TECHNICAL REVIEW

Breaking New Ground at Inglenook

Historic Property Poised for Next Century Thanks to New Production Winery

Andrew Adams

Andrew Adams is the editor of the *Wine Analytics Report* and grew up in the city of Sonoma, Calif. before graduating from the University of Oregon with a degree in journalism. In addition to working at daily newspapers for more than a decade, Adams worked in the cellar and lab at the former Starmont winery in Napa Valley before serving as a writer and editor at *Wines & Vines* magazine for nearly a decade.

Just past the barrel washing station near the entrance to the cold room in the vast network of caves at Napa Valley's Inglenook estate is where the company held its last major event—and it proved to mark the end of one era and the start of another.

The rather unremarkable passageway from one cave, which houses a barrel work area, to the cave for barrel aging is where, on Feb. 13, 2020, estate owner and famed film director Francis Ford Coppola drove a small front-end loader in front of a crowd of more than 100 employees to literally break through the excavation of a new cave network into the winery's existing caves.

While the ceremony was the last major event at the winery prior to the pandemic, it could also be viewed as the start of the next era for the historic winery.

Inglenook now boasts an additional 22,000 square feet of caves thanks to an expansion to create a sophisticated production facility, which was finished in time for the 2022 harvest. It is the next step following the 2011 hire of director of winemaking, Philippe Bascaules, who worked as the estate director of Château Margaux in Bordeaux for more than a decade. The facilities at Inglenook are now comparable to the best of Bordeaux as the Coppola family continues to invest in a property that has a tradition of winemaking going back to 1879.

Handling day-to-day winemaking are senior associate winemaker Chris Phelps and associate winemaker Jonathan Tyer, who also helped manage construction and equip the new winery.

An abundance of top-of-the-line processing and fermentation equipment provides the winemaking team with an enviable level of labor efficiency and logistical flexibility to focus on each unique section of the estate vineyards while also running multiple trials each vintage to maintain and improve wine quality.

Tyer said all grapes arrive at the winery in small bins that are emptied by hand into a Bucher Vaslin Delta Densilys that separates the clusters from any MOG in a receiving hopper filled with water. Lighter debris floats to the surface where it's collected into a waste channel.

"It's to get the fruit as clean as possible," Tyer said. "The Densilys was an option to clean dust and impurities off of the grapes to really get our pure fruit."

The Densilys feeds into a Bucher Vaslin Oscillys destemmer that empties onto a densimetric sorting table, which sorts the loose berries. The berries then run through a WECO optical sorter that feeds another elevated conveyor with rolling crushers at the top. The equipment ensures the grapes are clean for sorting and fermentation; and while the automated sorting does reduce the number of workers needed for processing, the use of smaller picking bins (that also get washed) means it's still a relatively labor-intensive setup.

The sorted and lightly processed grapes then fall into one-ton tanks, called "cuvons," that are made by the French firm Serap Group. They feature a large, actuator-activated valve on the bottom. Once filled, the tanks are lifted above the top hatch of a fermentation tank by a forklift; and after another worker on a catwalk has ensured each tank is in position, they are connected to a compressed air outlet, and the bottom valve is opened to drain the smaller tank—it takes about 10 seconds—into the larger one.

The winery houses 120 double-walled and -insulated, stainless steel fermentation tanks used for the distinct portions of their 235 acres of certified organic estate vineyards. The gentle processing and use of gravity to transfer the must is a key part of the winemaking team's crush pad strategy.

An Abundance of Fermentation Space

Phelps said the new winery has the capacity to handle all the various growing regions of the estate individually, but the breakdown is not a rigid allotment of specific vineyard blocks to individual tanks.

The calculation, done by Tyer, was based on an average crop size, picking dates and fermentation times as well as other parameters to match the variables of yields and winemaking with a fixed amount of tank capacity. The winery generally produces between 22,000 to 25,000 cases a year from 700 to 750 tons of estate grapes. The estate Cabernet Sauvignon accounts for 10,000 cases, with production of the Rubicon blend coming in at around 7,500 cases. A further 1,200 cases of Syrah are produced.

The fermentation tanks can be used for white and red ferments but were designed with extraction and maceration in mind.

"These are a little taller than you might expect because there's been this sort of one-to-one golden rule, right?" Phelps explained. "By having a relatively small surface at the top of the cap, we can control exactly how we conduct a maceration. We're more about slow and gradual and stopping it right when we think it's a perfect time. With the bigger tanks we really noticed a faster rate of extraction."

Phelps and his team arrive at that perfect point to press through daily sensory analysis, complemented with routine wine chemistry and tannin analysis. Each tank is equipped with its own pump-over system and remote temperature monitoring and control via a TankNet system.

According to the winery, the automated tanks required more than 30 miles of electrical and communication wiring through the cave that was constructed with more than 1,000 cubic yards of low-CO_2 concrete. Must Fabrication in St. Helena provided the pump-over pumps and all the various piping needed to equip each tank with such a system.

"With all the extra automation, we're able to really dial in all of the details," Tyer said. "We can get extremely precise with our pump-overs and our extractions and the introduction of air."

The pump-over setups are also equipped with a sparging stone that is supplied with filtered air from an oil-free compressor. The system can be used to control and monitor headspace gassing, and additional tank ports can be used for probes to monitor Brix or dissolved oxygen.

According to Tyer, one safety feature is that the sparger cannot run unless the pump is running. The pumps are also used for washing, followed by Blue-Morph UV lights for sanitation.

In addition to better winemaking precision, the new technology also made the 2022 harvest much easier. When asked if there were any time and labor savings this year compared to others, Phelps and Tyer both answered with an emphatic yes.

"This year we did harvest with less people than we have in the past," Tyer said, "and for the most part, we were running shorter days."

Most of the fixed tanks range in size from three tons to 15 tons; the winery also has four large tanks that will be used for blending but could handle 27 tons

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for fermentation. A handful of small, portable tanks are used for small lots, white wines and trials.

Myriad tanks mean winemaking decisions are made purely based on quality rather than freeing up capacity to accommodate grapes that need to be picked.

Tyer said it's more efficient, and they're able to control every single parcel and realize the full potential of each.

At the top of the tanks, the hatches can be opened and closed with one hand, and also offer the ability to use fixed gas lines for headspace gassing and carbon dioxide evacuation. For headspace gassing, Tyer will either use argon Dewars or nitrogen from the winery's own generator. With carbon dioxide evacuation lines in place, one of the winery's long-term goals is to retain and reuse the gas produced from fermentation.

"There are some different options that in the future could be possible," Phelps said. "One is to make dry ice, which would be awesome, another is just to collect the gas and try and use that, and another would be to inject that CO_2 into the ground."

For the time being, and perhaps most importantly, the system ensures that a cave filled with hundreds of tons of fermenting must doesn't fill up with lethal carbon dioxide gas.

Phelps noted that it's a very efficient evacuation system, and there was never a trace of CO_2 in the cave this harvest.

Tyer said each tank base is fitted with CO_2 sensors that trigger a variety of alerts and alarms, and the warning system stayed quiet during the entire 2022 harvest.

Staying True to a Classic Style

While the cave doesn't require climate control, there is a chamber that does because it's used for white fermentation. The room is also where the two vertical presses and a brand-new basket press are stored. White wines ferment in a mix of 75-gallon stainless steel Mueller drums or puncheons.

Tyer said they designed the room big enough so that they can stack two high, making it easier for topping and accessing the barrels.

Inglenook produces a Sauvignon Blanc and white Rhône blend called Blancaneaux that is comprised of about a third each of Viognier, Roussanne and Marsanne. The whites receive regular lees stirring through the winter prior to bottling in the spring.

Both the reds and whites spend time exclusively in French oak, with the estate Cabernet Sauvignon aging in roughly 75 percent new barrels, Rubicon seeing 50 percent new and the estate Syrah about 35 percent.

While the winery does have a core of about four coopers it uses each year, Tyer and the rest of the winemaking team closely evaluate all barrels every vintage.

"Every year we have all of our coopers, and we try and put the same wine lot into all of them and have those stay completely separate up until bottling to really identify if any of them are changing qualities that we like or don't like," he said.

The whites are bottled under Diam corks while the reds are sealed with natural corks that have undergone individual TCA testing by Portocork and Amorim.

The barrel washing area—equipped with a washing unit, steam wands and an ozone generator—is the connecting passage between the new and the 16,000-square-feet of caves dug in 2003. Following a tour of the new facility, Phelps said it was Coppola's idea to move the new winery underground rather than at the top of the knoll, as originally planned, out of respect for the natural environment.

Although that initial planning phase of the project started in 2015, the new winery can be viewed as the final act of restoration that started when Coppola purchased the property in 1975.

Since then, the company has created a 50-year vineyard replant plan, brought in Phillippe and continued the restoration in earnest after Coppola purchased the Inglenook name in 2011.

"The vineyard is the big thing," Phelps said. "A new winery is fantastic, but it's not the crucial part. But to Francis, there's no reason we don't deserve the latest, greatest—not fancy but hyper-practical—and still aesthetically pleasing facility. That's the last missing element of what he sees is just the complete restoration and update for this property. He wants it to be on the level of a Bordeaux first growth, a Napa first growth."

Phelps is quick to add that the goal is by no means to mimic Bordeaux but remain true to an estate that has produced dozens of classic vintages going back to the '70s and earlier. He said the wines coming off the estate in the past two decades are much closer to those classic vintages, an assessment based on extensive tannin and anthocyanin analysis, as well as tasting.

"We're not trying to fight anything during harvest, and this harvest [2022] I think we really saw that it's just guiding the grapes through the winery into the bottle and trying not to get in the way," he said. "We have reason to believe that we're much closer now to what was done in the late '70s-early '80s. We feel confident we're on that track now." **WBM**

technical review

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Owners/Principals
Francis & Eleanor Coppola

Winemakers
Philippe Bascaules,
Director of Winemaking
Chris Phelps,
Sr. Associate Winemaker
Jonathan Tyer,
Associate Winemaker

Vineyard & Cellar Operations
Enrique Herrero

Year Bonded
1879

Winery Case Production
20,000

Average Bottle Price
$225

VINEYARD INFORMATION

Appellation
Rutherford
Vineyard acreage
235
Varieties grown
Cabernet Sauvignon, Cabernet Franc, Merlot, Petit Verdot, Syrah, Marsanne, Roussanne, Viognier, Sauvignon Blanc and Semillon
Soil type
Well-drained volcanic and alluvial soils
Climate
Mediterranean
Total tons
450
Sustainability certification(s)
CCOF Organic (1994)
Sustainability practices (not certified)
Napa Green (in process)

BUILDING THE WINERY

Year built
2022
Size (square feet)
22,000
Architect
Matt Hollis Architects
Contractor
Nordby Construction Co.
Cave excavation
Nordby Wine Caves

WINEMAKING

Receiving hopper
Bucher Vaslin
Sorter
Delta Densilys, Bucher Vaslin, WECO optical sorter
Destemmer
Oscillys, Bucher Vaslin
Crusher
Bucher Vaslin
Tanks
120 stainless steel tanks, double-walled and ranging in capacity from 3 to 15 tons
Four large tanks (27 tons) will be used for blending
Small portable tanks are used for small lots and trials
Sumps (for processed fruit): Serap Group
Tank heating/Chilling systems
TankNet providing individual control for every connected tank
Pump-over screens, devices, pumps
Must Machining & Fabrication
Pump-over control
TankNet
Pumps
Francesca and Cazaux
Presses
Horizontal presses: Bucher Vaslin
Vertical presses: JLB, Bucher Vaslin
Barrels
100% French Oak, 50% to 75% new for reds
Whites ferment in French oak or stainless steel drums with regular lees stirring
Barrel washing system
washing unit, steam and ozone