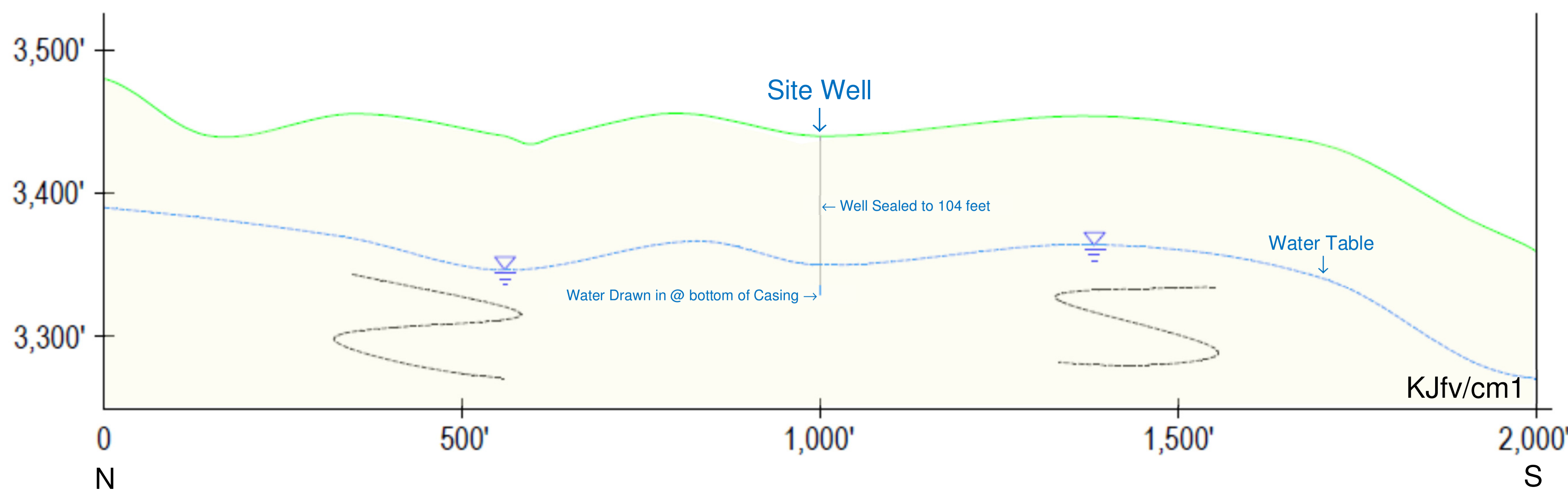
13 Syncline showing trace of axial plane and plunge of axis; dashed where located approximately

74 Overturned syncline showing trace of axial plane and plunge of axis; dashed where located approximately

Lindberg Geologic Consulting	Engineering-Geologic Well Connectivity Assessment Report	Figure 5
Post Office Box 306	High Point Road, Dinsmore, APN: 208-201-017	February 16, 2023
Cutten, CA 95534	Well e0353403, Ms. Petya Ivanova, Cherrytree LLC, Client	Project 0488.00
(707) 442-6000	Geologic Cross Section (locations approximate)	Not to Scale

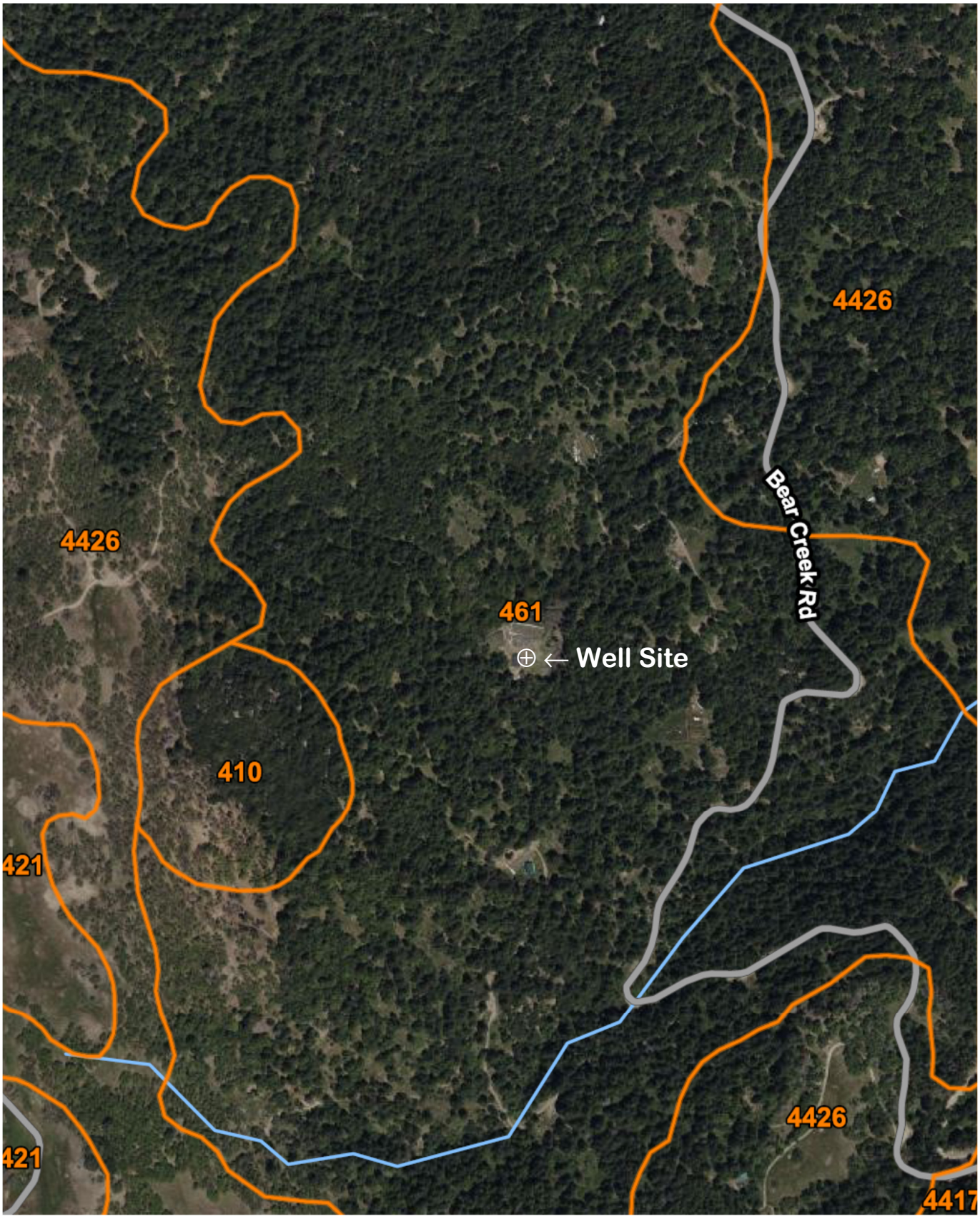


Lindberg Geologic Consulting	Engineering-Geologic Well Connectivity Assessment Report	Figure 6
Post Office Box 306	High Point Road, Dinsmore, APN: 208-201-017	February 16, 2023
Cutten, CA 95534	Well e0353403, Ms. Petya Ivanova, Cherrytree LLC, Client	Project 0488.00
(707) 442-6000	Hydrogeologic Cross Section (locations approximate)	2X VE



In this vertically exaggerated (~2x) cross section, the view is looking to the east toward the Mad River valley. Groundwater flow in this cross section is easterly, away from the viewer, or into the page. Groundwater is presumed to flow from recharge areas in the higher ground of Amelia Butte to the west. This well is sited high on the ridge above Mad River valley. Subgrade is composed of mélange (argillite and sandstone) of the Central Belt of the Franciscan Complex. Groundwater is envisioned to flow through bedrock fractures. Fractures are interpreted to be the primary permeability, providing preferential flow paths for the local groundwater. The driller failed to note the first water encountered. Static water level was reported at 90 feet below the surface. A bentonite seal was installed by the driller from the ground surface to the 104-foot depth. This well is cased to 110 feet below the existing ground surface, and not screened, but rather was developed from the bottom, and draws groundwater from the 110-foot depth. Bedrock mapping (Figure 4), is from Aalto and Others, (1988).

Lindberg Geologic Consulting	Engineering-Geologic Well Connectivity Assessment Report	Figure 7
Post Office Box 306	High Point Road, Dinsmore, APN: 208-201-017	February 16, 2023
Cutten, CA 95534	Well e0353403, Ms. Petya Ivanova, Cherrytree LLC, Client	Project 0488.00
(707) 442-6000	Humboldt County Assessor's Parcel Map (locations approximate)	Scale Not Determined



Modified from: USGS-NRCS Web Soil Survey, February 16, 2023. N ≈

*The free Adobe Reader may be used to view an plete this form. However, software must be purchased to con , save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0353403

RECEIVED

SEP 27 2017

HUMBOLDT CO. DIVISION OF ENVIRONMENTAL HEALTH

Page 1 of 1

Owner's Well Number

Date Work Began 08/25/2017 Date Work Ended 8/30/2017

Local Permit Agency

Permit Number 16/17-1372 Permit Date

DWR Use Only – Do Not Fill In

State Well Number/Site Number

N W

Latitude Longitude

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
0	10	BROWN SILT
10	90	GREY SHELL
90	110	GREY QUARTZ/SHELL

Total Depth of Boring 110 Feet

Total Depth of Completed Well 110 Feet

Well Owner

Name ELSA MURIEL LORIST

Mailing Address PO BOX 831

City FORTUNA State CA Zip 95540

Well Location

Address HIGH POINT RD

City DINSMORE County Humboldt

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

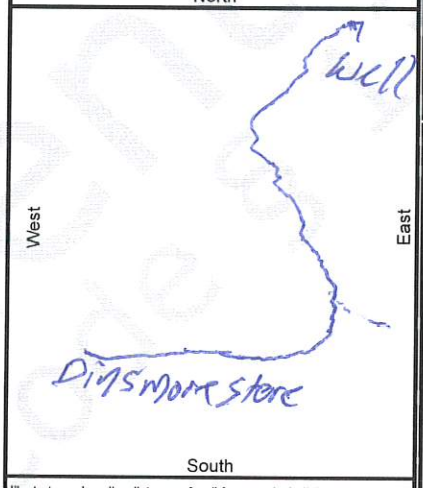
Datum Dec. Lat. Dec. Long.

APN Book 208 Page 201 Parcel 017

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. **Please be accurate and complete.**

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water (Feet below surface)

Depth to Static Water Level 90 (Feet) Date Measured 08/28/2017

Estimated Yield * 10 (GPM) Test Type Air Lift

Test Length 4.0 (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	120	5 9/16		Low Carbon Steel	.188	5 9/16		

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	104	Bentonite	Bentonite Chips

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 3D Drilling
Person, Firm or Corporation

PO Box 1285 Address Rock Springs City WY State 82902 Zip

Signed Chad Parker C-57 Licensed Water Well Contractor

8/30/17 Date Signed

10015033 C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ENTERED

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR NOV 17 2014

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0234785

DWR Use Only – Do Not Fill In

State Well Number/Site Number

N W

Latitude Longitude

APN/TRS/Other

Page 1 of 2

Owner's Well Number 1

Date Work Began 09/19/2014 Date Work Ended 9/22/2014

Local Permit Agency Humboldt County E.H.D.

Permit Number 13/14-0319 Permit Date 5/1/14

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Direct Rotary Drilling Fluid Air

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
0	2	Top Soil
2	10	Sandstone Clay Mix
10	15	Brown Clay
15	30	Shale
30	46	Blue Sandstone
46	71	Shale Sandstone Mix
71	97	Bue Sandstone97
97	200	Shale, Sandstone, Basalt Mix

Total Depth of Boring 200 Feet

Total Depth of Completed Well 200 Feet

Well Location

Address Bear Creek Rd.

City Bridgeville County Humboldt

Latitude ___ ___ ___ N Longitude ___ ___ ___ W
Deg. Min. Sec. Deg. Min. Sec.

Datum ___ Dec. Lat. ___ Dec. Long. ___

APN Book 208 Page 201 Parcel 011

Township 02N Range 05E Section 29

Location Sketch

(Sketch must be drawn by hand after form is printed.)

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 and complete.**

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other ___
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

◉ Water Supply
☑ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other ___

Water Level and Yield of Completed Well

Depth to first water 75 (Feet below surface)

Depth to Static Water Level 61 (Feet) Date Measured 09/19/2014

Estimated Yield * 2 (GPM) Test Type Air Lift

Test Length 4.0 (Hours) Total Drawdown 189 (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	120	10	Blank	PVC Sch. 80	CL200	5		
120	200	10	Screen	PVC Sch. 80	CL200	5	Milled Slots	0.032

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	20	Bentonite	Sanitary Seal
20	200	Filter Pack	3/8" Pea Gravel

Attachments

☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Location Map

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

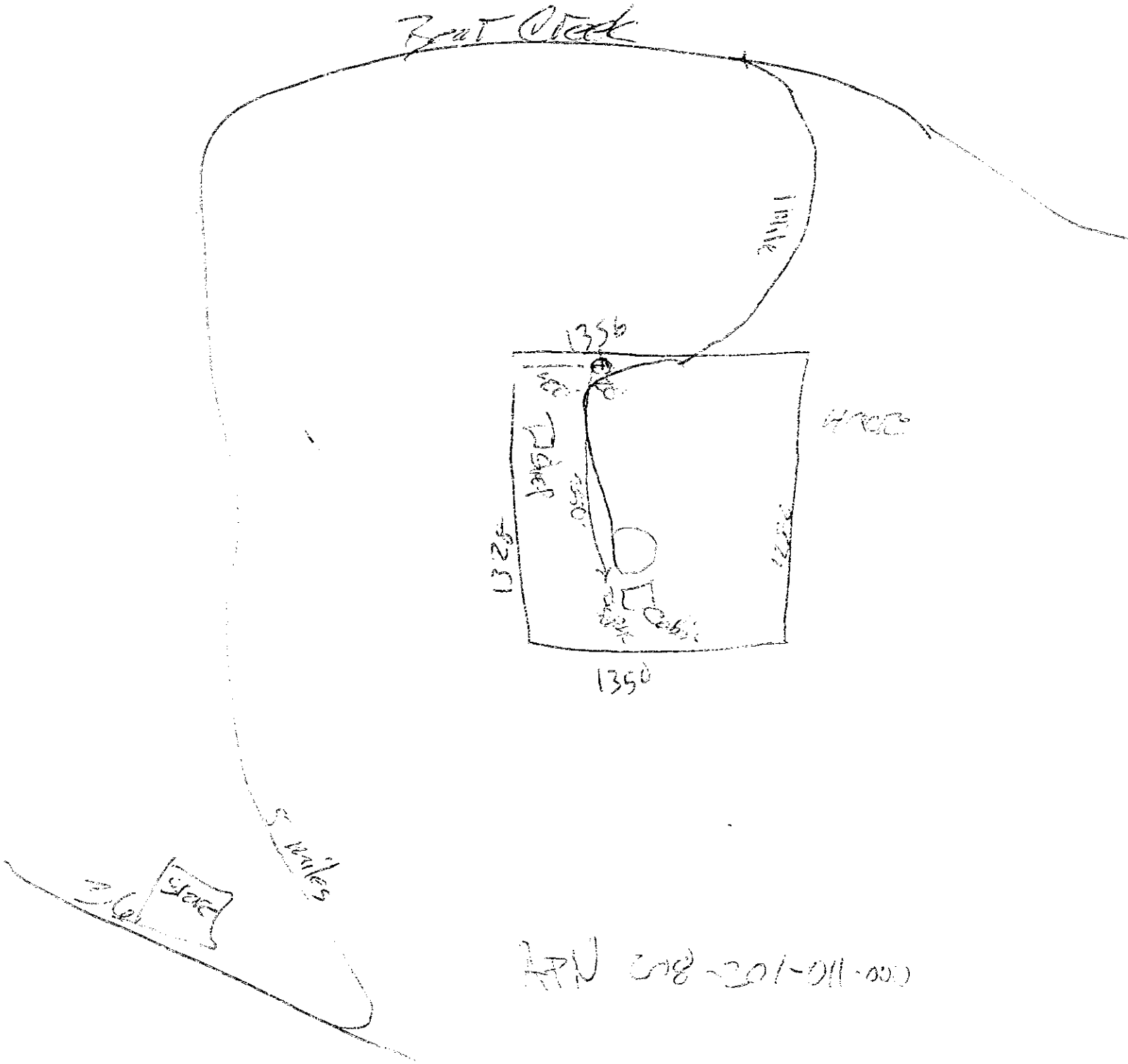
Name FISCH DRILLING
Person, Firm or Corporation

3150 JOHNSON ROAD HYDESVILLE CA 95547
Address City State Zip

Signed ___ 09/29/2014 683865
C-57 Licensed Water Well ~~Contractor~~ Date Signed C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM



120	200	10	Screen	PVC Sch. 80	CL200	5	Milled Slots	0.032	20	200	Filter Pack	3/8" Pea Gravel

Attachments

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Signed _____ (C-57 Licensed Water Well Contractor) 09/29/2014 (Date Signed) 683865 (C-57 License Number)

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Humboldt County, Central Part, California

461—Tannin-Burgsblock-Rockyglen complex, 30 to 50 percent slopes

Map Unit Setting

National map unit symbol: xhvy
Elevation: 200 to 4,000 feet
Mean annual precipitation: 49 to 90 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 240 to 280 days
Farmland classification: Not prime farmland

Map Unit Composition

Tannin and similar soils: 40 percent
Burgsblock and similar soils: 25 percent
Rockyglen and similar soils: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tannin

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope, shoulder, footslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium derived from mudstone and/or colluvium derived from sandstone

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 7 inches: loam
AB - 7 to 24 inches: loam
Bt1 - 24 to 43 inches: gravelly loam
Bt2 - 43 to 59 inches: gravelly clay loam
Bt3 - 59 to 79 inches: gravelly clay loam

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F005XZ022CA - Mesic Mountains >60"ppt
Hydric soil rating: No

Description of Burgsblock

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope, shoulder, footslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Colluvium derived from sandstone and/or colluvium derived from mudstone and/or residuum weathered from sandstone and/or residuum weathered from mudstone

Typical profile

Oi - 0 to 1 inches: gravelly slightly decomposed plant material
A - 1 to 8 inches: very gravelly silt loam
AB - 8 to 22 inches: very gravelly silt loam
Bt1 - 22 to 47 inches: very gravelly clay loam
Bt2 - 47 to 67 inches: very gravelly clay loam
Bt3 - 67 to 79 inches: very gravelly clay loam

Properties and qualities

Slope: 30 to 50 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: F005XZ022CA - Mesic Mountains >60"ppt
Hydric soil rating: No

Description of Rockyglen

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope, footslope, shoulder
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Concave, convex, linear
Across-slope shape: Linear, concave, convex
Parent material: Colluvium derived from mudstone and/or residuum weathered from sandstone

Typical profile

Oi - 0 to 2 inches: very gravelly slightly decomposed plant material
A1 - 2 to 6 inches: gravelly loam
A2 - 6 to 12 inches: very gravelly loam
Bw1 - 12 to 26 inches: extremely gravelly loam
Bw2 - 26 to 45 inches: extremely gravelly loam
C - 45 to 79 inches: extremely gravelly loam

Properties and qualities

Slope: 30 to 50 percent
Surface area covered with cobbles, stones or boulders: 5.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F005XZ022CA - Mesic Mountains >60"ppt
Hydric soil rating: No

Minor Components

Wohly

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Coolyork

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Concave, convex, linear
Across-slope shape: Linear, concave, convex
Hydric soil rating: No

Chalkmountain

Percent of map unit: 4 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave, convex, linear
Across-slope shape: Linear, concave, convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Data Source Information

Soil Survey Area: Humboldt County, Central Part, California
Survey Area Data: Version 9, Sep 1, 2022