

EXHIBIT F

Gilpin Geosciences, Inc
Earthquake & Engineering Geology

June 12, 2018
91658.03

Annalee Sanborn
PPI Engineering, Inc.
2800 Jefferson Street
Napa, CA 94559

**Subject: Engineering Geological & Geotechnical Evaluation
 Ovid Vineyards, Metamorphosis Wines, LLC
 APN 032-030-065 & 066
 255 Long Ranch Road
 St. Helena, California**

Dear Ms. Sanborn:

We are pleased to present the results of our engineering geological and geotechnical evaluation of the proposed new vineyard blocks for a total of 31.5 acres (38.9 acres gross) on the Ovid Vineyards property on Pritchard Hill at 255 Long Ranch Road (Figure 1) in St. Helena. Existing improvements on the parcel include a winery, office facilities, wells, numerous water storage facilities, and a paved access driveway.

We understand that this evaluation will supplement the "Metaorphosis Wines, LLC 255 Long Ranch Road Track I Erosion Control Plan, Blocks 1-5", prepared by PPI Engineering, Inc. (PPI), and dated June 2018.

The proposed new vineyard block 5 lies within the Lake Hennessey watershed, however we have performed our evaluation on the other blocks 1, 2A-2C, 3, and 4, included in the ECP

SCOPE OF SERVICES

The purpose of this evaluation was to review the proposed vineyard development and evaluate the potential impact to local surface erosion and slope stability. In order to accomplish this, we performed the following tasks:

- reviewed published and unpublished reports and maps of the site;
- reviewed aerial photographs in order to evaluate the surficial geological features on the site;
- reviewed the PPI Engineering, Inc. Erosion Control Plan, and,

- performed a geologic reconnaissance on 7 June 2018.

REGIONAL GEOLOGY

The site is located in the Coast Ranges geomorphic province, which is characterized by northwest-southeast trending valleys and ridges. These are controlled by folds and faults that resulted from the collision of the Farallon and North American plates and subsequent shearing along the San Andreas fault. The bedrock in the site vicinity, as shown on Figure 2, is mapped as Sonoma Volcanics andesitic to basaltic lava flows (Fox and others, 1973; Bezore, et al., 2005). This unit is characterized by volcanic deposits, including andesite or basaltic flows, that trend northwest to west and dip gently to the east to northeast. The site lies northwest of Haystack Mountain, a prominent topographic knob composed of pumicitic tuff and capped with north-dipping dacite lava flow.

Several queried landslides, as shown on Figure 2, have been mapped on the canyon wall approximately 350 – 400 vertical feet below the proposed 2B and 2C vineyard blocks (Dwyer and others, 1976). The massive Sage Canyon landslide that blankets the slopes above Sage Canyon Road lies approximately 1,500 feet northwest of the site.

The soil mapped at the site is the Hambright-Rock outcrop Complex, which is characterized as developing on basic igneous and massive sandstone bedrock, respectively (USDA, 1978).

Active faults have been mapped in the vicinity. The closest active faults to the site are the West Napa and Hunting Creek-Berryessa Fault approximately 3.7 miles southwest, and 6.8 miles east of the site, respectively. The West Napa fault is classified as a type B fault by the UBC, (ICBO, 1988) and is capable of generating a Moment Magnitude 6.5 earthquake. The Hunting Creek-Berryessa fault is classified as a type B fault by the UBC, (ICBO, 1988) and is capable of generating a Moment Magnitude 6.9 earthquake.

Two splays of an unnamed fault are mapped crossing vineyard Block 5 on the volcanic plateau near the northeast property corner as shown on Figure 2 (Bezore, et al., 2005). The ancient fault separates Sonoma Volcanic bedrock units of similar lithology along its trace. No faulting offset of Holocene (11,000 years old) or younger units has been documented.

SITE CONDITIONS

We evaluated site conditions based on aerial photo interpretation and a geological reconnaissance on 7 June 2018. The aerial photographs are referenced at the end of this letter.

The site consists of a gently sloping upland area bounded on the south by the volcanic escarpment overlooking the Napa Valley. The upland surface is naturally vegetated with low shrubs and grasses; however, parts of the site have been landscaped and orchards and vineyards have been planted. A natural swale separates proposed Blocks 1 and 2A but does not appear to continue off site. Larger channels drain the upland surface and flow down the steep west-facing escarpment.

The topographic relief across the site is on the order of 170 feet (PPI, 2018). The proposed vineyard blocks extend from 1,150 to 1,320 feet above sea level (PPI, 2018).

We noted frequent andesitic to basaltic volcanic bedrock outcrops within the proposed blocks and along the access roads. The soil in the proposed vineyard development has been classified according to the USDA Soil Conservation Service Soil Survey as Rock outcrop-Hambright complex. The rock is hard, very strong and resistant to erosion. The presence of frequent bedrock outcrops, and many very large boulders surrounding the existing vineyards indicates excavation of the vineyard areas will encounter bedrock difficult to rip. We concur with the Hambright classification and note that weathering of the andesitic to basaltic lava has resulted in very red soil development.

We did not observe any significant soil creep or slope instability in the course of our evaluation. There were no signs of instability at the top of the steep southern edge or at the top of the volcanic escarpment.

CONCLUSIONS AND RECOMMENDATIONS

Based on our research and review of the site conditions, we conclude the proposed new vineyards are feasible from engineering geological and geotechnical standpoints.

The surface drainage improvements associated with the existing vineyard incorporate controls to inhibit concentrated surface runoff that would lead to gullyng and sediment removal. The PPI Erosion Control Plan has proposed temporary and permanent drainage improvements for the new vineyard blocks that include straw mulch, straw wattles, and rock-filled avenues. The layout as shown in the plan appears appropriate with respect to the existing surface conditions described in this letter.

Construction of rock-filled avenues is feasible and the specifications appear adequate as shown on the detail on sheet 2 of 2. If the rock fill is placed on slopes steeper than 3:1 horizontal to vertical, the cut bench should be keyed into bedrock a minimum of 1 foot.

We did not observe any evidence of global slope instability such as landslides or soil creep. We observed favorable slope stability conditions with low inclinations, combined with strong to very strong andesitic lava underlying the site. In our judgment, given the site conditions we observed, the proposed vineyard improvements will not be impacted by nor impact the site vicinity slope conditions. Because of the hard rock surface conditions, blasting may be required to create a plantable "soil". In our opinion blasting will not adversely impact the local slope stability.

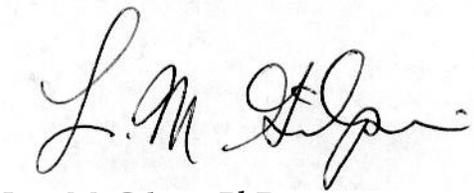
LIMITATIONS

Our services have been performed in accordance with generally accepted principles and practices of the geological and geotechnical profession. This warranty is in lieu of all other warranties, either expressed or implied. In addition, the conclusions and recommendations presented in this report are professional opinions based on the indicated project criteria and data described in this report. They are intended only for the purpose, site location and project indicated.

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We trust that this provides you with the information you need. If you have any questions, please call.

Sincerely,
GILPIN GEOSCIENCES, INC.



Lou M. Gilpin, PhD
Engineering Geologist

ROCKRIDGE GEOTECHNICAL, INC.



Craig Shields
Geotechnical Engineer

Attachments:	References
	Figure 1 Location Map
	Figure 2 Regional Geology Map

REFERENCES

Bezore, S.P., Clahan, K.B., Sowers, J.M., and Witter, R.C., 2005, Geologic Map of the Yountville 7.5' Quadrangle Napa County, California: A Digital Database: California Geological Survey Preliminary Geologic map, scale 1;24,000.

Dwyer, M. J., Noguchi, N., and O'Rourke, J., 1976, Reconnaissance photo-interpretation map of landslides in 24 selected 7.5 minute quadrangles in Lake, Napa, Solano, and Sonoma Counties, California: U.S. Geological Survey Open File Report 76-74, St. Helena Quadrangle, scale 1:24,000.

Fox, K.T., Sims, J.D., Bartow, J.A., and Helley, E.J., 1973, Preliminary Geologic map of Eastern Sonoma County and western Napa County, California: U.S. Geological Survey Miscellaneous Field Studies MF-483, scale 1:62500.

International Conference of Building Officials, 1988, Maps of known active fault near-source zones in California and adjacent portions of Nevada: prepared by California Division of Conservation Division of Mines and Geology, p. 19, with maps.

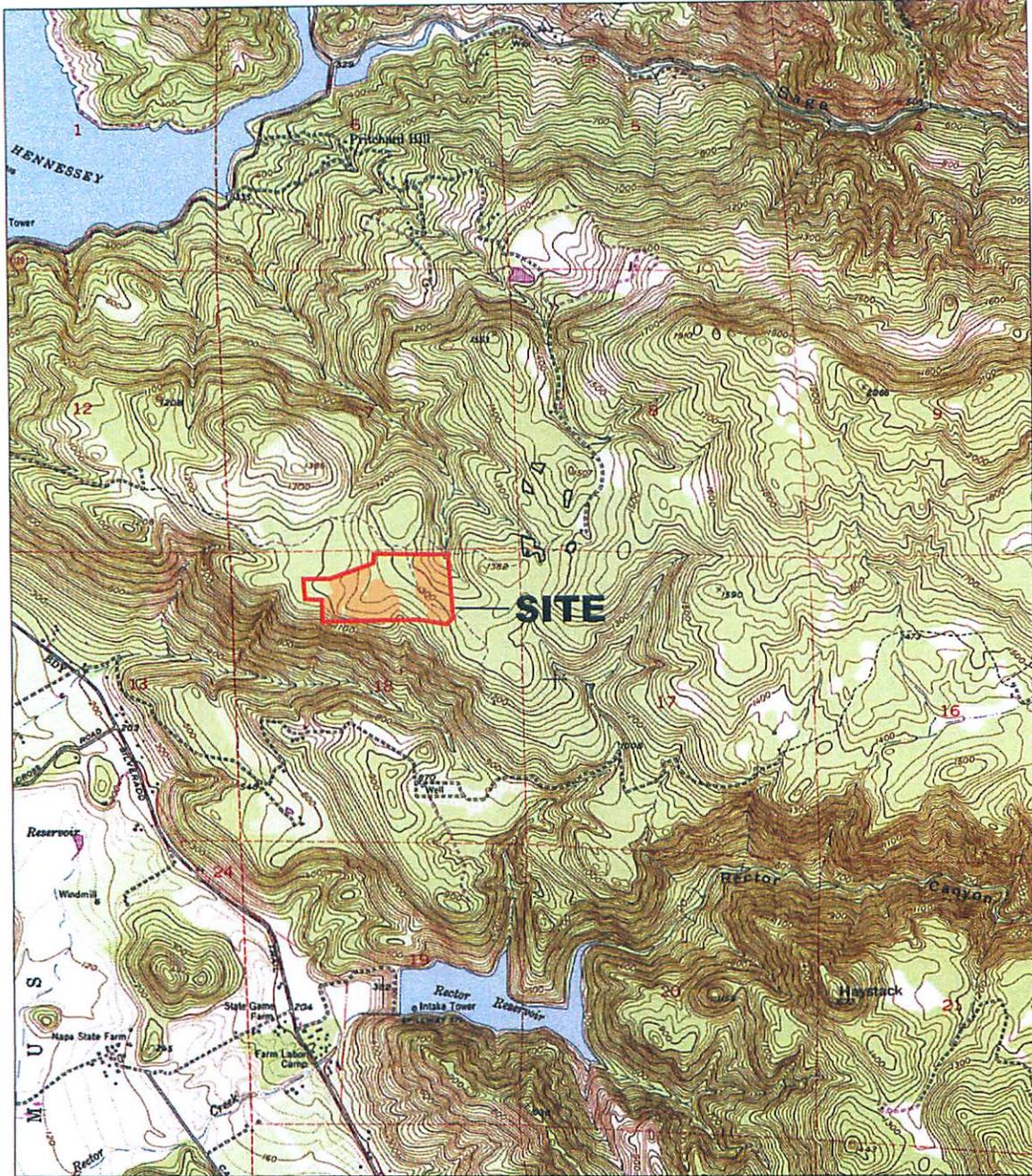
PPI Engineering, Inc., 2018, Metamorphosis Wines, LLC 255 Long Ranch Road Track I Erosion Control Plan, 2 Sheets, scale 1-inch=100-feet, dated, June 2018.

U.S. Department of Agriculture, 1978, Soil Survey of Napa County, California: U.S. Department of Agriculture Soil Conservation Service, Washington, D.C.

U.S. Geological Survey, 1978, Yountville Quadrangle California 7.5 Minute Series (Topographic), scale 1;24,000.

Aerial Photographs

<u>Date</u>	<u>Photo Number</u>	<u>Scale</u>	<u>Source</u>
10/8/99	CIR 6323-10- 23,24	1:12,000	Quantum Spatial
8/27/93	CIR 4519-10- 15,16	1:12,000	Quantum Spatial



TN 15°

0 1000 FEET 0 500 1000 METERS
 Printed from TOPOI ©2001 National Geographic Holdings (www.topo.com)



Base Map: National Geographic, 2001

SITE LOCATION MAP

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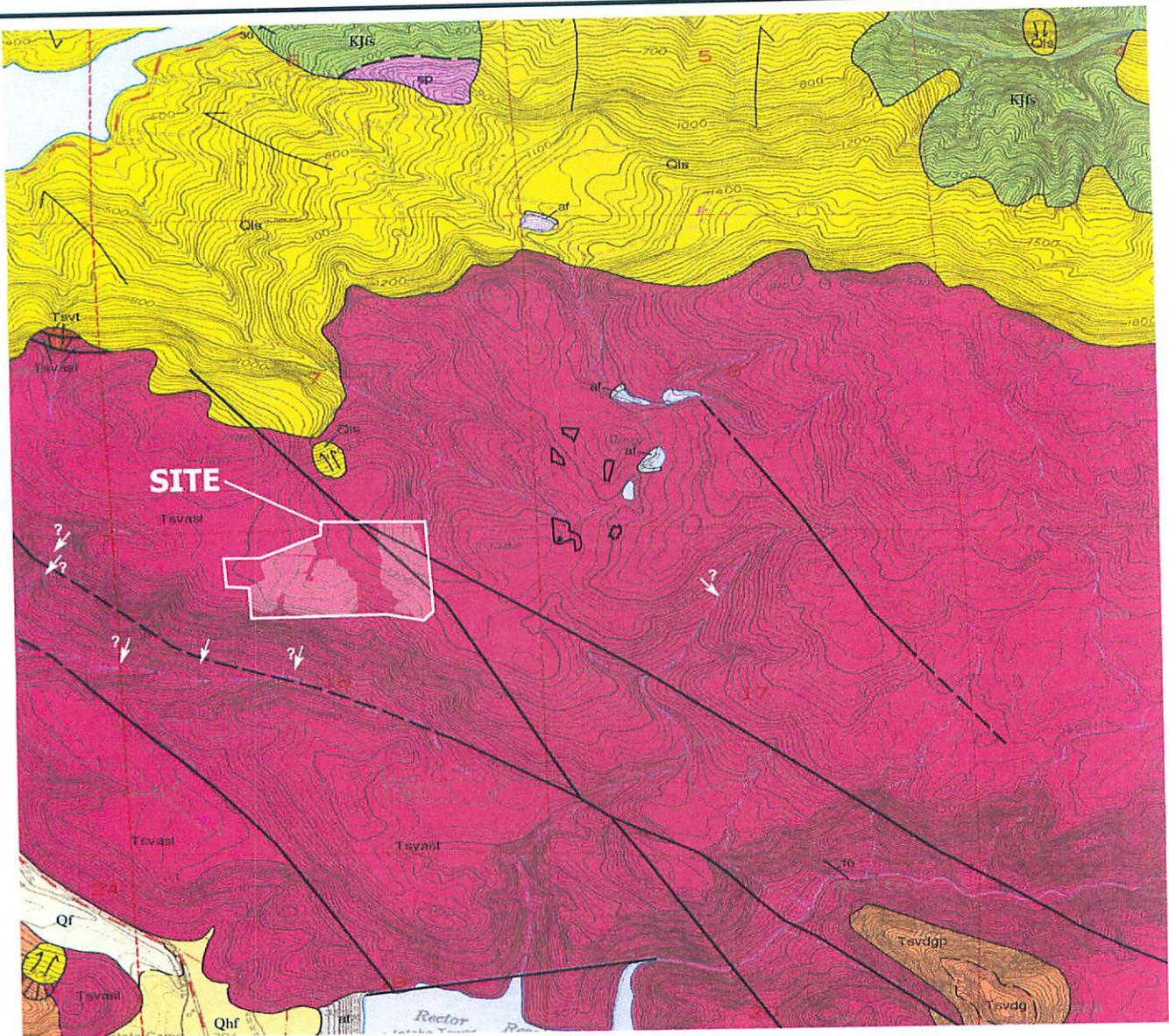
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FIGURE

1

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EXPLANATION

Geologic Units

af - artificial fill
 Qf, Qhf, Qha, Qpf - Alluvium
 Qls - Landslide deposits



Landslides (from Dwyer et al, 1976)
 P-Probable, DA-Definite, Active,
 queried where unknown.

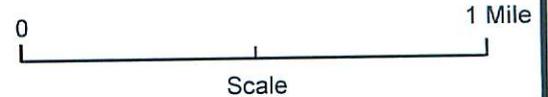
Sonoma Volcanics

Tsvdg - Dacite of Mt. George flows and shallow intrusives
 Tsvdgp - Pumice breccia
 Tsvasl - Andesite lava flows and breccias of Stags Leap

Franciscan Complex

KJfs - sandstone (greywacke)

Reference: Bezore, et al., 2005.



REGIONAL GEOLOGY MAP

Metamorphosis Wines LLC
 St. Helena, California

FIGURE

2

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