

CLOS DE LA TECH

**Our Jack Russell,
J. Rockwell Dogworth III,
“Rocky,” takes a siesta
after chasing all of the
critters out of the vineyard.**

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Listening to the master. After trying for three years to visit Romanée-Conti, I finally received a private tour from Aubert de Villaine, the owner of the Domaine de la Romanée-Conti (DRC), which makes the most expensive red burgundy in the world, Romanée-Conti (\$1,695 per bottle at the 2002 release). Although our American Pinot Noir is different from French Burgundies, as we optimize them for the soils and climate in California, we have taken the winemaking process used at DRC as the baseline for how we make wine. Others de-stem the grape berries prior to fermentation, but the DRC ferments whole clusters. Our experimentation at Clos de la Tech showed that whole clusters (which reduce the amount of seed tannin in the wine and increase the amount of stem tannin in the wine) make bigger wines with rounder, softer tannin. The DRC uses native (field) yeast to ferment. We also do not add refined yeast to the fermentation and prefer the complexity of the natural fermentation in which several varieties of native field yeasts ferment the wine. We use the same barrel maker as does DRC, François Frères, from the town of Saint Romain in Burgundy. We also prefer our oak from the Bertrange forest in central France, because of its very understated oak flavor, which allows us to use all new barrels for every harvest without over-oaking the wine. Like DRC, we also bottle our wine by gravity with no filtration. Although we do use high technology to monitor the grapes during the growing season and the wine during fermentation and barrel-aging, we never deviate from the basic Burgundian "recipe" for making Burgundy that was firmly established in the 1830s, unless that new technology dramatically improves the wine (for example, our fully automated, but very gentle wine press—patent pending).

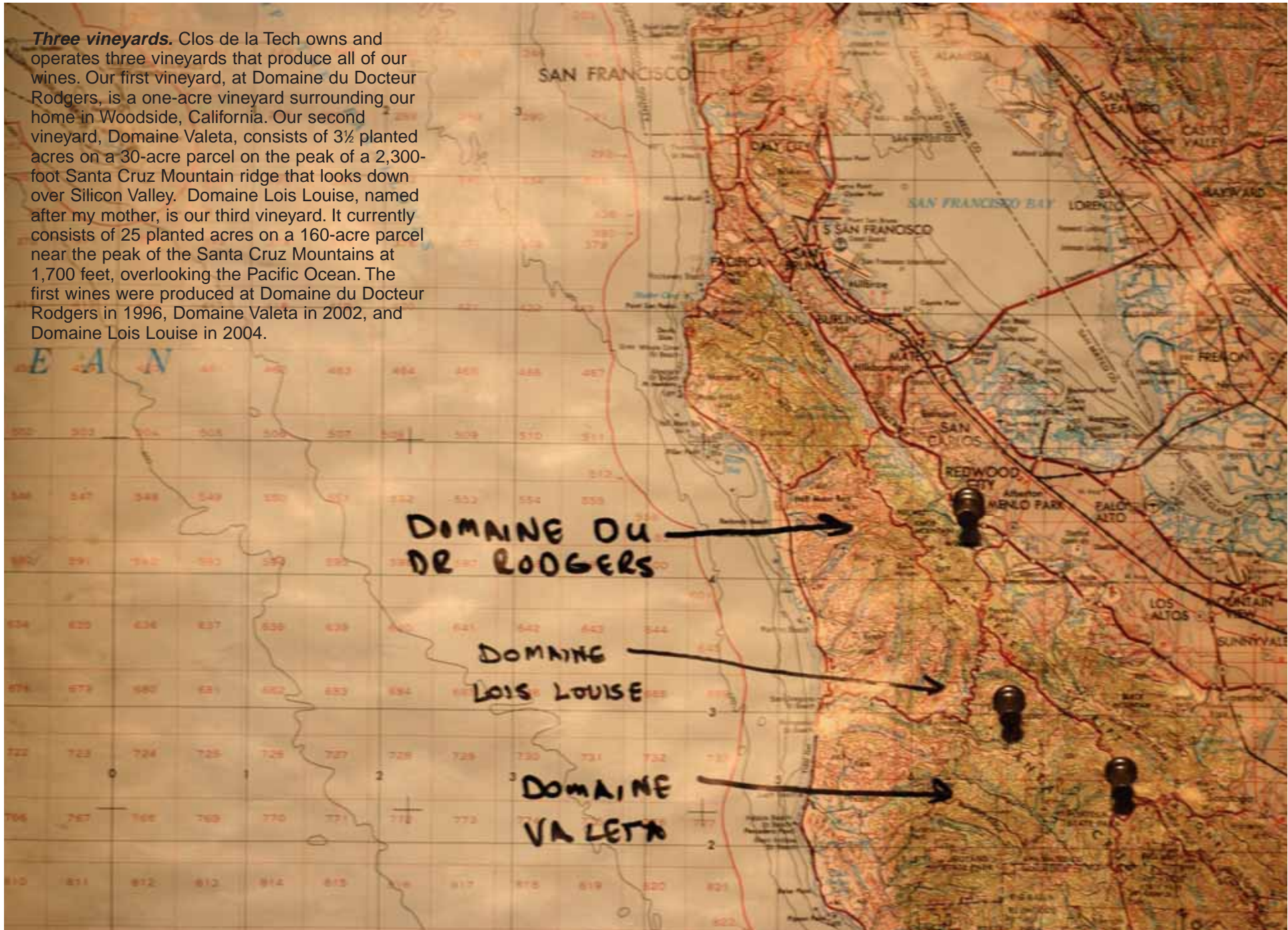


Clos de la Tech and Romanée-Conti.

Although French Pinot Noir grapes grown in California's sunny, rainless growing season produce a wine which is different from Romanée-Conti, we at Clos de la Tech follow many of the best winemaking practices established at this vineyard almost 200 years ago, including the expensive practice of planting three to 10 times more vines per acre to achieve the high degree of concentration afforded by an extraordinarily low yield per vine.



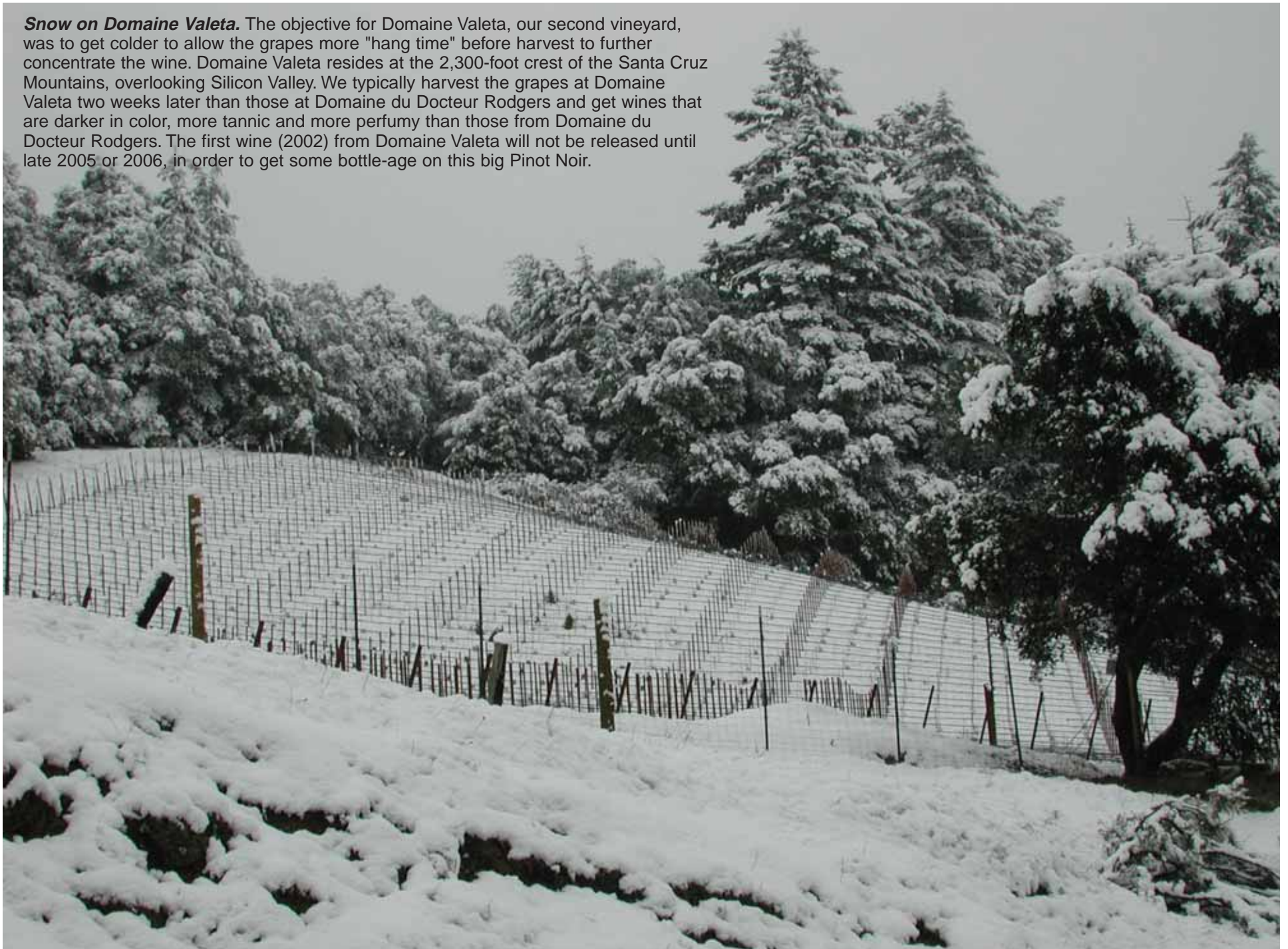
Three vineyards. Clos de la Tech owns and operates three vineyards that produce all of our wines. Our first vineyard, at Domaine du Docteur Rodgers, is a one-acre vineyard surrounding our home in Woodside, California. Our second vineyard, Domaine Valeta, consists of 3½ planted acres on a 30-acre parcel on the peak of a 2,300-foot Santa Cruz Mountain ridge that looks down over Silicon Valley. Domaine Lois Louise, named after my mother, is our third vineyard. It currently consists of 25 planted acres on a 160-acre parcel near the peak of the Santa Cruz Mountains at 1,700 feet, overlooking the Pacific Ocean. The first wines were produced at Domaine du Docteur Rodgers in 1996, Domaine Valeta in 2002, and Domaine Lois Louise in 2004.




Domaine du Docteur Rodgers. Our first vineyard was named partly in honor of Docteur Barolet, a French M.D. who made wines in the 1930-1950 period privately for himself and his friends. These wines are considered to be the finest red Burgundies ever made. All of Clos de la Tech's vineyards are planted using the finest rootstocks and Pinot Noir clones available from France. The rootstocks are chosen to match the characteristics of the soil, while the Pinot Noir clones are chosen to be the best available at the time of planting. Domaine du Docteur Rodgers is planted on Riparia Gloire, Courderc 420A and Millardet et de Grasset 101-14 rootstocks, known for low vigor (waist-high growth) and low yield. The rootstocks are topped with Pinot Noir clones named Dijon 113, 115, and 777, the latter two of which are recommended for replanting "Grand Cru" Burgundian vineyards. The vineyards are planted in the French style with tightly-spaced vines. The soil is loamy clay with a pH of 7.0, very similar to the soils in Burgundy, except for an added dose of magnesium, which comes from the serpentine bedrock underneath the soil. Magnesium can be a problem in commercial-scale vineyards because it causes low vigor and low yield—but this is desired at Clos de la Tech.



Snow on Domaine Valeta. The objective for Domaine Valeta, our second vineyard, was to get colder to allow the grapes more "hang time" before harvest to further concentrate the wine. Domaine Valeta resides at the 2,300-foot crest of the Santa Cruz Mountains, overlooking Silicon Valley. We typically harvest the grapes at Domaine Valeta two weeks later than those at Domaine du Docteur Rodgers and get wines that are darker in color, more tannic and more perfumy than those from Domaine du Docteur Rodgers. The first wine (2002) from Domaine Valeta will not be released until late 2005 or 2006, in order to get some bottle-age on this big Pinot Noir.





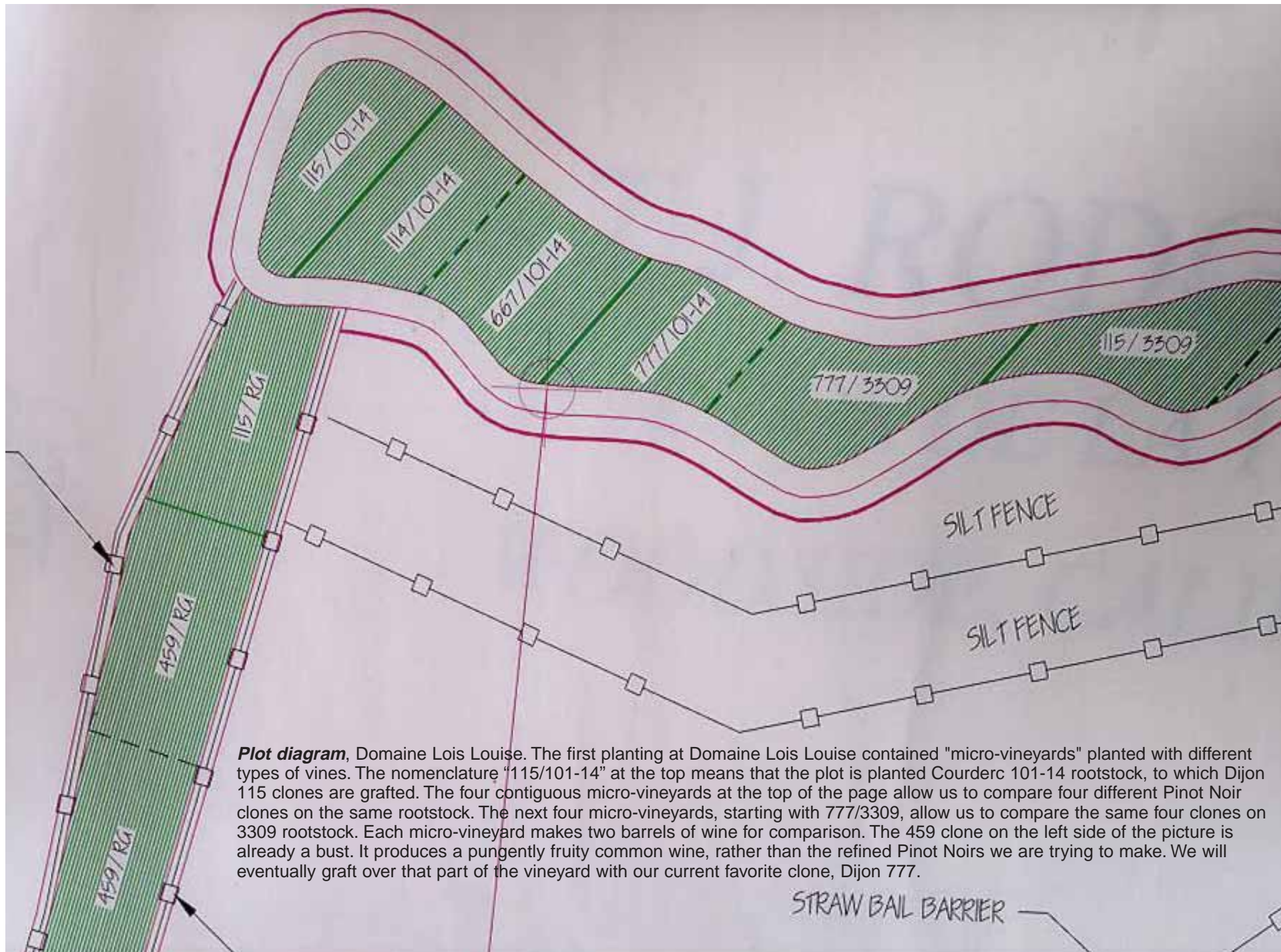
Domaine Lois Louise. Our third vineyard lies on a 160-acre parcel, which contains a five-acre, ridge-top vineyard surrounded by a farm road that serves a 25-acre vineyard on the south slope (right side of the photo) of the hilltop vineyard. Eventually, 80 acres will be planted. Unlike Domaine du Docteur Rodgers and Domaine Valeta, both of which are on the inland side of the Santa Cruz Mountains, Domaine Lois Louise directly faces the Pacific Ocean. The vines take a beating from the spring storms, causing the yield of this vineyard to be the lowest of the three. This vineyard contains not only Dijon 115 and Dijon 777—the best clones from the other vineyards—but also some of the very newest clones, such as Dijon 828, the newest Burgundian “super clone.”

The wine at Domaine Lois Louise will be made in three caves, each 30 feet wide, 30 feet high and 300 feet deep. The large structure at the left is a concrete plant that was assembled on the site during the excavation of the caves. (The caves were dug four feet at a time, and then immediately reinforced with shotcrete to prevent cave-ins. That approach did not work—we had two cave-ins in the center cave that vented all the way to the surface, tearing 30-foot diameter holes in the vineyard.) The concrete plant is now gone and the hill on which it sat has been completely restored and planted.

Experimental Tractor. Valeta and I worked with the German wine-agricultural firm Clemens GmbH to design a tractor capable of dealing with the hills at Domaine Lois Louise. Because it is pulled up the hill by cables, it needs no motor, steering wheel or brake. Control is achieved by a joystick, just like a video game.

The tractor is shown on a hill with a 35% slope (steep but not devastating), but with a side slope of 25% (note that the wheels are at different heights). There is no other tractor in the world that has demonstrated the ability to handle both vertical slope and side slope in a close-spaced vineyard.





Thousand-foot slope. From the bottom of the hill at Domaine Lois Louise, you cannot even see the ridge-top vineyard. Several hundred soil pits dug at the site to analyze the soil show that there are very different soils in the vineyard. Soils at the bottom of the hill are a heavy clay and should produce a big wine. Soils at the top are lighter, thinner clay-loam soils, which should produce more elegant wines. One of the objectives of Domaine Lois Louise is to keep 56 different micro-vineyards completely separate. We will not blend away our great (Grand Cru) wines into our ordinary (Commune) wines, as many commercial vineyards do. Once we have determined where our "Grand Cru" wines are, we will bottle the wine from those tiny parcels separately.



Walking on the clouds. The ocean fog swamps Domaine Lois Louise every day. On many days, the valley vineyard stays foggy until 11:00 a.m., while the ridge-top vineyard gets early sun. These "micro climates" will produce different wines, even when the same vines are planted. Weather differences—magnified by the notoriously fickle Pinot Noir grape—are one cause for the dramatic differences between neighboring wines only a few hundred meters apart in Burgundy. Romanée-Conti is less than a mile away from common Burgundies that sell for less than \$20 a bottle. We are hoping that there is a big wine—like a Burgundian Pommard—lurking in the 777 Pinot Noir planted in deep clay in the foggy valley, while at the same time there is an elegant, delicate, perfumy wine like a Vosne Romanée growing on the slope shown here.



Making wine, circa 1830. In the 1830s, the famed Romanée-Conti owner, Ouvrard made a world-renowned wine, despite the fact that he was unaware of the existence of a microorganism, *Saccharomyces Cerevisiae*, the wine yeast, which had yet to be discovered by Pasteur. Ouvrard knew by taste and by seed color (brown, not green) when the grapes were ripe. He knew that picking grape clusters gently by hand and immediately crushing them by foot would lead to the beginning of fermentation in several days. Destemming the grape was highly impractical because automatic de-stemmers had not yet been invented. He did not know that his inability to crush every grape meant that the seed tannin, which is more bitter and astringent than skin and stem tannin, would be left behind, producing a wine with mellow tannins. Nor did he know that when his fermentation started, it actually started with a non-wine yeast, such as *Pichia*, which died after only a few percent alcohol was achieved, yielding to the dominant *Saccharomyces Cerevisiae* yeast to finish the fermentation. With no practical pumps, he had no choice but to take the wine directly from the fermenter and put it directly into barrels. In this photo—from our second harvest in 1997—the young ladies are about to practice pipéage, the art of foot-crushing. At that time, we did not have our stainless steel equipment, but this polyethylene bin served to make one barrel of wine in an experiment that proved to us that foot-crushed, whole-cluster wine is superior to wine made from grapes that have been destemmed and crushed by a machine. That year we sold our destemmer/crusher.

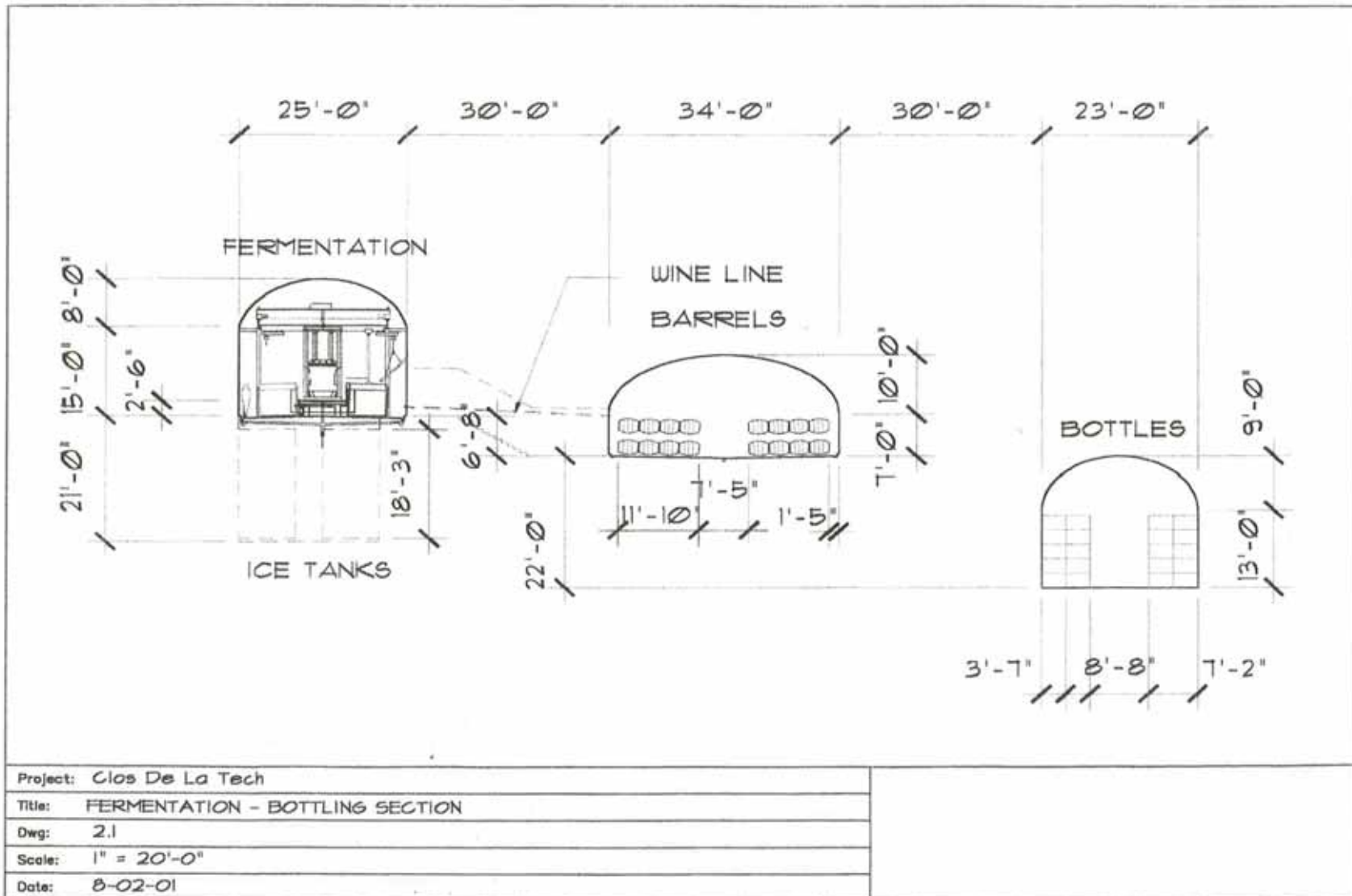


World's best barrels. The label says that this barrel was made at the famous François Frères Tonnellerie (barrel-making shop) in Saint Romain, France. The mark on the barrel shows that the barrel was made for "TJ" or Clos de la Tech out of oak from the Bertrange forest, toasted to a Medium-+ level. The only thing we have changed since this picture is to reduce the toast from medium-plus to medium. Toasting oak creates vanilla (literally), oak-based coconut-flavored compounds called octalactones, as well as smoke-flavored compounds, such as guaiacol. The less the barrel is toasted, the less of these oak-related compounds are in the wine. The less flavorful the oak is, the higher percentage of new oak can be used on the wine without "over-oaking" it. Oak also has a highly beneficial effect on enhancing and stabilizing the color of wine.

The Burgundian theory is to use a high percentage of new oak, but to toast it lightly to avoid excess oak flavor in the wine. The American theory is different, as necessitated by the much more pungent oaky flavor of American oak (*quercus alba*), compared with French oak (*quercus robur* and *quercus sessiliflora*). An American vineyard might use 25% new American oak barrels each year at a cost of \$280 each (or \$70 per year). Clos de la Tech uses 100% new French oak barrels every year at a cost of \$700 per barrel. We actually pay a surcharge in that barrel cost, because we age our wood for three or four years instead of the standard two years to reduce its woody flavor further before the barrel-making process. We have already purchased the Bertrange oak for our 2009 vintage.



Winery in a cave. This is a cross section of the caves under the Domaine Lois Louise vineyard. The problem posed by a large vineyard is how to vinify 150 tons of grapes without losing the intimate wine-making style practiced at Domaine du Docteur Rodgers. The answer is to construct 56 small-scale wineries, each independent from each other. The caves are built at different heights to allow gravity flow of wine from one cave to another, just as we do in our small-scale winery. The top cave contains 56 fermenters, each one capable of making eight barrels of wine. For every fermenter there are eight unique barrels in the barrel cave and 10 unique bottle bins in the bottling cave. The winemaking process for each of the small fermenters is identical to the state-of-the-art practice developed since 1996 at Domaine du Docteur Rodgers (building on the fundamental work of Ouvrard at DRC). The process couldn't be more natural. The grapes are handpicked from the vineyards above the winery and then dropped from the sorting pad through a stainless steel chute directly into the tanks in the winery. After a foot-crushing and a native-yeast fermentation, the wines are siphoned by gravity to new François Frères barrels in the barrel cave. Eighteen months later, the wine is siphoned from the barrels to a gravity-fed bottling machine in the bottling cave. Approximately four years after the grapes are dropped by gravity into the fermentation cave, the wine has flowed slowly downward 28'8" through three caves in the mountain, to re-emerge bottled on a shipping pallet from the bottling cave.



Patented new wine press technology. When new technology improves the ancient method, we use it. Ancient wine presses were giant wood cages pressed together with levers sometimes the size of telephone poles. These presses squeezed the last 25% of the wine from the grape “pumice,” but they were not gentle. Typically, press wine is considered to be rougher and less desirable than so-called free-run wine. At Clos de la Tech, we invented and patented a wine press which is very much like the French Melior coffee pot. In this case, the cap of the wine is pressed gently through the wine (filtering the wine beautifully and naturally) and squeezed against the bottom of the tank with 20 tons of pressure.

Since the pumice is not disturbed (cracking the bitter seeds), our experiments show that the pressed wine is not inferior to the free-run wine. The wine tanks are special in that they have to be round within 1/16 of an inch in order to allow the plunger to work properly. It used to take Valeta and me half a day per tank to press wine using our old-fashioned Italian basket press. Last year, we pressed 20 small tanks of wine at an average rate of one tank every 42 minutes. Our press is not only gentle, but efficient.

