

PH 0505633

DATA SHEET

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FOR NPS USE ONLY
RECEIVED
DATE ENTERED
OCT 4 1977
MAR 24 1978

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC

~~Green Brae Brick Yard of the Remillard Brick Company~~

AND/OR COMMON

Remillard Brick Kiln

2 LOCATION

STREET & NUMBER

125 East Sir Francis Drake Blvd.

NOT FOR PUBLICATION

CITY, TOWN

Larkspur

VICINITY OF

5th

STATE

California

CODE

06

COUNTY

Marin

CODE

041

3 CLASSIFICATION

CATEGORY

OWNERSHIP

STATUS

PRESENT USE

DISTRICT

PUBLIC

OCCUPIED

AGRICULTURE

MUSEUM

BUILDING(S)

PRIVATE

UNOCCUPIED

COMMERCIAL

PARK

STRUCTURE

BOTH

WORK IN PROGRESS

EDUCATIONAL

PRIVATE RESIDENCE

SITE

PUBLIC ACQUISITION

ACCESSIBLE

ENTERTAINMENT

RELIGIOUS

OBJECT

IN PROCESS

YES: RESTRICTED

GOVERNMENT

SCIENTIFIC

BEING CONSIDERED

YES: UNRESTRICTED

INDUSTRIAL

TRANSPORTATION

NO

MILITARY

OTHER: unused

(occasional historic tours are conducted)

4 OWNER OF PROPERTY

NAME

Robert H. Lee

STREET & NUMBER

41 Madrone Avenue

CITY, TOWN

Larkspur

VICINITY OF

STATE

California

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,
REGISTRY OF DEEDS, ETC.

Marin County Recorder's Office

STREET & NUMBER

Marin Civic Center Building

CITY, TOWN

San Rafael

STATE

California

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Larkspur General Plan

DATE

Adopted 1973

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR
SURVEY RECORDS

Larkspur City Hall

CITY, TOWN

Larkspur

STATE

California

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input checked="" type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

PRESENT PHYSICAL APPEARANCE

The present brick kiln and chimney stack are the only surviving structures of the Green Brae brickyard operation that, at one time, consisted of over 25 buildings and structures.

The exterior configuration of the brick kiln is that of a long, low brick structure having battered walls with regularly spaced arched openings in the walls. The end wall sections of the structure are rounded. The overall width is 64 feet, the length 195 feet and the height 12 feet. The kiln is made of unreinforced brick and has double walls with earth between for heat retention.

The exterior brick walls are battered to stabilize the arched roof, and have 16 wickets or openings through which the bricks were carried in and out of the kiln.

The roof of the kiln is flat, and has hundreds of small ports through which the coal was fed to fire the kiln.

The brick kiln is essentially stable structurally, but in need of considerable repair. The exterior walls and roof are covered with numerous areas of vegetation and brush, and some of the bricks forming the arched chamber openings have been removed by trespassers.

The inside of the present kiln is in the form of a toroid, or an elongated, endless tunnel, with a brick floor, walls and arched roof. It has a central section fitted with small flues and dampers which discharge into a main flue, which, in turn, is connected to the chimney stack by a large underground flue. The width inside the tunnel is 14 feet, its height is 11 feet and its length 370 feet in circumference.

The chimney stack constructed entirely of unreinforced brick, has tapered, octagonal sides and measures 125 feet in height. The stack bears the letters "R.B. Co." and the numbers "1891", representing the year the kiln was completed.

The unusual feature about the stack is its location relative to the kiln. Virtually all Hoffman kilns (see #8, Engineering Significance) have the stack located within the kiln, directly over the central flue.

The purpose of the stack was to provide adequate draft. The design was of great importance, and if improperly designed, resulted in higher fuel costs and incomplete firing of the brick.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input checked="" type="checkbox"/> PREHISTORIC	<input checked="" type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input checked="" type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900- 1915	<input type="checkbox"/> COMMUNICATIONS	<input checked="" type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
<input checked="" type="checkbox"/> 1900-1968		<input checked="" type="checkbox"/> INVENTION		

SPECIFIC DATES 1891 - 1915

BUILDER/ARCHITECT Unknown

STATEMENT OF SIGNIFICANCE

PERIOD: PREHISTORIC - AREA OF SIGNIFICANCE: ARCHEOLOGY

The brick kiln is located on a site occupied in prehistoric times by the ethnographic group, the Coast Miwok Indians of the Penutian language family. These were a hunting and gathering people who resided in permanent villages along the San Francisco Bay and creeks that drained into the Bay. The kiln was constructed on top of one such site at the mouth of the Corte Madera Creek and recorded as 4-Mrn-225 where Middle Horizon charmsstones and an obsidian projectile point were found. Although this site has been leveled, there is always the possibility of subsurface finds.²

PERIOD: 1865-1945 - AREA OF SIGNIFICANCE: ENGINEERING

The Remillard brick kiln in Larkspur is one of the few remaining examples of the Hoffman Type kiln in the United States.

It represents a brick making process which was considered to be the most efficient for its time, during the years 1865-1945.

This particular type of kiln was invented by Friedrich Hoffmann of Berlin, Prussia, in 1865. It revolutionized the manufacture of bricks because it was the first of the continuous type kilns. Previous kilns were the batch type which required the cooling of the bricks before new green bricks could be introduced. The Hoffman kiln could be fired continuously and new green brick could be added as the already fired bricks were removed.

See Continuation Sheet, Item #8, Page 1

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Independent Journal, July 14, 1973.

Illustrated Edition, Oakland Tribune. 1898

Mason & Park. The Making of Marin, 1850-1975. North Shore Books, 1975. p. 92

San Quentin Peninsula Development Environmental Impact Report. Madrone Associates, 1975. p. 74

Sausalito News. November 14, 1890. p. 3

Walking Tours of Historic Larkspur. Larkspur Heritage Committee. 1976. p. 70

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 1.74 acres

UTM REFERENCES

A	10	543650	4199650
	ZONE	EASTING	NORTHING

B			
	ZONE	EASTING	NORTHING

VERBAL BOUNDARY DESCRIPTION

Beginning at the intersection of the calls set forth as North 86°15' East 264.69 feet and North 32°30' East 435.72 feet in the deed from Remillard Brick Company, a corporation to Sanitary District No. 1 of Marin County dated November 6, 1957 and recorded December 6, 1957 in Book 1158 of official records at page 228, Marin County Records; running thence along the southerly line of said parcel South 86°15' West 264.69' See Continuation Sheet, Item #10, Page 1

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY (See Continuation Sheet, Item #11, Page 1)

NAME / TITLE

Robert H. Lee, property owner

ORGANIZATION

DATE

April 18, 1977

STREET & NUMBER

41 Madrone Avenue

TELEPHONE

(415) 924-3103

CITY OR TOWN

Larkspur

STATE

California

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

Herbert Meades

TITLE

S.H.P.O.

DATE

8-22-77

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

Wm. J. ...

DATE

3/29/78

ATTEST:

Walter ...

KEEPER OF THE NATIONAL REGISTER

DATE

3.13.78

KEEPER OF THE NATIONAL REGISTER

UNITED STATES DEPARTMENT OF THE INTERIOR
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INVENTORY -- NOMINATION FORM**

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OWNER OF PROPERTY

Andre F. Bosc
1155 Jones Street
San Francisco, California

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REPRESENTATION IN EXISTING SURVEYS

Title: Walking Tours of Historic Larkspur

Date: 1975 and 1976

Depository: Larkspur Library x Local

City: Larkspur State: California

Title: "Historical and Archaeological Survey of the Proposed
Larkspur Ferry Terminal"

Date: 1973 x Local

Depository: Department of Planning and Community Development

City: Larkspur State: California

Title: "Marin County Historic Resources Inventory"

Date: Ongoing - Spring, 1977, to be submitted to State 7/1/77

Depository: Civic Center Library x County

City: San Rafael State: California

Depository: Department of Parks and Recreation

Office of Historic Preservation x State

City: Sacramento State: California

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No changes or alterations have been made to the original brick structure other than those attributed to deterioration. Only the wooden shed which once covered the kiln has been removed. (See description of original physical appearance.)

ORIGINAL PHYSICAL APPEARANCE

The Green Brae brickyard, encompassing some 150 acres, operated from 1891 to 1915, and functioned as a small community, with its workmen living in the 16 cabins on the property. Nearby were a cook-house, stable, blacksmith shop, vegetable gardens and an orchard. Livestock grazed on the hillsides and hay was grown for the fifteen or more work horses. Tubb Lake was created to provide a water supply for domestic uses and for steam to run the brick machines. There was a small railroad to haul the clay from nearby pits. In addition, it had its own landing on San Francisco Bay from which the five company scow schooners carried millions of brick to San Francisco and Oakland.

The kiln structure was enclosed by a large wooden shed until the early 1940's when it was demolished. The shed provided protection against the weather for the firing operation and the workmen, thereby extending the months of operation. (See attached drawings.)

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AREA OF SIGNIFICANCE: ENGINEERING (continued)

The kiln is divided into 16 chambers each having its own wicket, or opening, through which the bricks enter and leave the kiln. Green bricks are hand stacked to the ceiling in each chamber, leaving vertical hollow chases below the coal ports in the roof. The wickets are closed up with brick as soon as the chamber has been filled and tightly sealed with clay paste or "daub". Coal is then fed into the ports from the top of the kiln, into the hollow formed by the stacked brick and ignited.

Once the fire is started, it burns continuously and moves steadily around the kiln from chamber to chamber. The progress of the fire is about one foot per hour and its rate is controlled by flues and dampers within each chamber. After the fire moves far enough past the fired bricks and they have cooled, they are then removed and the chamber is filled with a new batch of green bricks. In this way the operation proceeds continuously. (See attached schematic drawings.)

The structure is unusual and complex in that there are double walls filled with earth, an underground flue system, arched ceilings and openings made with wedge bricks and a roof pierced with hundreds of ports.

The chimney stack is of exceptional design having a square base and tapered octagonal sides with a corbelled top, freestanding from the kiln itself, an unusual arrangement. It withstood the famous San Francisco earthquake of 1906.

The Remillard brick kiln is significant as an historical engineering landmark, representing a manufacturing process that was considered the best of its time in the important industry of brickmaking.

PERIOD: 1874-1885 - AREA OF SIGNIFICANCE: INVENTION

Edward Remillard improved the brick manufacturing techniques by inventing and patenting the brickyard truck in 1874³ and the excavating and grading machine in 1885.⁴

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PAGE 2

PERIOD: 1861-1968 - AREA OF SIGNIFICANCE: INDUSTRY

In 1891 the Remillard brothers built the Green Brae kiln to add to their Oakland based brick manufacturing company. The site chosen was one where bricks had been made since 1871. ⁵ The Remillard Brick Company thus increased its production capabilities by 10,000,000 annually.

Standing today on the San Quentin Peninsula, this brick kiln is the only surviving structure of the Remillard Brick Company, once the largest brick manufacturer on the Pacific Coast.⁶ During its 107 years of operation from 1861-1968, the Remillard Brick Company made the following significant contributions to industry in the Bay Area:

1. Constructed and operated at varying periods brickyards at 7 locations: Oakland, Santa Venetia, Pleasanton, Green Brae, San Pablo and 2 at San Jose.
2. In 1875 supplied the 26,000,000 bricks needed to construct the original Palace Hotel in San Francisco.⁷
3. As a brick manufacturer and construction firm, built the original St. Mary's College in Oakland, California in 1889.⁸
4. In 1898 the Company sold 30,000,000 bricks, the production of which employed 400 men with an annual payroll of \$150,000.⁹
5. In 1906 and the years immediately following, supplied much of the brick required to rebuild San Francisco after its devastation by earthquake that year.
6. Manufactured and shipped from Marin County brickyards (Green Brae and Santa Venetia) the bricks to build the chocolate factory at Ghiradelli Square, the Cannery, the second Palace Hotel, the St. Francis and Clift Hotels and the Phelan and Flood Buildings.¹⁰
7. Maintained high manufacturing standards and produced bricks consistently reported as "superior" and "noted for their excellence".¹¹

Although the Green Brae brickyard ceased manufacture in 1915, the Remillard Brick Company continued operation until 1968 when the San Jose brickyard was closed.

Countess Lillian Remillard Dandini, daughter of the company's founder, owned the Green Brae kiln until her death at age 93 in 1973.

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Footnotes

1. Treganza, "The Examination of Indian Shellmounds within San Francisco Bay with Reference to the Possible 1579 Land Fill of Sir Francis Drake." 1957.
2. Goerke, "Historical and Archeological Survey of the Proposed Larkspur Ferry Terminal." 1973 P. C-4.
3. "Official Gazette", U.S. Patent Office, 1887, Vol. 2.
4. "Official Gazette". U.S. Patent Office, 1887, Vol. 39.
5. Salt Marsh and Tidelands Map #7, County of Marin, 1871.
6. Alameda County Illustrated Oakland Tribune. 1898, P.211.
7. Woon, San Francisco and the Golden Empire., 1935, P.79.
8. Illustrated Edition, Oakland Tribune. 1890 P. 36.
9. Alameda County Illustrated Oakland Tribune. 1898, P. 162.
10. Independent Journal, "The Countess and the Brickyard." July 14, 1973.
11. Op. Cit., Oakland Tribune, P. 36.

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GEOGRAPHICAL DATA - Verbal Boundary Description, continued

to the Southwest corner thereof; thence leaving said parcel and running along the Southeasterly line of that certain parcel of land described in the deed from Remillard Brick Company, a corporation to Sanitary District No. 1, recorded August 26, 1947 in Book 562 of official records at page 78, Marin County Records; North 43°39'48" East 307.68 Feet to the Northerly right of way line of Sir Francis Drake Highway, as described in the deed from Remillard Brick Company to the County of Marin recorded October 14, 1930 in Book 204 of official records at page 207, Marin County Records; thence along said line Southeasterly to a point which bears South 33°55'48" West from the point of beginning, thence leaving said line of Sir Francis Drake Highway and running North 33°55'48" East 343.97 feet to the point of beginning.

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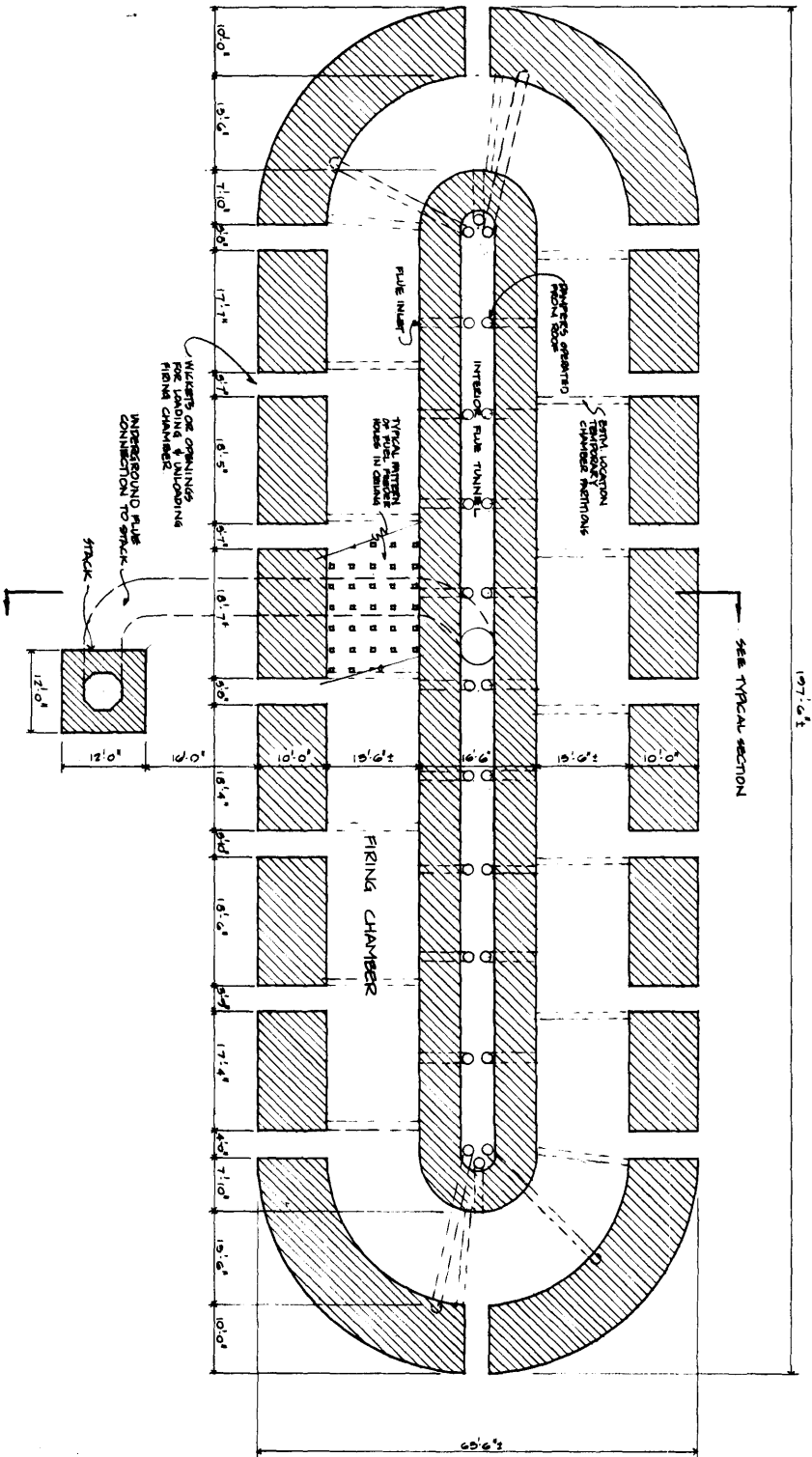
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FORM PREPARED BY

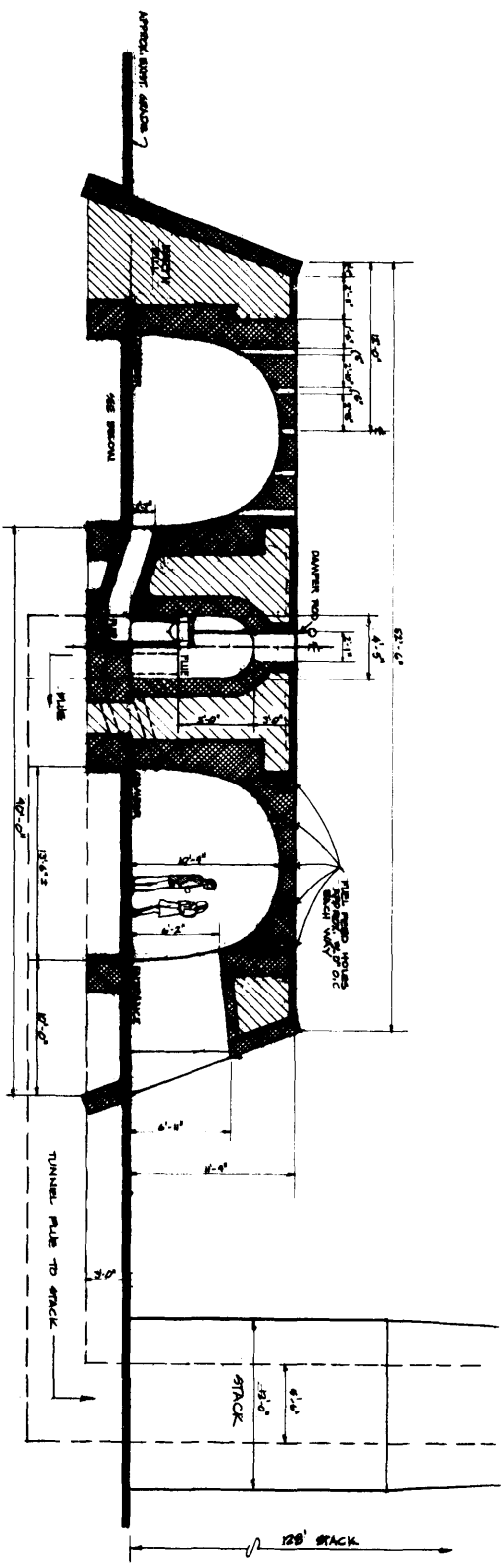
Name/Title: Nancy W. Curley, member
Organization: Larkspur Heritage Committee
Street & Number: 130 Elm Avenue
City: Larkspur State: California
Telephone: (415) 924-3133
Date: April 18, 1977



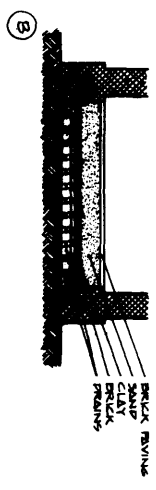
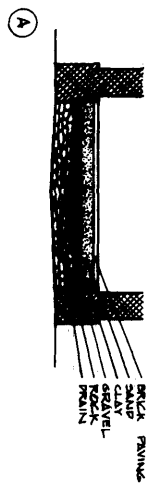
FLOOR PLAN - EXISTING KILN
1/8" = 1'0"

REMILLARD BRICK COMPANY KILN
EXISTING FLOOR PLAN
5/15/72

ROBERT H. LEE & ASSOCIATES
101 S. 1st Street, Columbus, Ohio

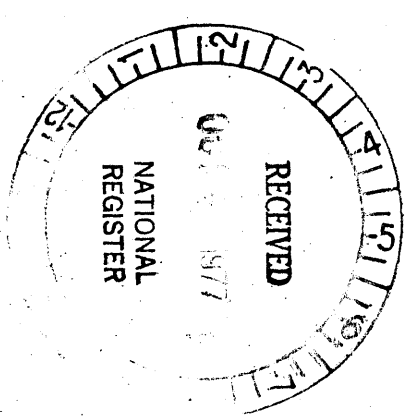
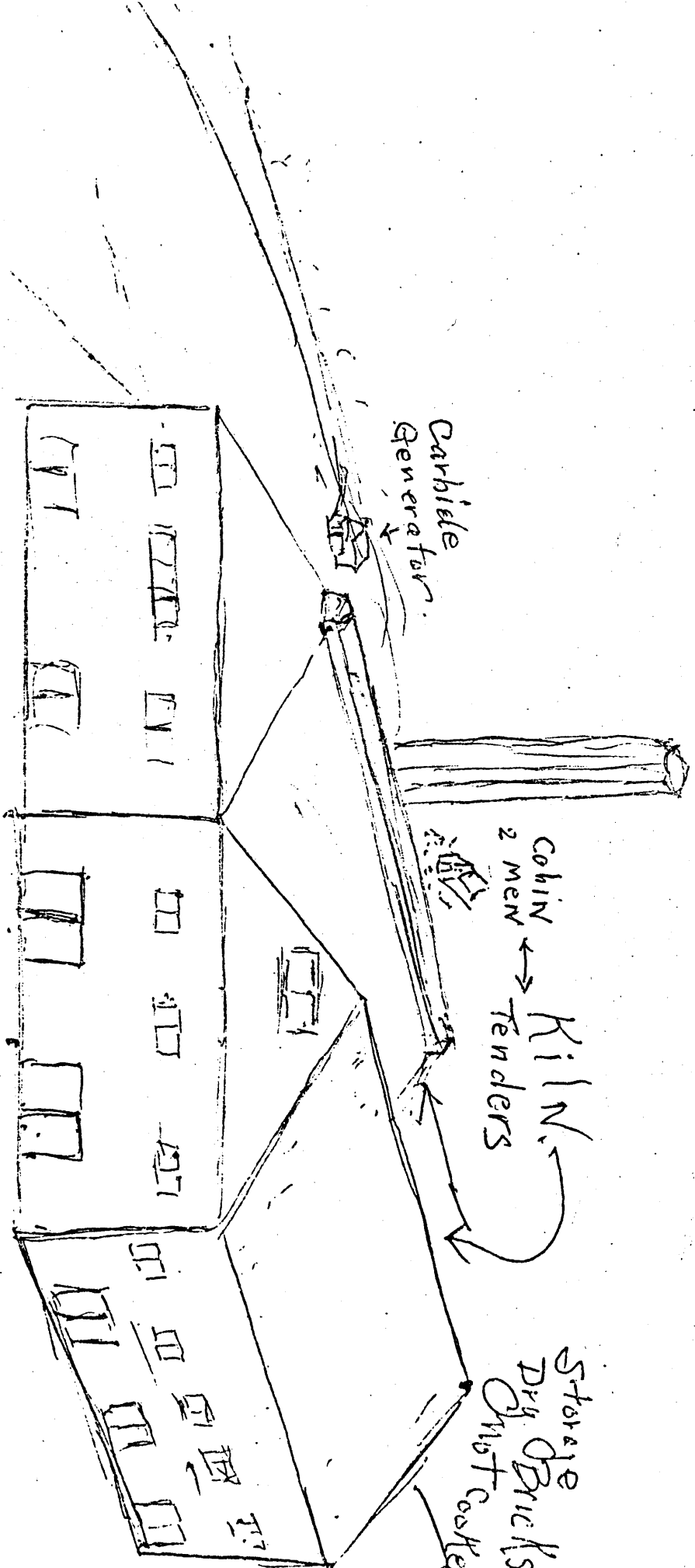


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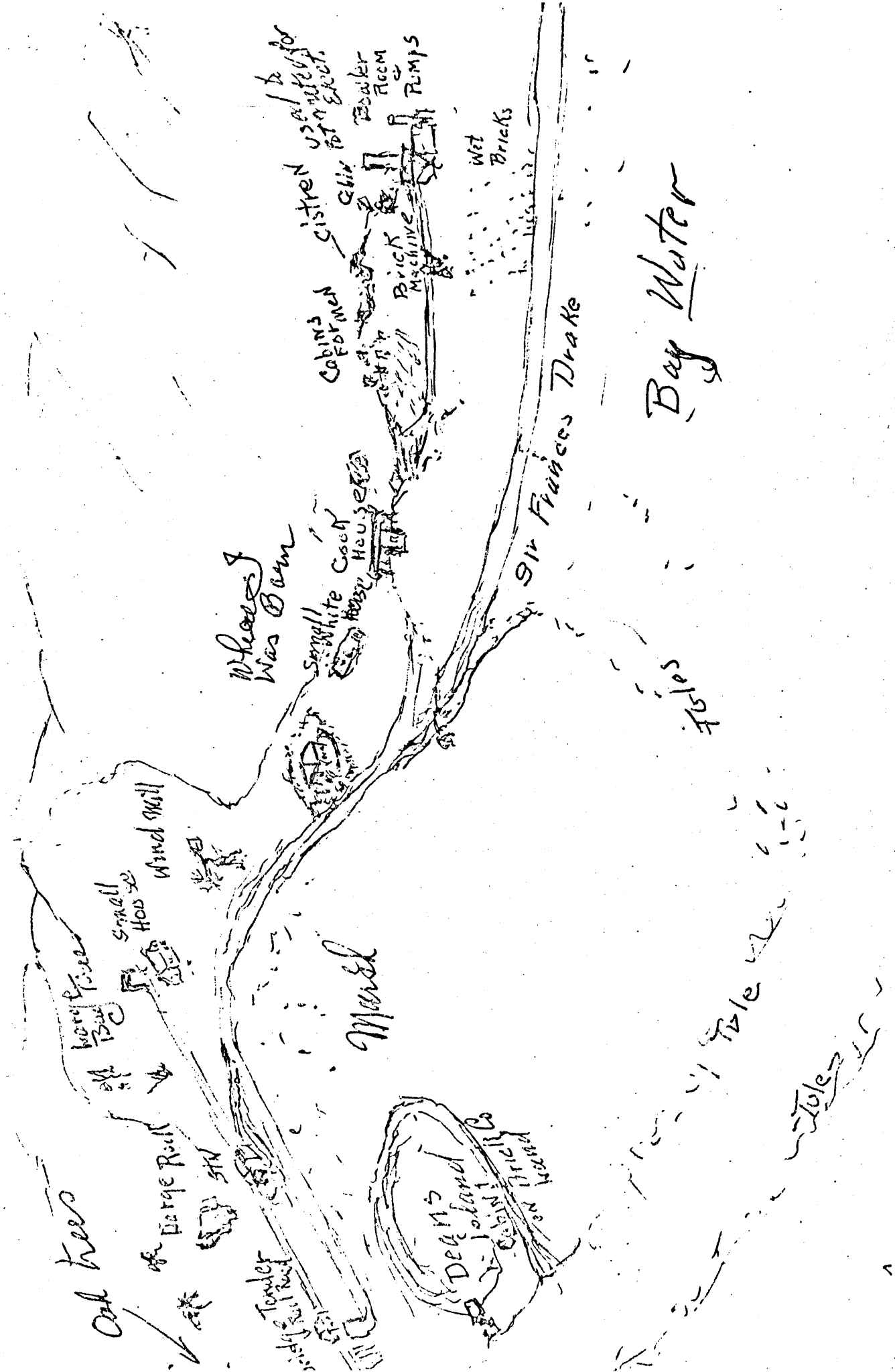


POSSIBLE FLOOR SECTIONS
NO SCALE

REMILLARD BRICK CO. KILN
 5/8/72 EXISTING SECTIONS.
 ROBERT H. LEE & ASSOCIATES
 1401 10th St. San Francisco, California



Drawn by Mr. John Tacchi, 1975
 Born at Remillard Brick Yard, 1900
 Resident 1900-1915
 ITEM #7. DESCRIPTION: ORIGINAL APPEARANCE



Wharf
Was Barn

Small White Cook House

CABINS

Cistern

Cabin

Brick Machine

Wet Bricks

Baker Room
Pumps

Sir Frances Drake

Bay Water

Mud

Oak trees

Barge Rack

Small House

Wind Mill

Tender

Deans Island

Johns Co

Tides

Tide

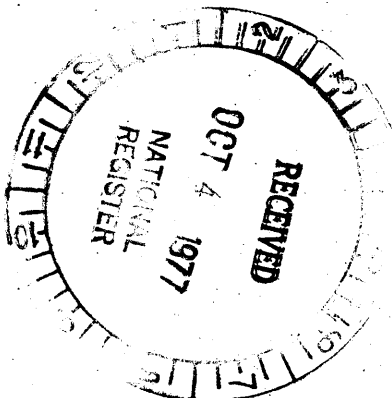
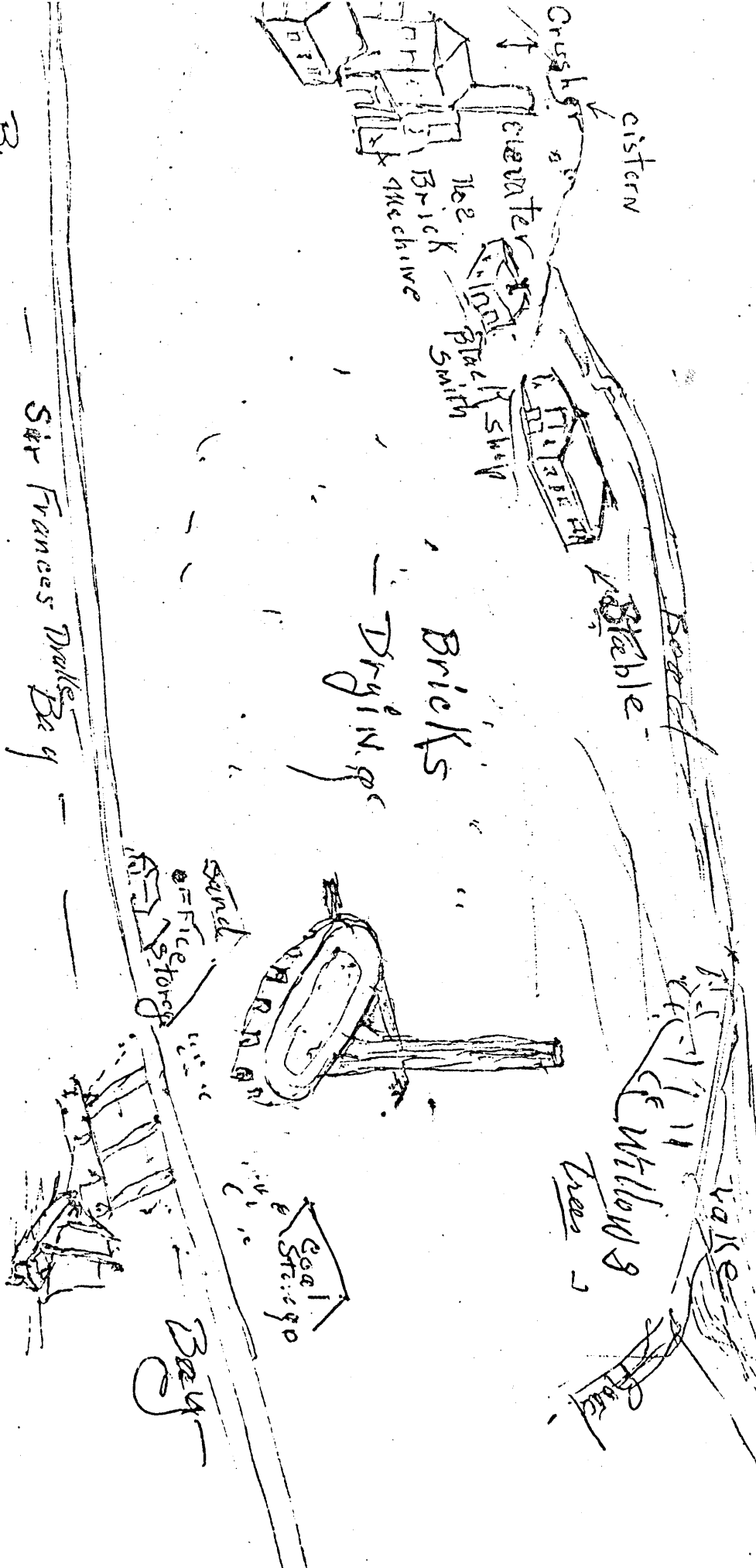
Tides

Bay

Sir Frances Drake Bay

Bay

Sup Board



Drawn by Mr. John Tacchi, 1975
 Born at Remillard Brick Yard, 1900
 Resident 1900-1915

ITEM # 7 - DESCRIPTION: ORIGINAL APPEARANCE