Form No. 10-306 (Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY
RECEIVED OCT 30 1981
DATE ENTERED 12-14-81

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

1 NAME

HISTORIC ~~45-CL-113~~

AND/OR COMMON
Basalt Cobblestone Quarries District (45-CL-113)

2 LOCATION

STREET & NUMBER Carty Unit, Ridgefield National Wildlife Refuge

_NOT FOR PUBLICATION

CITY, TOWN
Ridgefield

X VICINITY OF

CONGRESSIONAL DISTRICT
3rd - The Honorable Don Bonker

STATE	CODE	COUNTY	CODE
Washington	053	Clark	011

2 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
X DISTRICT	X PUBLIC	_OCCUPIED	_AGRICULTURE	_MUSEUM
_BUILDING(S)	_PRIVATE	X UNOCCUPIED	_COMMERCIAL	_PARK
_STRUCTURE	_BOTH	_WORK IN PROGRESS	_EDUCATIONAL	_PRIVATE RESIDENCE
_SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	_ENTERTAINMENT	_RELIGIOUS
_OBJECT	_IN PROCESS	X YES: RESTRICTED	_GOVERNMENT	_SCIENTIFIC
	_BEING CONSIDERED	_YES: UNRESTRICTED	_INDUSTRIAL	_TRANSPORTATION
		_NO	_MILITARY	X OTHER: Wildlife Refuge

4 AGENCY

REGIONAL HEADQUARTERS: *(If applicable)*
Ridgefield National Wildlife Refuge

STREET & NUMBER
210 N. Main, P.O. Box 457

CITY, TOWN
Ridgefield —— VICINITY OF

STATE
Washington 98642

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Clark County Courthouse

STREET & NUMBER
1200 Franklin Street

CITY, TOWN
Vancouver

STATE
Washington 98660

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
see continuation sheet

DATE

_FEDERAL _STATE _COUNTY X LOCAL

DEPOSITORY FOR SURVEY RECORDS
Washington Archaeological Research Center

CITY, TOWN
Washington State University, Pullman

STATE
Washington 98163

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
__EXCELLENT	xDETERIORATED	xUNALTERED	xORIGINAL SITE
__GOOD	__RUINS	__ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Seven basalt cobblestone rock quarries lie on the floodplain of the Columbia River approximately two miles north of Ridgefield, Washington. The floodplain here exhibits a rolling topography, characterized by basalt knolls surrounded by low areas of alluvial silt which are seasonally flooded. The quarries are located in the sides of these knolls, and a rock road of the same material connects the quarries with Lake River. The only visible remains of the quarry operations are the quarries and their associated piles of tailings, and the two sections of rock haul road. The walls of several of the quarries have fallen in, and they are overgrown with trees and brush.

One quarry and part of the rock haul road have been inventoried on an Archaeological Site Survey Record as 45-CL-113. This site is an extensive quarry located at the northeast end of a large meadow. A rock road runs across the meadow from the quarry to Lake River.

The water level of this area is directly dependent on that of the Columbia River. During the spring "freshet", snow melt in the mountains swells the Columbia and the rising river decreases the flow gradient of Gee Creek, which flows through the area and enters the Columbia just below the mouth of Lake River. Water backs up the creek and spreads out into the low areas to a corresponding level. The water does not recede until the water level of the Columbia drops.

Historically, the "freshet" came during late May and early June and lasted about a month, reaching levels of 20 to 30 feet above sea level. This pattern has been altered by the dams on the Columbia, Now the flood may last two and a half months and peak at 15 feet.

The Columbia River basalt outcroppings, which are Miocene to Pliocene in age, provide moderate relief ranging from zero to 40 feet. Thus, most of the knolls rise well above the high water line.

The knolls are covered with Oregon white oak savannah, while willow and other emergent and submergent marsh plants grow in the alluvial areas. A narrow belt of Oregon ash defines the high water line in some areas. Douglas fir grows on the highest ground at the eastern edge of the area.

Refuge management objectives on this unit are to preserve the natural Columbia River floodplain and to provide habitat for migrating waterfowl. The only active management within the nominated area is limited summer grazing by cattle. The area was probably being grazed at the time the quarries were in operation, since other parts of the unit have been farmed for over 100 years. Except for a limited amount of fencing and some jeep trails, the land retains its natural character.

Public use of the Carty Unit is generally limited to wildlife observation, hiking, fishing and berry picking. A self-guiding interpretive trail lies on the east end of the unit, partially within the nominated area and passing by one of the quarry sites. The area along the trail and around the south end of the nominated district is used extensively by school groups for environmental education.

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Title: "Archaeological Survey of Lower Lake River and Bachelor Island Slough, Clark County, Washington."

Date: September 1975

Title: "Cultural Resources Assessment of the Carty Unit, Ridgefield National Wildlife Refuge, Clark County, Washington."

Date: October 1980

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
_PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	_COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	_RELIGION	
_1400-1499	_ARCHEOLOGY-HISTORIC	_CONSERVATION	_LAW	_SCIENCE	
_1500-1599	_AGRICULTURE	_ECONOMICS	_LITERATURE	_SCULPTURE	
_1600-1699	_ARCHITECTURE	_EDUCATION	_MILITARY	_SOCIAL/HUMANITARIAN	
_1700-1799	_ART	_ENGINEERING	_MUSIC	_THEATER	
X 1800-1899	_COMMERCE	_EXPLORATION/SETTLEMENT	_PHILOSOPHY	X TRANSPORTATION	
X 1900- 1910	_COMMUNICATIONS	_INDUSTRY	_POLITICS/GOVERNMENT	X OTHER (SPECIFY) urban developme technology	
		_INVENTION			

SPECIFIC DATES 1880-1910 BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The Basalt Cobblestone Quarries represent a significant technological period in the development of Portland, Oregon and other American cities, and a turn of the century industry in Ridgefield, Washington.

As Portland grew from a frontier village into an urban and commercial center in the second half of the Nineteenth Century, some sort of street improvements quickly became imperative. The rainy winter climate of Portland turned dirt streets into impassable muddy quagmires, while in summer the streets dried out into dust bowls.

Several different materials, including wooden planks and macadam, were used in the search for a satisfactory paving material that could withstand the extremes of Portland's climate. Beginning about 1880, basalt blocks were quarried near Ridgefield and barged upriver to Portland for use as paving material. The basalt was chipped into brick-shaped pieces of a standard size, called Belgian block, and laid on the streets. Sewer blocks were also cut from the quarries.

By 1885, three miles of Portland's streets were paved with Belgian block[1] and eventually the paving may have covered as much as 30 miles of streets[2] before its use was discontinued. It was used in both east and west Portland.

The stone was hard, and when it was evenly laid it made a firm - and noisy - street. Constant use created problems, however, because the corners of the blocks wore down. They then formed a cobblestone surface that was slippery when wet and water froze in the joints during cold weather. Horses pulling heavy loads could not get traction on the slick surface. The unfirm ground on which the blocks were laid caused the paving to warp, and the constant lifting of the blocks for sewer and water line repairs (Portland doesn't have alleyways for utilities) and the installation of street car tracks also contributed toward an uneven surface. The Belgian block paving eventually proved as unsatisfactory as the other paving materials in use at the time.

Much of the cobblestone, or Belgian block, is still intact under the streets of Portland, having been covered over with asphalt. A survey by the city engineer's office estimates that there could be as much as 4.8 million square feet of the stones.[3]

While most of the stones came from the Ridgefield quarries, the crosswalks were originally ships' ballast. Crosswalks of the streets were made of slabs of granite a foot wide and four to five feet long, laid treble. The granite was

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Bridges, Doug. Memorandum to Bob Gustafson, City of Portland, OR: Bureau of Planning, 15 June 1977.

McKie, Mrs. Allan. Letter to James E. Carty, 28 May 1975.

"Proposal to Retrieve Cobbles From Under Portland Street Triggers Protest", Oregon Journal , 15 July 1974.

10 GEOGRAPHICAL DATA

UTM NOT VERIFIED

ACREAGE OF NOMINATED PROPERTY 535

UTM REFERENCES

	ZONE	EASTING	NORTHING
A	10	519620	5076980
B	10	519620	5076180
C	10	517150	5075180
D	10	517150	5076960

VERBAL BOUNDARY DESCRIPTION

The boundary of the nominated district is outlined in red on the accompanying USGS 7.5 Minute St. Helens Quadrangle Map and is further delineated in the accompanying sketch map. The boundary encompasses the portion of the refuge characterized by the basalt outcroppings. Boundary lines follow recognizable geographic features as much as possible. (See Continuation Sheet)

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

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

Susan M. Saul, Outdoor Recreation Planner — 28 January 1981

ORGANIZATION — DATE

Lower Columbia River National Wildlife Refuge Complex, USDI

STREET & NUMBER — TELEPHONE

P.O. Box 457, 210 N. Main Street — (206) 887-4071

CITY OR TOWN — STATE

Ridgefield — Washington 98642

12 CERTIFICATION OF NOMINATION

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES X NO ____ NONE ____

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 9. [illegible] which to present the nomination to the State Review Board and to evaluate its signific

FEDERAL REPRES — for ____ Local X State

Robert G. Stanton — Acting Associate Director

TITLE — DATE OCT 8 1981

FOR NPS USE ONLY

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

Entered in the National Register — DATE 12/14/81

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST: Emma Jane Saye — DATE 1-5-82

KEEPER OF THE NATIONAL REGISTER

GPO 899-214

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brought from England or China in ships as ballast.[4] On the return trip, the ballast was replaced by cargo from the Pacific Northwest. This explains the presence of Chloris radiata, a hardy, tropical grass native to Jamaica, in Portland. It is unknown anywhere else in Oregon, but it can be found in Portland pushing up through the asphalt that covers the old cobblestones.[5] Apparently the grass seed was on a cargo from a tropical port and became attached to the ballast, which then was used for street paving.

Portland City Ordinance No. 139670, passed by the City Council in 1975, calls for the preservation of cobblestones excavated during construction and maintenance activities on city streets. The cobblestones are warehoused by the City and are meant to be reused in appropriate civic historic restoration projects. In 1977,[6] the City estimat it had 60,000 cleaned stones and 200,000 uncleaned stones on hand.

The stones have been reused in a number of park projects including a short path in Washington Park, curbs along the Rose City Golf Course, fill in around street tree plantings, and under benches in Pettygrove Park.

Although they represented a significant industry in Ridgefield, very little is record about the quarries from which the cobblestones were obtained. The James Carty family owned the land and John (Jack) McKie operated the quarries, apparently leasing the sites from the Cartys. McKie worked under contract to the Portland Contracting Company and employed many Ridgefield residents.

Several stories concerning the quarries are retained in the oral histories of the Carty and McKie families. For example, the rock was removed from the quarries by blasting with dynamite. A man named John McKay was killed on December 21, 1892 while tamping a charge of powder. To dispel the curse of his death, a photograph was taken of the scene to find the ghost. If a face or figure was found in the rock, it was blasted out to lay to rest the evil spirit responsible for the death. This Scottish quarryman's custom allayed the fears of the workmen that there would be another accident.[7]

Another story involves a bookkeeper who absconded with the payroll. Consequently, John McKie worked the last year of the contract by himself because he could not pay anyone to help him. A second story about the payroll tells of Stewart McKie, the oldest son, going with his father to all the saloons to pay the workmen. Stewart, who was only five or six years old, carried all the gold in a gunnysack that he dragged behind him. It was so heavy he needed help[8] when he came to the saloon steps, but no one ever bothered him or the gold.

The most intriguing tale of the quarries comes from the Carty family. It seems two foremen, who paid the men in gold, hid their money near the quarries.[9] They were killed in an explosion and the $10,000 stash was never found.

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Work book pages in the possession of the McKie family indicate that the quarries were still in operation in April 1903, and the oral family history states that the contract expired in 1909.[10]

Although the local significance of the quarries was short-lived, they played a significant role in the economic and cultural growth of Nineteenth Century Portland and Ridgefield. Since Portland was not the only American city searching for a satisfactory paving material for its streets during the Nineteenth Century, on a national level the quarries represent an important technological experiment in the evolution of American cities.

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1 H.W. Scott, History of Portland, Oregon, (Syracuse, N.Y. 1890), p. 206.

2 The Sunday Oregonian, 19 May 1974.

3 Oregon Journal, 15 July 1974.

4 Scott, p. 206

5 The Sunday Oregonian, 19 May 1974.

6 Doug Bridges, memorandum to Bob Gustafson, (City of Portland, Oregon: Bureau to Planning), 15 June 1977.

7 The Columbian, 13 December 1978.

8 The Columbian, 13 December 1978.

9 The Columbian, 13 December 1978.

10 Mrs. Allan McKie, letter to James E. Carty, 28 May 1975.

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"Quarrier's Life Wasn't An Easy One", The Columbian, 13 December 1978.

Scott, H.W. History of Portland, Oregon, Syracuse, N.Y.: Mason and Co., Publishers, 1890.

"Tropical Grass Sprouts From Old Cobblestones", Sunday Oregonian, 19 May 1974.

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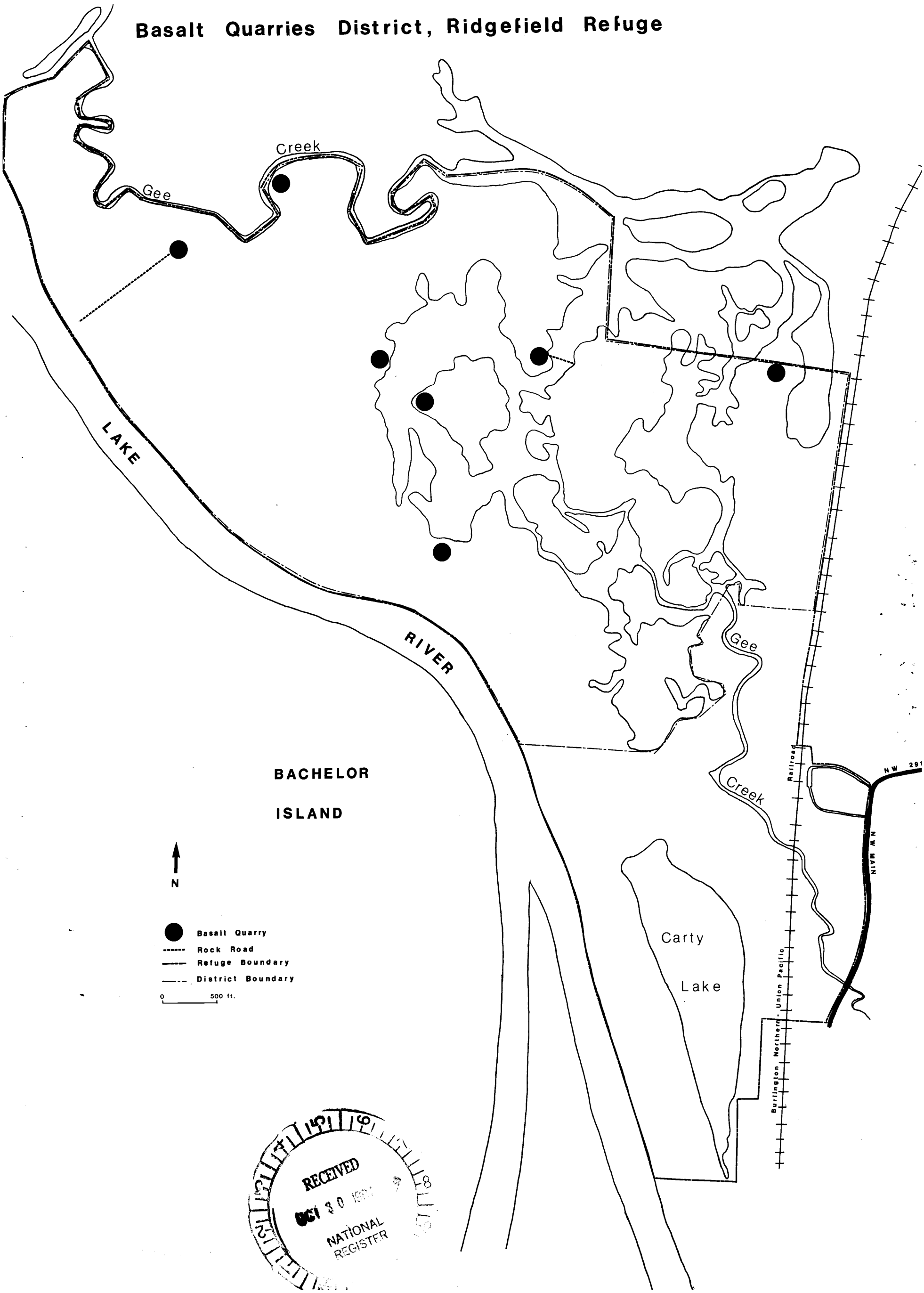
The north boundary begins at the mouth of Gee Creek and follows the channel eastward, paralleling the refuge boundary, turns south and then east again along the refuge boundary line to the Burlington Northern-Union Pacific Railroad tracks; the east boundary runs south along the railroad tracks to the approximate point where they cross the second small, intermittent creek; the south boundary runs due west to the point where the Gee Creek channel disappears into the first of a series of shallow lakes, and then follows the south lake shoreline (high water line) to the southwest corner, then due west to Lake River; the west boundary follows the shoreline of Lake River north to the mouth of Gee Creek.

Basalt Quarries District, Ridgefield Refuge



ST. HELENS QUADRANGLE
OREGON—WASHINGTON
7.5 MINUTE SERIES (TOPOGRAPHIC
SE/4 ST. HELENS 15' QUADRANGLE

RIDGEFIELD QUADRANGLE
WASHINGTON
7.5 MINUTE SERIES (TOPOGRAPHIC)
SW/4 LA CENTER 15' QUADRANGLE

Basalt Cobblestone Quarries Dist.
Ridgefield, Washington

UTM References
A 10/ 519620/ 5076980
B 10/ 519620/ 5075180
C 10/ 517150/ 5075180
D 10/ 517150/ 5076960

Basalt Cobblestone Quarries Dist.
Ridgefield, Washingtnn

UTM References
A 10/ 519620/ 5076980
B 10/ 519620/ 5075180
C 10/ 517150/ 5075180
D 10/ 517150/ 5076960