Petition to Establish Mt. Harlan as an American Viticultural Area

January 23, 1989

Mr. Josh Jensen
Calera Wine Company
11300 Cienega Road
Hollister, CA 95023

January 23, 1989

Mr. Richard Mascolo
Chief, FAA Wine and Beer Branch
Bureau of Alcohol, Tobacco and Firearms
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20226

RE: Petition to Establish Mt. Harlan Viticultural Area

Dear Mr. Mascolo:

The undersigned hereby petitions the Bureau of Alcohol, Tobacco and Firearms ("ATF") under 27 CFR Section 4.25a(e) to establish the grape growing region known as "Mt. Harlan" as an American Viticultural Area under Part 9 of 27 CFR.

INTRODUCTION

Mt. Harlan, with its prominent 3,274 foot peak, is located entirely within San Benito County in the upper elevations of the Gavilan Range. The Gavilan Range is a short mountain range that parallels the coast range, the watershed of which serves as the boundary line between San Benito and Monterey counties. The proposed Mt. Harlan viticultural area lies inland, approximately twenty-five miles east of Monterey Bay and nine miles south of the city of Hollister.

The viticultural area consists of approximately 7,440 acres and measures six miles at its widest point east-west and three miles north-south. Total vineyard acreage at this time consists of 44 acres with plans to establish more than 100 additional acres. Both the planned and current vineyards are planted at an

elevation of around 2,200 feet, dramatically distinguishing them from any other vineyards in San Benito County.

As ATF knows from having established five viticultural areas in and around San Benito County, viticulture is not new to this area (see figure 1). The viticultural areas of Lime Kiln Valley, Cienega Valley, Paicines, Chalone and San Benito evidence a history of viticulture that dates back over a century. This point is well documented by John Ohrwall in "A History of Vineyards and Wineries in San Benito County" (Exhibit "A").

The proposed Mt. Harlan viticultural area nearly abuts the established viticultural areas of Cienega Valley, Lime Kiln Valley and San Benito but is included in none (see figure 2). Indeed, the western border of Lime Kiln Valley and the southern border of Cienega Valley help to define the Mt. Harlan area.

The exclusion of Mt. Harlan from these established viticultural areas was a natural and logical decision on ATF's part. In the Final Rule establishing the Lime Kiln Valley viticultural area, ATF excluded the mountains to the west, which were part of the original proposal, and included only enough of the higher elevations to define the valley.

> After evaluating the entire record concerning the climate of the area, ATF believed the boundaries of the proposed Lime Kiln Valley should be amended to exclude the mountain areas. This change would limit the proposed viticultural area to one which exhibits uniform climatic characteristics. 1/

We agree with this decision not only for the difference in rainfall between the mountain and valley areas as noted by ATF,

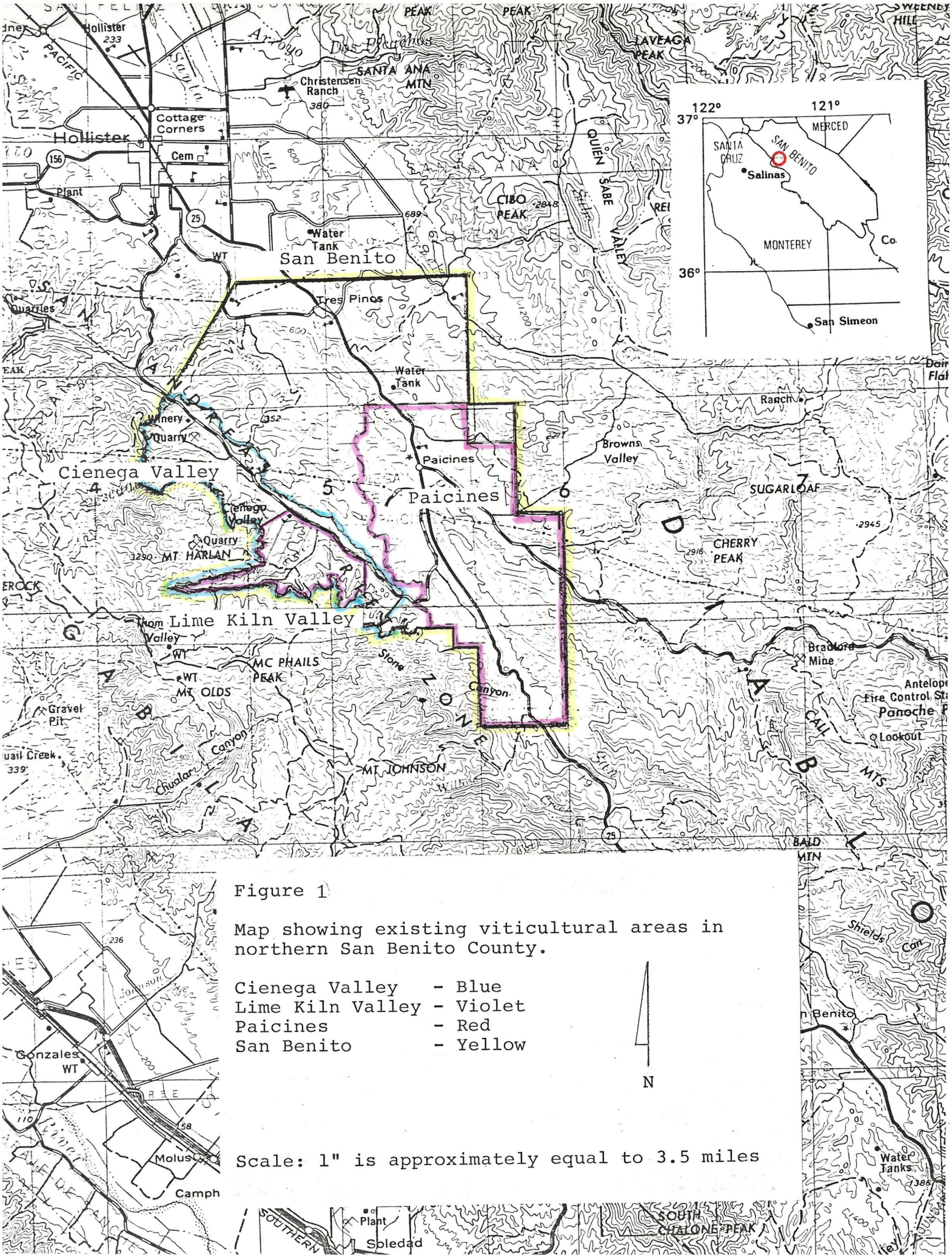


Figure 1

Map showing existing viticultural areas in northern San Benito County.

Cienega Valley - Blue
Lime Kiln Valley - Violet
Paicines - Red
San Benito - Yellow

Scale: 1" is approximately equal to 3.5 miles

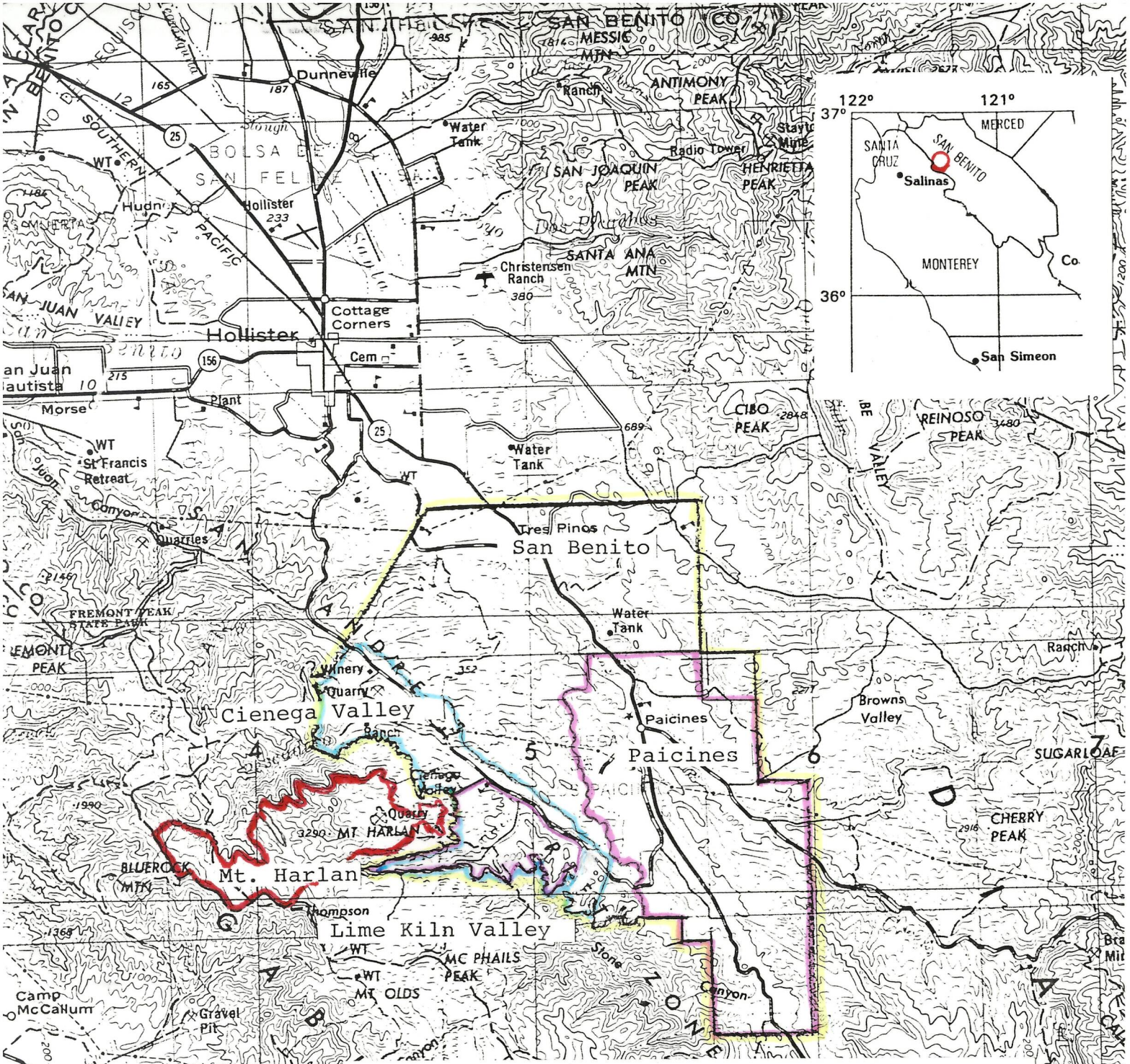


Figure 2

Map showing proposed Mt. Harlan viticultural area (in red) in relation to existing viticultural areas.

Scale: 1" is approximately equal to 3.5 miles

but also because of the combined effects that unique soil composition, elevation and microclimate have upon the production of grapes grown in the respective viticultural areas.

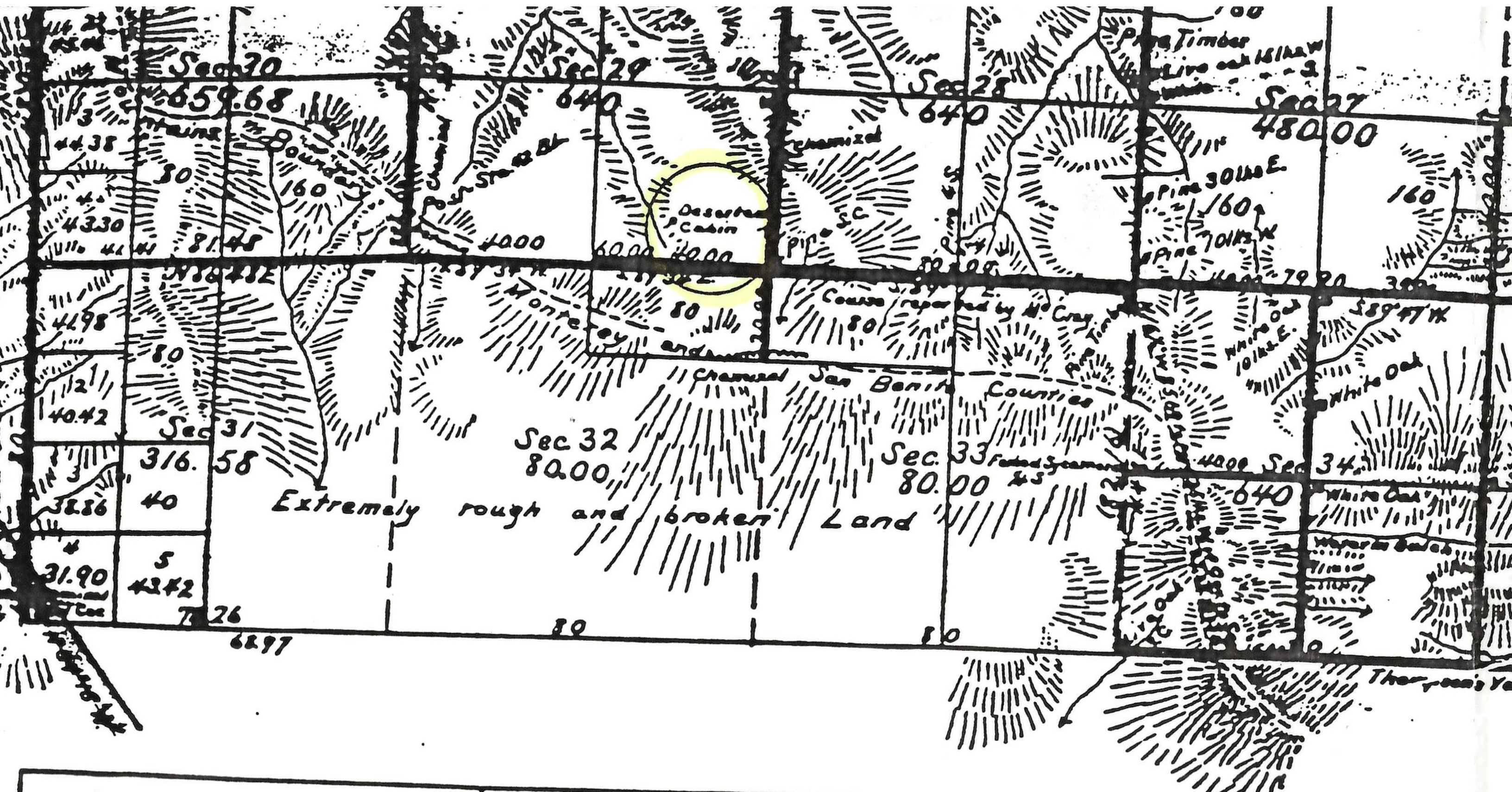
By establishing the Mt. Harlan viticultural area, ATF will complete a sensible and natural viticultural division already begun in this viticulturally significant area, distinguishing mountain grapes from valley grapes and thereby aiding the consumer in identifying grape origin.

I. NAME IDENTIFICATION

A. Historical Recognition and Usage

Ulysses Grant Harlan, rancher, settled in the northwestern region of San Benito County. It is he for whom Mt. Harlan is named. Though it is difficult to pinpoint exactly his arrival date, current evidence suggests it was between 1860 and 1880. Two maps produced by the Department of the Interior show the early homesites of U.G. Harlan. The first map, produced in 1875, shows a deserted cabin in Section 29, Township 14 South, Range 5 East (figures 3 and 5). The later edition of this map, produced in 1884, shows two cabins specifically connected with Harlan: "Harlan's Cabin" in Section 28, Township 14 South, Range 5 East; and "Harlan's Upper Cabin", in Section 23 of the same township and range (figures 4 and 5). In any event, Harlan is well established in the area by 1884.

Harlan was engaged in the hay and grain business. Exhibit "B", the letter of Howard Harris, lifelong resident of Hollister



Surveys Designated	By whom Surveyed	Date of Contract	Amount of Surveys	When Surveyed
Township line colored yellow	J. E. Freeman	October 20th 1854		1854
" lines " blue	H. Washington	November 27th 1858		1859
Boundaries of Lot No. 37	G. H. Thompson	(Inst) October 23d 1865		1865
South boundary of Tp. & Tp line colored green	S. W. Smith	July 31st 1868		1868
Lines colored red	A. H. Parker	December 10th 1874		1874
Township lines colored brown	F. R. McCray	(Inst) March 3d 1877	5 mls 57 chs 50 lks	1880
Ranch line " "	" "	"	1 " 36 " 10 "	"
Section lines " "	" " "	"	8 " 7 " 56 "	April 10th 1880

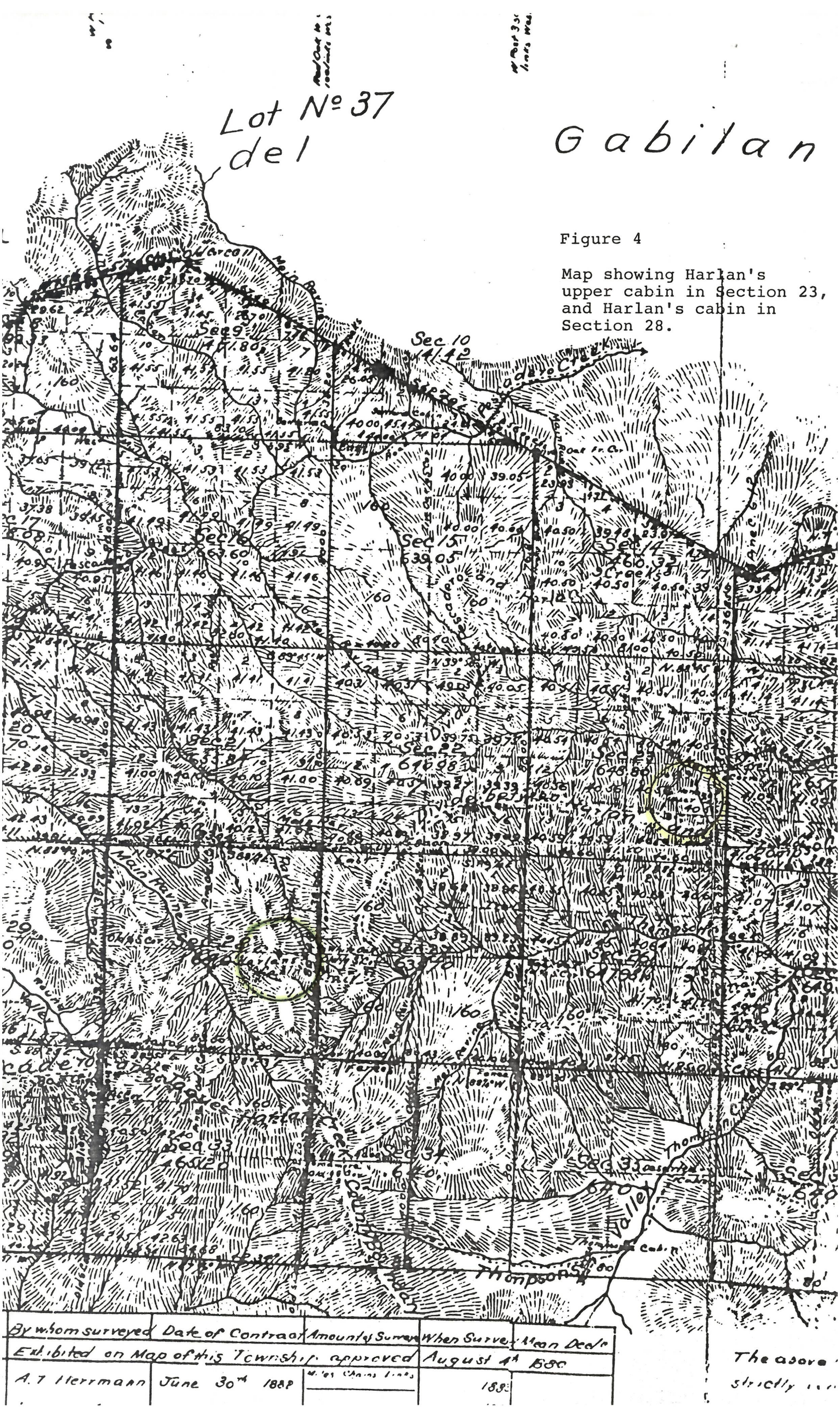


Figure 4

Map showing Harlan's upper cabin in Section 23, and Harlan's cabin in Section 28.

in San Benito County, speaks of Harlan as "having cleared hundreds of acres by hand" to support his business. The hay and grain business was the major industry in San Benito County until after World War I when orchards, row crops and vineyards began to take over. 2/ However, Harlan's continued presence in the area suggests that he was able to sustain his family and business in a region characterized by steep and difficult terrain at high elevations. There are direct descendants of Ulysses Grant Harlan in the area to this day.

Mt. Harlan stands in an area long recognized as being viticulturally significant. Grape growing and wine production in San Benito County have their beginnings in the vineyards of Theophile Vache, planted in the 1850s. In his report, "History of the Vineyards and Wineries in San Benito County" (attached hereto as Exhibit "A"), John Ohrwall chronicles the history of the wine industry from Vache's first vineyards in the 1850s to 1965 when over 3,600 acres lay planted to vineyards. Ohrwall explains that Vache began an industry which was to thrive in the region for years to come. By 1883 Vache had 320 acres planted to vines.

The success of Vache's vineyards spurred increased grape production. By the turn of the century, several families were involved in grape growing and wine production. 3/

Grape cultivation was not limited to the low lying areas. As early as 1914 the homesites of two families, Crow and Fisher, were known to have contained vines (figure 5). In an interview

with Howard Harris (a direct descendant of the Crow family), whose letter and resume are attached hereto as Exhibit "B", Mr. Harris spoke of these homesite vineyards. They are now overgrown, but wild grape vines may still be seen on both the Fisher and Crow sites. These homesites were located in the upper elevations just south of Mt. Harlan's summit at an elevation of 2,200 feet. Generally speaking, orchards, crops and vineyards were planted by nearly every settler and maintained for personal use.

The tradition of viticulture in San Benito County is now being carried forward by Calera Wine Company ("Calera") and its vineyards planted on Mt. Harlan. In 1971, the founder of Calera, Mr. Josh Jensen, began a search for limestone soils in California upon which he could establish his vineyards. Having limestone in the soil was central to Calera's operation. Since the greatness of the red and white wines of Burgundy is attributed in large part to the limestone soil, it would follow that the same characteristics of greatness would be demonstrated in wines grown on California limestone soil. (A discussion of the limestone soil may be found in the next section of this petition, Distinguishing Geographic Features).

Having discovered that the land around Mt. Harlan was rich in limestone, Calera secured the land in 1974 and planted its first vineyard, an experimental plot consisting of 500 vines. In the following spring of 1975, Calera planted the now well-known Reed, Selleck and Jensen Pinot Noir Vineyards (see figures 5 and

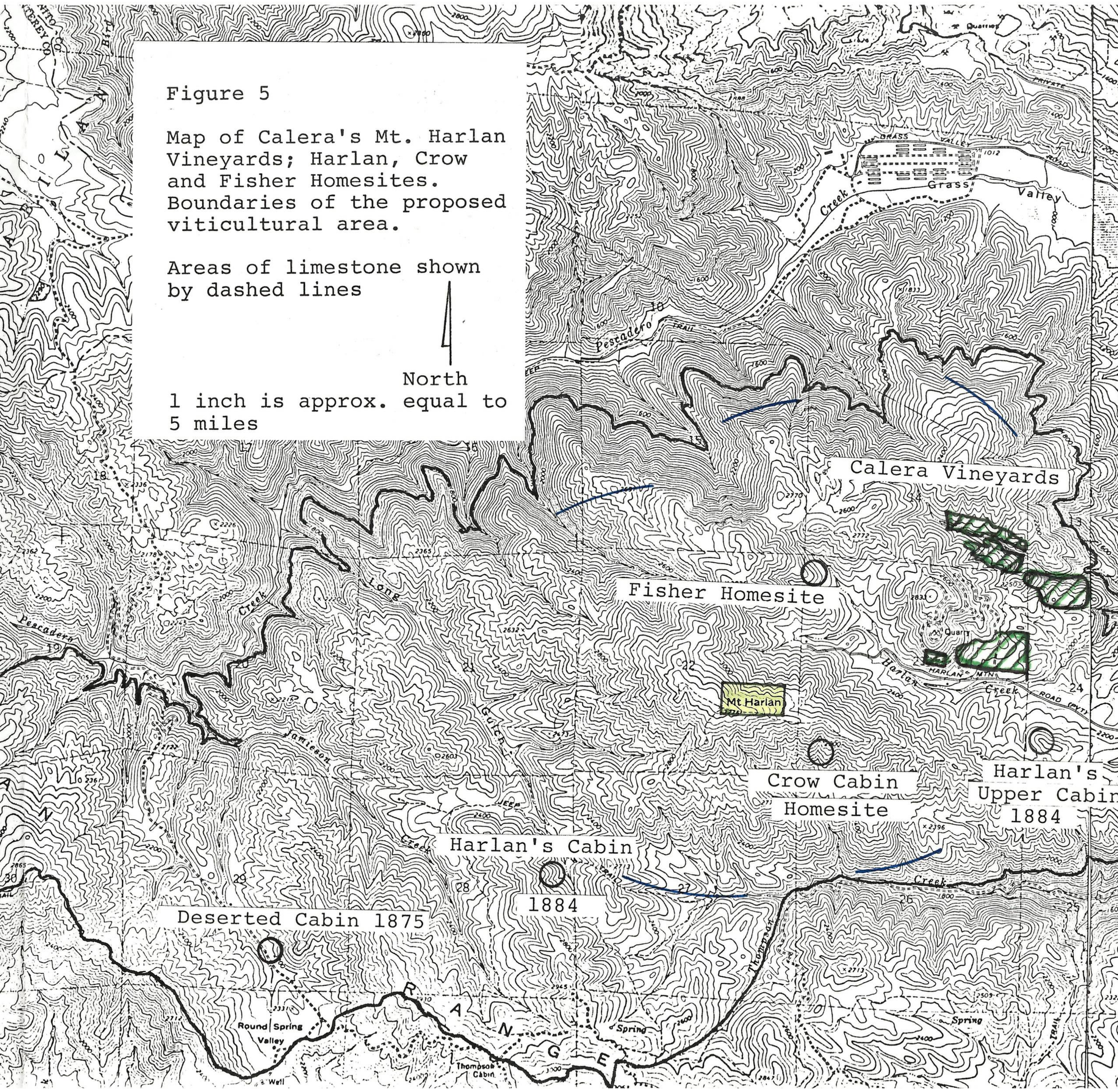


Figure 5

Map of Calera's Mt. Harlan Vineyards; Harlan, Crow and Fisher Homesites. Boundaries of the proposed viticultural area.

Areas of limestone shown by dashed lines

North

1 inch is approx. equal to 5 miles

6) and in 1978 conducted its first harvest. Since the original installation of the 24 acres of vines named above, Calera has added an additional 12 acre vineyard with the Mills designation, planted 6 acres of Chardonnay, and two acres of Viognier, bringing the total acreage planted to 44. The company plans to add an additional 100 acres to its total, the land for which has already begun to be cleared.

The name Calera, which actually names a soil series whose major component is limestone, has become synonymous with outstanding Pinot Noir produced from the grapes grown on Mt. Harlan. It is in this reputation of excellent quality that the viticultural tradition of San Benito County is carried on.

B. Current Recognition and Usage

Because of its prominence, Mt. Harlan is firmly fixed as a place name and landmark, and is currently recognized and referred to as a distinct region of San Benito County. In this rather sparsely populated area where roads are few, natural landmarks are important locators that help to identify the area in question. The California Department of Forestry, the California Department of Fish and Game, and the United States Geological Survey Division of the Department of the Interior, all use Mt. Harlan to pinpoint areas of interest respective to their department's particular needs.

The California Department of Forestry ("CDF") chose Mt. Harlan, in conjunction with other landmarks, to identify the area

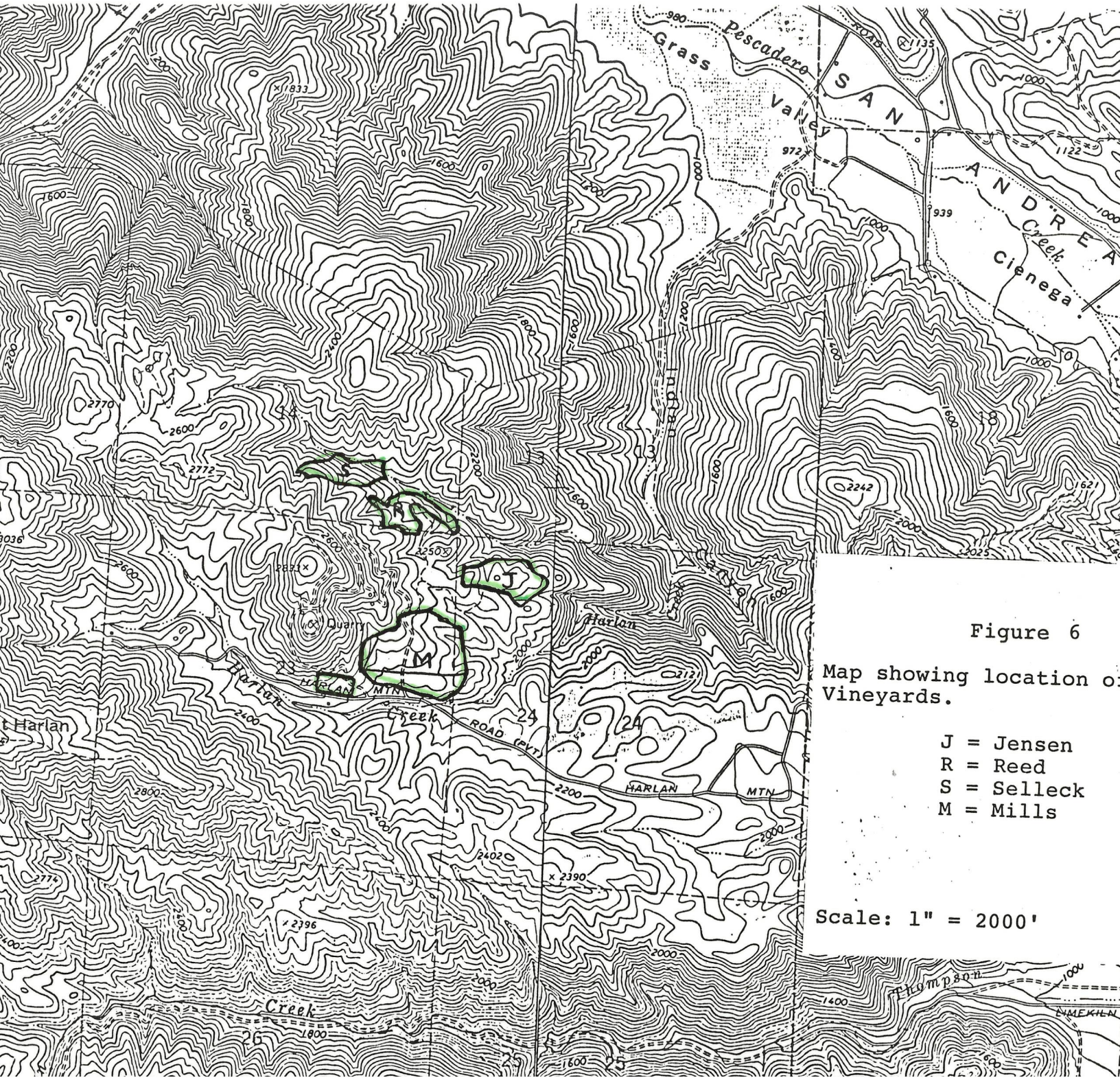


Figure 6

Map showing location o
Vineyards.

J = Jensen
R = Reed
S = Selleck
M = Mills

Scale: 1" = 2000'

surrounding the summit. Other landmarks in this area used by CDF are Indian Canyon, Pescadero Creek and Thompson Creek. Interestingly, these landmarks help to define the boundaries of the proposed Mt. Harlan viticultural area (see Section IV of this petition, "Boundaries," p. 18).

The California Department of Fish and Game requires sportsmen hunting in San Benito County to pinpoint any areas where deer have been shot. This information is transferred onto a map showing spot kills throughout the county. For the department's purposes, in the northwestern section of the county, Mt. Harlan serves as a specific locator when referring to spot kills. According to the department, any spot kill made within two to four miles of the summit of Mt. Harlan is referred to in terms of distance from this reference point. 4/

It was the size of Mt. Harlan in relation to the surrounding features in this area of the county which led the United States Geological Survey ("U.S.G.S.") to name the 7.5 minute topographic map quadrangle of this region, "Mt. Harlan". U.S.G.S. states on its field report name sheet that the name Harlan, as attached to the mountain, has been in local usage for over sixty years. This fact is corroborated by the appearance of Mt. Harlan on a map of California produced in 1928 (figure 7).

The U.S.G.S. map also uses the Harlan name for physical features other than the mountain. Harlan Creek flows from the area south of Mt. Harlan to Grass Valley in the north. Harlan Mountain Road connects the area west of the summit with the area

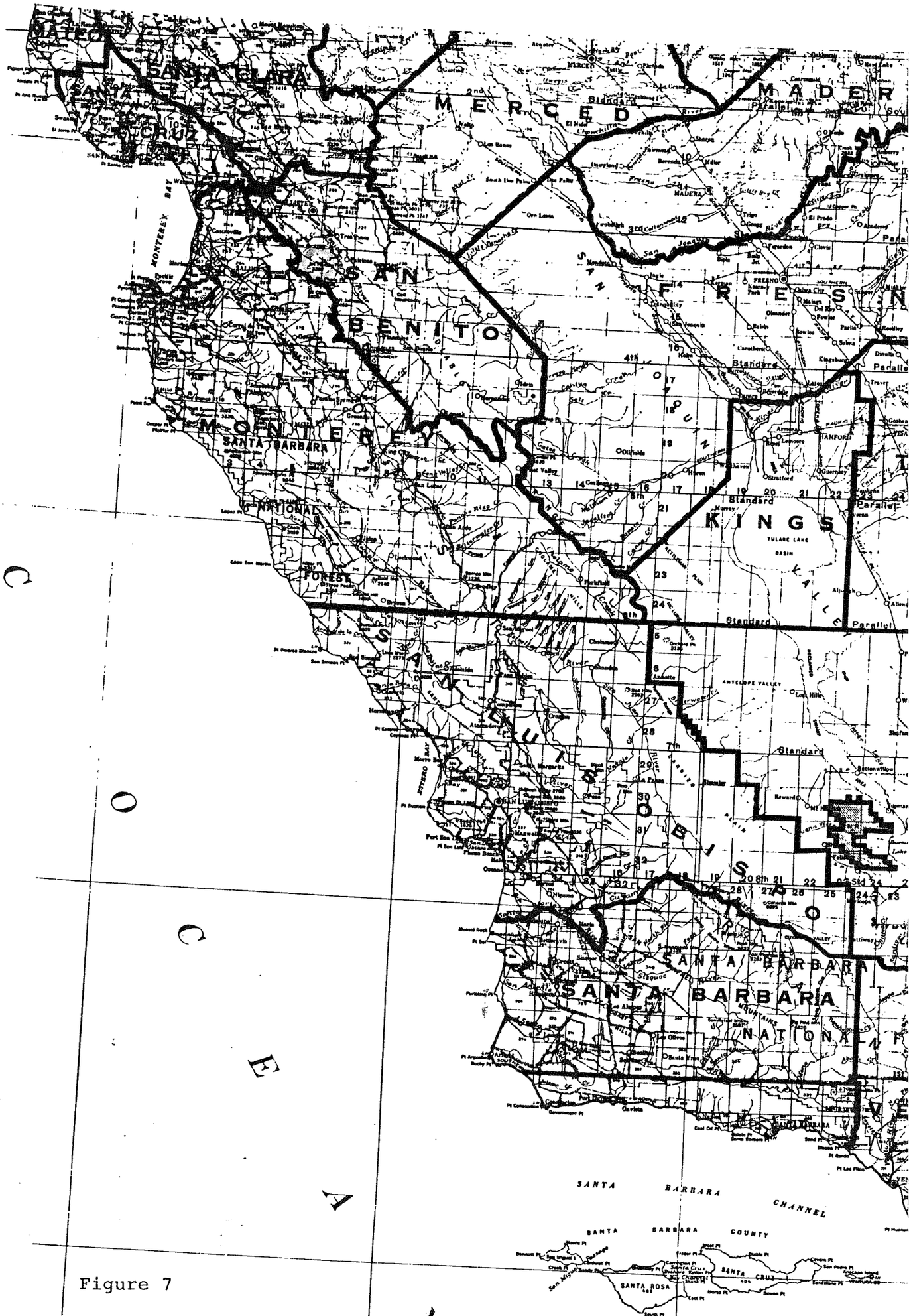


Figure 7

Excerpt of 1928 Map of California showing Mt. Harlan.

Early California, southern Edition, Corvalis, Ore., Western Guide, 1974.

known as Lime Kiln, a low-lying area to the east. Local residents are familiar with both Harlan Mountain Road and Harlan Creek. The mountain, the creek and the road are present day reminders of Ulysses Grant Harlan's pioneering efforts in the area one hundred years ago.

II. BOUNDARY SUPPORT

The foregoing sections discuss the history of Mt. Harlan, the current usage of the term, and Ulysses Grant Harlan's influence in the area from a name perspective. Though there are no formal boundaries of a Mt. Harlan area as such, the preponderance of geological, geographical, historical and contemporary evidence supports the boundaries proposed in part IV of this petition.

Figure 5 outlines the boundaries of the proposed viticultural area and shows within these boundaries the key factors considered when determining the boundaries as proposed. Within the boundaries are included the locations of Harlan's early homesites, and the homesites of Fisher and Crow, as discussed in the foregoing section. Calera's vineyards lie completely within the boundaries. The peak of Mt. Harlan is in the center of the viticultural area. Harlan Creek and Harlan Mountain Road, features discussed in the preceding section, also lie within the proposed boundaries. The areas of limestone, as identified by the California Division of Mines are included in the viticultural area.

The western boundary of the proposed viticultural area is the ridge top which serves as the dividing line between Monterey and San Benito Counties and also as the watershed division. The boundary also follows in part two drainage channels: Thompson Creek to the south and Pescadero Creek to the west.

The 1800 foot contour defines the remainder of the viticultural area. These boundaries support the creation of the Mt. Harlan viticultural area as exclusively a mountain area. A detailed description of the boundaries of the proposed Mt. Harlan viticultural area follows in Section IV of this petition.

Figure 2 shows how the Mt. Harlan area fits into the framework of viticultural areas already established in northern San Benito County, like a puzzle piece nestled against several other viticultural areas. The boundaries of this area are supported by the settlement history, mountain micro-climate (see following section, "Distinguishing Features"), current name recognition and usage, geography and geology.

III. DISTINGUISHING GEOGRAPHIC FEATURES

A. Climate; Elevation; Aspect

Because the vineyards around Mt. Harlan are located at an elevation of around 2,200 feet, special microclimatic conditions exist. The Mt. Harlan area is distinguished from the lower elevations and valley floor by cooler temperatures, higher rainfall, less danger of frost, differing air drainage and less incidence of fog.

The general rule for understanding the relationship between elevation and temperature is expressed as a 3 - 5.5 degree Farenheit temperature decrease for every one thousand foot increase in altitude. This is due to the expansion and cooling of warm air as it rises. According to the Soil Survey of San Benito County, the average annual temperature within the petitioned area is between 56 and 60 degrees F. This contrasts with the warmer average annual temperatures of Lime Kiln and Cienega Valleys to the northeast (60 - 62 degrees F).

This dissimilarity in temperature translates into differing maturation periods for mountain grapes and valley grapes. In the mountains the cooler temperatures retard the ripening of the grapes. Therefore more time is required for the grapes to reach acceptable sugar levels. The warmer temperatures of the valley floor allow the varieties planted there to ripen earlier. Generally, harvest will occur two to four weeks later in Mt. Harlan than in Lime Kiln and Cienega Valleys. This difference in harvest dates further distinguishes the proposed area from its immediate neighbors to the east.

Fog plays a major role in distinguishing the proposed area. Because of the higher elevations at Mt. Harlan, fog is not nearly so prevalent as it is in Cienega and Lime Kiln Valleys. As the air over the California Central Valley heats each morning, it rises, creating a suction effect that pulls the moist Pacific Ocean air inland. The Gavilan Range, like most of the mountain ranges in California, acts as a natural barrier to this eastward

flowing cool air, keeping the cooling, moist breezes west of the valley areas. Yet the Pacific air from Monterey Bay flows into the interior through Chittenden Pass and Pacheco Pass, bringing the effects of fog and moist air through San Benito County and into the Central Valley (figures 8 and 8a).

The final rule establishing the Paicines viticultural area states:

> The Paicines area is in a wind tunnel of cool ocean air flowing to the San Joaquin Valley. ...during periods of extremely heavy fog, the Paicines area holds the fog much longer than much of the nearby area, including Cienega Valley. 5/

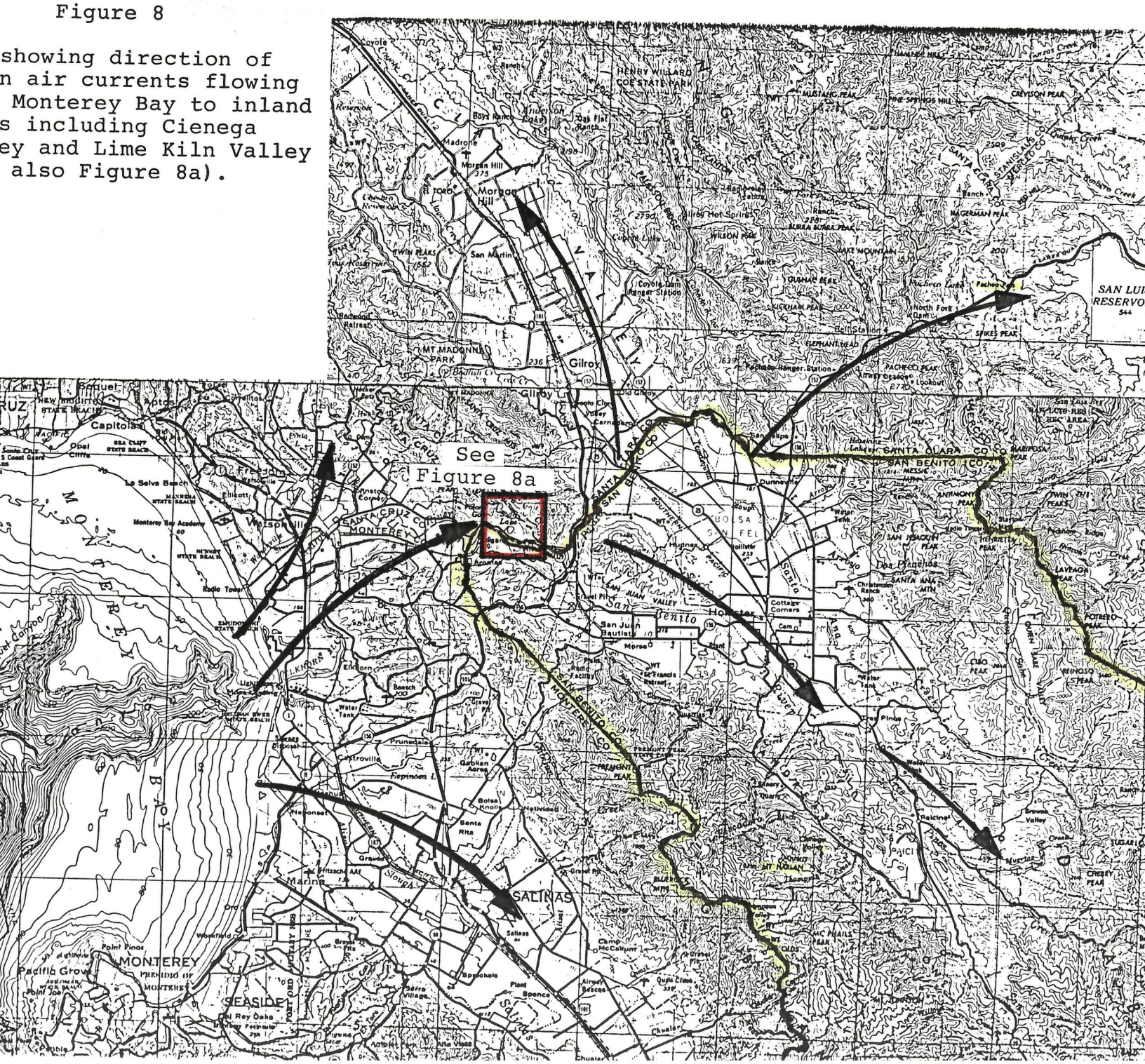
The final rule establishing Cienega Valley speaks of the Cienega Valley in similar terms, describing it as being in this same "wind tunnel of cool ocean air." The final rule continues:

> Cienega Valley gets more evening fog than much of the surrounding area because of its location at the foot of the Gabilan Mountains. This fog usually burns off by early morning. 6/

As the fog enters Cienega and Lime Kiln Valleys it may often reach the 1,400 foot elevation. At the same time that vineyards in Cienega and Lime Kiln Valleys are blanketed under fog, the vineyards on Mt. Harlan are exposed to full sun. When the fog occasionally does reach the mountain vineyards, it burns off early in the morning, sometimes a full two hours ahead of the valleys. The result is more hours of sunlight on Mt. Harlan than in the valleys.

Figure 8

showing direction of
n air currents flowing
Monterey Bay to inland
s including Cienega
ey and Lime Kiln Valley
also Figure 8a).



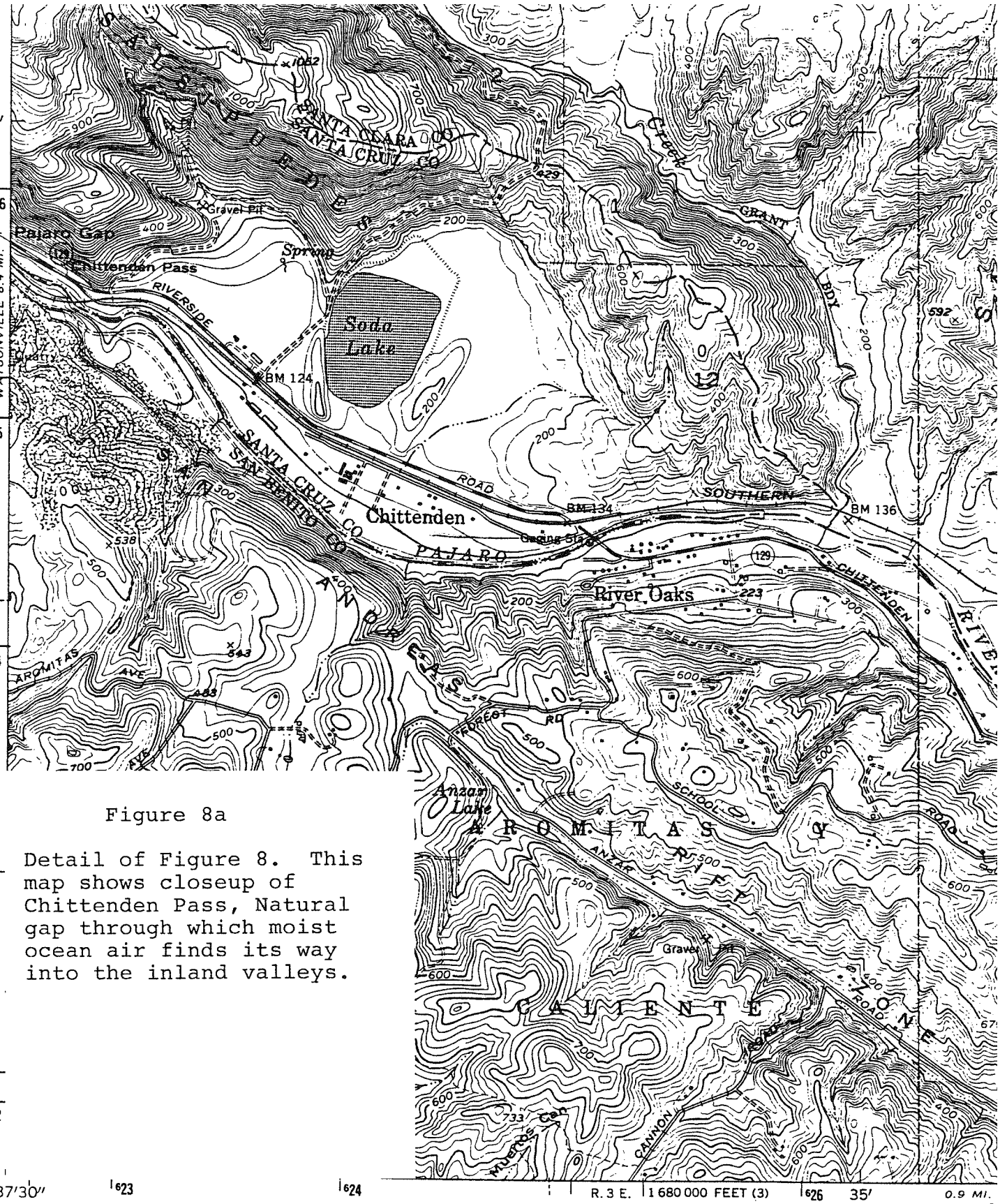


Figure 8a

Detail of Figure 8. This map shows closeup of Chittenden Pass, Natural gap through which moist ocean air finds its way into the inland valleys.

Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography from aerial photographs by multiplex methods and by planetable surveys 1955. Aerial photographs taken 1952

Polyconic projection
10,000-foot grid based on California coordinate system, zones 3 and 4
1000-meter Universal Transverse Mercator grid ticks,
zone 10, shown in blue. 1927 North American Datum
To place on the predicted North American Datum 1983
move the projection lines 12 meters north and
93 meters east as shown by dashed corner ticks

GN MN
0°52′ 15 MILS
16° 284 MILS

UTM GRID AND 1980 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

The increased exposure to sunlight due to elevation is further supported by Exhibit "B", letter of Howard Harris to Josh Jensen of Calera. In this letter, Harris, a geologist who has also farmed this area of San Benito County, states:

> The vineyards of the Harlan Mountain area are above the smog layers which occur in many other areas. This allows more penetration of the sun's rays to stimulate better photosynthesis in the production of sugar and flavor in the grapes produced there. 7/

Mr. Harris continues by noting, importantly, that the vines on Mt. Harlan are planted primarily on southern exposures which again allows for more concentrated sunlight, as compared to the vines on the valley floor.

In sum, because of its unique exposure, elevation, and the incidence of fog, smog, and sunlight, the Mt. Harlan viticultural area differs greatly in terms of both geography and viticulture from the vineyard area at lower elevations.

Rainfall also distinguishes the proposed area from the neighboring viticultural areas. It was noted in the hearing proceedings for the Lime Kiln Valley viticultural area that the rainfall is greater in the mountains. This fact was borne out by testimony at the hearing offered by Charles Strohn of the Wilbur Ranch and Leonard Caetano of the Board of Directors of the San Benito Chamber of Commerce. 8/

The original boundaries of the Lime Kiln viticultural area proposed a summit to summit configuration that used Mt. Harlan as one of the reference points. The western region of Lime Kiln

Valley as originally proposed is the southeastern region of the proposed Mt. Harlan viticultural area. Because the mountain regions receive 35-40 inches of rain annually, ATF deemed it appropriate to exclude this area from Lime Kiln Valley on the grounds that a viticultural area should exhibit uniform characteristics. Since the proposed area is comprised nearly exclusively of mountain areas, uniform rainfall characteristics are exhibited throughout. The disparity in rainfall between Cienega/Lime Kiln Valleys (the valleys average 16 inches annually) and Mt. Harlan is a major point of distinction between the viticultural areas, which already has been recognized by ATF.

B. Soils; Geology

While rainfall, fog, temperature and concentration of sunlight serve to distinguish Mt. Harlan climatically from neighboring Lime Kiln Valley and Cienega Valley, perhaps the greatest contrast between the viticultural areas is their soils. The relevant variables encompassed under the soils rubric are type of soil, water holding capacity, runoff, erosion potential, and location (i.e. upland versus lowland soils).

In Lime Kiln Valley and in Cienega Valley the dominant soil series comprising the vineyards is the Hanford series. The Soil Survey of San Benito County (hereafter Soil Survey) characterizes this series as lowland soils which are "nearly level to sloping" and as "occurring on flood plains and fans." 9/ They occur primarily in the larger valleys. According to the Soil Survey, bedrock or hardpan is always reached at depths greater than five

feet. The average depth of these soils is 70 inches. The available water holding capacity ranges from 7.5 to 8.5 inches per representative soil profile. Because they are lowland soils, they exhibit very slow runoff and only slight to moderate erosion potential.

In contrast to the lowland soils which are present in Lime Kiln Valley and Cienega Valley, upland soils of the Sheridan series comprise nearly 70% of the soils in the proposed Mt. Harlan viticultural area. These are mountainous soils which, as noted in the Soil Survey, occur west of Cienega Road and northwest of Lime Kiln Road, the region to which this petition is addressed. Bedrock or hardpan may be reached in as little as 1.5 feet from the surface. The average soil depth is 3.5 feet. The runoff is rapid, a natural result of the slope and elevation of the area (anywhere from 15% - 75% slope). Therefore, the available water holding capacity ranges from two to seven inches per representative profile. Concomitantly, the erosion potential is severe to very severe.

Associated with the Sheridan soils are the Cieneba and Auberry series which together make up the remaining 30% of the soils in the proposed viticultural area. Both associated series are upland soils with similar slope to the Sheridan series (15%-75%). All three soil series exhibit similar erosion potential and available water holding capacity.

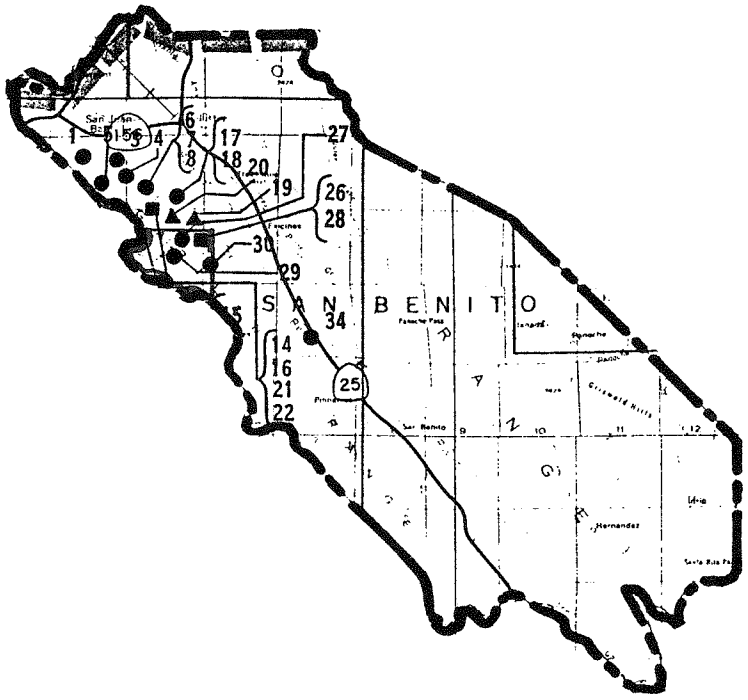
Lime Kiln Valley and Cienega Valley viticultural areas do contain some soils of the Sheridan-Cieneba-Auberry association.

However, these soils occur in the unplanted hillsides (mountains) which define these valleys. The vineyards occur predominantly on the valley floors where the soils are of the Hanford series. On Mt. Harlan, all the soils are of the Sheridan-Cieneba-Auberry association, giving the region unified soil characteristics.

In addition to the uniformity of its soil characteristics, Mt. Harlan contains an important and distinguishing geological feature - the presence of limestone. In discussing the Cieneba soils series, the Soil Survey, notes that there "are a few small areas of limestone... in the mountains to the west of Cienega Road." 10/ In addition, the soil survey notes that within the Sheridan series are "areas of soils underlain by limestone." 11/

A special report issued by the California Division of Mines corroborates the findings of the soil survey. "Limestone deposits of different sizes are found in the Mt. Harlan vicinity of Cienega Valley between Pescadero Canyon and McPhails Peak." 12/ (See figure 9) These citations place limestone within the petitioned area and not within Cienega Valley or Lime Kiln Valley.

As further corroboration of this distinguishing feature, there is a history of limestone mining within the area which goes back over a century. During the 1920s, Mt. Harlan was an active mining site. The U.S.G.S. 7.5 minute "Mt. Harlan" quadrangle shows a quarry located in Section 23. Archie Hamilton based his mining operations around this quarry. His plan was to mine the limestone from Mt. Harlan and process it at his plant then under



Scale 1:1,000,000

BASE MAP BY U.S. GEOLOGICAL SURVEY

EXPLANATION

	MAJOR ACTIVE[1] DEPOSITS >20MT* tons	MAJOR UNDEVELOPED OR INACTIVE DEPOSIT >20MT* tons	MINOR ACTIVE[1] DEPOSIT <20MT* tons	MINOR INACTIVE DEPOSIT <20MT* tons
LIMESTONE	●	●	●	●
DOLOMITE	▲	▲	▲	▲
LIMESTONE & DOLOMITE	■	■	■	■

AREA KNOWN TO BE UNDERLAIN IN PART BY CARBONATE ROCKS

CARBONATE ROCK PROVINCE BOUNDARY

COUNTY BOUNDARY

III-A-1

AREA AND REGION BOUNDARY

STATE MAP SHEET BOUNDARY

*MILLION TONS (production plus reserves)

[1]ACTIVE SINCE 1965

Figure 9

Map showing Limestone and Dolomite Deposits in San Benito County. Mount Harlan area shown in red. 13/

construction on Cienega Road. Before completing the quarry, Mr. Hamilton realized that it would be more cost effective to process the limestone on site. For this purpose, he erected two buildings on Mt. Harlan which are visible from the vineyards to this day.

Poor health eventually forced Hamilton to abandon his operations in the late 1950s. Calera has since planted its vineyards in this abandoned mining area and constructed its winery out of Hamilton's original processing plant on Cienega Road.

It is the presence of limestone in the vineyard soil that is responsible for the unique and complex character of the Pinot Noir, Chardonnay, and Viognier grapes grown on Mt. Harlan. In Burgundy the greatness of Pinot Noir and the renown of that area's wines are attributed to the presence of limestone in the soil. The same is true in the Mt. Harlan viticultural area. The fame of Calera is built on the uniquely high quality of its Pinot Noir, and the reputation of these wines is due in large part to the special character the limestone soil adds to the grapes. Wine writers and critics have often rated Calera's Pinot Noir as the best in the United States, attributing the special qualities in the wines to the limestone in the soil (see Exhibit "D" collection of reviews and articles on Calera, and Exhibit "C", page 13, interview with Josh Jensen of Calera).

C. Viticultural Distinctiveness

As noted in the introduction, plans for 100 acres of vineyards on Mt. Harlan in addition to the existing planted acreage have been established. The success of the three Pinot Noirs produced by Calera (the Jensen, Mills and Reed vineyard designations, see figure 6, Map of Mt. Harlan vineyards) has demonstrated the viability of planting this variety in the mountains. In addition to Pinot Noir, Calera has found that Chardonnay and Viognier are also suitable varieties for this location. Viognier, a premium white grape variety rarely produced in the United States, is indigenous to the northern Rhone from which the renowned wines of Condrieu and Chateau Grillet are produced. At present, there are at most five producers of Viognier in the United States. The experimental 2-acre Viognier Vineyard has done so well that a portion of Calera's planned additional acreage will be planted to this variety.

These three premium varieties are the only varieties planted on Mt. Harlan and were selected because of their suitability to the upland soils. By contrast, the San Benito viticultural area is suited and has been planted to over twenty different varieties, not all of which are premium varieties.

Because of the tremendous success of Pinot Noir in the mountains, this variety is likely to remain the dominant grape of the Mt. Harlan vineyards. Pinot Noir grows differently in this

area than it does in the lowland areas. Were it planted at the lower elevations it would ripen earlier.

The yields, respective to elevations, differ as well. Because the vineyards are terraced on the mountainsides, the yield is somewhat restricted, never reaching two tons per acre until 1987. The average yield is 1.25 to 1.60 tons per acre compared with normal 3 to 5 tons per acre expected of vines planted in lowland areas. The low yield is a result of vine stress due to the slope of the mountain vineyards, low water holding capacity, and elevation. The berries are smaller and more concentrated in flavor. The wines therefore have a more intense varietal character.

This concentration of fruit, combined with the unique features that limestone soil adds, results in unique wines clearly distinguishable from the wines grown at lower elevations, in terms of both price and sensory evaluation. This is most evident in the Pinot Noir varietal which is presently planted on Mt. Harlan and in the neighboring valley areas, but it also can be expected, and has been noted, for other varietals.

IV. BOUNDARIES

The boundaries for the Mt. Harlan viticultural area are easily administrable and follow natural geographical features such as the ridge line in the south and west, Thompson Creek to the south, Pescadero Creek at the northwest, and the 1800 foot contour line in the northwest and east.

The appropriate maps used for determining the boundaries of the proposed Mt. Harlan viticultural area are two U.S.G.S. maps entitled (1) "Mt. Harlan Quadrangle, California" 7.5' series; and (2) "Paicines Quadrangle, California" 7.5' series. The point of beginning is the unnamed 3063' peak on the county line between San Benito and Monterey Counties in Township 14 S., Range 5 E., Section 34 of the "Mt. Harlan" quadrangle.

1. From the point of beginning proceed in a generally northwesterly direction along the county line through sections 34, 33, 28, back to 33, 32, 29, and 30, all in Township 14 S., Range 5 E., to the point at which the county line intersects the line between Sections 30 and 19 of said Township and Range.

2. From this point proceed in a straight line northeast approximately 750 feet to the end of westernmost stream leading into Pescadero Creek in the southwest corner of Section 19 in Township 14 S., Range 5 E.

3. Thence following the stream in a northeasterly direction to its intersection with the 1800 foot contour line near the center of Section 19 in Township 14 S., Range 5 E.

4. Thence following the 1800' contour line in a southeasterly and then northeasterly direction through

Sections 19, 20, 17, 16, 15, 14, north of Section 14, then southerly through Sections 13 and 24, then circling through Sections 13, 18, 19, 30, 25, and 26 to the point of intersection of said 1800' contour and Thompson Creek near the center of Section 26 in Township 14 S., Range 5 E.

5. Thence southwesterly along Thompson Creek to its commencement in the northwest corner of Section 34, Township 14 S., Range 5 E.

6. Thence in a straight line to the beginning point.

CONCLUSION

Mt. Harlan is a unique area distinguishable by its soils, elevation, microclimate, history and viticulture. In the past ten years Mt. Harlan has emerged as an important grape growing region responsible for the United States' premier Pinot Noir. By establishing "Mt. Harlan" as an American Viticultural Area, ATF will allow the consumer to identify precisely the origin of the grapes in the wines of this region.

JOSH JENSEN, General Partner
CALERA WINE COMPANY

FOOTNOTES

1/ T.D. ATF-106, 47 Federal Register 24295 (June 4, 1982).

2/ John Ohrwall, "A History of Vineyards and Wineries in San Benito County," San Benito County Farm Advisors Office, 1976, p.4.

3/ Ibid., pp.2-4.

4/ Information based on telephone conversation of November 14, 1988 with Field Biologist Don Pine of the California Department of Fish and Game.

5/ T.D. ATF-108, 47 Federal Register 35480 (August 16, 1982).

6/ T.D. ATF-109, 47 Federal Register 36126 (August 19, 1982).

7/ Letter of Howard Harris to Josh Jensen of Calera Wine Co. dated February 27, 1988 (attached hereto as Exhibit B).

8/ Reporter's Transcript of Proceedings, Lime Kiln Valley Hearing (January 21, 1981) p.35.

9/ United States Department of Agriculture, Soil Survey of San Benito County (Wash., D.C., GPO 1969) p.24.

10/ Ibid., p.14.

11/ Ibid., p.46.

12/ Oliver E. Bowen, Jr., Clifton H. Gray, Jr., "Geology and Economic Possibilities of the Limestone and Dolomite Deposits of the Northern Gabilan Range, California" (San Francisco: California Division of Mines, 1959), p.37.

13/ Oliver E. Bowen, Map of Limestone and Dolomite Deposits in California, from information obtained by Q.A. Aune, O.E. Bowen, J.R. Evans, C.H. Gray, E.W. Hart, P.K. Morton, F.H. Weber, Jr., and R.B. Saul.

REFERENCES

Bowen, Jr., Oliver; Gray, Clifton. "Geology and Economic Possibilities of Limestone and Dolomite Deposits of the Northern Gabilan Range." California Division of Mines, Special Report 56, 1959.

Dunmire, John R., ed. Western Garden Book. Menlo Park, CA. Lane Magazine and Book Co., 1967.

Isgrig, Dan. Soil Survey of San Benito County. Washington, D.C. U.S. Government Printing Office, 1969.

Ohrwall, John. "A History of Vineyards and Wineries in San Benito County." San Benito, CA. San Benito Farm Advisors Office, 1965, reprinted 1976.

"Establishment of the Lime Kiln Valley Viticultural Area." 47 Federal Register, 24295-6, T.D. ATF-108 (June 4, 1982).

Reporter's Transcript of Proceedings, Lime Kiln Valley Viticultural Area Hearing Bureau of Alcohol, Tobacco and Firearms. Wash., D.C. 1981.

Cienega Valley Viticultural Area." 47 Federal Register 36125-7, T.D. ATF-109 (August 19, 1982).

"Paicines Viticultural Area." 47 Federal Register 35480-2, T.D. ATF-108 (August 16, 1982).

LIST OF EXHIBITS

Exhibit A	"A History of Vineyards and Wineries in San Benito County."
Exhibit B	Letter to Josh Jensen of Calera Wine Company from Howard W. Harris, with Harris' biographical description.
Exhibit C	Excerpt from Oral History Interview with Josh Jensen.
Exhibit D	Collection of press notices and reviews on Calera Wine Company's Mt. Harlan Wines.
Exhibit E	Representative wine labels of Calera Wine Company's Vineyard designated Pinot Noirs.

EXHIBIT "A"

A HISTORY OF VINEYARDS AND WINERIES IN SAN BENITO COUNTY

by

JOHN P. OHRWALL

Over a century ago there were vines around all the Missions of California, and we can assume that the good Padres planted vines at San Juan Bautista and eventually made wine for sacramental purposes from these grapes.

In the early 1850's Theophile Vache, a Frenchman, settled in the area some 9 miles South-west of Hollister, later known as the Vineyard District, cleared the original chaparral brush and trees, and planted vines. He produced wine and hauled it by oxcart (the cart consisting of a single puncheon fitted with wheels) to San Juan. San Juan Bautista was then the largest city in this area, a stop on El Camino Real between San Francisco and Los Angeles. Hollister did not exist at this time. In the book "Early Days at the Mission San Juan Bautista" written by Isaac Mylar, and published in 1929, he mentions the merchants of San Juan as he remembers them in 1856. I quote, "A Mr. Filoucheau operated a saloon on the corner of 3rd and Washington Street, he was the agent for Theophile Vache. Vache would send down from his vineyard in a carretta, two or three barrels of his products, leaving them with Filoucheau for disposal. The Mexican driver would return on that toilsome journey, there being hardly a vestige of a road through the canyon late at night, and without mishap. Vache ultimately sold his vineyard to the late William Palmtag," end quote.

1883 was the year that William Palmtag bought the 320 acres from Theophile Vache. He employed Adam Renz, the father of George Renz of Gilroy, and Bill and Bob Renz of Hollister, as his vineyard foreman and winemaker. More grape acreage was planted, the winery enlarged, and a small distillery was established. Under the name of Palmtag Mountain Vineyard and San Benito Vineyard, quality wines were produced which

were said to have won prizes at various expositions and fairs, including some held in France and Italy.

About 1895 Leopold Palmtag, the nephew of William Palmtag, replace Adam Renz as winemaker and Vineyard Superintendent. Adam Renz moved to Hollister and established a home on the Tres Pinos Road.

Alta Williams drew my attention to a book published in 1893 in which the authors say, and I quote, "The foothills throughout this region are undoubtably adapted to the growing of vines. The splendid results obtained by Mr. Palmtag with several kinds of foreign grapes, serve as a pointer which others may follow with confidence. Though his wines are young, they show plainly enough to the discerning something of the future possibilities of this section in viticulture. The vineyards of the future in California will be established on the foothills and hillsides of this area," end quote. How true these authors were in their forecast,made 70 years ago, is shown by the present 3500 acres of fine varietal grapes that Almaden Vineyards has in the Cienega and Paicines District, at this time.

Early in the 1900's several vineyards were planted in the Cienega and Grass Valley area. Some of the owners that I remember were the Contival family, who also had a small winery, the Sullivan's, Pivetti's Benassi's, Lat Hawkins, and others. I believe that Emil Corotto had a vineyard and winery in the Southside, as did the Lucchetti family. The Calleri's had a vineyard and later a winery just South of Tres Pinos.

During the period that William Palmtag owned the winery and until Prohibition became the law of the land, a bar was operated on the premises. The vineyard and winery employees would gather here in the evenings for a game of cards, and I imagine to spend some of their wages over the bar. A picnic area was established near the winery, with a swimming pool fed by springs, and early time residents of Hollister have told me that they used to drive up on Sundays with their

families for a pleasant day in the country. While this location was never a branch Post Office, for the convenience of neighbors, and I imagine to bring in additional customers to the bar, a semi-official mail service was established to Hollister. The first farmer going to town in the morning would stop and pick up the mail bag and deliver it to Palmtag's saloon in Hollister, which was on the corner of 5th and San Benito Streets. Someone would take the mail bag across the street to the Post Office which was located at that time in the middle of the block on 5th between San Benito and East Streets, and mail for certain residents in this area would be collected from their private boxes, and the bag and contents brought back to the winery by some one returning in the afternoon. One of my chores, as a boy, was to ride horseback to the San Benito Vineyards in the evening, a distance of 3 miles, and get our mail. As a reward Captain St. Hubert, who acted as winemaker and part time attendant at the bar would give me several brandied cherries kept in a glass jar on the bar. I never remembered ever falling off the horse on my way home.

In 1906 William Palmtag sold his vineyard and winery to a group of Eastern men who incorporated the property under the name of San Benito Vineyards Company. Again the vineyards were expanded under the managership of Capt. Jules St. Hubert, a retired French Cavalry officer, who acted as superintendent and winemaker for the next six years. John Dickenson, the senior member of the San Benito Vineyard Corporation finally assumed full ownership and control, and operated the property until Prohibition when the winery was closed and Dickenson left San Benito County for San Francisco. He was said to have traded his property here for a hotel in San Francisco.

In 1907 Professor Frederick Bioletti, who was head of the Viticulture Department of the University of California, interested my father, Dr. H. Ohrwall, in the development of an experimental vineyard in

Grass Valley, some 12 miles South-West of Hollister, on the Cienega Road. A partnership was formed under the name of El Gavilan Vineyard, and the next year about 100 acres of varietal grapes were planted from cuttings obtained by Bioletti, from the best vineyards of California. Bioletti was called back to the University after a year, and my father carried on alone. A small winery was built about 1914 and operated until Prohibition, the wines being sold in bulk each year to the California Wine Association.

When Prohibition was the law of the land all wineries in San Benito County closed and a new era was established -- shipping wine grapes to the Eastern markets. During the Dry Era it was legal for a legitimate head of a household to make up to 300 gallons of wine each year for his own use. In the Eastern cities which had a large foreign born population, there was a big demand for grapes each Fall.

Following the close of the first World War the Northern part of San Benito County was changing from a hay and grain economy to one of orchards, row crops, and vineyards. Vineyards of shipping quality grapes were planted in the Ausaymas, Sunnyslope, and Cienega areas. Quality wine grapes that were produced at the San Benito Vineyards and on my father's El Gavilan Vineyard were penalized on account of their poor shipping qualities, and the tough skinned varieties brought a premium price.

At the close of the Dry Era in 1935 when it was again legal to operate a winery and produce quality wines, Edwin D. Valliant and son Ed Jr., acquired the former San Benito Vineyards property and commenced rehabilitation and operation of the winery. Other small wineries opened in the area around Hollister and by 1940 there were wineries operated by Antonio and Peter Felice in the Ausaymas; Domingo Lima, on Sunnyslope Road; Josephine Guerra, in Hollister; and John Podesta in Aromas.

In 1943 W. A. Taylor & Company, a New York State subsidiary of Hiram Walker & Sons, acquired the San Benito Vineyard property from the Valliants, and this Company undertook a program of renovation, replacement, and expansion. The original Oak cooperage which William Palmtag had received by sailing vessels, around the Horn, some 75 years ago, were recoopered, and are now in their original condition maturing excellent wines. Much of the vineyards had suffered from poor care during the preceding years, and a program of removal of old non bearing vines was established, and new plantings were made of high quality grape varieties. In 1945 Taylor and Company acquired the El Gavilan Vineyard, which had been in my family's name since 1907, and here too instituted a program of grape variety improvement.

In the early 1940's B. Cribari and Sons established a 600 acre vineyard South of Hollister on the Tres Pinos Road. Their grapes were crushed in their winery at Madrone. Water and soil conditions were not the best and this acreage was abandoned after a ten year period.

Grape acreage in San Benito County after Repeal gradually built up to a high of 1765 acres in 1948 and then gradually declined to a low of 860 acres in 1959. Latest figures from the Agricultural Commissioner's office show a total of less than 150 acres of grapes in the County that are in individual ownership, the balance of the 3700 acres now in the County are owned by Almaden Vineyards.

Almaden Vineyards came to San Benito County in 1956 with the purchase of the Paicines Orchards from Mrs. George Sykes. All available land on the property that was thought to be suitable for vineyards, was planted. Other acreage was acquired from neighboring ranchers, and each succeeding year has shown an increase in grape acreage. At the present time the Company has over 3500 acres in vines. In 1963 Almaden acquired the former W. A. Taylor property in the Cienega district. A million gallon capacity winery was built at Paicines, together with a still,

and here all the Company's white wine grapes are made into wine. In the Cienega plant, red grapes are processed, and this plant has been increased in size so that its capacity is approximately one million gallons also.

Henry Schacht, the Farm Reporter for the San Francisco Chronicle, in an article entitled "Paicines --- Giant of the New Vineyards," dated last March, has this to say, and I quote, "Paicines in the foothills of the Gavilan Range south of Hollister is little more than an old-fashioned general store. A country crossroads where a tribe of Indians, the Paicines, once lived on the border of a soggy meadow. Where the squaws hunted grasshoppers and gathered acorns, and where later settlers herded cattle, is today the center of the world's largest vineyard of fine wine grapes. This is the astonishing Paicines Vineyards of Almaden Vineyards Inc., with headquarters at Los Gatos. Under the pressure of urbanization Almaden has now sold its original vineyards at Los Gatos down to 50 acres around the winery. For the future it looks to outlying plantings and especially to the monster Paicines operation where 1.3 million vines of 19 varieties have been planted. Paicines is the largest single contributor to the growing volume of fine wine grapes being produced in the "new frontier" of San Benito and Monterey Counties. Far better known in the past for livestock, tree fruits and vegetables, these counties will play a most important role in satisfying the future demand for California table wines. Visitors are usually surprised that the climate is so cool, seldom going over the 80's even on summer days, and quickly losing its heat after sundown. The daily average for the summer is about the same as in the best wine districts of Europe. The factors of coolness and variety seem to hold more importance in the opinion of wine experts, these days, than soil. On both of these factors Paicines ranks with the best regions. We knew it was big before we saw it but Paicines is

more than that... It is staggering." End quote of Henry Schacht's article.

And now, in conclusion, may I extend to you a cordial invitation to visit the Almaden Winery at Cienega where the first commercial winery and vineyard was established in this area over 100 years ago. We will show you a vast aging cellar, almost 4 acres in extent, which has no comparable equal in the world. Here in over 30,000 small oak barrels, Almaden's red wines await their maturity and perfection. Visit our tasting room where you may sample the wines of your choice that have made Almaden's great and evergrowing reputation known throughout the world.

Thank you very much for allowing me to make this presentation to you.

Presented at the meeting of the San Benito County Historical Society
July 29, 1965

Reproduced by San Benito County Farm Advisors Office
March, 1976

Harris Consulting
Soils • Water • Minerals

EXHIBIT "B"

Howard W. Harris • 340 Donald Drive • Hollister, CA 95023 • (408) 637-2643

February 27, 1988

Mr. Josh Jensen
Calera Wine Co.
Cienega Road,
Hollister, CA

Dear Josh: In response to your inquiry regarding my ideas on the unique features of the Harlan Mountain area:

The Harlan Mountain area is a unique region noted for its high quali wines produced by the Calera Wine Company.

The Calera name is derived from the U.S. Department of Agriculture classification of soils originating from Calcium Carbonate- limestone, which mineral is abundant in the area.

Historically, in the 1800's, there were great losses from fires in California due to the prevailing wooden buildings. This led to a tremendous demand for fireproof buildings built of brick, and the lime mortor used to bind the bricks together. Because of the abundance of extra high quality of limestone in the vicinity the area was selected for the produ of burnt lime, one of the main ingredients of mortor and plaster. Several kilns fired by oak wood were located in the area, one of which is on the property of the Calera Wine Company.

The presence of limestone in the area is generally recognized as a factor in the production of fine wines.

In addition to the soil conditions favoring the excellent wine qual the Harlan Mountain area is unique in its high elevation of the vineyard there. Most of the vines are above 2500 feet above sea level. The lower atmospheric pressure at this elevation has a favorable effect on the whc metabolism of the grape plant.

Another unique factor at the higher elevation is the clarity of the atmosphere. The vineyards of the Harlan Mountain area are above the smog layers which occur in many other areas. This allows more penetration of sun's rays to stimulate better photosynthesis in the production of sugar and flavor in the grapes produced there.

An additional factor favoring the vineyards of the Harlan Mountain is the fact that they are planted mostly on the southern exposures agair the surrounding hills. This makes for additional concentration of the su rays, as compared to vineyards planted on level ground.

The Harlan Mountain area has an interesting and unique histori romanticism, too. Before the gold rush brought hordes of people to the State, there was already activity in the Harlan Mountain area. During the Mission period from 1797 to 1832 there were pieces of silver showing up at San Juan Bautista. For many years, it was a mystery as to where the silver was coming from. Early seachers for the "Lost Spanish Silver Mine traced the old Indian trails to the Gavilan Mountains near Harlan Mountai In recent years some of the old workings have been found near the Calera Wine Company holdings.

Harlan Mountain was named for an early settler, Ulysys Grant Harlan He cleared hundreds of acres by hand and grew hay and grain there. To this day, an ancient piece of grain harvestibg equipment can be seen on the property of the Calera Wine Company.

Best Wishes,

RESUME, HOWA HARRIS, FOR CIBA PANEL, CRAMENTO APRIL 1, 1982

BORN IN OAKLAND,CALIFORNIA, JANUARY 20, 1910.

AT AGE OF FOUR, A NOTORIOUS BURGLAR, ARSONIST, AND THIEF. BANISHED TO THE MOUNTAINS ABOVE HOLLISTER, TO BECOME A "MOUNTAIN BOY".

AT AGE OF 13 EXPELLED FROM GRAMMAR SCHOOL AS "HOPELESS CASE".

IN 1933 GRADUATED WITH HIGHEST HONORS /UNIVERSITY OF CALIF., BERKELEY AND BATCHELOR'S DEGREE IN PLANT SCIENCE, SPECIALIZING IN GEOLOGY, CHEMISTRY, AND PLANT PHYSIOLOGY.

PHI BETA KAPPA, NAT. SCHOLASTIC HONOR SOCIETY
ALPHA ZETA, NAT. AGRICULTURAL HONOR SOCIETY
PHI SIGMA, NAT. BIOLOGY HONOR SOCIETY
SIGMA XI, NAT. SCIENCE HONOR SOCIETY.

FOR OVER 60 YEARS OPERATED A FARM, NOTED FOR ITS WALNUTS (WHERE IT HELD THE WORLD'S RECORD IN PRODUCTION OF OVER FOUR TONS OF DRY NUTS PER ACRE A YEAR), APRICOTS, GRAPES,TOMATOES, GRAIN, BEEF CATTLE, AND MOTORCYCLES.

DONATED LAND TO THE UNIVERSITY OF CALIFORNIA FOR THE SAN ANDREAS GEOPHYSICAL OBSWRVATORY, AND FAMILY HELPED OPERATE FOR MANY YEARS, AND DEVELOPED HOBBY OF EARTHQUAKE PREDICTION.

A STUDENT OF LAW, SPECIALIZING IN WATER RIGHT PROBLEMS.

FOR OVER 40 YEARS HAS OPERATED "HARRIS CONSULTING" , SPECIALIZING IN WATER, SOILS, AND MINERALS.

IN 53RD YEAR AS 4-H RURAL YOUTH LEADER, SPECIALIZING IN TEACHING ENTOMOLOGY, GEOLOGY, AND ELECTRONICS.HONORED LAST MONTH AT HONOLULU CONFERENCE OF LEADERS AS LEADER WITH GREATEST NUMBER OF YEARS OF SERVICE.

ACTIVE IN CALIFORNIA FARM BUREAU FEDERATION AS CHAIRMAN OF POLICY COMMITTEE ON NATURAL RESOURCES WHIC DEALS WITH ENVIRONMENTAL PROBLEMS SUCH AS HERBICIDES, PESTICIDES, FERTILIZERS, AND BIOLOGIC DEVELOPMENTS.

ACTIVE CONSULTANT TO SAN BENITO COUNTY BOARD OF SUPERVISORS, HEADING TASK FORCES ON ZONING AND PLANNING, MINING ORDINANCE, ANIMAL CONTROL, WATER DEVELOPMENT, TAXATION, SEWAGE DISPOSAL, AIR POLLUTION, FLOOD CONTROL, AND OTHERS. RECENTLY CHAIRED STUDY COMMITTEE ON

ADVANCED GENETIC SCIENCES' "FROSTBAN", AS A RESULT OF WHICH, THE BOARD OF SUPERVISORS UNANIMOUSLY APPROVED ITS FIELD TESTING.

MR. HARRIS SAYS HE HAS SOME IDEAS REGARDING INDUSTRY NEEDS. HIS HOBBY IS MAGIC. PERHAPS THAT IS WHAT WE NEED.

EXHIBIT "C"

Oral History Interview - October 1, 1987

Interviewer:
CHARLES BLACK
President
Beneficient Oenological Institute
765 Woodside Drive
Woodside, California 94062

Subject:
JOSH JENSEN
Founder & President
Calera Wine Company
11300 Cienega Road
Hollister, California 95023

Beneficient Oenological Institute: This is Josh Jensen who started atypically as a History Major at Yale and went on to Anthropology at Oxford. The next year and a half were spent in France picking grapes and eating well. Returning to this country Josh searched for and found a limestone area where Calera was started. Josh, when did you first get interested in wine?

Josh Jensen: I had my first exposure to wines when I was ten or twelve years old. An old family friend of my father's, who became a dear lifetime friend of mine, was Dr George Selleck who was a San Francisco dentist, great story teller, renowned chef and extraordinarily good palate who had a major collection of wine and did a lot of entertaining. I remember tasting German wines with him when I was just a kid and then later progressed onto Bordeaux and Burgundies. The first time in my life that I really started drinking wine on an everyday basis was when I went to graduate school in England, at Oxford, where we'd have wine with dinner. That's when I really fell in love with great Burgundies.

BOI: Did they have a formal aspect to drinking their wines at Oxford?

JJ: At every Oxford college there is a High Table where the faculty and the heads of the College eat. They have nice wines. Many of the Oxford Colleges have vast, extensive cellars. But I never ate at High Table. Most often it was going out to restaurants and having dinner at friends' houses.

BOI: There was more of a seriousness about wine, wasn't there?

JJ: Well, wine was just an everyday thing. The English don't put napkins on the table, but they put wine on the table. American's put napkins on the table, but no wine. So there was a frequent exposure to it that I had never had. My family didn't drink wine except on special occasions.

BOI: Nice intense wine out of that. Where is Calera going? And where does the name Calera come from?

JJ: Calera is the Spanish word for limekiln. The logo on our label is an artist's rendition of an old abandoned kiln that's up on the mountain alongside our vineyards. It's a masonary kiln that we believe was built around the turn of the century. And as I mentioned earlier, our winery building also started out to be a limekiln. A third reason for choosing this name was the obvious reference to limestone, which we, along with the Burgundians, believe to be so essential for growing Pinot Noir. And finally, the name Calera is pretty sounding, and can be easily pronounced in every major language except Japanese and Swahili. I think we looked at about 1,000 possible names before selecting Calera.

As for where Calera is heading, we are going to increase production of our Estate wines, which clearly are our best wines and also the best-selling of our wines, even with their high price. But to increase the production in a major way, we'd need to make a major investment in new vineyards, beyond the 24 original acres and the 20 new acres planted in 1984. We own plenty of land. We just need to find the dollars to put more vineyards in. Where we are, land's cheap. It's putting in the vineyards that gets expensive.

BOI: You didn't take on partners or go corporate? Or have you?

JJ: I've got family members as partners now and probably we will be bringing in new partners to finance new plantings.

One thing I haven't mentioned is the 2 acres of the grape variety Viognier we planted on a somewhat experimental basis in 1984, at the same time we planted the 12 acres of Mills Pinot Noir and 6 acres of Estate Chardonnay. Viognier is the white variety that makes the renowned Condrieu and Chateau-Grillet wines in the northern Rhone Valley. We have had a very hard time keeping the Viognier vines alive and getting the grafts to take, but after several years of grafting and re-grafting Viognier buds onto the rootstocks, we finally have about 150 growing Viognier vines with some crop on them this year, and another 950 or so rootstocks seem to have taken their grafts this summer. So we figure to get a few gallons only of Viognier this year, but, hopefully, 60 to 100 cases next year, 1988.

BOI: I'm going to make a bid on that. I think that's one of the most fascinating wines. Roughly what total number of cases do you make now and where do you see your production going when your vineyards ultimately all come into harvest?

JJ: We are now making about 2,500 cases a year of Estate wines, out of our total wine production of 10,000 cases a year. So roughly a quarter of our current production is from our own vineyards. I'd like to plant another 100 acres, and as I've said, we already own the land. We would then be making around 15,000 cases or so of Estate wines. But even if we started today with a crash program of planting, which we aren't doing, and planted 100

acres over the next three years, we wouldn't have quantities like that to sell for another 10 years. So that would be quite a way off. Then, if we do ever grow to 15,000 cases a year of Estate wines, at that point we might continue making wines from purchased grapes, or we might phase out that part of the operation.

BOI: Several small winemakers who've done very well feel that there comes a thing after 15,000 cases where you lose control, where you don't know what's in each barrel. Do you have any thoughts about that?

JJ: Well, 15,000 is a workable size. Whether it gets too big above that, I don't really have a firm opinion one way or the other.

BOI: You'll just find out when you get there. Well, is there anything else about Calera you'd like to tell me, that I might have missed?

JJ: Not that I can think of. I think you have the whole story.

BOI: Well, I think you've really been a leader in getting Pinot Noir more recognized, and really improved, too. Just continue it.

JJ: Thasnks very much, Charles.

BOI: Thank you, Josh.

PARKER'S

WINE BUYER'S GUIDE

FINITIVE INFORMATION ON RECENT VINTAGES
D PRICES AND RATINGS FOR MORE THAN 3,000 WINES
M THE WORLD'S GREAT WINE-GROWING REGIONS
BY THE AUTHOR OF BORDEAUX

1987-1988

ROBERT M. PARKER, JR.
OR AND PUBLISHER OF THE WINE ADVOCATE

who's who in the world of wine becomes readily
years of tasting and visiting the vineyards and wine
world's producers and growers. Great producers are,
still quite rare, but certainly more growers and produ
making better wine, with better technology and more l
ever before. The charts that follow rate the producer
system, awarding five stars and an "outstanding" ratir
ducers deemed to be the very best, four stars to thos
cellent," three stars to "good" producers, and two star
"average" and "below average" producers. Since the a
is to provide you with the names of the very best
content is dominated by the top producers rather tha
cessful ones.

Those few growers/producers who have received f

are indeed those who make the world's finest wines. Tl
selected for this rating because of two reasons: they mak
wine of their particular viticultural region, and they ar
consistent and reliable even in mediocre and poor vinta
whether they be specific numerical ratings of individual
sifications of growers, are always likely to create contr
not only the growers but wine tasters themselves. But, i
tially, with a global viewpoint and with firsthand, on
("sur place"), knowledge of the wines, the producers,
and quality of the winemaking, such ratings can be relia
erfully informative. The important thing for readers to
that those growers/producers who receive either a fou
star rating are producers to search out; I suspect few c
ever be disappointed with one of their wines. The th
growers/producers are less consistent, but can be expe
fine wines in the very good to excellent vintages. Thei
come either from the fact that their vineyards are not as
placed, or because for financial or other reasons they
make the severe selections necessary to make only the
wine.

The importance of rating the growers/producers o
major viticultural regions is perhaps the single most sa
this book. Years of wine tasting have taught me many th
more one tastes and assimilates the knowledge of the wo
the more one begins to isolate the handful of truly world-
and producers who seem to rise above the crowd in gre
mediocre vintages. I always admonish consumers again
in one grower or producer, or one specific vintage, but t

ıardonnay Santa Barbara	($12.00)	84
ıot Noir Jensen	($25.00)	86
ıot Noir Jensen	($22.00)	87
ıot Noir Reed	($25.00)	90
ıot Noir Reed	($22.00)	84
ıot Noir Santa Barbara	($10.00)	74
ıot Noir Santa Barbara	($10.00)	72
ıot Noir Selleck	($25.00)	88
ıot Noir Selleck	($23.00)	86
ıot Noir Selleck	($25.00)	90

ent, the tiny Calera Winery is making California's best and riguing Pinot Noirs. They are rich, aromatic, rather intense, vines. The production is tiny, the costs of production high, so es for the final product look expensive. However, you are not be disappointed, particularly if you are in search of flamboy- intense, exotic Pinot Noirs. The 1982s are intensely smoky, agrant, rich wines that some might call the Chambertins of ia. They are unfiltered and, whether for that reason or not, swell and develop in the glass as they sit. Usually the Selleck ıost evolved and the Reed and Jensen the most tannic and bly ageworthy. All three of the 1982 wines can be drunk now extroverted, full-intensity, complex bouquets, although they e potential to improve for several more years. The 1982 Santa made from purchased grapes, is very weedy and vegetal, and y liking. The 1983s continue the success this winery has had fickle varietal. They are similar to the 1982s, perhaps slightly berant and intense, but are immensely interesting wines. The again is the most advanced and the Reed and Jensen more d, with spicy, leathery, exotic bouquets. Of the three, the ooks to be the star. Again, the Santa Barbara, made from ed grapes, is excessively vegetal and of little interest. The lleck and Reed exhibited flamboyant, spicy, fragrant Pinot ıracter and layers of flavor. Calera also makes an inexpensive el that can be very good—although my experience is that it is tent from vintage to vintage—and a sound, fruity, straightfor- unky Chardonnay.

*** * * * * (OUTSTANDING PRODUCERS)**

Calera (San Benito)

*** * * * (EXCELLENT PRODUCERS)**

Bonny Doon (Santa Cruz)
Calera (San Benito)
Chalone (Monterey)
Edna Valley (San Luis Obispo)
Hanzell (Sonoma)
Kalin (Marin)
Saintsbury (Napa)
Santa Cruz Mountain (Cruz)
Sea Ridge (Sonoma)

*** * * (GOOD PRODUCERS)**

Acacia (Napa)
Beaulieu (Napa)
Belvedere (Sonoma)
Kistler (Sonoma)
Robert Mondavi (Napa)
Monticello (Napa)
Mount Eden (Santa Cruz)
Qupé (Santa Barbara)
Richardson (Sonoma)
Sanford (Santa Barbar
Soleterra (Napa)
Robert Stemmler (Son
Joseph Swan (Sonoma
Trefethen (Napa)
Tulocay (Napa)

A GUIDE TO CALIFORNIA'S BEST PRODUCERS
ZINFANDEL

*** * * * * (OUTSTANDING PRODUCERS)**

Ravenswood (Sonoma)
Ridge (Santa Cruz)

*** * * * (EXCELLENT PRODUCERS)**

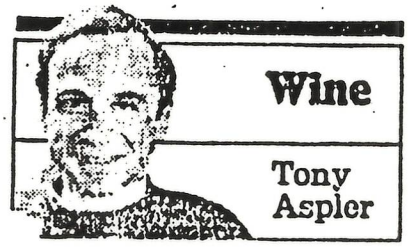
Calera (San Benito)
H. Coturri (Sonoma)
Edmeades (Mendocino)
Grgich (Napa)
Lytton Springs (Sonoma)
Chateau Montelena (Napa)
Monterey Peninsula (Monterey)
Joseph Phelps Alexanc (Sonoma)
Rafanelli (Sonoma)
Richardson (Sonoma)
Sausal (Sonoma)
Shenandoah (Amador)
Storybook Mountain (N
Joseph Swan (Sonoma)

*** * * (GOOD PRODUCERS)**

Baldinelli (Amador)
Burgess (Napa)
Caymus (Napa)
DeMoor (Napa)
Dry Creek (Sonoma)
Fetzer (Mendocino)
Guenoc (Lake)
Montevina (Amador)
Preston (Sonoma)
Story (Amador)
Sullivan (Napa)
Sutter Home (Amador)

Budget-induced bargain hunt yields red and white rewards

THE TORONTO STAR
Saturday, April 11, 1987



I just bought a new car (white outside, claret-colored inside). The last time I bought a car was 10 years ago. I am still in a state of shock.

My wine-buying habits now reflect my incipient bankruptcy.

The recent highly successful Toronto Wine & Cheese Show gave me an ideal hunting opportunity to sniff out some bargains.

There are many wines under $6 at the board, but I was looking for those in that price range that taste as if they cost twice as much.

These days, you're not going to find white Burgundy for six bucks, but you can find some acceptable alternatives from Italy.

Folonari Chardonnay 1985 from the Alto Adige ($5.25) and Pasqua Chardonnay 1985 from Veneto ($5.20) are both fresh and clean with good acidity and no wood to temper the apple-like fruit.

Red licorice

I also liked the nutty, floral Granduca Cortese di Gavi 1984 ($6.80) and the Schloss Riegensburg Weissburguner 1982 from Austria (Vintages stores, $8.50) with its soft, smokey fruit and lemony finish.

Impressive, too, for the price is the Navip Traminer 1984 from Yugoslavia ($5.05) which has good lychee Gewurz character on the palate, if not on the nose.

At $5.95, B&G has Fonset-Lacour, white Bordeaux blend with a hint of residual sugar and an aftertaste of red licorice. Very stylish for the price.

Generally, you can find more inexpensive reds of quality than you can whites. If you're looking for substitutes for chateau-bottled Bordeaux, try the Concho Y Toro Cabernet Sauvignon 1983 from Chile ($5.95).

This vintage is already showing a fine black currant flavor with enough tannin to give the wine structure.

The Sudtiroler Cabernet 1982 Riserva (Vintages, $7.30) is bantam-weight claret with good perfumed fruit balanced by acid and tannin.

Talking of perfume, the 1982 Marques de Riscal with its coconut and lanolin bouquet ($8.05) shows that this house is back on the track of making good wines after several lacklustre years.

Plum flavors

If your taste runs to blockbusters, you have the choice of Cheateau du Bois de la Garde 1985 ($7.55) from the Rhone (a big peppery wine with lots of extract), Bairrada Reservea 1982 ($5.55) from Portugal (soft vanilla and plum flavors), Vacqueras 1983 ($9.05) — one of the Cotes du Rhone villages (rich, spicy fruit) and Montepulciano di Abruzzo 1983 ($5.55) produced by Casal Thaulero (dry raisiny character with a fresh acidic finish.)

Perhaps the best bargain of all is the Rumanian Pinot Noir at $4.90, whose black label assures us that the contents of the bottle is "Derived From Grapes."

That's reassuring in this age of soybean lobsters. Once you get past the gruesome label, the wine is soft and plummy with a rich fruit taste.

Finally, two sparkling wines that are excellent value. Segura Viudas from Spain ($7) is a dry, earthy sparkler with enough breeding to show up at a fashionable wedding. And Fontanafredda's Asti Spumante ($9.05) is a delight with its sweet Muscat taste and clean, crisp finish. A wine for those lazy summer afternoons.

An English Master Of Wine was once asked when was the last time he mistook a Bordeaux for a Burgundy. His reply: "Not since lunch."

Well, I had that kind of an experience at The Senator Restaurant recently when California wine evangelist Bob Sniderman put on a spectacular dinner pitting five vintages of Calera Pinot Noir (Selleck Vineyard) against a selection of some find red Burgundies.

These were in order of serving (paired blind with Calera of the same vintage), Chambolle-Musigny 1983 (Drouhin), Romanee St. Vivant 1980 (Domaine de la Romanee-Conti), Vosne-Romanee 1984 (Faiveley), Clos de la Roche 1981 (Vadey Castagnier) and Vosne-Romanee Les Suchots 1979 (Latour). All top stuff.

Tiny winery

When the dust had settled those present voted Calera 1979 as the best wine of the evening, followed by Clos de la Roche.

My top three wines were Calera 1979, 1982 and 1983! I was convinced that these were French Burgundies because of their elegance and bouquet.

Josh Jensen, the owner of Calera, who has been conducting these Pinot Noir-offs in American cities (usually with Echezeaux or Grands-Ediezeaux), was justifiably gratified by the results. His tiny winery produces only 2,500 cases of single vineyard Pinot Noir in San Benito County, 145 kilometres (90 miles) south of San Francisco. But he out-Burgundys Burgundy in the orthodoxy of his approach. Josh doesn't destem or filter.

He fines with egg whites, racks as little as possible and leaves the wine in 60 gallon French oak for 15 months before bottling. The results have to be tasted to be believed. A feather in the cap for The Senator for bringing Calera Pinot Noirs here.

Number 41

Robert M. Parker, Jr.'s

The WINE ADVOCATE®

An independent consumer's bimonthly guide to Fine Wine

EXHIBIT D3

California Pinot Noir: New Releases

CALERA	1983	SANTA BARBARA	($10.00)	75
CALERA	1983	JENSEN	(Unreleased)	87
CALERA	1983	REED	(Unreleased)	84
CALERA	1983	SELLECK	(Unreleased)	86
CALERA	1982	JENSEN	($25.00)	86
CALERA	1982	SELLECK	($25.00)	88
CALERA	1982	REED	($25.00)	87
CALERA	1982	SANTA BARBARA	($10.00)	80

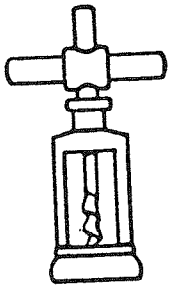
At present, the tiny Calera winery is making some of California's best and most intriguing pinot noirs. They are rich, aromatic, rather intense and unique wines. The production is tiny, the costs of production high, so prices for the final product are high. However, you are not likely to be disappointed. I have reviewed the 1982's before, and they are intensely smoky, spicy, fragrant, rich pinot noirs that someone might call the Chambertins of California. They are unfiltered, and whether for that reason or not seem to swell and develop in the glass as they sit. The **1982 Selleck** is the most evolved, the **Reed** and **Jensen** the most tannic and presumably ageworthy. All three 1982 wines can be drunk now for their extroverted, full intensity, complex bouquet, but they all should be even better in 2-3 years. The **1982 Santa Barbara**, made from purchased grapes, is a bit too weedy and vegetal. The **1983's**, not yet released by the winery, continue Calera's magic touch with pinot noir. They are quite similar to the 1982's; perhaps slightly less exhuberant and intense, but immensely interesting wines. At this time, the **1983 Selleck** is the most advanced and evolved in both bouquet and taste. Exotic spices, ripe fruit, cedarwood, all seem to play games with the nose. The **1983 Reed** wasn't quite as impressive. It had the typical big, intense, spicy, leathery, exotic bouquet but also more of a vegetal character. It is moderately tannic and needs 2-3 years of cellaring. The **1983 Jensen** looks to be the superstar of this trio. It has a darker, denser color, but although closed, it exhibits oodles of ripe, rich fruit, spicy, toasty oak, rich flavors and moderate tannins. As for the **1983 Santa Barbara**, like the 1982 rendition, I again found it a trifle too vegetal. With the exception of Santa Barbara offerings, all of these Calera pinot noirs are **Recommended.**

50 California Pinot Noirs were reviewed in this issue, from such top producers as Chalone (3 wines reviewed), Acacia (5 wines), Robert Mondavi (2 Reserve wines), Mt. Eden (1 wine), Edna Valley (2 wines), David Bruce (2 wines), and Sanford (2 wines). The top-scoring wines out of the 50 were:

	score
CALERA Selleck '82	88
CALERA Reed '82	87
CALERA Jensen '83	
Chalone "Reserve" '81	
CALERA Jensen '82	86
CALERA Selleck '83	
(4 others also scored 86)	

Closing Date: 6-9-87
Number 51

EXHIBIT " D4 "



Robert M. Parker, Jr.'s

The WINE ADVOCATE®

An independent consumer's bimonthly guide to Fine Wine

RATING SYSTEM

The WINE ADVOCATE's rating system employs a 50-100 point quality scale. It is my belief that the various twenty (20) point rating systems do not provide enough flexibility and often result in compressed and inflated wine ratings. The WINE ADVOCATE takes a hard, very critical look at wine, since it would prefer to underestimate the wine's quality than to overestimate it.

96-100	An **extraordinary** wine of profound and complex character displaying all the attributes expected of a classic wine of its variety. Wines of this caliber are worth a special effort to find and purchase.
90-95	An **outstanding** wine of great complexity and character.

Pinot Noir

CALERA 1984 PINOT NOIR "JENSEN" ($23.00) 9

Wow! When I first smelled this wine, I thought of Henri Jayer's Echezeaux and the Richebourg of Madame Gros. Owner Josh Jense has done what no one else in California has been able to achieve — make an incredibly complex, staggeringly French-like, gre pinot noir. The purity yet complexity of pinot noir flavors in this wine are mind-boggling. Can it get any better? For twice the pric one could not find a French red burgundy of this quality.

WINE COUNTRY®

MAY/JUNE 1988 THE INTERNATIONAL MAGAZINE OF WINE, FOOD, TRAVEL, AND FINE LIVING

EXHIBIT "D5"

PINOT NOIR REVIEW

Closing The Gap With Burgundy

BY RONN R. WIEGAND

$8.01 TO $12

1985 Calera, Pinot Noir, Santa Barbara County, Los Alamos Vineyard, $10—Rich, ripe, and spicy in aroma, with hints of figs and tobacco. Medium-bodied, but supple and rich on the palate, with some herbal character. Long persistence. Has the tannin to carry it several more years. ★★★ $$$

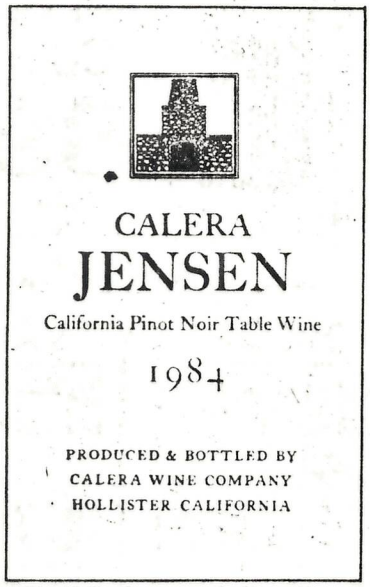
$12.01 & ABOVE

1985 Calera, Pinot Noir, Jensen, San Benito County, $25—Intense, rich, and distinct ripe-fruit aroma (raspberry/cranberry). Full-bodied, richly flavored, very long on the palate, long and slightly tannic/stemmy finish. Could age for another 5–10 years. Rich, mouthfilling, and savory. One of the best wines yet from this superb Pinot Noir producer.
★★★★★ $$$$$

A Calif. vintner's secret ingredient

EXHIBIT D6

The Calera label relies on the limestone-rich soil south of San Francisco.



The kiln logo symbolizes lime.

By Deborah Scoblionkov
Special to The Inquirer

"Is there a wine explosion happening in Philadelphia?" asked California vintner Josh Jensen. "Or is that too strong a word?"

How to describe the Philly wine scene? Somewhere between a whimper and a bang? A few intense, isolated skirmishes?

One well-aimed shot was a recent wine event held at Ecco restaurant at 17th and Lombard Streets, where Jensen's wines, a chardonnay, four pinot noirs and a zinfandel from the Calera Wine Co., were featured. It was one of a series of wine dinners organized by Ecco, the intimate new-wave bistro near Rittenhouse Square, which periodically matches up a specially designed menu with a thoughtful selection of superb and often hard-to-find wines.

Jensen, a tall, elegant and rather intellectual-looking man, was in town to attend the Ecco dinner. A native Californian, Jensen says that he was first introduced to fine

On wine

wines as a young man by an old family friend, Dr. George Selleck, in whose honor Jensen later would name his best vineyard.

At graduate school in England, Jensen discovered a culture where wine was "a part of everyday life, like lettuce or soap." He then went to France, where he decided to enter the wine business.

After apprenticing himself to several winemakers in Burgundy, Jensen returned to California and began a two-year search for limestone-rich soil, which he is convinced is essential to producing great pinot noir. His search ended 14 years ago in the unlikely town of Hollister, 90 miles south of San Francisco, in San Benito County. The land, once used for processing lime, still has several lime kilns scattered throughout the vineyards. The importance of lime soil

(See WINE on 7-K)

These vineyards are located 90 miles to the south of San Francisco in the Gavilan Mountains at an elevation of 2200 feet. They were planted in 1975 on a series of limestone outcrops. Selleck is oriented to the south, Reed to the north, and Jensen primarily to the south and east.

Label's guide to the vineyards.

PHILADELPHIA INQUIRER - JUNE 5, 1988

WINE, from 1-K

to Jensen's wines inspired him to use a kiln design in his logo and on his wine labels, and to name his venture Calera (which means lime kiln in Spanish).

"Hollister happens to be the earthquake capital of the world," he said, adding in jest, "That's another one of our secret weapons on pinot noir." Calera produces three excellent vineyard-designated pinot noir labelings that have quickly distinguished Calera as one of the country's top producers of that grape ("superlative pinot noir consistently from year to year," proclaimed wine guru Robert Parker).

Calera's style of winemaking relies less on technology than do many California wineries. "We don't do anything tricky," he said. "We let Mother Nature do her work and simply try to get that into the bottle." One example of this laissez-faire attitude is that Calera does not add sulfur dioxide or any commercial yeasts to its crushed grapes, allowing instead the "native" (usually called "wild") yeasts to flourish during the wine's fermentation.

"It's those guys in white lab coats who like to control everything who call it *wild* yeast — *horrible, dangerous wild yeasts!*' Jensen said with a laugh. Wouldn't such yeast make his wines more susceptible to spoilage?

"Taste them," he replied confidently. "Are they spoiled?"

Quite the contrary. Although I was surprised to learn that Calera's total wine production is a scant 10,000 cases, the company has placed its wines in select restaurants and wine bars around town, or out-of-state. Some samples:

- 1985 Calera Chardonnay, Santa Barbara ($12). Made from grapes purchased by Calera. A full, rich wine, with ripe, exotic fruit aromas and luscious texture. Good acidity.
- 1984 Calera Pinot Noir, Reed Vineyard ($23). The five-acre vineyard is named after Jensen's original partner in Calera (he has since bought the partner out). Pale, but aromatic. Light, fruity, very pleasant and accessible.
- 1983 Calera Pinot Noir, Selleck Vineyard ($25). Jensen considers this his best vineyard. I agree. With five years of age, this wine has acquired a deep, rich, mature aroma, quite earthy and complex with a mellow, mushroomy character.
- 1984 Calera Pinot Noir, Jensen Vineyard ($24). A clean, sweet, fruity nose. Full of ripe, cherry-like flavors and dazzling acidity. Still fresh and youthful, it will last a while longer.
- 1985 Calera Pinot Noir, Jensen Vineyard ($25). Exuberant fruit, nicely balanced with tart acidity and an earthiness reminiscent of top burgundies.
- 1981 Calera Zinfandel ($20 for a magnum). Available locally only in magnums, zin-lovers will recognize this as a good value. It has a rich, berry taste, viscous and jammy with a lingering finish.

The Wine Journal™

A DEFINITIVE GUIDE TO THE FINEST WINES OF THE WORLD

Volume IX, Number 6 January 1988

EXHIBIT D7

Current Tasting Notes

California Pinot Noirs

". . . the most elusive and capricious grape variety of all. "

The best wines have fruit, tannin, acidity and balance and those of you who have "written off" California Pinot Noir should try a few of the best bottles listed below. We think you might find them of interest. Our tasting this month covers Pinot Noirs. At the top of the list are Calera and Hunter Ashby.
-Ted Swinnerton

Calera 1984 "Reed". Josh Jensen is making fine Pinot Noirs. Founding the winery in 1975 and using the name Calera (meaning lime kiln in Spanish), he planted Pinot Noir rootings in the limestone soil high in the coastal mountains of Central California near Hollister. This medium red wine has a perfumed nose with raspberry fruit aroma and hints of spice and pine. On the palate there are flavors of cherries, berries and vanilla with a trace of spice and a dusty, chalky nuance. It has a nice intense fruitiness that is locked-up and needs a lot of time. A slightly lean wine that is well-balanced with very good acidity and moderate tannins, it ends with a long finish. It could use some additional aging but is a well-made wine with lots of fruit, some earthiness, great balance and structure, and some richness--all crying for more bottle age. This is a very fine California Pinot Noir (17). $23

HIGHEST SCORE OF 37 PINOT N REVIEWED

San Francisco Chronicle
The Largest Daily Circulation in Northern California
WEDNESDAY, SEPTEMBER 28, 1988

EXHIBIT D8

Fighting to Save Thirsty Vines

BY ROD SMITH
SPECIAL TO THE CHRONICLE

One of the more dramatic stories to come out of the 1988 harvest was Josh Jensen's battle to keep his Calera Vineyards Pinot Noir vineyard from dying of thirst.

Those who saw the French films "Jean de Florette" and "Manon of the Spring" will get the basic scenario immediately. In the films, a potentially successful farm high in the mountains is overcome by disaster because of a blocked spring. All the plants and animals die of thirst, and the family comes to grief.

At Calera the situation wasn't quite that dire. A crop was at stake, but not the whole farm, and although there were some pretty grim moments, grief was never a serious option. There was, however, a blocked spring — and thereby hangs a tale.

Jensen was a student at Oxford when he first became interested in wine. After graduating, he went to Burgundy, worked in a winery and fell in love with Pinot Noir. Upon returning to the United States, he came to California in search of the perfect vineyard site to produce great American Pinot Noir.

Limestone Vein

One of the things he was looking for was limestone soil like that in the Burgundy vineyards. The same limestone that forms the white cliffs of Dover runs in a vein through Champagne and Burgundy. It seems to contribute something special to the wines from those areas.

Jensen found limestone in the Gavilan Mountains near Hollister. He had a strong hunch that the reddish, mineral-rich soil, liberally flecked with crumbly white limestone, was the ticket to great Pinot Noir. In 1974, he began planting in a remote place some 2,200 feet up Mount Harlan, high above the Cienega Valley viticultural area and the San Andreas Fault.

The rest is history, or at least wine lore. Jensen boldly went where no vintner had gone before. He fermented whole bunches, stems and all, with native yeasts (that is, the yeast naturally present on the grapes rather than a commercially cultured strain) and barrel-aged the wines on their lees (sediment composed primarily of grape solids and dead yeast cells).

Calera Pinot Noir took the definition of that varietal in California a long way toward clarity, and Jensen became a leader of the determined but often frustrated American Pinot Noir movement.

It's a difficult grape to make into wine, and it's not so easy to grow, either. Especially over 2,000 feet up a shaggy mountain.

Uneven Ripening

"It normally takes a month to harvest," said winemaker Steve Doerner. "There are low spots and high spots in the vineyard, different exposures, and the fruit ripens unevenly so that only part of the crop is ready to pick at any one time."

The dirt road to the vineyards goes through numerous gates, all equipped with cattle guards. It's definitely cattle country out there — it's also wild boar country, deer and cougar country, ground squirrel country.

"This vineyard is kind of a ground squirrel Caribbean," said vineyard manager Jim Ryan, but it's no joking matter. The little guys breed fast, and they love ripe grapes — just like the wild pigs and deer. A large family can drastically reduce a grape crop, especially if it's short to start with.

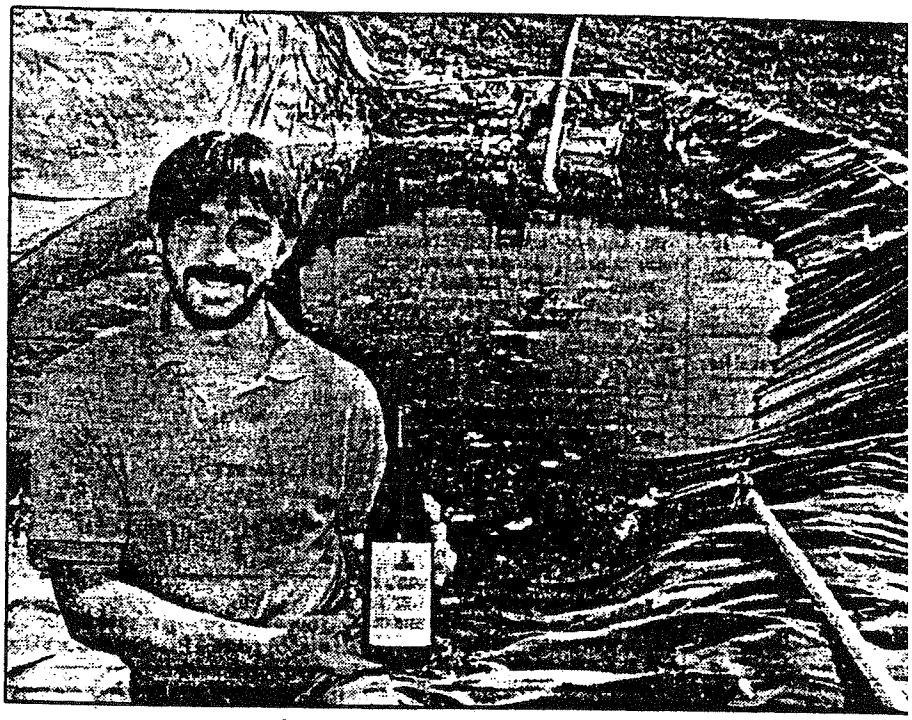
As it was this year. Recurring heat waves burst and shriveled many bunches, decimating a crop load that was already down because of drought conditions in 1987.

In the middle of July, Jensen discovered that his water supply was playing tricks on him. There are several springs on one part of the property. Usually they supply abundant water for irrigation, which is done through a controlled drip system when necessary.

Bad Year for Weeds

Before the drought, the vines on Mount Harlan subsisted largely on rainwater that was held in suspension between soil particles. This year, said Ryan, "the weeds didn't even grow well."

When the decision was made to begin irrigating, it was discovered that the normally trusty mountain springs were drying up. In 1985 and 1986, the springs had supplied 82 acre-feet of water. This year the output was down around 32 acre-feet. By August, several reservoirs that were normally full had become muddy bogs.



SPECIAL TO THE

Steve Doerner, Calera's winemaker, in front of the reservoir built to save Calera's vines

It was time to develop the springs. Ryan fired up the trusty John Deere 350 and dug a little six-acre-foot reservoir, which he lined with polyethylene sealer. The backhoe operator started running trenches. Eventually a decent spring was uncovered.

They dug a shaft about eight feet deep and sank a square wooden liner, with a smaller box in a pit at the bottom. Water trickles out of the exposed rock into the small box, is siphoned out through white PVC and is conducted downhill to the reservoir by gravity at about six gallons per minute.

Twice a week the reservoir is pumped out into the drip irrigation systems, to the tune of about 80,000 gallons a week.

It wasn't what a thirsty mountain vineyard would call enough, but it sufficed to save the vines and what turned out to be 25 percent of a normal crop size. The bad news is that Calera Vineyards estate Pinot Noir, usually in short supply at the normal 4,000-case production level, will be very difficult to obtain from the 1988 vintage.

The good news is that there will, after all, be about 1,000 cases for a lucky few.

In the two French films there was skullduggery and lots of Euripidean plot twists, ending in tragedy relieved by only a tiny ray of hope. Calera's water fight had none of those elements, and the ending was utterly hopeful.

"I hope we get a halfway decent crop next year," said Jensen.

EXHIBIT "D9"

THE WALL STREET JOURNAL MONDAY, JANUARY 9, 1989

The Wonderful Wines of '85

By Barbara Ensrud

The 1985 vintage was an exceptional year for red wines—not just in one or two of the leading regions in France, but in most of the other top areas of the world—Bordeaux and Burgundy, emphatically yes, but also the Rhone, California, the Pacific Northwest, Italy and Spain. It was also a vintage year for port.

It is rare that a single year will produce wines so uniformly great from so many different places. The '85s are wines that wine lovers will taste, compare and discuss from now till the end of the century, and probably well beyond. This is not to say you will not find quite ordinary wines from this vintage. In some areas, like Bordeaux, it was a large vintage, and stringent selection from the better vats of wine was necessary to produce a wine that could be termed great. And except for the top white Burgundies, certain California Chardonnays, and bright spots in Germany and Alsace, it was an uneven year for white wines.

In a huge number of cases, however, the '85s are a worthy investment to consider, as a source of pleasure for decades to come. Here are some detailed suggestions by region.

Bordeaux. Excellent among the classified growths, many even superior to 1982, particularly those from Margaux, Saint-Emilion and Pomerol: Chateau Margaux, in fact, is the quintessential '85 Bordeaux. Classically balanced, firmly structured yet rich in fruit, '85s from the top properties promise to be elegant and long-lived wines. One must beware at lesser levels, however. Overproduction of Cabernet Sauvignon diluted flavor and concentration among some *petits chateaux* and *cru bourgeois* wines. Try a bottle before you buy a case.

Burgundy. *Incroyable!* This vintage has caused the greatest excitement among Burgundy lovers in two decades. Perfectly ripened fruit and impeccable balance made the '85 red Burgundies beguiling from the first moment—and they are likely to remain so at every stage over the next few years (at least till 1995). Most of the small estate wines were snapped up immediately by collectors. Some of them will turn up on restaurant wine lists, but be prepared to pay a lot for them—$40 to $60 for Volnay and Pommard, more for wines of the Cote de Nuits such as Chambertin and Musigny. Wines of the Domaine de la Romanee-Conti cost $125 to $195 a bottle in wine shops. But even the inexpensive '85s, such as Haute-Cote-de-Beaune-Villages, Santenay or Pernand-Vergelesses, at $10 to $15 a bottle provide pleasurable drinking.

Rhone Valley. The 1985 vintage was outstanding in both the northern and southern Rhone, but greatest among the noble appellations of the north: Hermitage and Cote Rotie, deep, compelling reds that will be in their glory around the year 2000. The lighter reds of the south, such as Gigondas, Cotes-du-Rhone and Cotes du Ventoux are quite delightful now. Chateauneuf-du-Pape also yielded very good wines, particularly at properties such as Beaucastel, E. Guigal, Vidal-Fleury and Les Cedres. Northern whites such as Hermitage Blanc and Condrieu also are superb, and long-lived.

California. The cool '85 vintage was excellent overall, but there were some fabu-

picked a better year to launch its Bordeaux-Cabernet blend, Montage. Fifty percent of the wine came from Bordeaux, 50% from Napa Valley, and it seemed to reap the best of both: ripe fruit from California, structure and elegance from Bordeaux. In California, Cabernet Sauvignon yielded wines of depth and concentration, with rich fruit and fine balance. Small estates such as Laurel Glen, Ridge Monte Bello and Diamond Creek already are difficult to find, but prized labels such as Heitz Martha's Vineyard, Robert Mondavi Reserve, Lyeth, Dunn, Rubicon and Dominus are not yet available. Grab them when they come along and hold them at least a decade. They'll easily go two. Other California reds also are superb. Calera produced its best Pinot Noir to date in '85, particularly from the Jensen Vineyard. Merlots are rich and plummy (try the Inglenook '85 Reserve), delectable drinking now, as are '85 Zinfandels such as Kenwood, Ridge Geyserville, Ravenswood and even the moderately priced Louis M. Martini.

Pacific Northwest. Oregon Pinot Noirs from 1985 rival the fine 1983s. When Cabernet Sauvignon can ripen fully, like 1983, Washington produces superb Cabernet, leaner in structure than California but packed with intense fruit and potential for long life. The 1985 was another such vintage in Yakima and Columbia valleys. The Cabernets from Hogue, Columbia, Chateau Ste. Michelle, Quilceda Creek and Woodward Canyon will reward laying away.

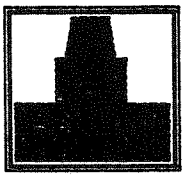
Italy. It was a banner year for Italy's two leading red wine districts, Tuscany and the Piedmont, but even Corvo red (from Sicily) was extremely good in 1985. Tuscan reds such as Chianti Riserva, Brunello di Montalcino, Carmignano and Vino Nobile di Montepulciano are robust and flavorful, likely to be very long-lived. This is particularly true of Brunello di Montalcino, which is rated on a par with the great 1975s. In the Piedmont, the Nebbiolo grape performed exceptionally well, producing wines of deep color, concentrated flavor and excellent balance. Gaja Nebbiolo Vignaveja is drinking superbly now. Barolos and Barbarescos, only a few of which are available as yet, are ultraviolet in color, so dense as to be opaque, and intensely fruity. Gaja's 1985 Barbaresco San Lorenzo is one of the few '85s available now; it's $83 a bottle.

Spain. An excellent year in Rioja, comparable with 1978 in character. These wines, particularly the Reservas, should be among the outstanding values of the next two years. The Penedes region near Barcelona also reports great potential for red wines made from Cabernet Sauvignon and the Spanish variety Tempranillo. Cabernet in particular was harvested at optimum ripeness. If the Pesquera is any indication, 1985 also was superb in the other region for outstanding reds, Ribera del Duero.

Vintage Port. Virtually all of the port houses declared a vintage in 1985. The wines are rich and dark, with fine depth and balance, more elegant than the powerful 1977s or '83s. Some feel they will age like the 1955s, one of the best vintages ever, still vigorous and full of charm.

Ms. Ensrud is a New York wine writer.

EXHIBIT E



CALERA

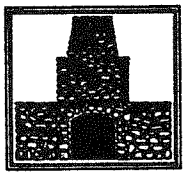
JENSEN

San Benito County Pinot Noir

1985

GROWN, PRODUCED & BOTTLED
BY CALERA WINE COMPANY
HOLLISTER, CALIFORNIA

Table Wine



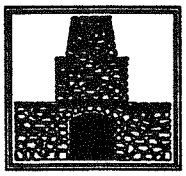
CALERA

SELLECK

California Pinot Noir Table Wine

1983

PRODUCED & BOTTLED BY
CALERA WINE COMPANY
HOLLISTER CALIFORNIA



CALERA

REED

California Pinot Noir Table Wine

1983

PRODUCED & BOTTLED BY
CALERA WINE COMPANY
HOLLISTER CALIFORNIA

RICHARD P. MENDELSON

DICKENSON, PEATMAN & FOGARTY
A PROFESSIONAL LAW CORPORATION
809 COOMBS STREET
NAPA, CALIFORNIA 94559-2977
TELEPHONE 707 252-7122

TELECOPIER
707 255-6876

December 22, 1989

Mr. David Brokaw
FAA, Wine and Beer Branch
Bureau of Alcohol, Tobacco and Firearms
1200 Pennsylvania Avenue, N.W.
Washington, D. C. 20226

Re: Mt. Harlan Viticultural Area

Dear Dave:

This letter will respond to your recent questions concerning the petition to establish the Mt. Harlan viticultural area which we submitted on behalf of our client, Calera Wine Company. Specifically, you asked us (1) to provide references upon which we base our air drainage and frost claims, (2) to provide information which shows the Hanford scil series in Cienega and Lime Kiln Valleys, and (3) to indicate why we determined that limestone deposits are a distinguishing feature of Mt. Harlan.

1. Frost and Air Drainage

The principal support for our assertion on page 9 of the petition that frost and air drainage differ on Mt. Harlan from the surrounding areas are Professor Winkler's treatise, General Viticulture, and Professor Harm De Blij's work, Wine, A Geographical Appreciation. Professor Winkler writes:

> In local areas the low-lying lands are more subject to frost than slightly higher adjacent lands because cold air, being heavier than warm air, tends to flow into the low spots. (A.J. Winkler, et. al., General Viticulture, 1974, p. 491.)

Professor De Blij corroborates Winkler's assertion when he states:

> In the spring and fall, when sun angles are comparatively low and daytime heating is only moderate, heat loss from the ground during the night can carry ground temperatures below freezing. As a result a layer of air adjacent to the surface also cools below frost level, and this cold, heavy

> air proceeds to slide downslope to settle in valleys and basins. This process of katabatic air flow (or more simply, cold-air drainage) creates "lakes" of nighttime cold air in such low-lying areas, and in these places further radiation loss combined with the inflow of frigid air can create serious frost danger. (H. J. De Blij, Wine, A Geographic Appreciation, 1983, p. 97.)

To clarify the point, perhaps the last sentence on page 9 of the petition should read "...higher rainfall and less danger of frost as a result of differing air drainage on upland and lowland areas."

2. Hanford Soil Series

You indicated that the Hanford series, which we use in part to distinguish soils in the proposed viticultural area from soils in the surrounding viticultural areas of Cienega Valley and Lime Kiln Valley, was not mentioned in T. D. ATF 109 (Cienega Valley Final Rule). The final rule reads as follows:

> The soil in Cienega Valley is loamy, generally well drained, and often underlain by weathered granite. The main soil associations of the flood plains and alluvial fans are Sorrento-Yolo-Mocho and Clear Lake-Pacheco-Williams. The soil associations on the uplands are the San Benito-Gazos-Lime association and the Sheridan-Cienega-Auberry association. (41 Federal Register 161, August 19, 1982, p. 36126.)

The guide to mapping units in the Soil Survey indicates four symbols for the Hanford soil series: HaA, HaC, HfA and HfC. The series is characterized as (a) level to sloping, (b) slow runoff, (c) slight to little erosion. (Soil Survey, pp. 24-25.)

Exhibit I attached hereto is a copy of the soils map from the Soil Survey for the area in question. The soils map consists of a series of aerial photographs which reveal the location of vineyards in Cienega and Lime Kiln Valleys. The Hanford series is outlined in green. An overlay traces portions of the boundaries of Cienega Valley, Lime Kiln Valley and the proposed Mt. Harlan viticultural areas. The exhibit shows clearly that a significant portion of Hanford soils occurs within Lime Kiln and Cienega Valleys. Further, the map reveals that much of the vineyard plantings in these viticultural areas are on Hanford soils.

The presence of Hanford soils in Lime Kiln and Cienega Valleys contrasts with the total absence of these soils in the

proposed Mt. Harlan viticultural area. The fact that Hanford soils were not mentioned in the Cienega Valley Final Rule may be due to an evaluation that Hanford is not a main soil series in terms of the entirety of these viticultural areas.

Limestone

The principal support for the geological information set forth on page 15 of the petition is a report by the California Division of Mines (CDM) entitled "Geology and Economic Possibilities of the Limestone and Dolomite Deposits of the Northern Gabilan Range" and the description of the Cienega Valley soils from the Soil Survey. The CDM report is enclosed as Exhibit II.

The CDM report identifies two areas of limestone in the subject area -- one which is centered in the proposed viticultural area and another which is somewhat south of the proposed area. The CDM report clearly identifies the proposed viticultural area.

> The most promising deposit, which consists of pure white, coarsely crystalline limestone without visible impurities or serious discoloration lies close to the boundary common to SW 1/4 Sec. 14 and SW 1/4 Sec. 23. . . . A small quarry from which a few thousand tons of material has been removed, evidently supplied the kilns which lie close to the Harlan Creek road northwest of the quarry. (CDM report, p. 124.)

The area described above is where Calera Wine Company has planted its vineyards. The USGS topographic map (specifically, the section line references) allows us to determine the exact location of the above deposit, which is squarely within the proposed viticultural area. Additionally, the Soil Survey supports the location of a "few small areas of limestone. . . in the mountains to the west of Cienega Road." (See p. 15 of the petition.) Exhibit III to this letter is a representation of the approximate boundaries of the surrounding viticultural areas in relation to these limestone deposits.

The second area mentioned in the CDM report is located approximately 5 miles north of McPhail's Peak. Depending on the exact location of the second deposit, one may conclude that limestone or limestone soils exist within Cienega and Lime Kiln Valleys. For this reason, ATF may have correctly associated limestone with Lime Kiln Valley as stated in T. D. ATF 106. However, it appears to us that these limestone deposits are not significant enough to characterize the soils throughout the Lime

Kiln Valley or Cienega Valley viticultural areas, as is the case on Mt. Harlan.

According to Josh Jensen of Calera Wine Company, outcroppings of limestone are evident throughout the Mt. Harlan vineyards, and this limestone constitutes the parent material of the soils on which the vineyards are planted. By contrast, the final rule establishing Lime Kiln Valley states that the soils there overlie a bedrock of limestone and dolomite.

For your reference we enclose a copy of the Soil Survey of San Benito County. I hope this letter is fully responsive to the questions you posed. Should you need further information, please do not hesitate to call.

Sincerely,

Richard Mendelson

RM:lwp
DR/MTHARLAN.LTR
Enclosures

cc: Mr. Josh Jensen (w/encl.)

Exhibit II

GEOLOGY AND ECONOMIC POSSIBILITIES OF THE LIMESTONE AND DOLOMITE DEPOSITS OF THE NORTHERN GABILAN RANGE, CALIFORNIA

By OLIVER E. BOWEN, JR. and CLIFFTON H. GRAY, JR.
Mining Geologists, California Division of Mines

Special Report 56
CALIFORNIA DIVISION OF MINES
FERRY BUILDING, SAN FRANCISCO, 1959

Westvaco (O'Hara Ranch) Deposit (23)

The quarries of the Westvaco deposit are a prominent landmark in the hills just southwest of Vineyard Winery. They were opened in 1947 by the present owners, the Westvaco Mineral Products Division of Food Machinery and Chemical Corporation, to supply the chemical plant at Newark. Since that time the quarries have produced roughly a million tons of high-grade dolomite. Prior to 1947 small tonnages of dolomite had been quarried from time to time—some as early as 1915.

White, medium crystalline dolomite occurs in a northwest-elongated mass roughly oval in plan. The mass is at least 1,800 feet long and 600 feet wide and has been explored to a depth of nearly 200 feet. It is enveloped in deeply weathered schist and granitic rock and granitic intrusions penetrate the dolomite in several places. The deposit is in or close to the San Andreas fault zone and the dolomite has been thoroughly crushed throughout the deposit. This lowers the cost of quarrying but raises the proportion of waste material. Several million tons of usable rock were proved. Further exploration was being done during the summer of 1958. According to the company the rock runs close to the theoretical composition for dolomite—slightly over 21 percent MgO. Iron oxide stains along the fracture surfaces are the only visible impurity. Logan (1947, p. 278) lists an analysis made by Smith-Emery Company from a sample collected toward the north end of the mass from a quarry then operated by A. E. Hamilton, which is probably representative of the deposit:

SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	Mn	CO_2
.17	.36	.11	31.00	21.23	.006	47.30

Hartnell District (24)

The Hartnell district, which adjoins the Natividad district on the south end, lies 5 to 7 miles east of Salinas. The geologic map of C. L. Herold, made in 1934 as part of a gradnate thesis at the University of California, delineates a large number of limestone pendants scattered over an area of 40 or 50 square miles. Most of these are on the J. C. Bardin ranch and Barnes ranches.

Pendants in the Hartnell district that were examined by the authors were found to consist either of intermingled dolomite and calcite rocks or of carbonate rocks intermingled with granitic rocks and with quartz-mica schist. Although small masses of white limestone and white dolomite of acceptable continuity and satisfactory commercial quality probably can be developed in the Hartnell district, it is doubtful if many of these exceed 200,000 tons; many would be much smaller. One small quarry on the old Hartnell College property once yielded limestone for construction purposes, but this has not been operated recently.

Bluerock Mountain-Quail Creek Deposits (24a)

These are on the Barnes ranch (formerly the Norvel and Silacci properties) on Old Stage Road 8 miles southeast of Salinas and 3 to 6 miles northeast of Chualar. The Bluerock Mountain deposit lies on the west slopes of the mountain on rugged topography. It is an oval mass having a slight east elongation and underlies most of the SW¼ sec. 25, T. 14S., R. 4E., M.D. It has not yet been sampled or otherwise explored. Most of the mass appears to be medium crystalline, blue-gray limestone. Reser probably aggregate many millions of tons.

The Quail Creek deposit was under development May, 1959, by Barnes Construction Company of Macino, California, as a source of roofing granules industrial limestone. A small quarry at the north end of the deposit was worked as a source of mate for lime early in the 1900's. The main mass is a sl like pendant set on edge striking N. 65-75 W. and ping 22-45 SW. It forms a blanket (dip slope) on west slope of the ridge. The thickness of the sheet va from 120 feet in the center of the mass to less tha feet at the northwest end. The limestone is envel in granitic rock and schist and granite dikes penet the mass in numerous places. The northwest end o deposit consists of mixed limestone and dolomite bu southeasterly two-thirds appears to be principally stone. Most of the deposit has been stripped of its overburden of soil and caliche and has been thoroi explored by trenching, rotary drilling and diam drilling. More than 2,000,000 tons of rock have blocked out, but because of granitic intrusions and coloration patches, recovery may run less than 50% $CaCO_3$ content may be expected to vary from 96 less than 60%. The proportion of high-grade to ma and sub-marginal-grade rock has not been determi

Mount Harlan-McPhails Peak District

Limestone masses of many different sizes are fo the Mount Harlan vicinity west of Cienega Val tween Pesadero Canyon and McPhails Peak. A of these have long been held by commercial fi potential sources of commercial limestone, and r several lime kilns operated prior to 1910 are fo the district. As the deposits are more remotely from markets and from rail transportation tha to the north and west, there has been less ince develop them. Dolomite deposits of notable si thus far not been found. The pure white crystal posits are the most likely to be used in the near None of the limestone deposits are believed to enough to support a cement plant of comparable most operating in California.

Cowell-Thompson Creek Deposit (25)

For more than 50 years the Henry Cowell L Cement Company held this deposit and it once s a bank of large lime kilns. Deposit and kilns are nous landmarks on the north side of Thomps Canyon, 3 miles by road southwest of Cieneg The property is administered by the Henry Cow Estate, 2 Market Street, San Francisco, Califor

The deposit is a thin, sheet-like pendant, set 60 to 100 feet wide and nearly half a mile long out over very steep topography, between gr schist wall rocks. The long axis of the mass tre due west and the strata dip very steeply north sheets and quartz-mica schist int beds are fou merous places within the limestone. Becau thinness and attitude of the limestone mass, would have to be mined underground. Dolomi observed in the deposit and most of the ro to be medium to coarsely crystalline white o limestone low in impurities. Analyses are not

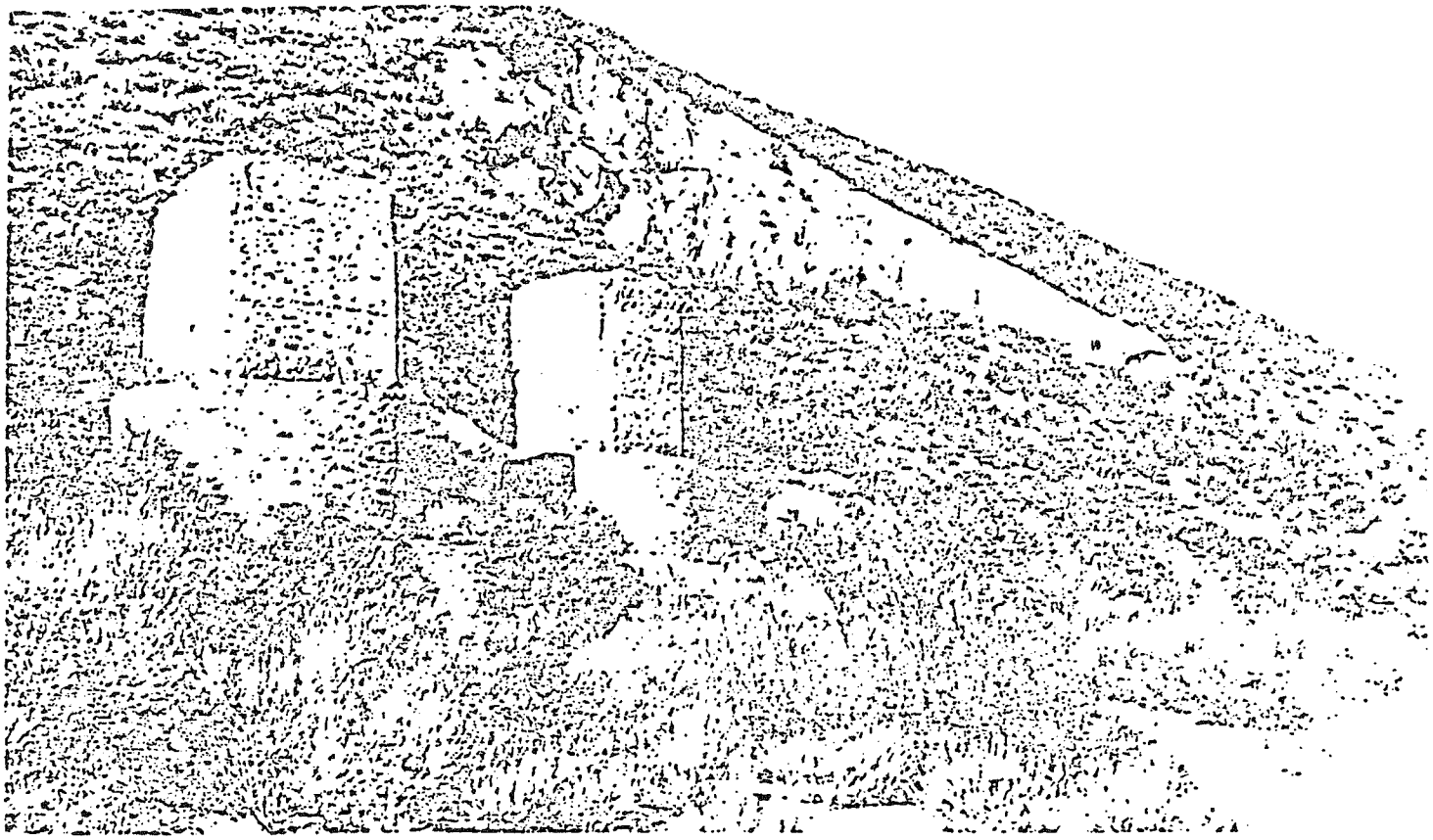


PHOTO 33. Old lime kilns and quarry at the Cowell Thompson Creek deposit in the Mt. Harlan district about 16 miles by road south of Hollister.

The pendant contains several millions tons of limestone but selective mining would be necessary to maintain a uniform grade of rock.

Hamilton, Harlan, Mayries, and McPhail Deposits (25)

The Hamilton, Harlan, Mayries, and McPhail are adjoining properties clustered together on and to the northeast of Mount Harlan. They are in sections 13, 14, 22, 23, and 24, T. 14 S., R. 6 E., M.D. The disposition of the property boundaries is not known to the authors. A good dirt road connects with the properties by way of the Thompson Creek and Cienega Valley roads. A. E. Hamilton, Box 621, Hollister, is reported to have done development work at one of the deposits during 1956.

The most promising deposit, which consists of pure white, coarsely crystalline limestone without visible impurities or serious discoloration, lies close to the boundary common to the SW¼ sec. 14 and the NW¼ sec. 23. The rock crops out on a hill, occupying 5 or 10 acres, but the exact size and shape of the mass is not known to the authors. A small quarry, from which a few thousand tons of material has been removed, evidently supplied the bank of kilns which lie close to the Harlan Creek road northwest of the quarry. The extent of outcrops suggests that there may be half a million to a million tons of limestone in the mass, but it would have to be selectively mined because of the prevalence of granitic intrusions. This deposit is attractive as a source of high-calcium, pure white limestone for glass and for specialty products.

The Hamilton deposit, on the south slope of Mount Harlan, is a lenticular, east-striking, south-dipping mass about 1,000 by 3,000 feet as seen in plan. It may contain as much as 20,000,000 tons of carbonate rock. The following mean analysis is the composite of 33 samples taken at 5-foot intervals perpendicular to the strike of the main part of the mass.

CaO	52.22
MgO	2.60
SiO_2	0.75
R_2O_3	0.61
Loss on ignition	41.79

Logan (1947) lists an analysis of a sample taken from the Hamilton property and analyzed by Smith-Emery Company of Los Angeles:

SiO_2	0.14
Al_2O_3	0.10
Fe_2O_3	0.02
CaO	54.19
MgO	0.81
Loss on ignition	44.54
Calculated as $CaCO_3$	96.72

There are other masses of white and blue-gray limestone in the five sections listed above, but most of these are undeveloped and untested.

Westphal Ranch Deposits (27)

These deposits are on the south slopes of Mt. Olds 2 miles east of Chualar in secs. 10 and 11, T. 15 S., R. 5 E., M.D. They are owned by the Herald Ranch, a trust estate, Herb G. Meyer, 16 San Pedro St., Salinas, California, manager. The beds are sinuous but have a general east strike and a steep south dip. The carbonate rocks are

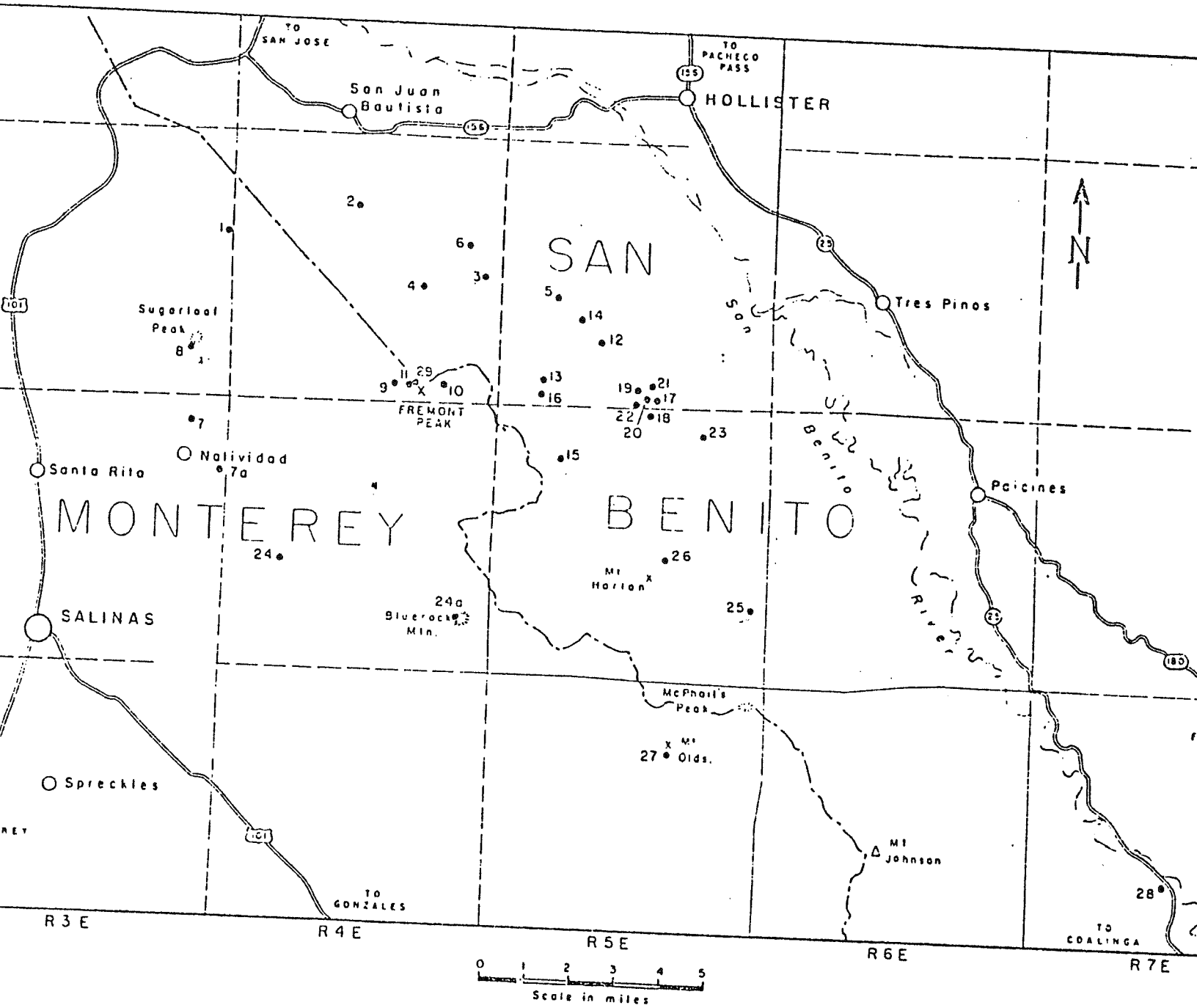


Figure 4. Map showing location of limestone and dolomite deposits, Fremont Peak area.

Issued November 1969

SOIL SURVEY
SAN BENITO COUNTY
California

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
In cooperation with
UNIVERSITY OF CALIFORNIA
AGRICULTURAL EXPERIMENT STATION