

St. Lawrence Island, Alaska

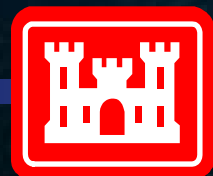
Gambell Sites

GIS-BASED HISTORICAL TIME SEQUENCE ANALYSIS (HISTORICAL PHOTOGRAPHIC ANALYSIS)

***PRODUCED BY THE
USACE ENGINEER RESEARCH AND DEVELOPMENT CENTER
TOPOGRAPHIC ENGINEERING CENTER
September 2000***

Final

F10AK0696--_01.04_0504_a
200-1e



US Army Corps of Engineers



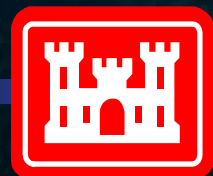
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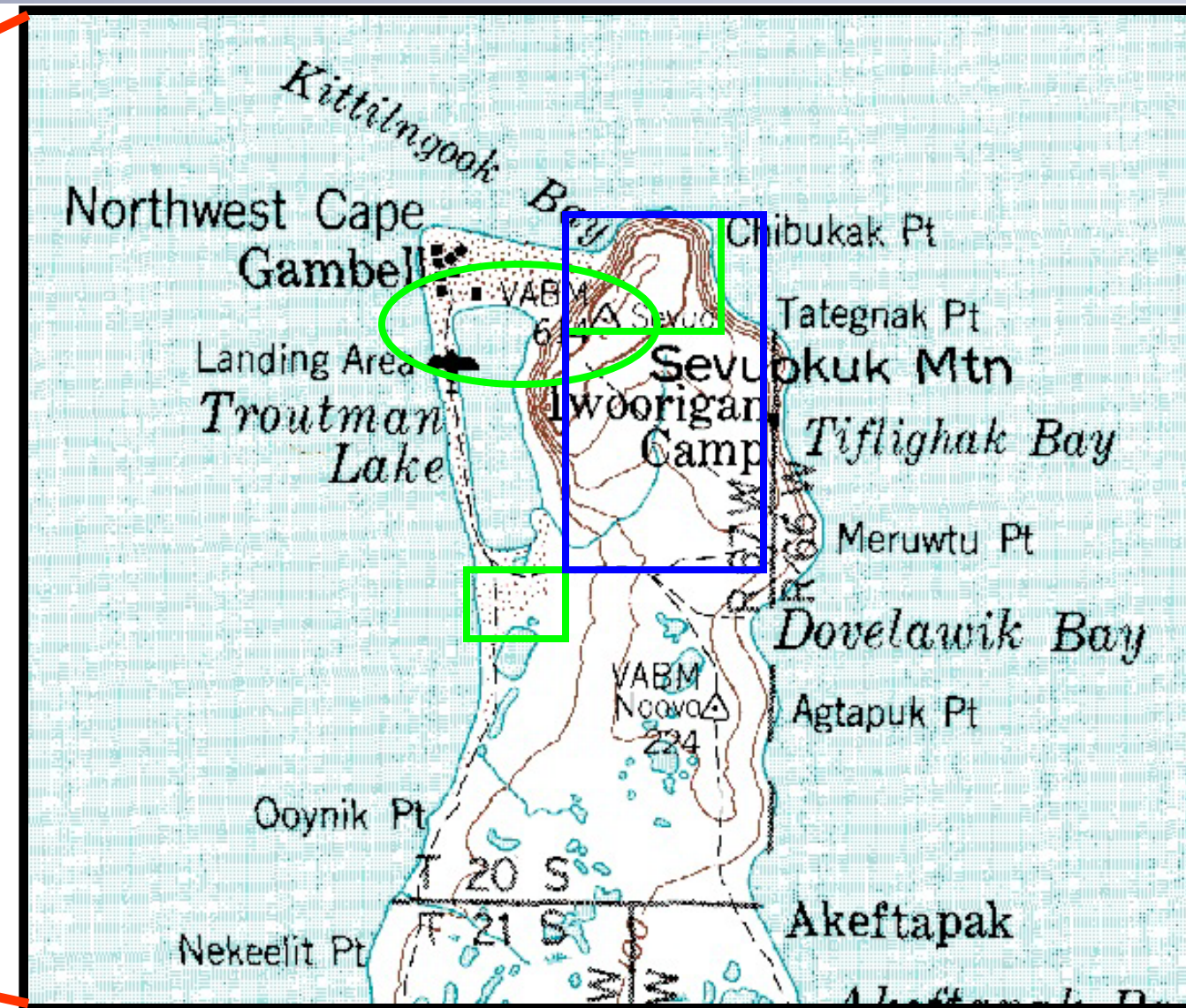
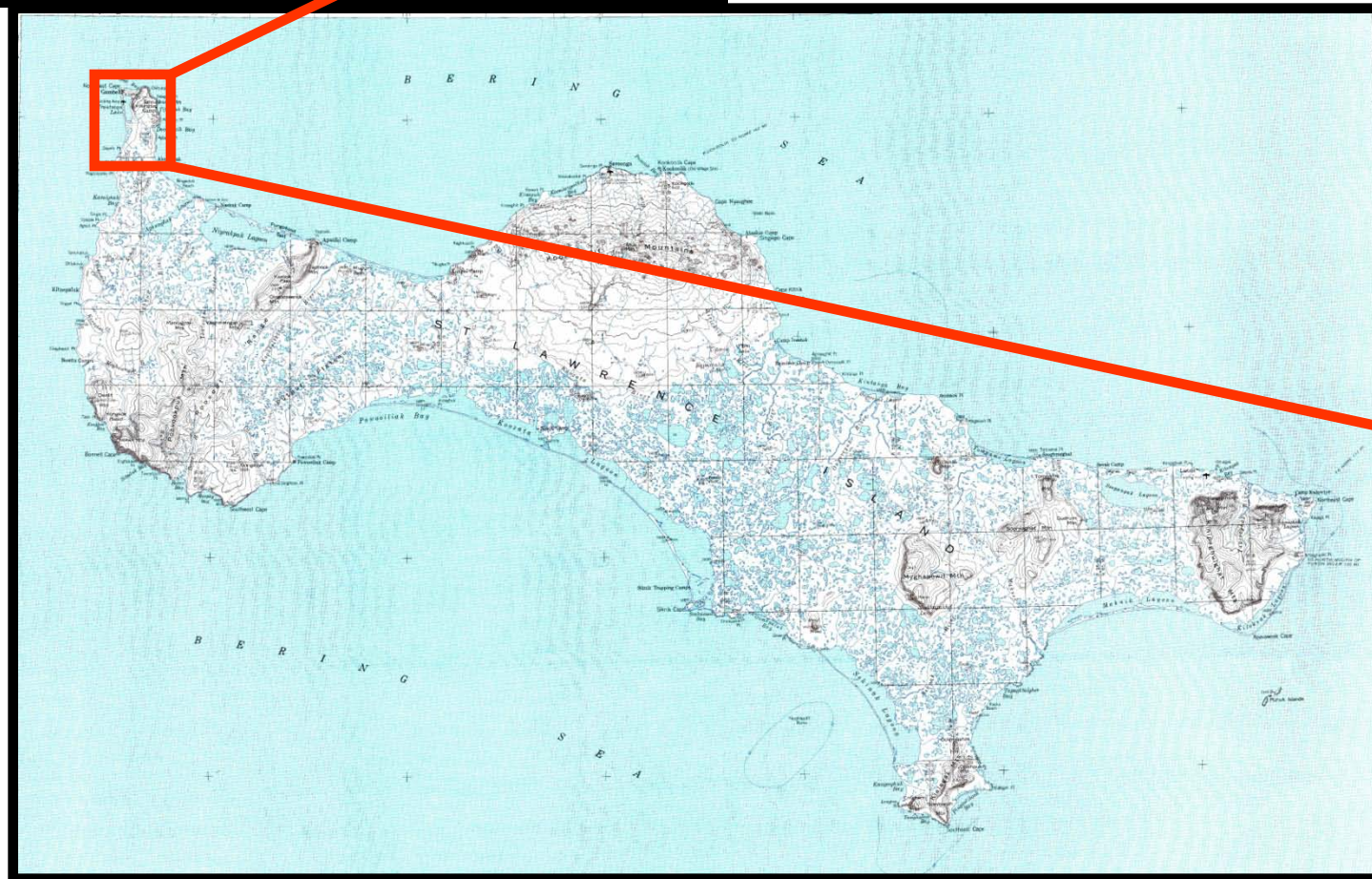
US Army Corps of Engineers



Gambell, AK - Site Locations

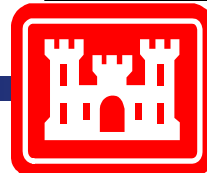


St. Lawrence Island

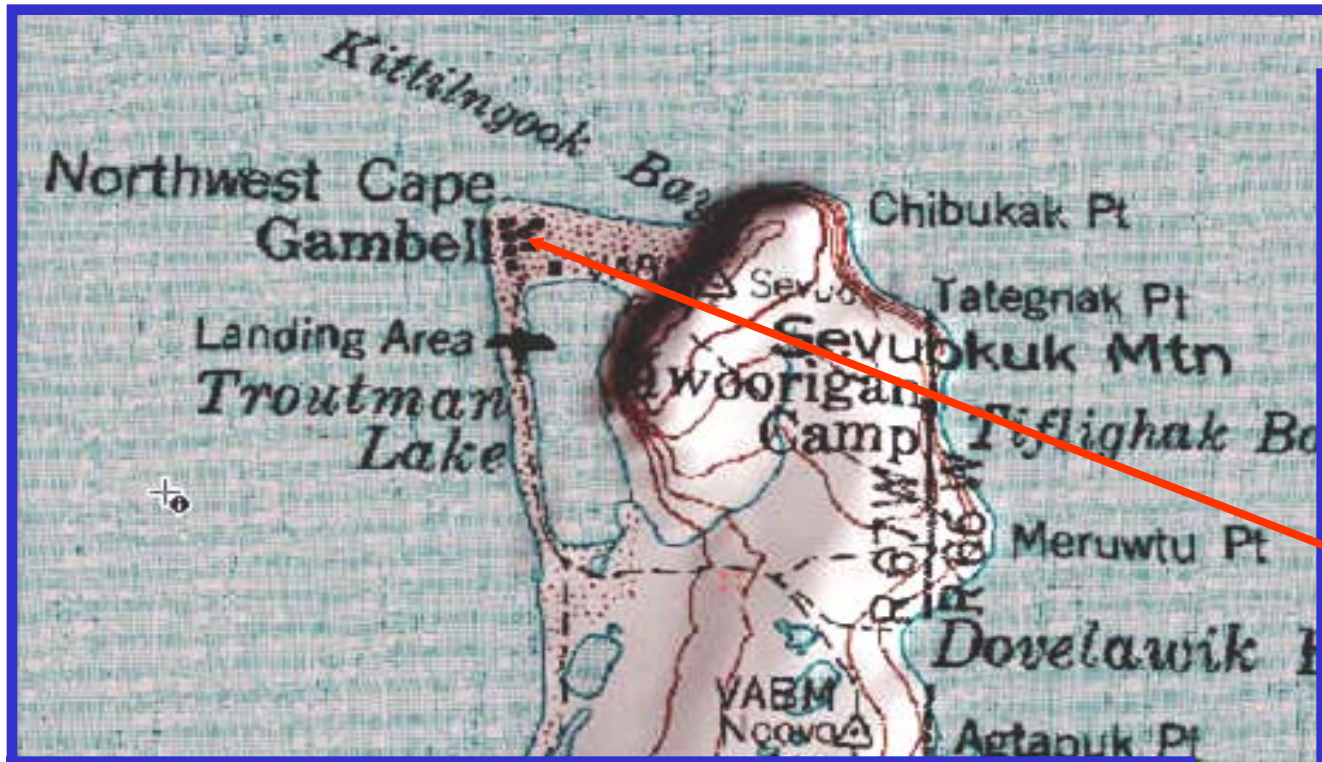


Army Activity 

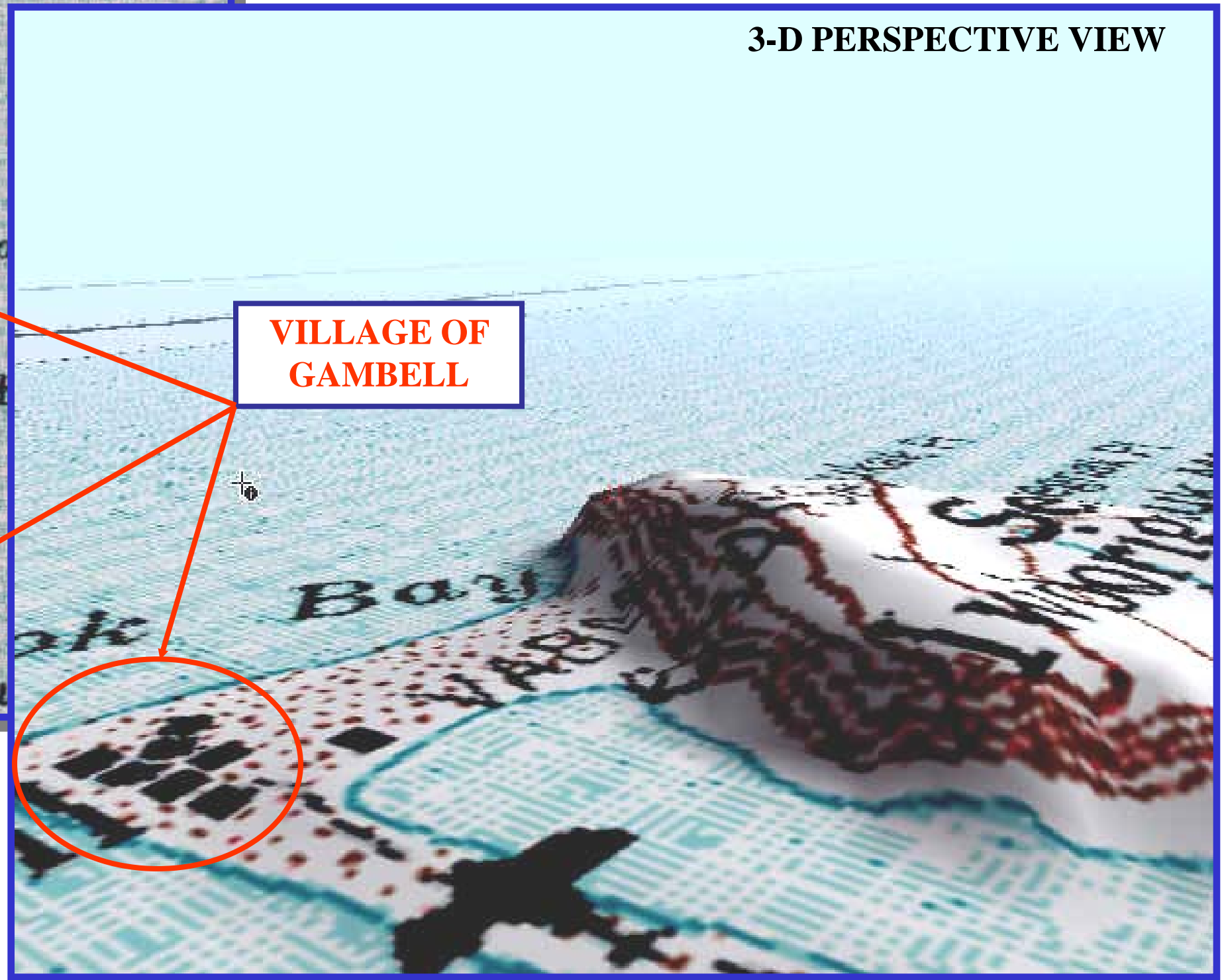
Air Force Activity 



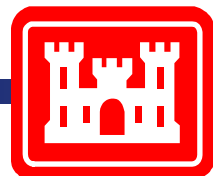
Gambell, AK



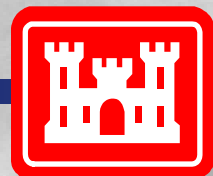
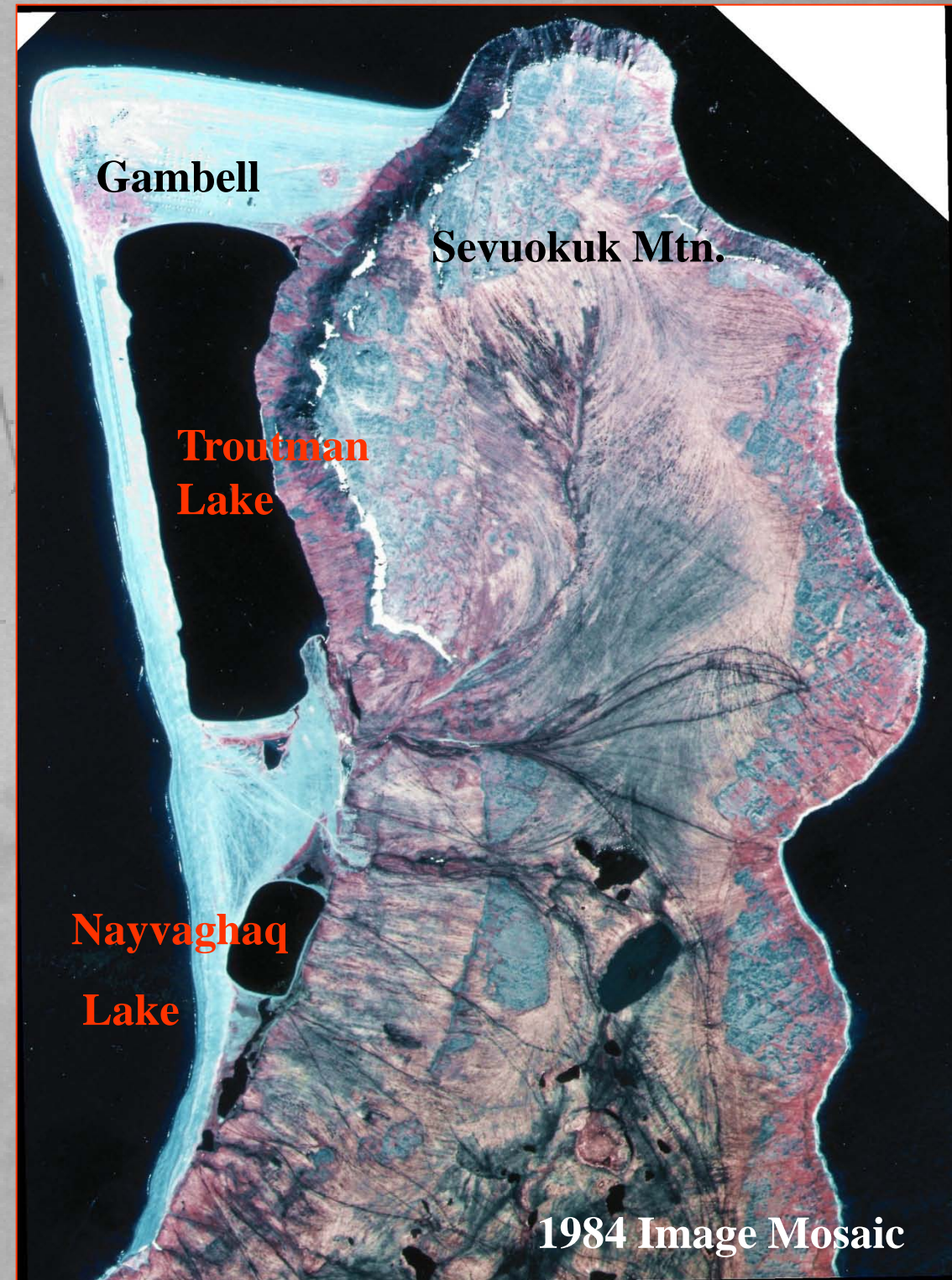
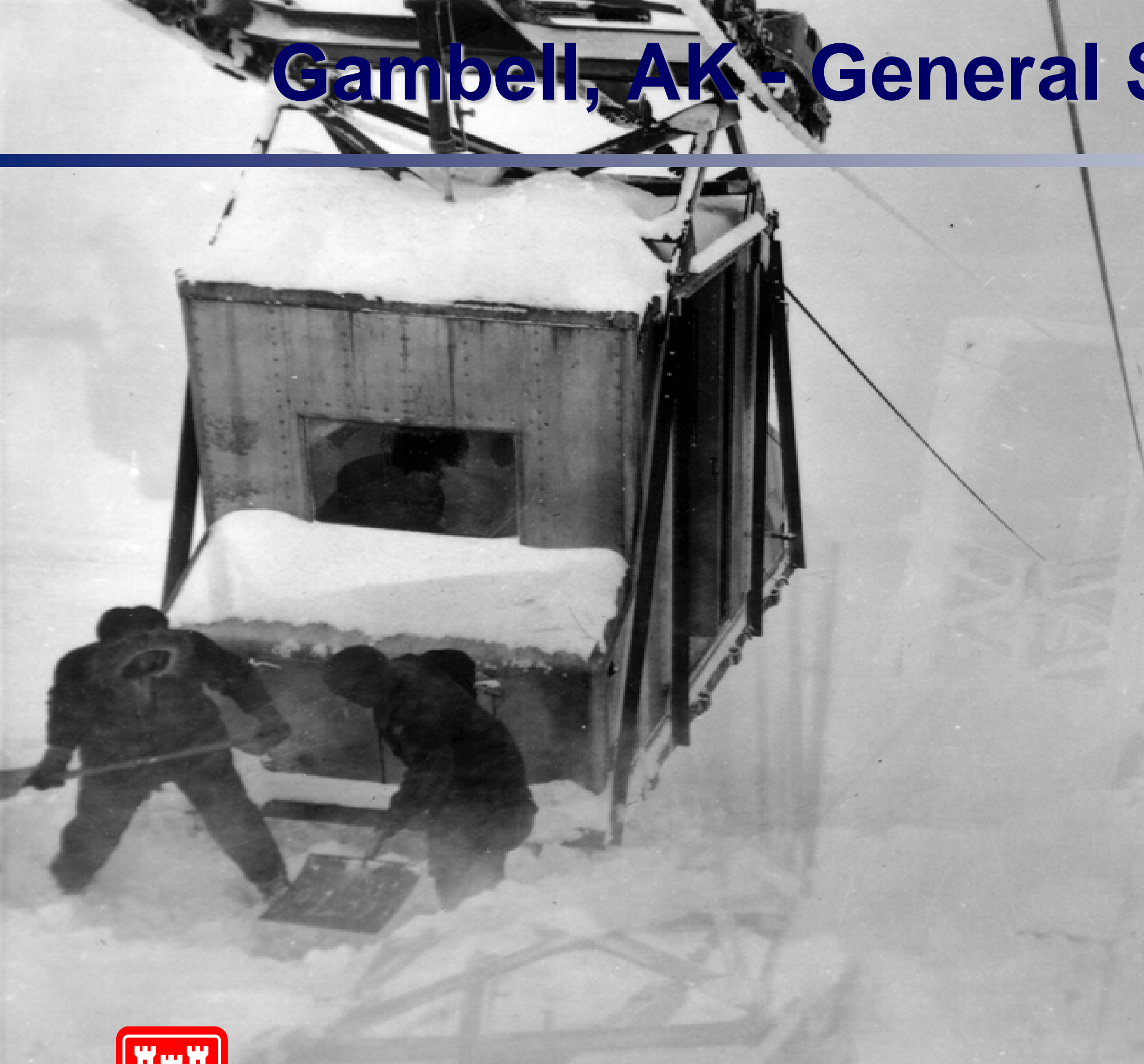
3-D PERSPECTIVE VIEW



1955 AERIAL OBLIQUE PHOTOGRAPH



Gambell, AK - General Study Area



1295G 10 PF 5 DEC 53 ST LAWRENCE ISLAND ALS 5070

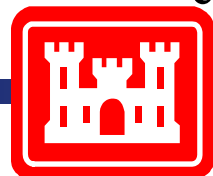
Gambell, AK - Objectives & Background

OBJECTIVES:

- Analyze a series of historic aerial photographs, historical maps, and ancillary data/documents for the 2,542 acre area we shall refer to as the **Gambell Sites**.
- Determine if there are features on these photos that could be indicative of possible burial and/or areas of general ground disturbance and/or possible historical, cultural features. These features may be potential areas of interest for possible HTRW disposal and/or conventional ordnance disposal, requiring further site investigation.
- Map the location of historical features of interest onto a current aerial photo base produced for the site.

BACKGROUND:

- Some of the features identified represent new or refined data found during the Topographic Engineering Center's (TEC's) analysis of historical aerial photography and therefore are meant to be used in addition to the data found in previous investigations and the Archive Search Report. Some information used in this report was provided by USACE Huntsville and USACE Alaska District.
- Data is presented in Geographic Information System (GIS) form and additional information for features is provided on the CDROM. ArcView is the common GIS display mechanism, though .dxf files are provided in addition to the arc coverages.



Gambell, AK

INTRODUCTION

This report presents the results of a historical aerial photographic analysis (GIS-based historical time-sequence analysis) for an area known as the Gambell Sites located on Saint Lawrence Island in the state of Alaska. This study was compiled for the U.S. Army Engineering & Support Center, Huntsville, Alabama by the United States Army Engineer Research and Development Center (ERDC), Topographic Engineering Center's (TEC) Operations Division (CEERD-TO), located in Alexandria, Virginia.

The Terrain Analysis Branch (TAB) of the Operations Division was tasked to search for and collect historical photographic records and map data relevant to the Gambell area. **The objective of this study was to locate any sites that may be of interest for further investigation. These sites may be linked to buried waste or equipment and/or ordnance and explosives (OE) activities.** OD was asked to map any such sites identified on the historical aerial photography (AP). For the purposes of this study, the entire Northwest Cape peninsula was examined south to a line where the sand spit terminates on the western coast.

SITE LOCATION and HISTORY

The study area for the Gambell Sites is located on Northwest Cape, St. Lawrence Island, in the Bering Sea. It is 36 miles from the Chukotsk Peninsula, Siberia, and 200 miles southwest of Nome, Alaska.

The Gambell Sites were established in the 1950s as part of the surveillance and intelligence-gathering network of the military. Seven individual leases were initiated by the DoD in this area. The first lease agreement was implemented in September 1950, and the final lease was terminated in September 1973. Various units of the U.S. Army and the U.S. Air Force utilized the area. Prior to lease terminations, all DoD-owned material was demolished and/or buried on site.

The Air Force established an installation in September of 1950 with a lease consisting of 1,580 acres. A base camp was built on the western base of Sevuokuk Mountain and a radar site was built directly above this camp on the mountain top. The Air Force abandoned this site in 1956, though the lease ran until September of 1962. The Army occupied several sites from 1954 through 1963, with a main base camp located just north of Troutman Lake. The Navy laid communication cables from the village of Gambell up Sevuokuk Mountain and across to Dovelawik Bay and then south to Brunnell Cape. A final lease by the Gambell National Guard was terminated in September of 1973. The military presence was essentially gone by the late 1970s.

METHODOLOGY

In preparation for this report, research was conducted for historical aerial photography (AP), maps and some textual information. Information and photography were gathered from the National Archives and Records Administration (NARA) in College Park, Maryland and other sources. The analysis was primarily based upon the interpretation of black and white AP over the project area, spanning the years 1948 through 1994. Stereo-paired aerial photographs were analyzed for 1948, 1955, 1972, 1973, 1980, 1984, 1985, and 1994. Orthophoto base maps was produced using 1984 color infrared AP and 1994 true-color AP.

Stereoscopic viewing was performed on the collection of historical photos. Film and paper based aerial photo material were used in the analysis. Features assessed as possible sites of interest were identified and labeled. Photos with these features of concern were scanned on a high-resolution scanner at 200 to 600 DPI resolution in TIF format. The historical aerial photos were rectified to the 1984 digital orthophoto.

All of the identified historical features were digitized on their respective rectified image. These features could then be placed onto the current 1984 and 1994 orthophotos as vector overlays.

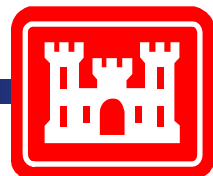
The image rectification was accomplished using ERDAS IMAGINE 8.3 software. Vector layers were generated using ArcView 3.2 software. Shape files were created. The digital data was transferred to a CD-ROM. The digital orthophoto and rectified aerial photos are in tagged image file format (TIF) with an associated "world file" or .tfw file. The tfw file contains the pixel size, and upper left geographic coordinate for the image file.

The orthophoto, rectified photos and corresponding vector layers are georeferenced to the Alaska State Plane (Zone 9), NAD83 (datum), and GRS 1980 (spheroid) Zone #6301. Units are in feet.

SUMMARY OF FINDINGS

The review of maps and photos for the site reveal numerous changes in the area over time. Features mapped for the area include pits, disturbed ground, possible trenches, and some possible mounded material. Many of the features occur in burial areas identified in previous studies.

A digital version of this report is on CD-ROM media. The CD-ROM also contains the historical features in vector layers (for use in a GIS system).



Gambell, AK Documents Reviewed

Documents Reviewed

Alaska Department of Environmental Conservation, *Site Summary Update – Saint Lawrence Island*. December 1999.

Alaska Department of Highways, Mapping Section, *City of Gambell, Alaska*, Map, Scale 1:3,000, 1973.

Alaska Historical Commission studies in history, Anchorage; no. 174, *Notes to the historical photographs of Saint Lawrence Island*, June 1985.

Army Magazine, “*The Rock*,” May 1984.

Bandi, H. G., *Preliminary Report on the “St. Lawrence Island Archeological Field Project 1967”* of the University of Berne/Switzerland and the University of Alaska. 1967.

Beikman, H. M., USGS, *Geologic Map of St. Lawrence Island, Alaska*, Map, Scale 1:250,000, 1980.

Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP FUDS), “*Findings and Determination of Eligibility (FDE)*,” St. Lawrence Defense Area, Alaska,” July 1985.

Ecology and Environment, Inc. (E & E), 1992, *Site Inventory Report*, Gambell Formerly Used Defense Site, St. Lawrence Island, AK. December 1992.

Holmes, C.E. and R.O. Stern, Fairbanks: Alaska Division of Geological and Geophysical Surveys, *Cultural Resources Survey: Gambell Evacuation Route, St. Lawrence Island*, February 1983.

Masters, P.M. and Zimmerman, M.R., “*Age Determination of an Alaskan Mummy: Morphological and Biochemical Correlation.*” *Science*, Vol. 201, 1 September 1978.

Staley, David P., (Environment and Natural Resources Institute, University of Alaska, Anchorage. *Archeological Work Plan for 1992 Construction Projects in Gambell, Alaska*. April 1992.

U.S. Army Corps of Engineers, Rock Island District, *Archives Search Report – Findings for the Former Gambell Site*. Revised March 1998.

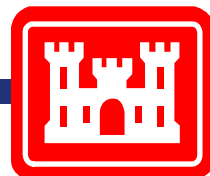
U.S. Army Engineer District, Alaska, *Final Phase II Remedial Investigation*, Gambell, AK. December 1998.

U.S. Dept. of the Interior, Bureau of Indian Affairs, *Gambell – Its History, Population, and Economy*. January 1977.

U.S. Environmental Protection Agency Region X, *Site Inspection Report – St. Lawrence Island – City of Gambell, Alaska*, September 1994.

U.S. National Archives. Multiple *still photographs*. July 1972, July 1960, 1959, 1953, 1955.

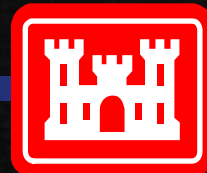
USGS, *St. Lawrence, Alaska*, Map, Scale 1:250,000. 1948.



Gambell, AK - Aerial Photography

<u>DATE</u>	<u>TYPE</u>	<u>SCALE</u>	
August 24, 1948	Black and White	1:21,000	
September 15, 1955	Black and White	1:10,000	
September 15, 1955	Black and White	obliques	
January 15, 1958	Black and White	1:6,000	
July 4, 1972	Black and White	1:1,500	
July 4, 1972	Black and White	1:3,000	
October 30, 1973	Black and White	1:3,000	
July 19, 1980	Black and White	obliques	
August 19, 1980	Black and White	1:6,000	
August 19, 1980	Black and White	1:24,000	
October 22, 1985	Black and White	1:6,000	
October 22, 1985	Black and White	1:18,000	
July 19, 1984	Color Infra-red	1:65,000	Orthophoto base map
July 12, 1994	True Color	obliques	
August 12, 1994	True Color	1:10,000	Orthophoto base map

**NOTE: FOR CERTAIN
YEARS ONLY
PARTIAL COVERABE
WAS AVAILABLE**

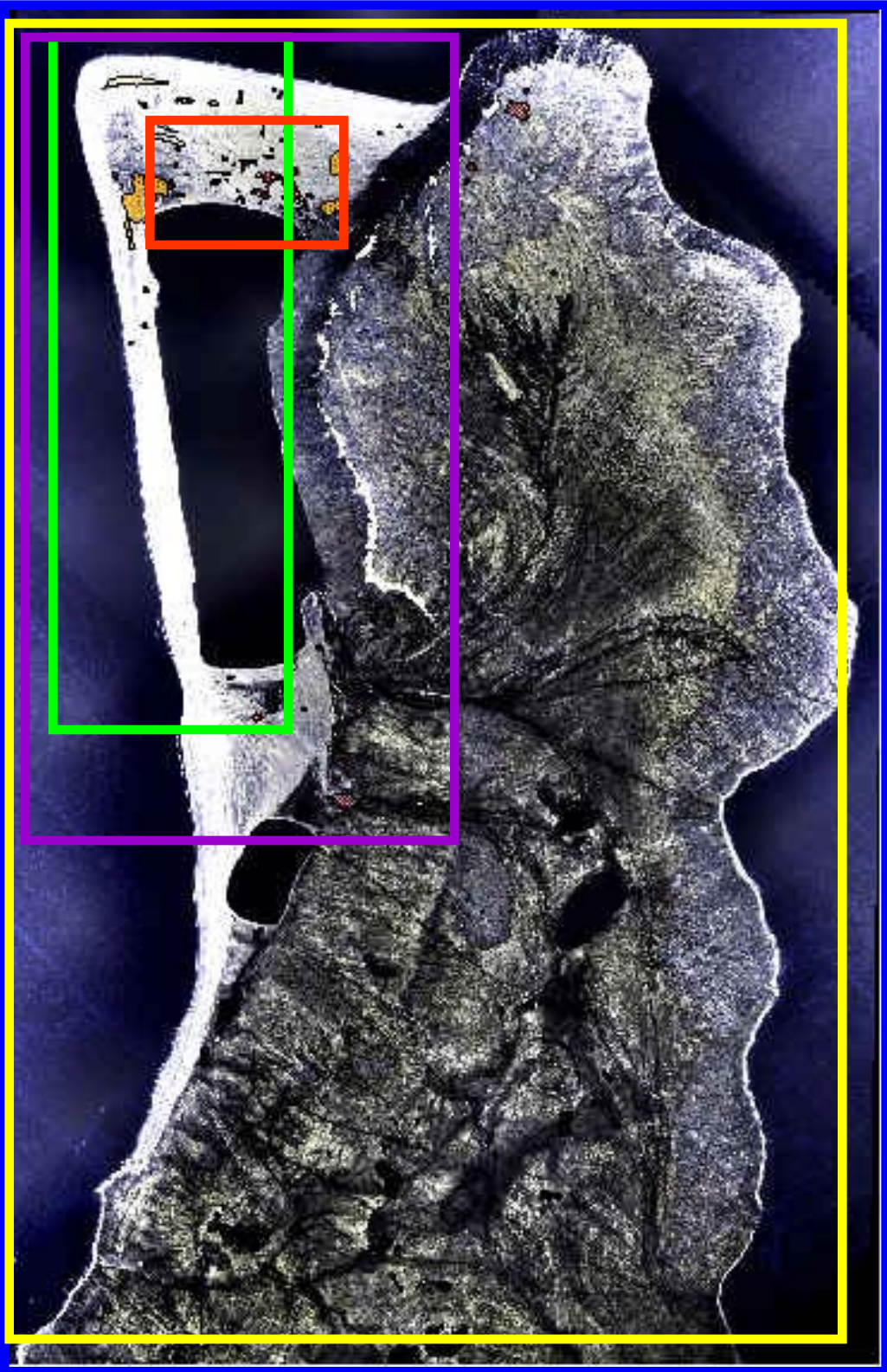


US Army Corps of Engineers

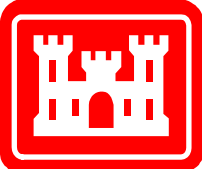


Gambell, AK - Aerial Photography

**Aerial Photographic
Coverage Extent
by
Year**



- 1948 —
- 1955 —
- 1958 —
- 1972 —
- 1973 —
- 1980 —
- 1984 —
- 1985 —
- 1994 —



Gambell, AK - Span of Analysis

Captured Features:

Disturbed Ground

Trenches

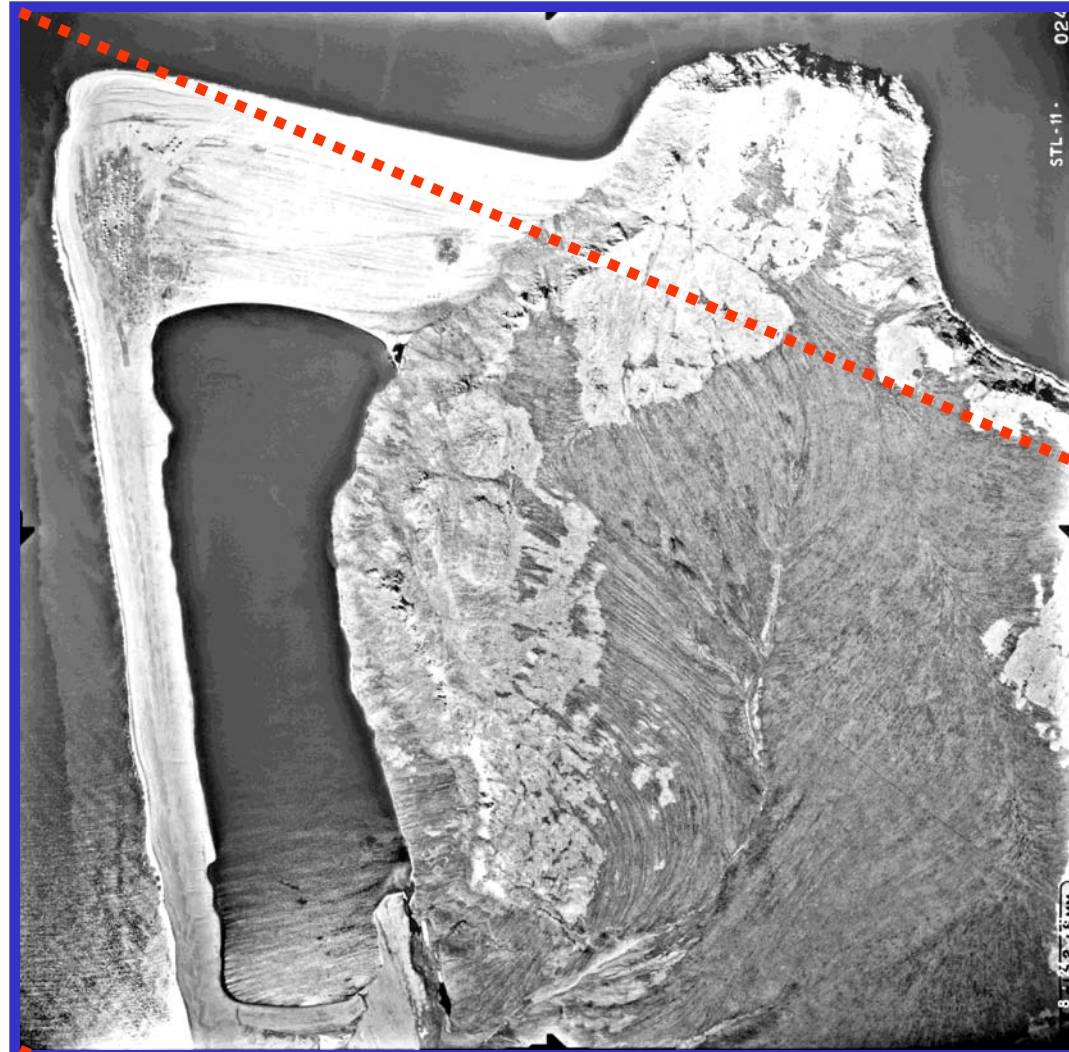
Pits

Mounded Material

Depressions

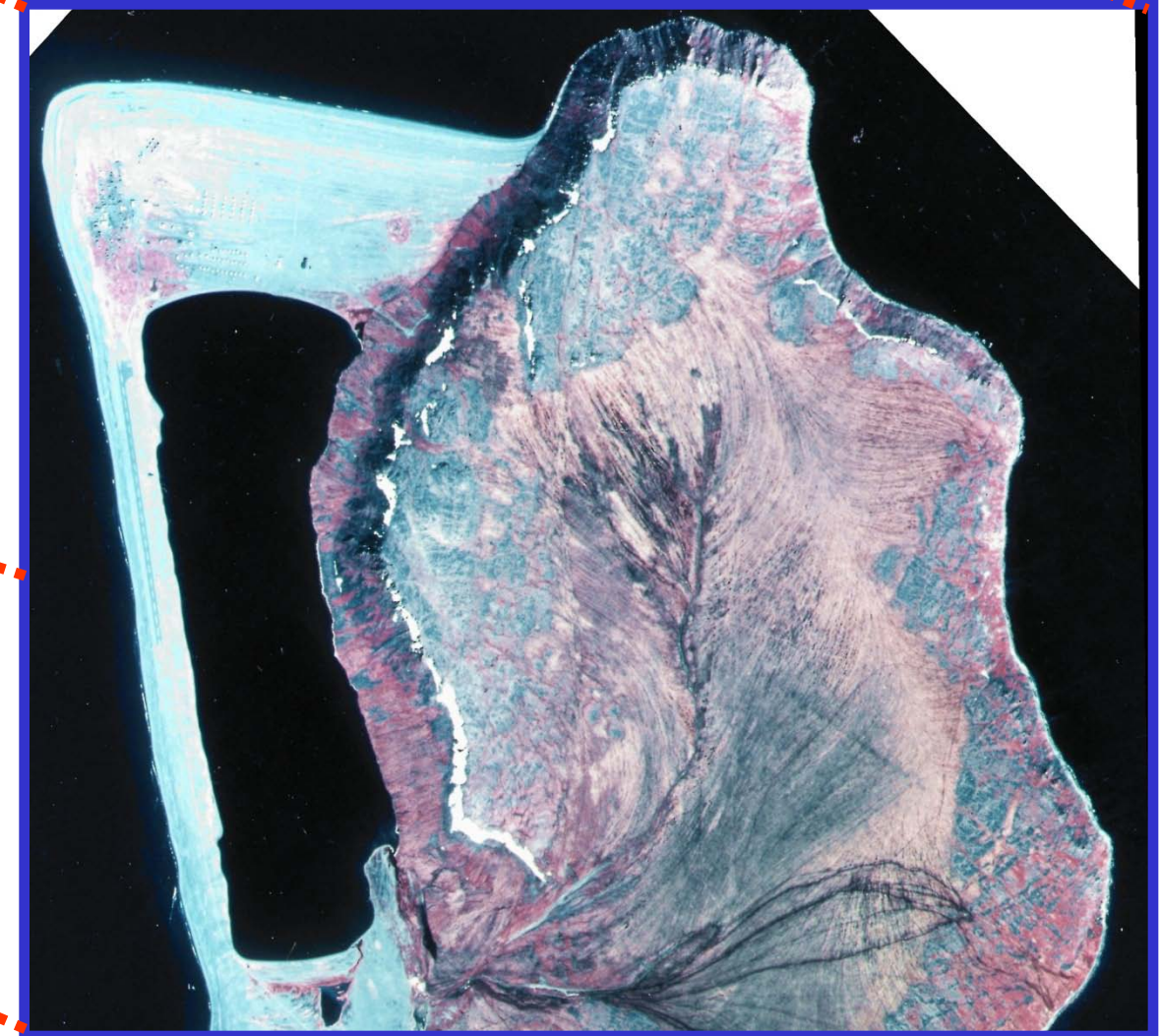
Buildings of Interest

Cultural Features of Interest

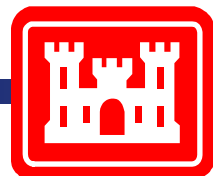


1948 Aerial Photo

Change Detection
Through Time



1984 Aerial Photo



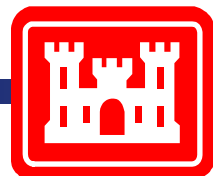
Gambell, AK - Archeological Sites

SEKLOWGHYAGET SITE

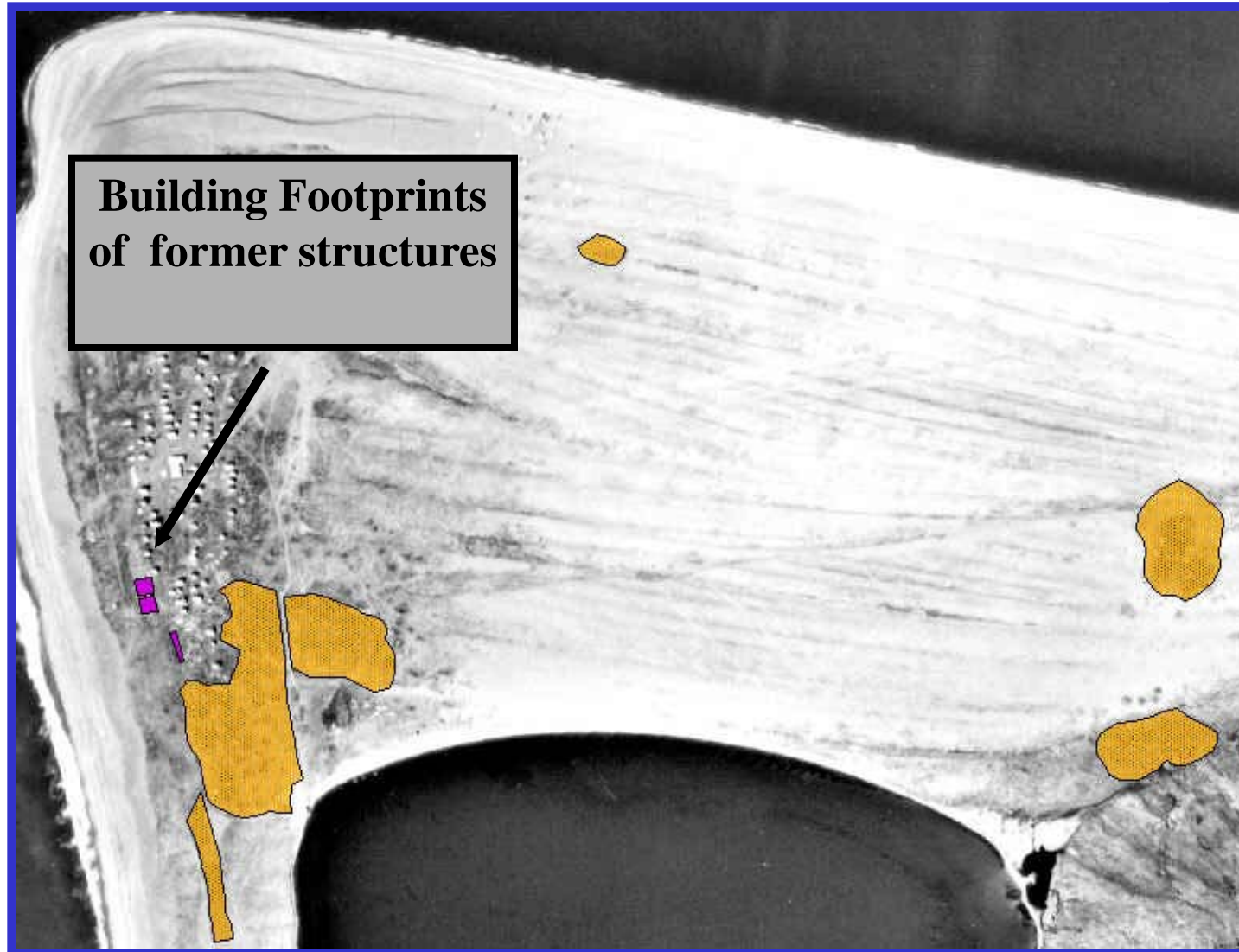
IEVOGHIYOQ SITE
MIYOWAGH SITE
AND
HILLSIDE SITE

MERUWTU POINT

Locations Approximate



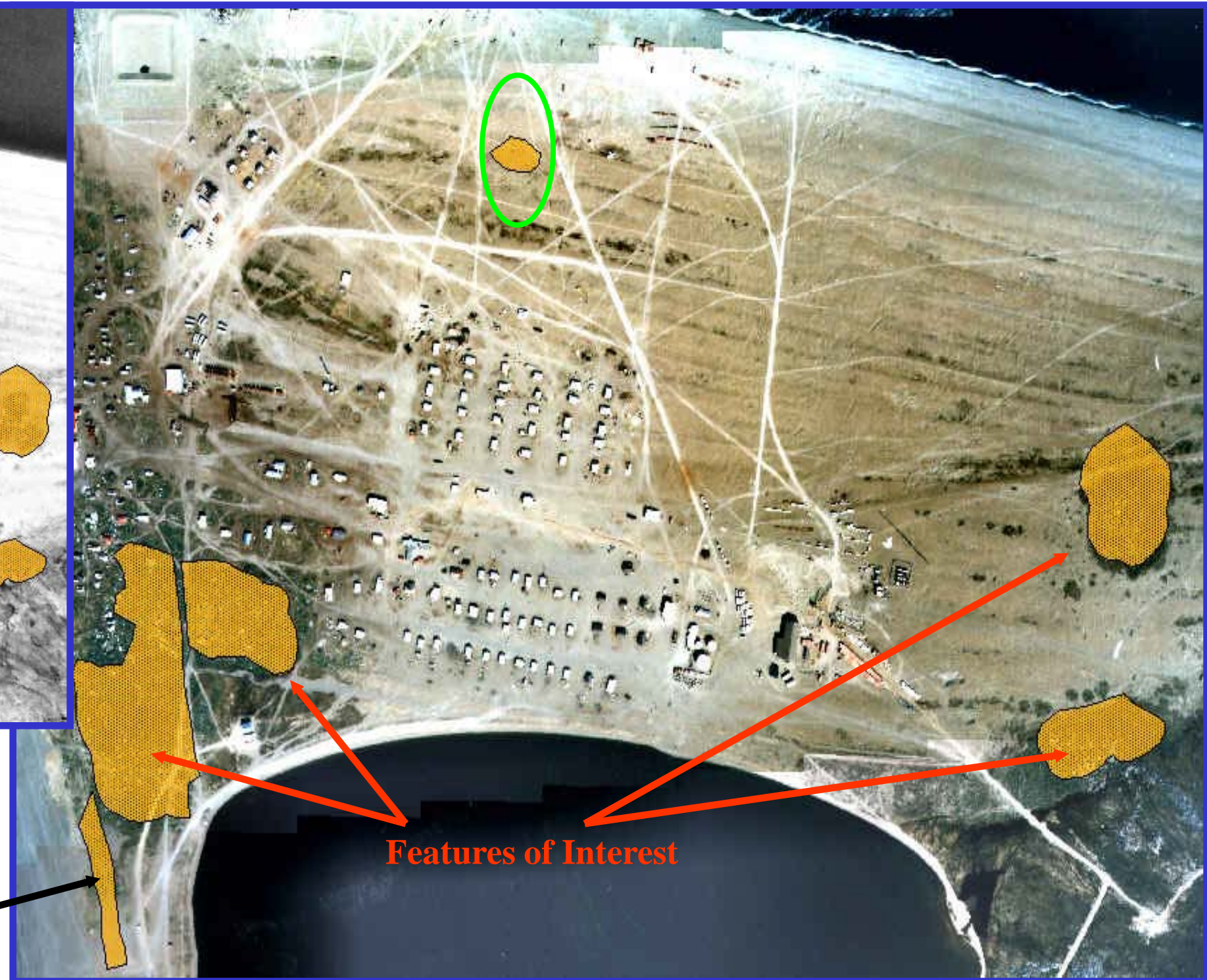
Gambell, AK - Pre-DOD Features



Building Footprints
of former structures

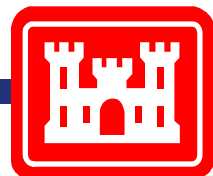
1948 AERIAL PHOTOGRAPH

Cleared area for runway



Features of Interest

1994 AERIAL PHOTO WITH 1948 FEATURES



Gambell, AK - Features of Interest

Sep 1953 North Beach, Gambell



Village of Gambell



1953 Army Site from Mtn.



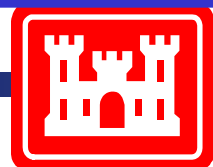
1953 View of North Beach from Mtn.



1959 North Beach and Sevuokuk Mtn.

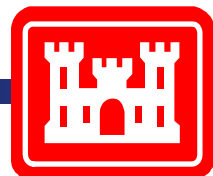


Ancient Village Site



Gambell, AK - DOD Leased Timeline

<u>DOD Component</u>	<u>Comments</u>	<u>Timeline</u>		AIR FORCE USE
Air Force	Aircraft Control and Warning	Sep 1950 - Sep 1962	ARMY USE	1950
Army	Gambell Army Site No. 1	Oct 1954 - Sep 1963	1953	
Army	Gambell Army Site No. 2	Jan 1955 - May 1958		
Army	St. Lawrence Island Army Site	Jan 1956 - Dec 1963		
Army	Gambell National Guard Site	Mar 1962 - Sep 1973		
Army	Gambell Army Station	Nov 1963 - Dec 1963		
Air Force	Gambell Communications Annex	Jun 1960 - Sep 1962	1963	1962



Gambell, AK - DOD Leased Areas

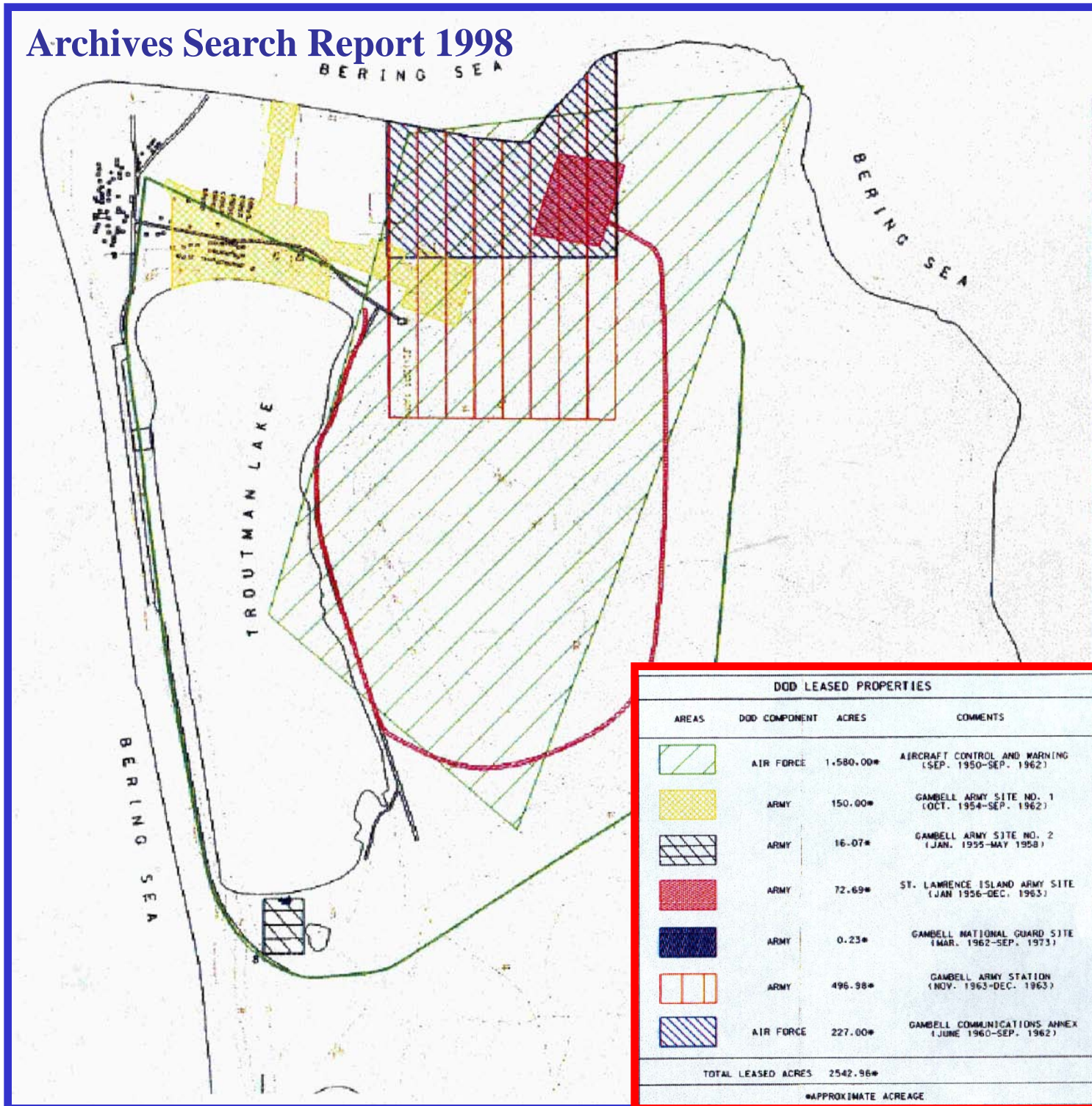


Plate 2

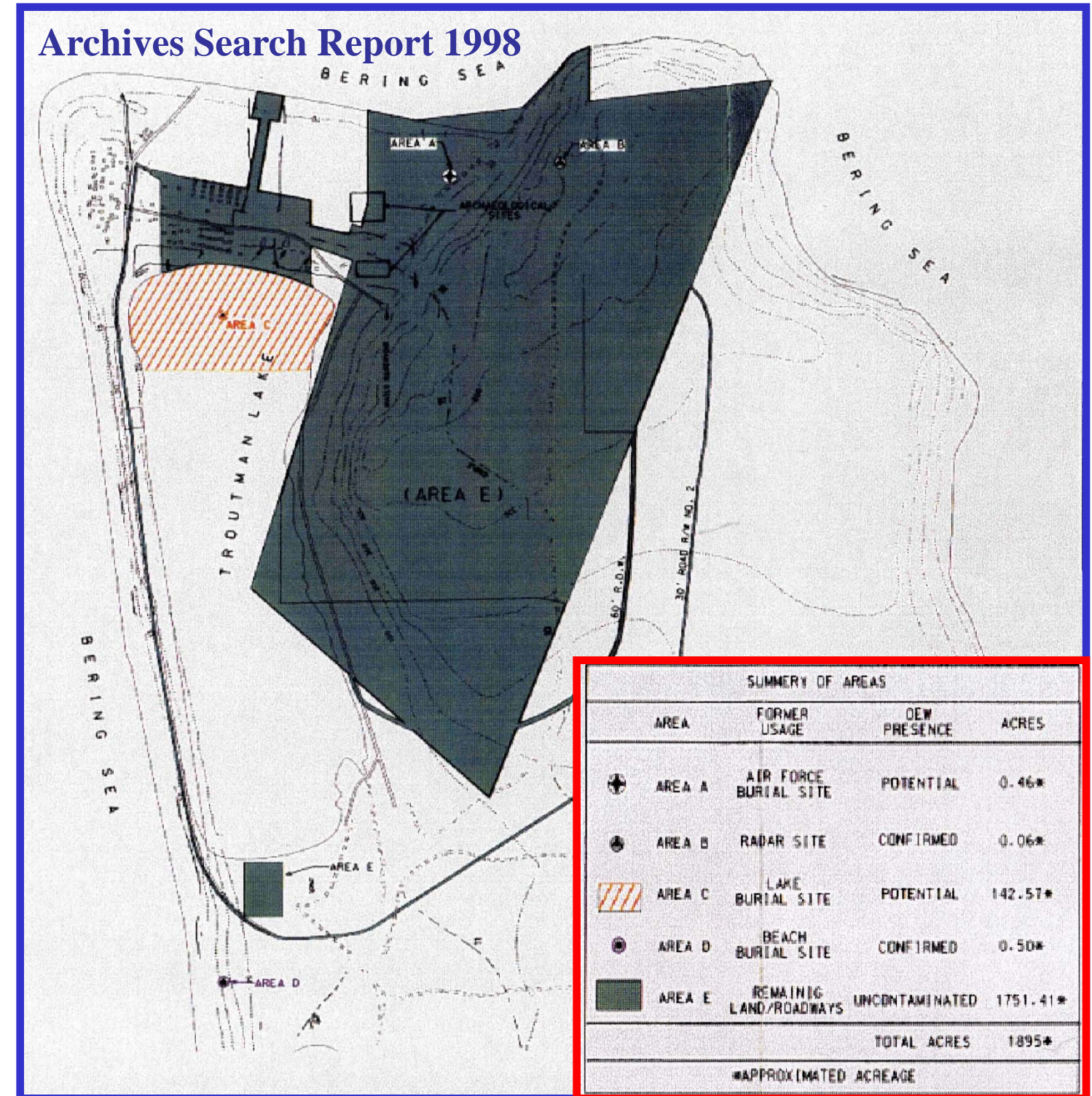
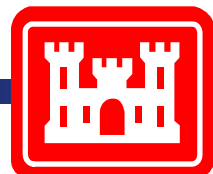
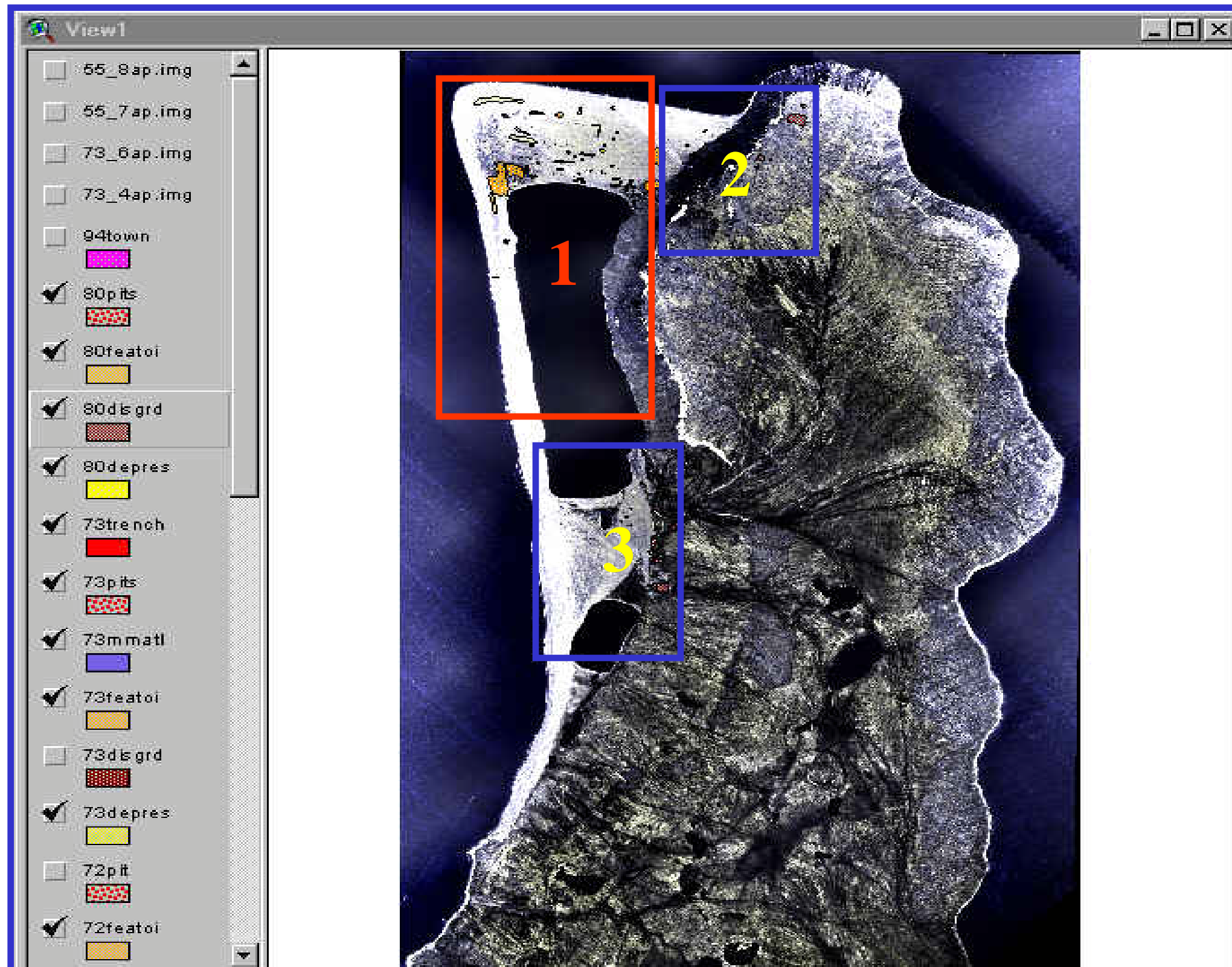


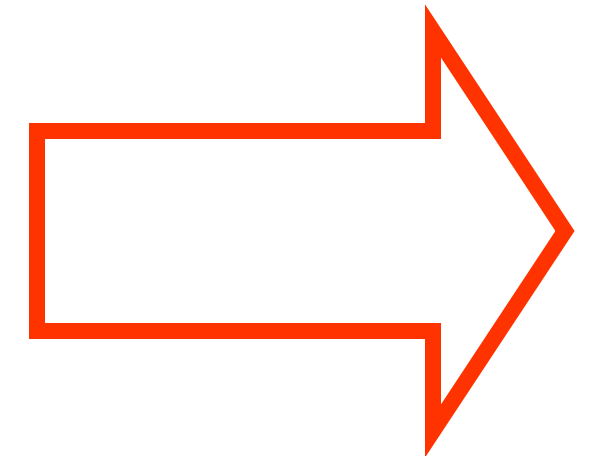
Plate 3



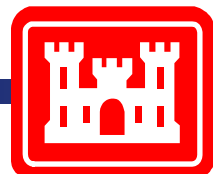
Gambell Sites, AK STUDY AREAS



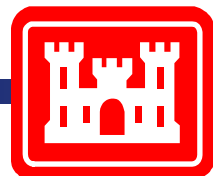
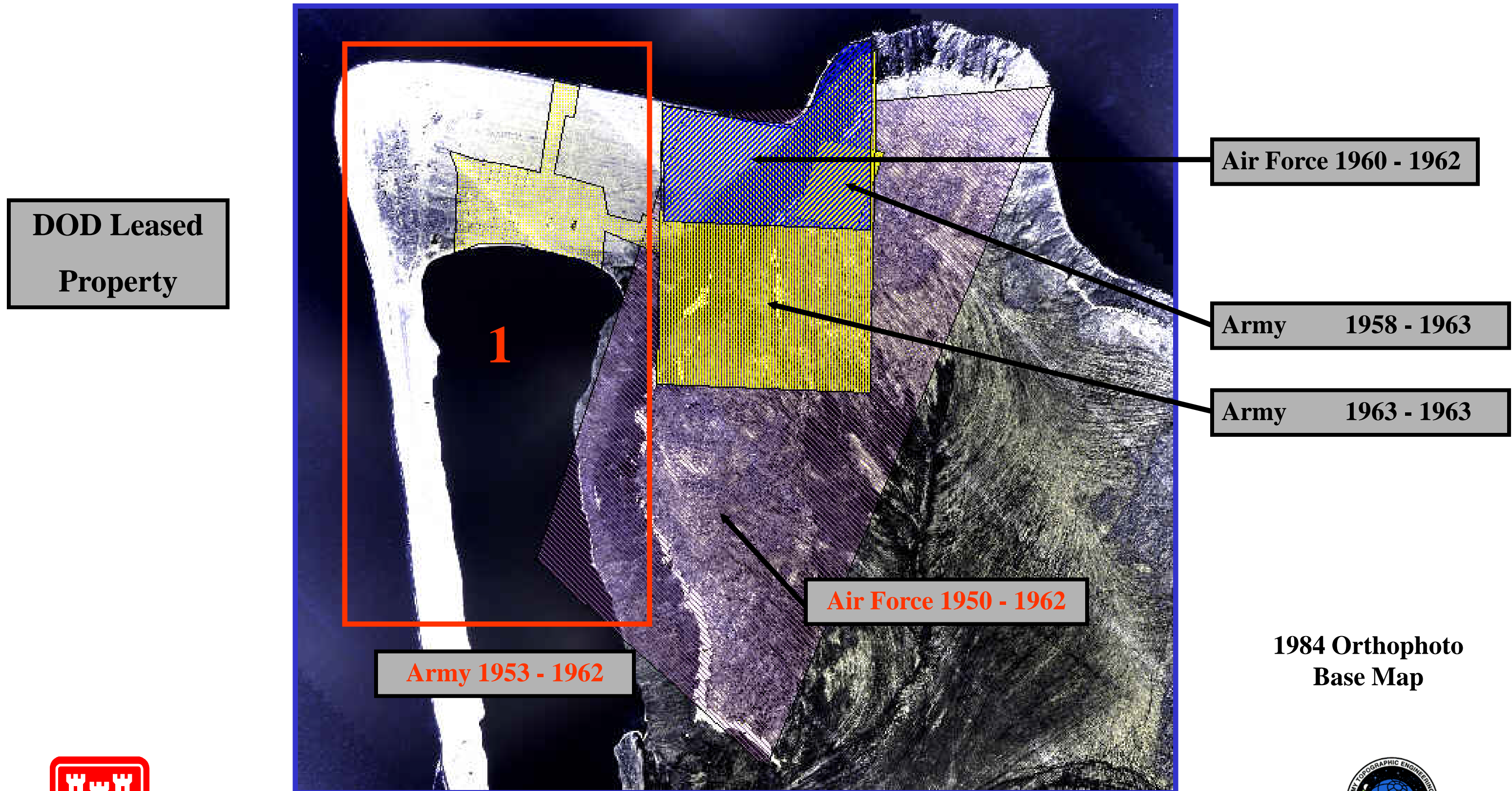
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STUDY AREA 1

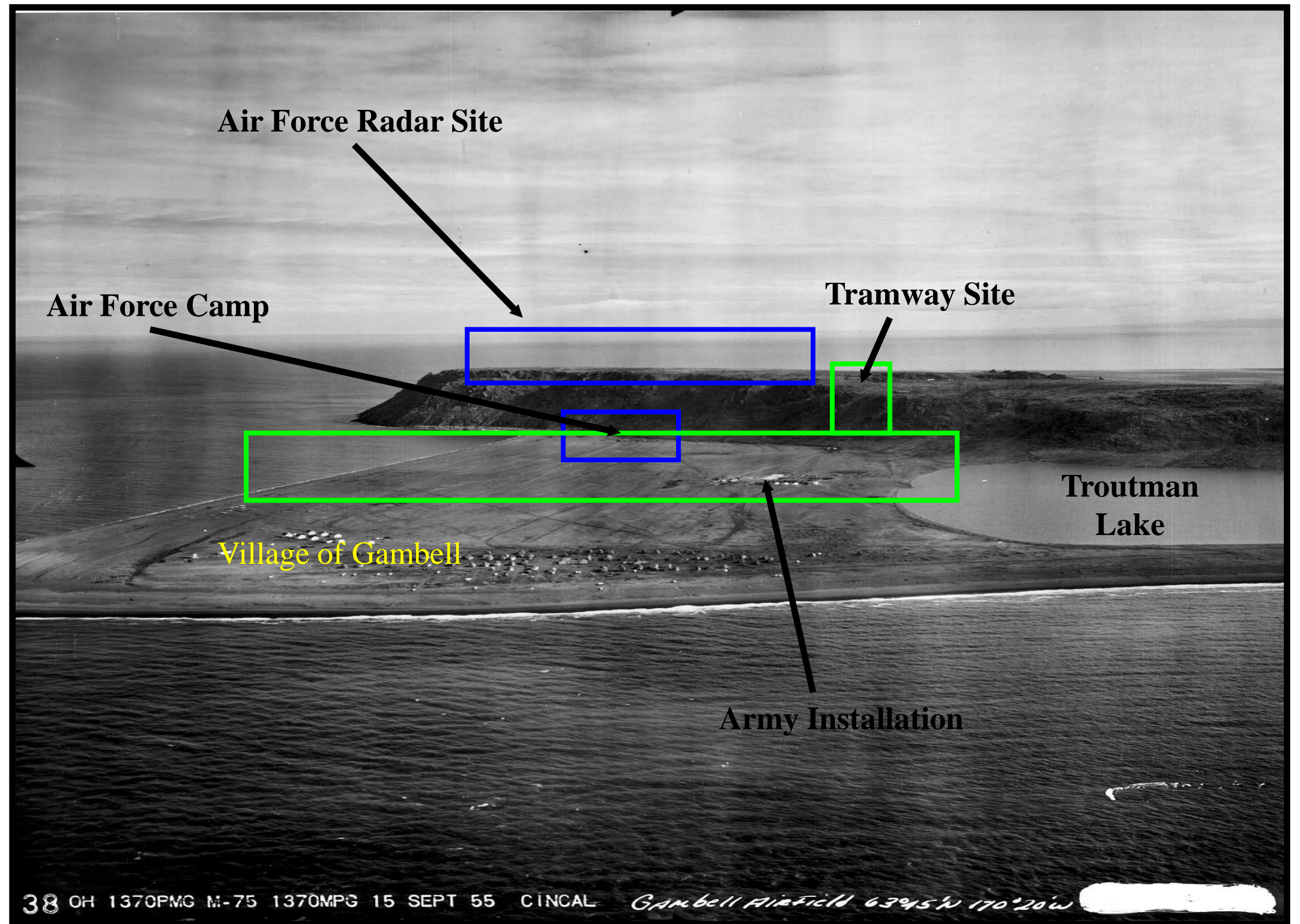


Gambell, AK - STUDY AREA 1



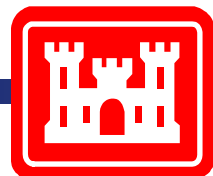
Gambell, AK Installations in Northern Area

Army and Air Force
Installations in 1955
General Locations in
Northern Area



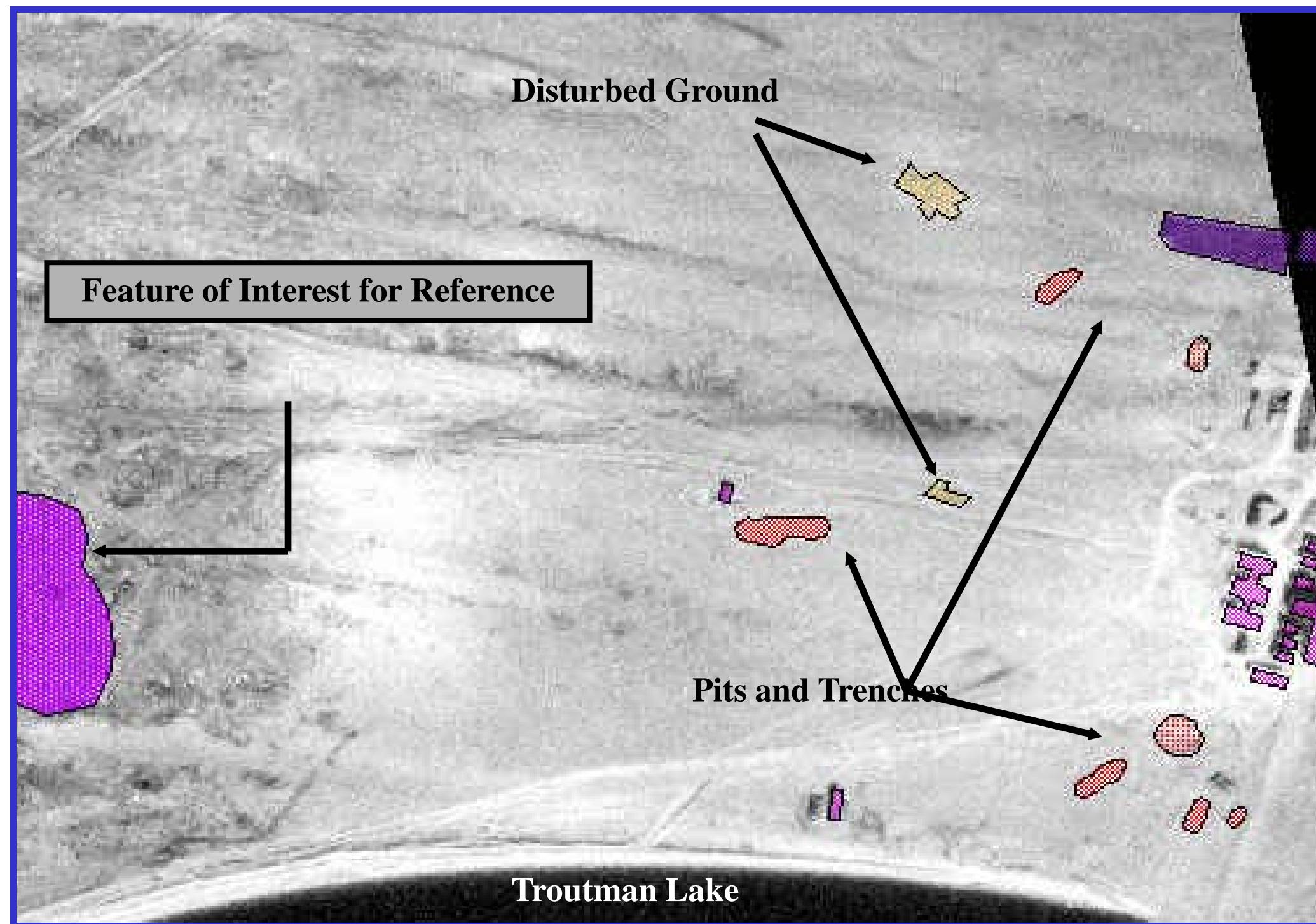
N ←

1955 Oblique Aerial Photo

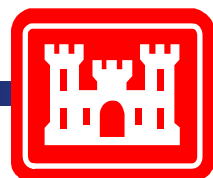


Gambell Sites, AK - STUDY AREA 1

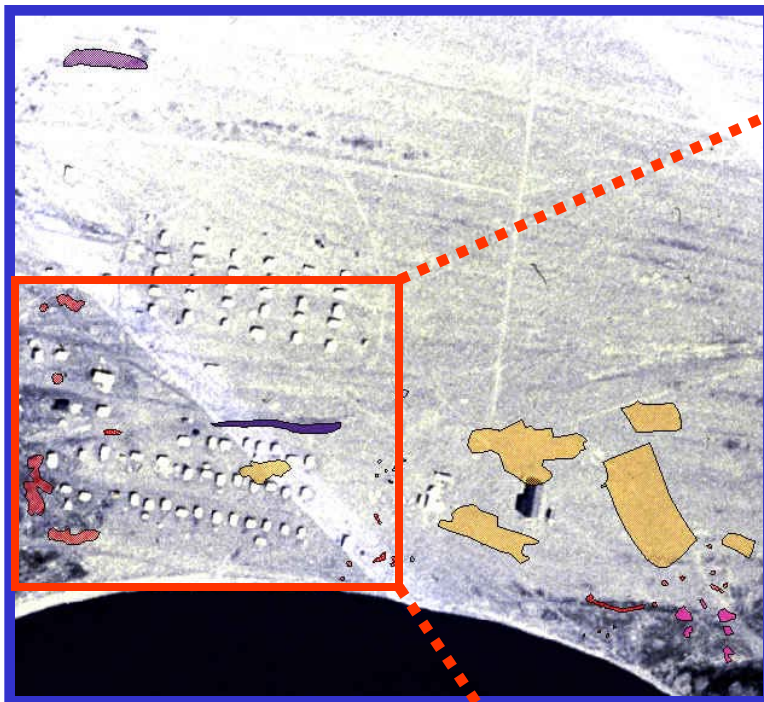
Features Identified from
1955 Aerial Photos



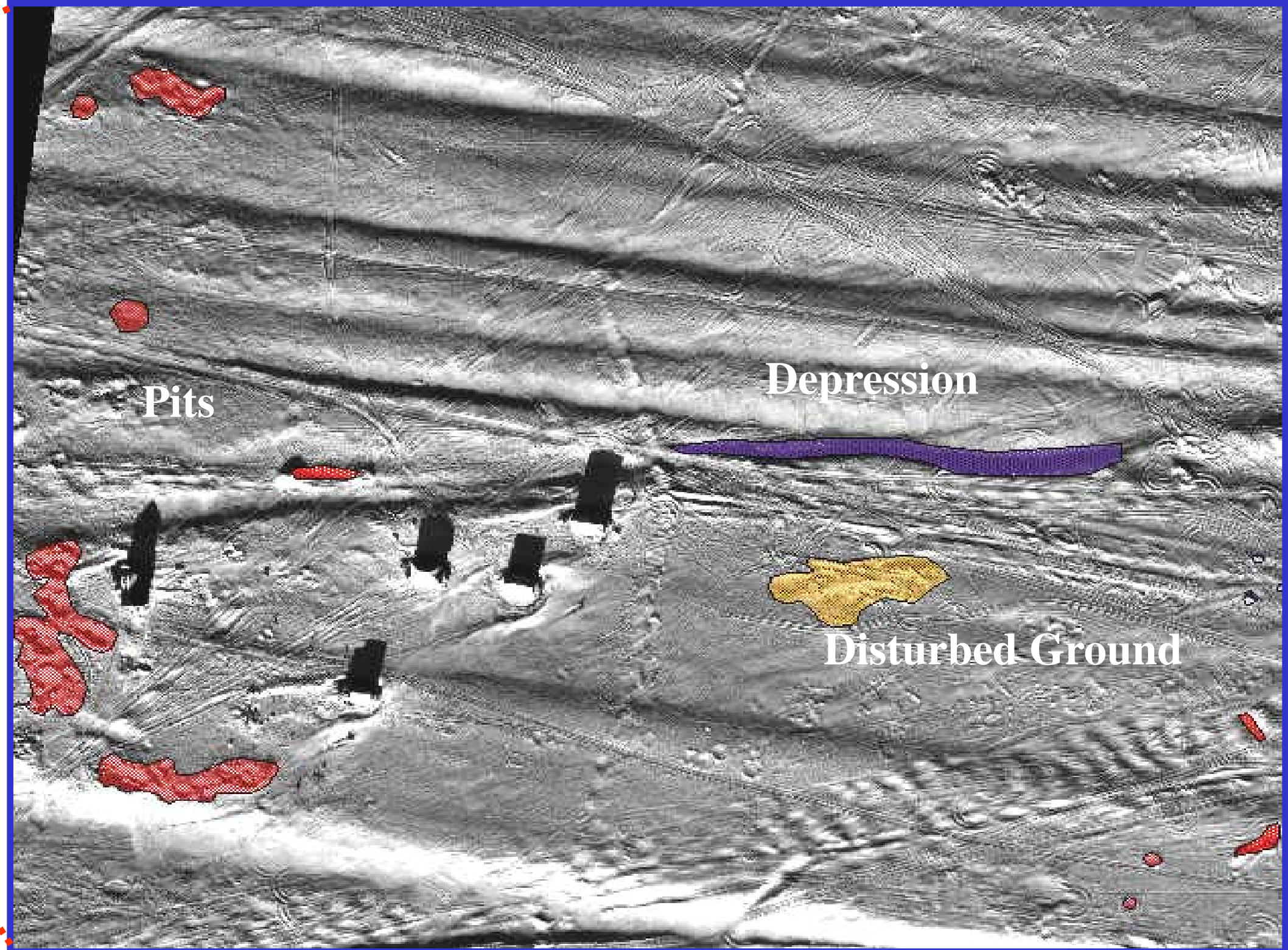
1955 Aerial Photo and Features



Gambell Sites, AK - STUDY AREA 1



1984 Aerial Photo



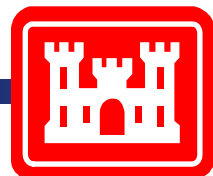
Pits

Depression

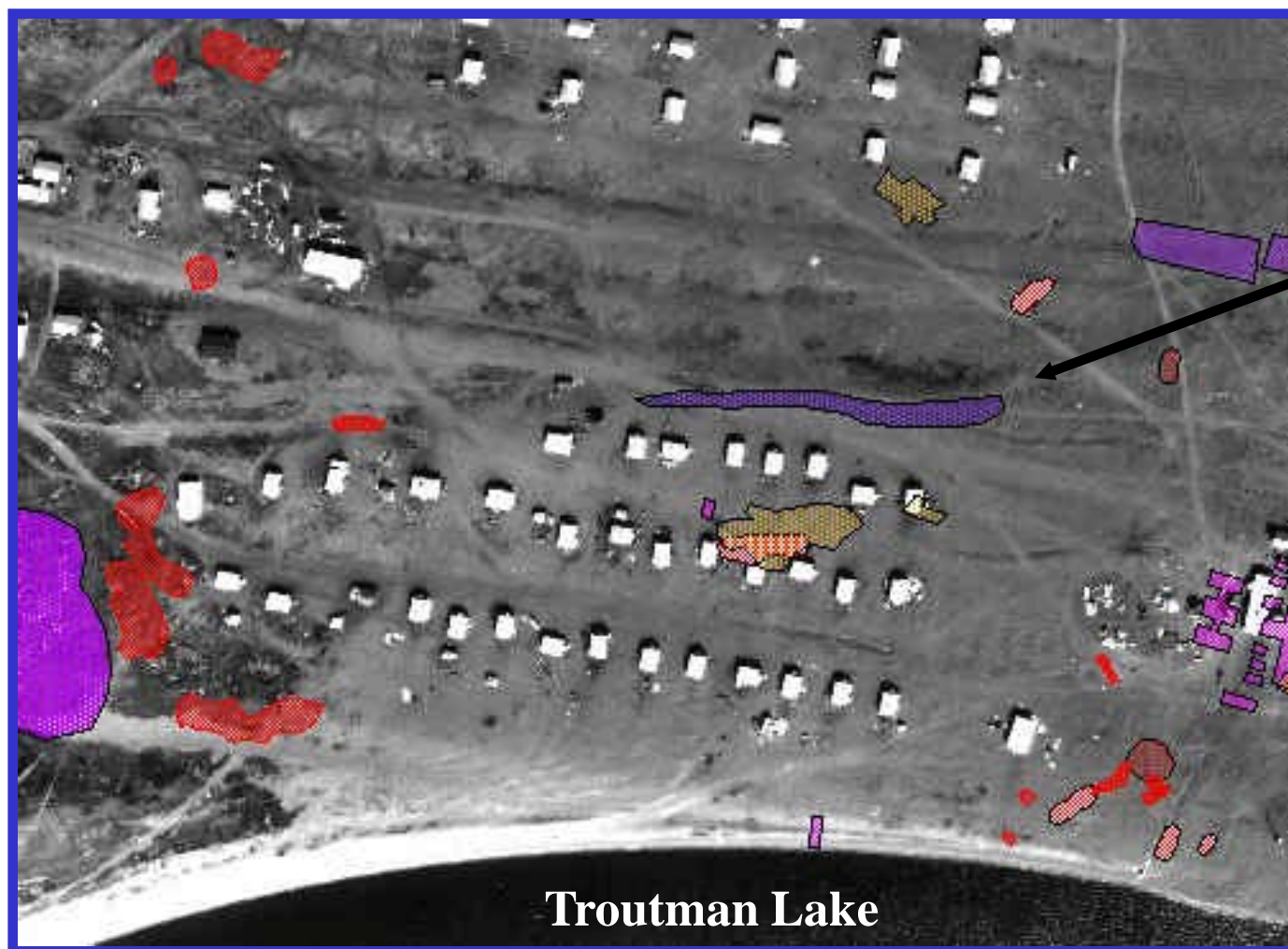
Disturbed Ground

Features Identified from
1973 Aerial Photos

1973 Aerial Photo and Features



Gambell Sites, AK - STUDY AREA 1



Troutman Lake

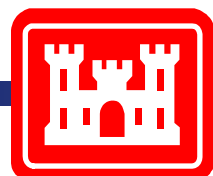
1980 Aerial Photo

Note: the 1973 Depression no longer apparent in 1980 and 1994 aerial photos

1955 and 1973 Identified Features on more current Aerial Photos

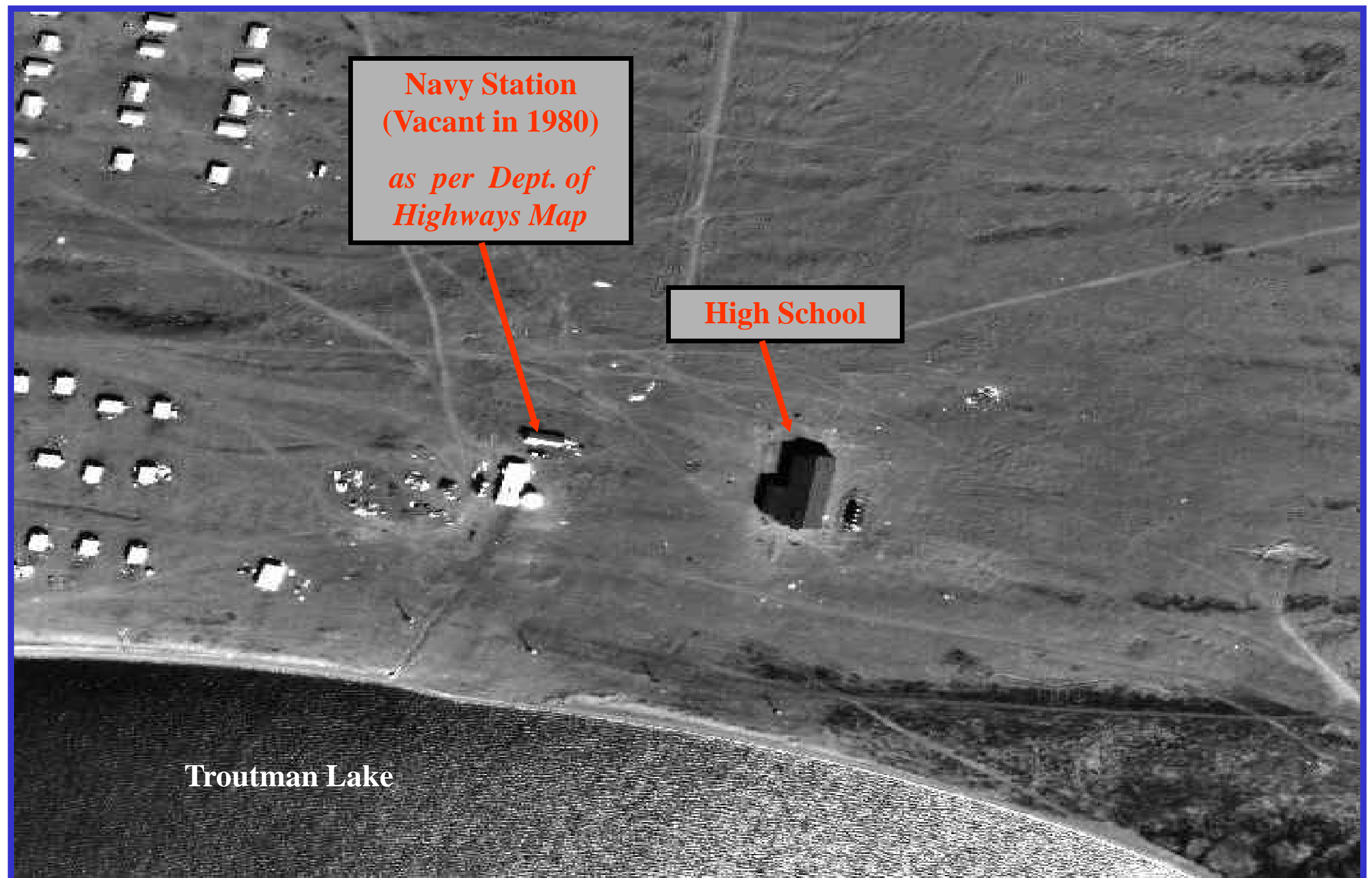


1994 Aerial Photo

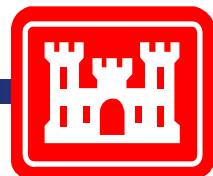


Gambell Sites, AK - STUDY AREA 1

Panning to the East
from the previous slide area



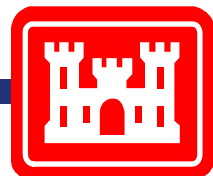
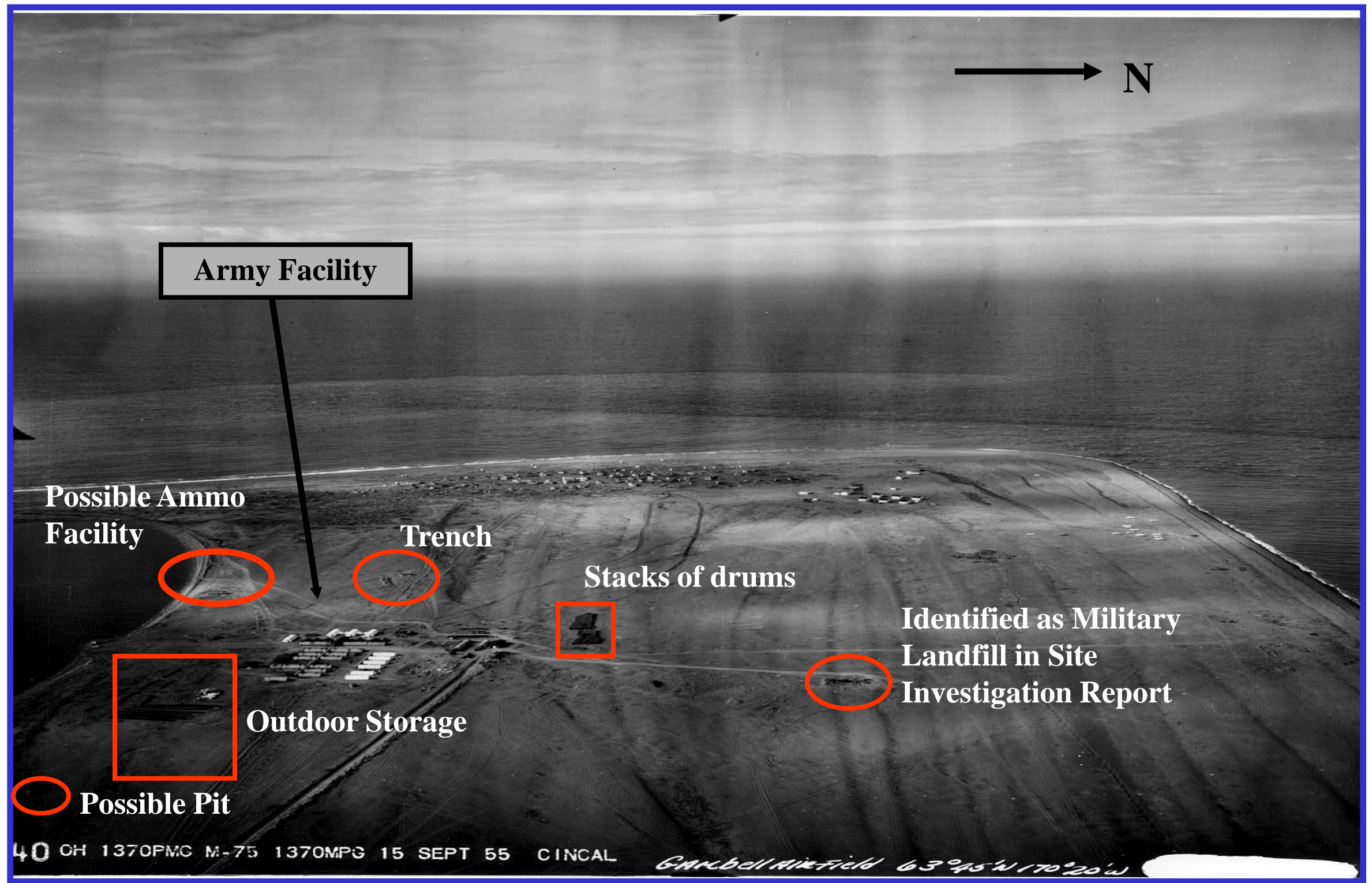
1980 Aerial Photo



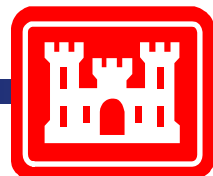
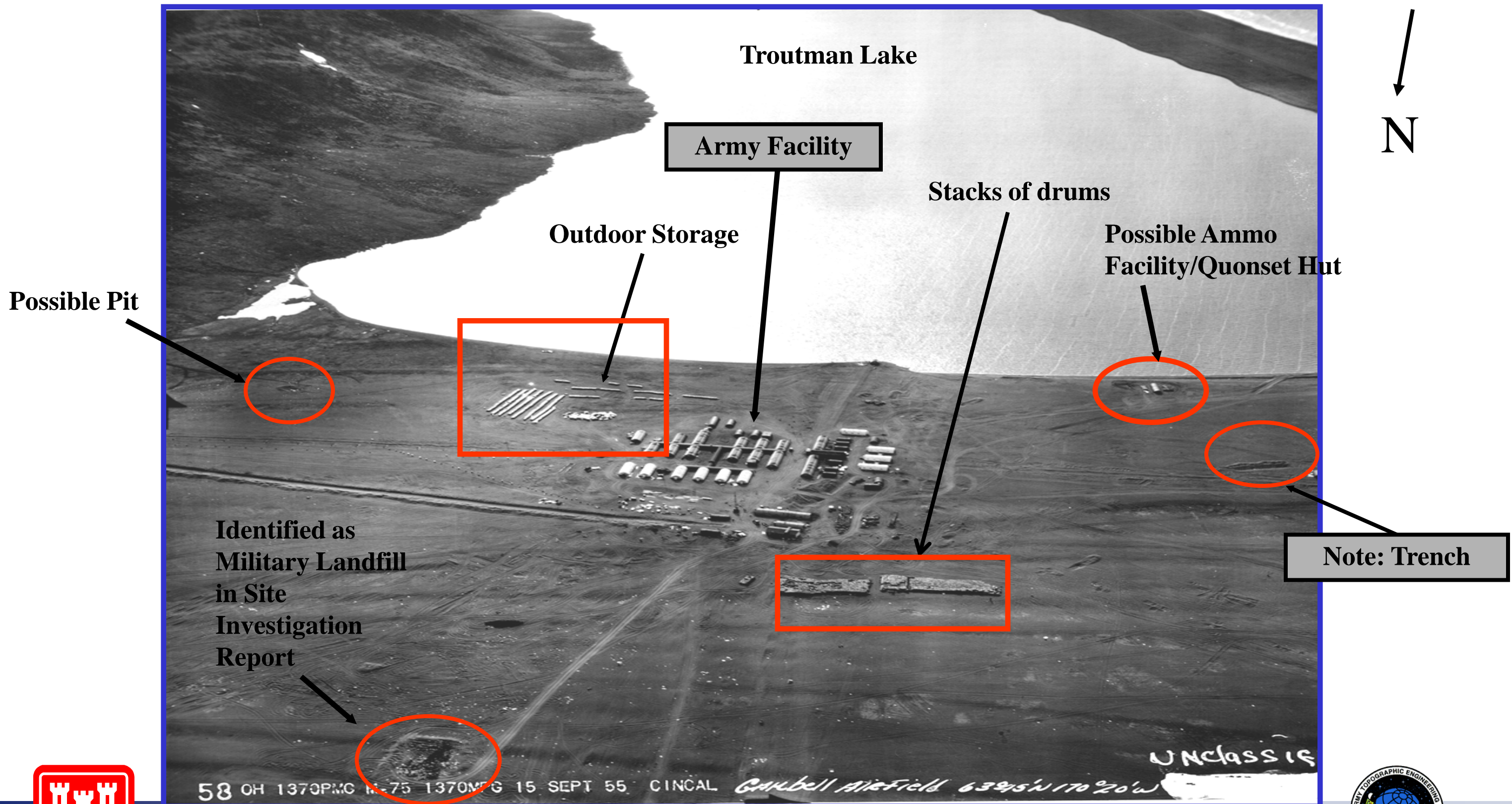
Gambell Sites, AK - Army Installation 1955

Features of Possible Concern

1955 Oblique Aerial Photo

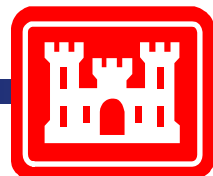
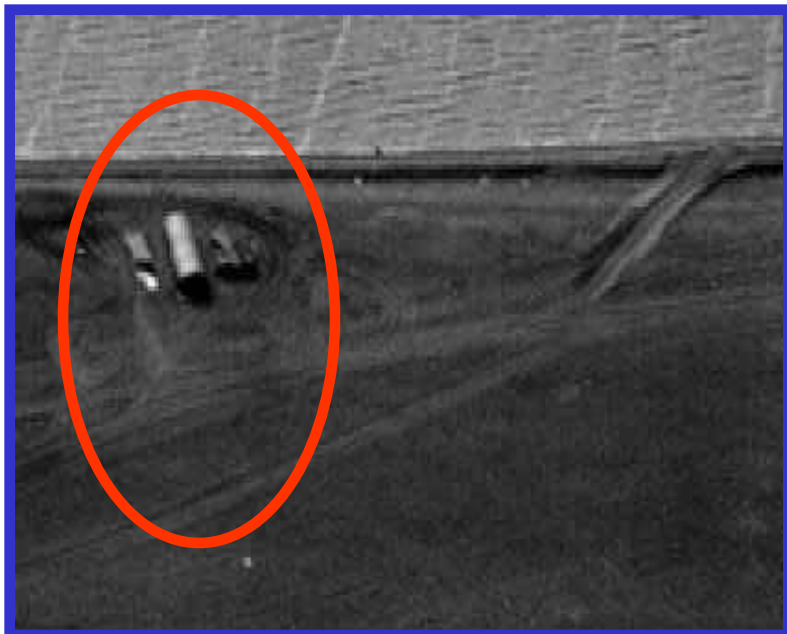
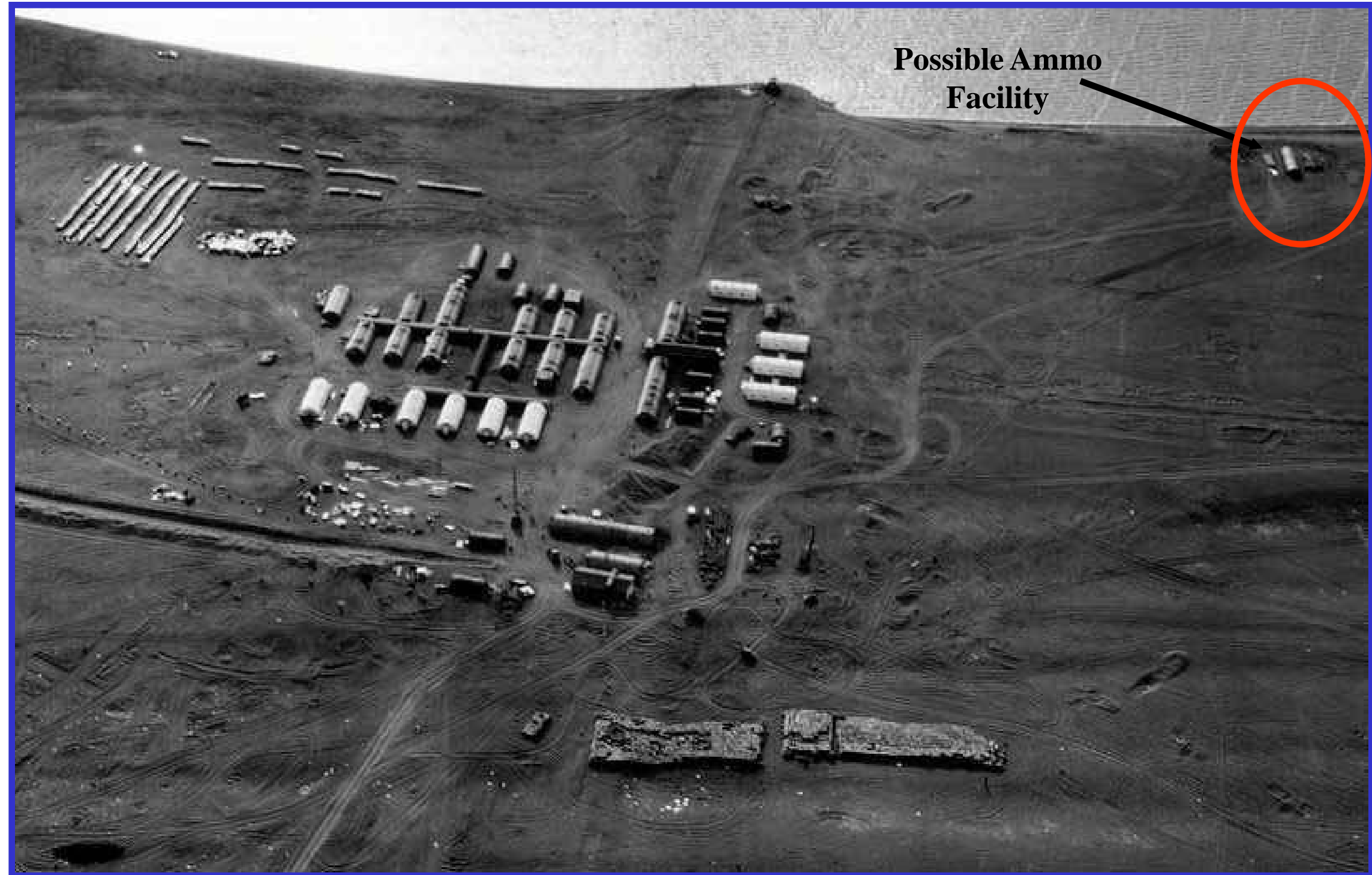


Gambell Sites, AK - Army Installation 1955



Gambell Sites, AK - Army Installation 1955

**Army Facility North
of Troutman Lake
with Detail of Possible
Ammo Facility**



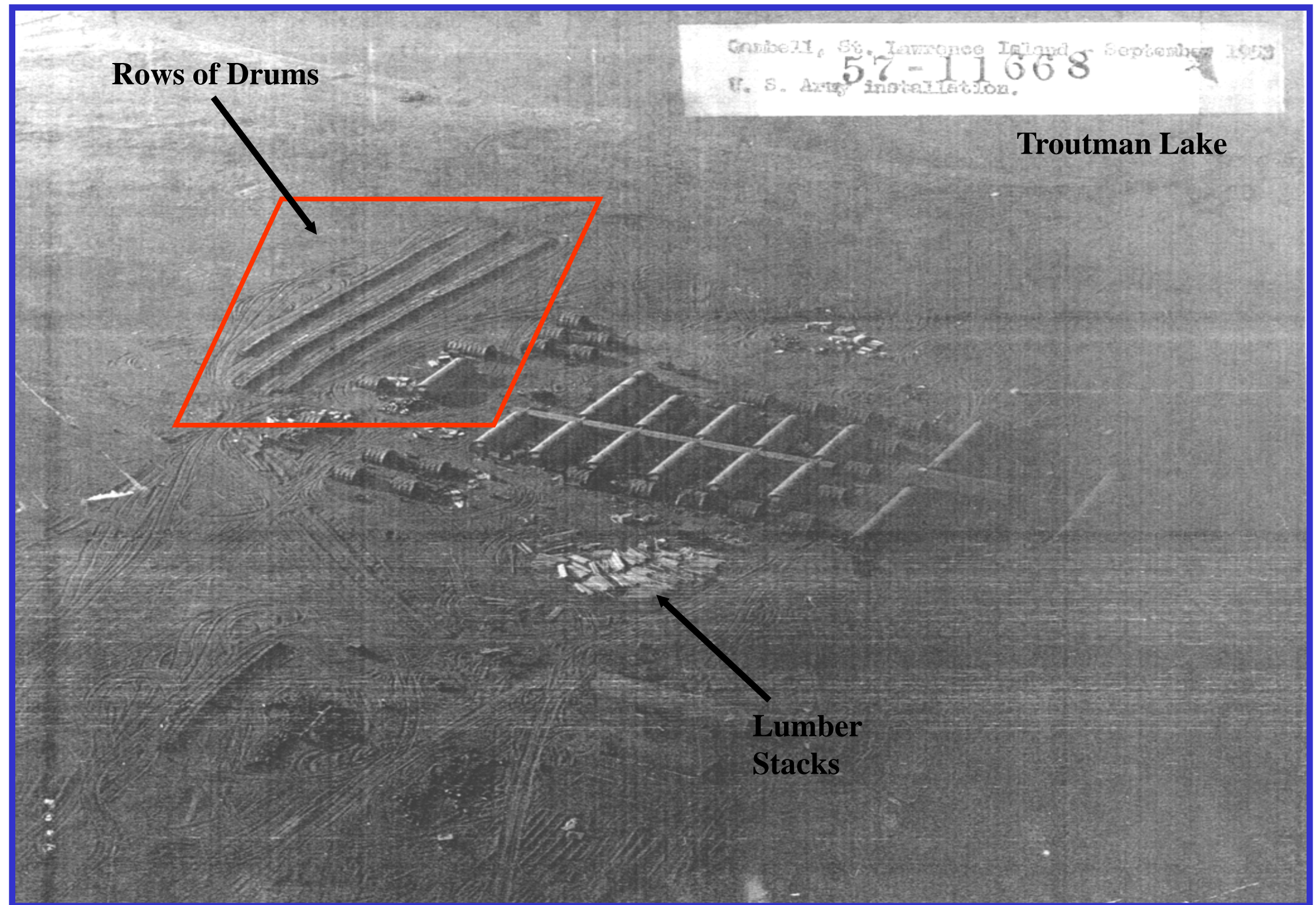
Gambell Sites, AK - STUDY AREA 1

Army Facility
in 1953

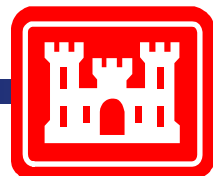
Looking to
the Southeast

September
1953

Oblique
Aerial Photo



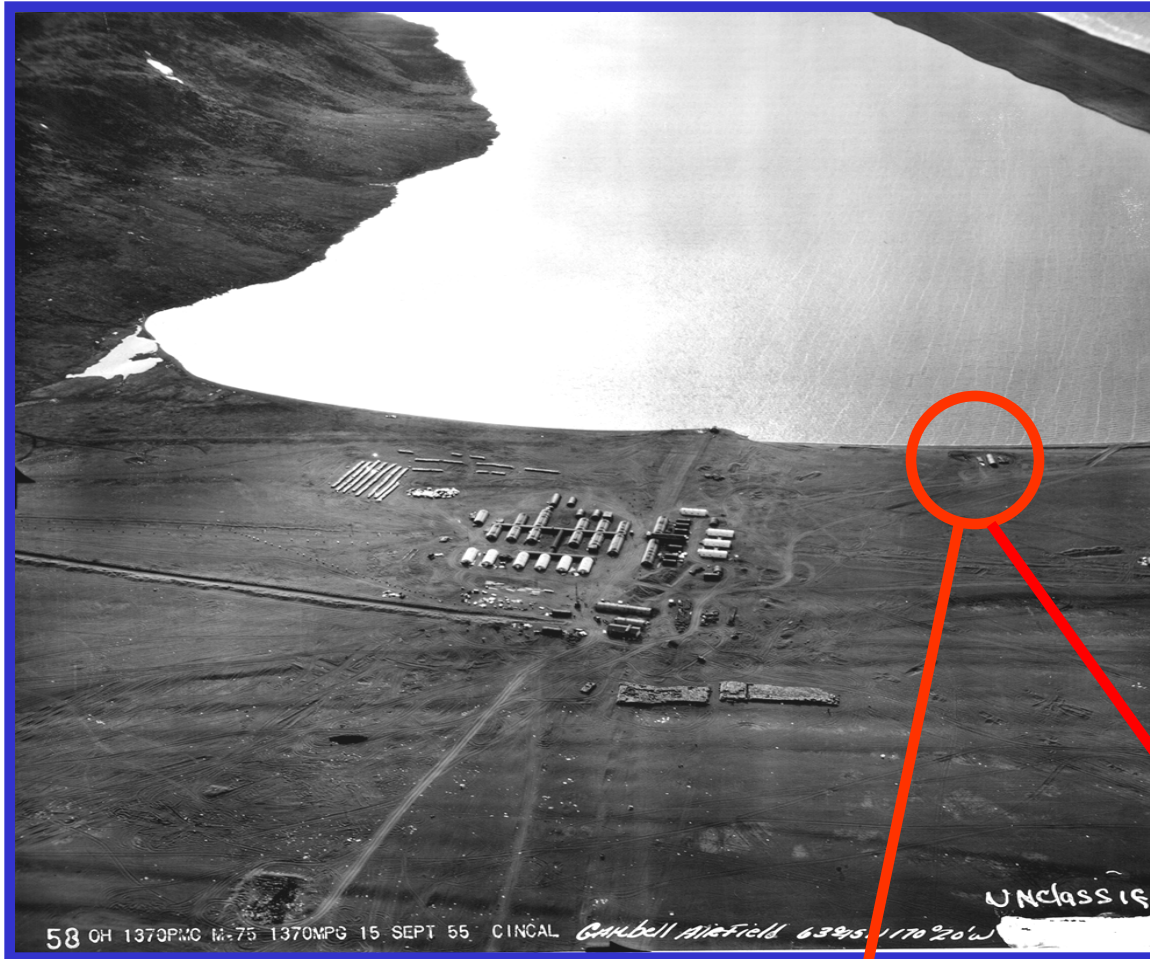
September 1953



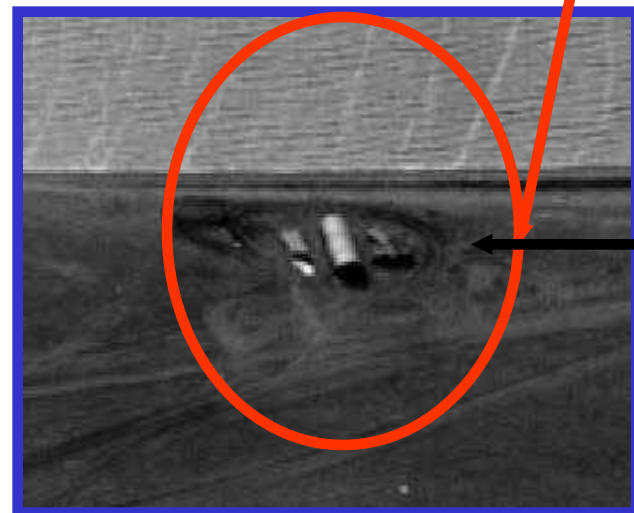
US Army Corps of Engineers



Gambell Sites, AK - Army Installation 1955



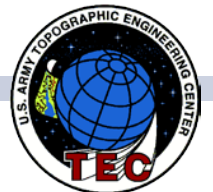
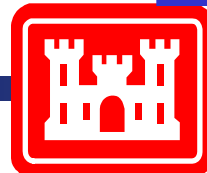
1955 Aerial Oblique



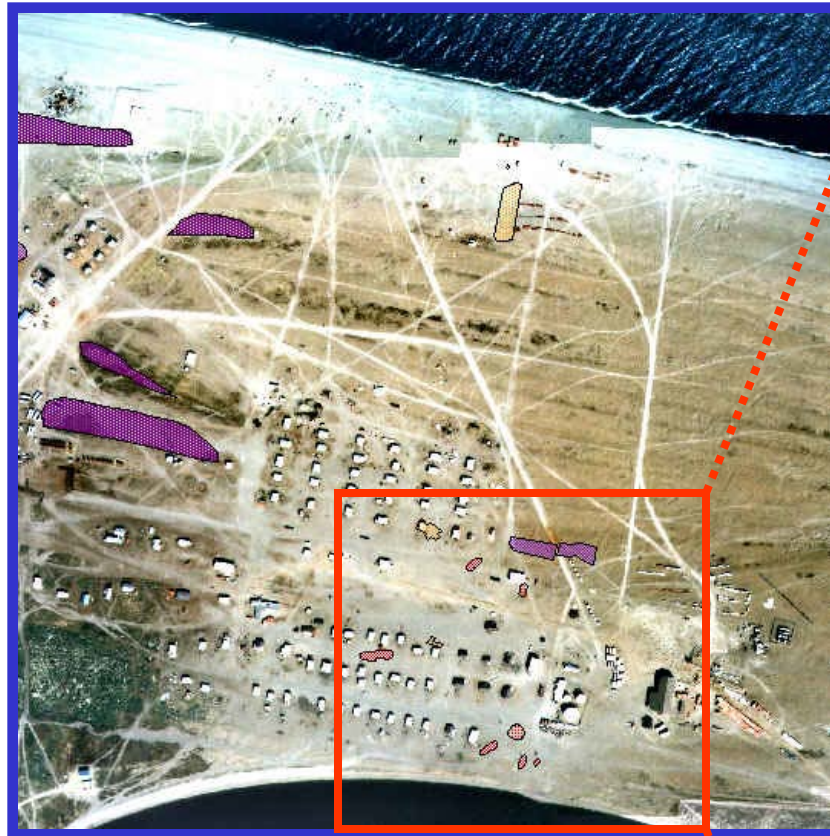
Note: Quonset Hut Building/
Berm



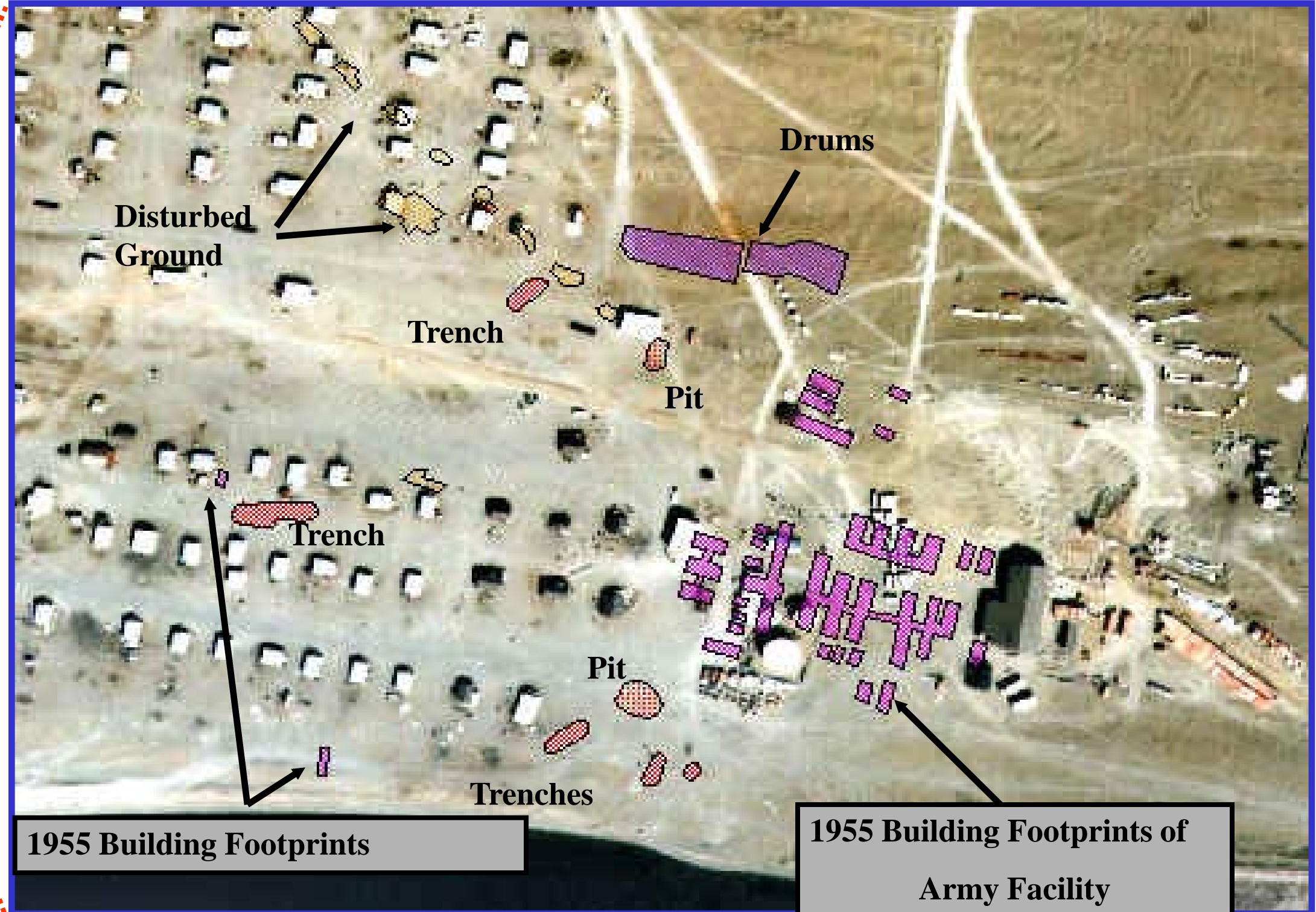
1955 Features on 1994 Aerial Photo



Gambell Sites, AK - STUDY AREA 1



1994 Aerial Photo

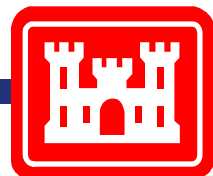


1955 Building Footprints

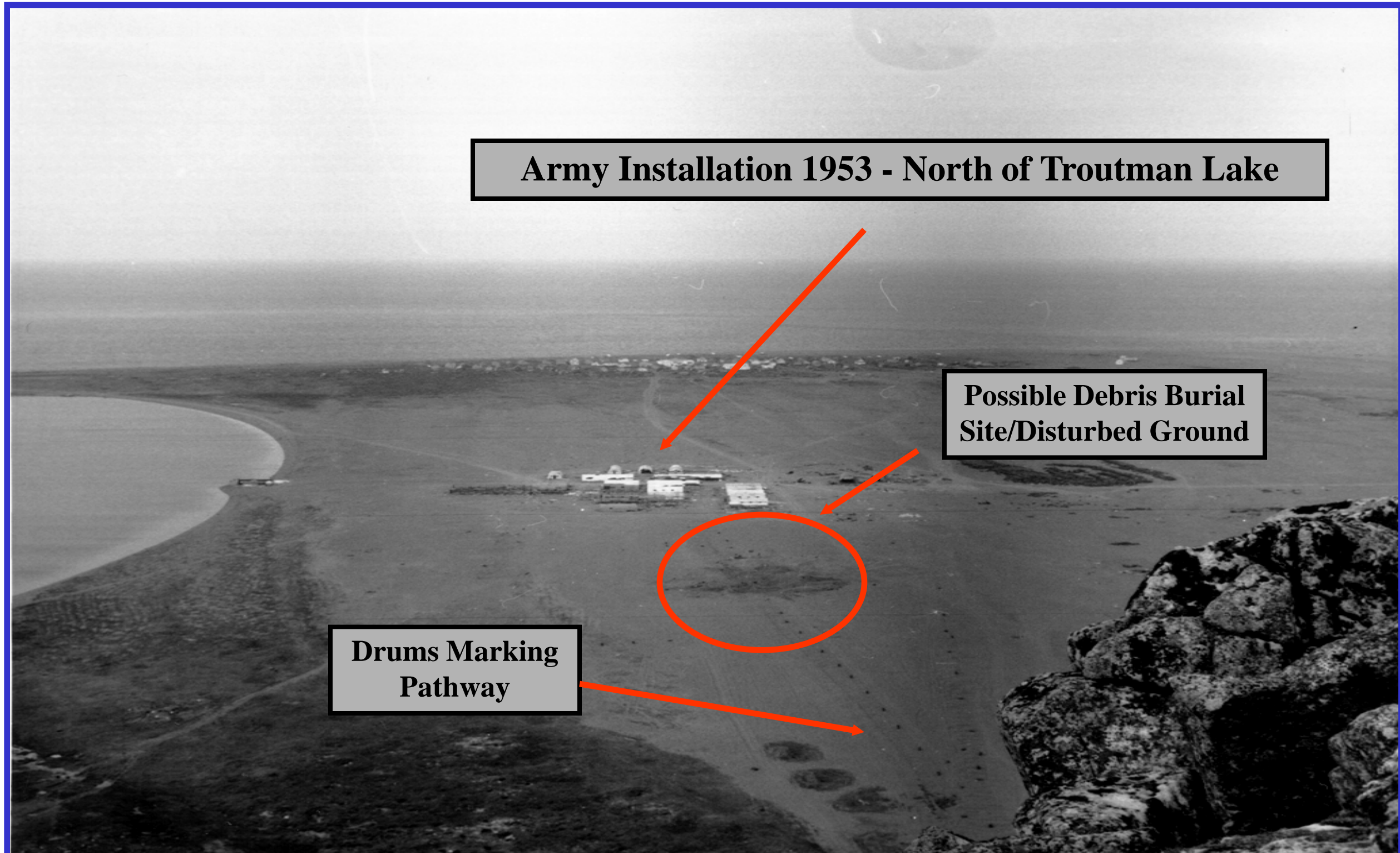
1955 Building Footprints of Army Facility

1994 Aerial Photo

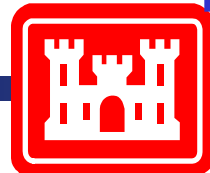
Features Identified from 1955 Aerial Photography



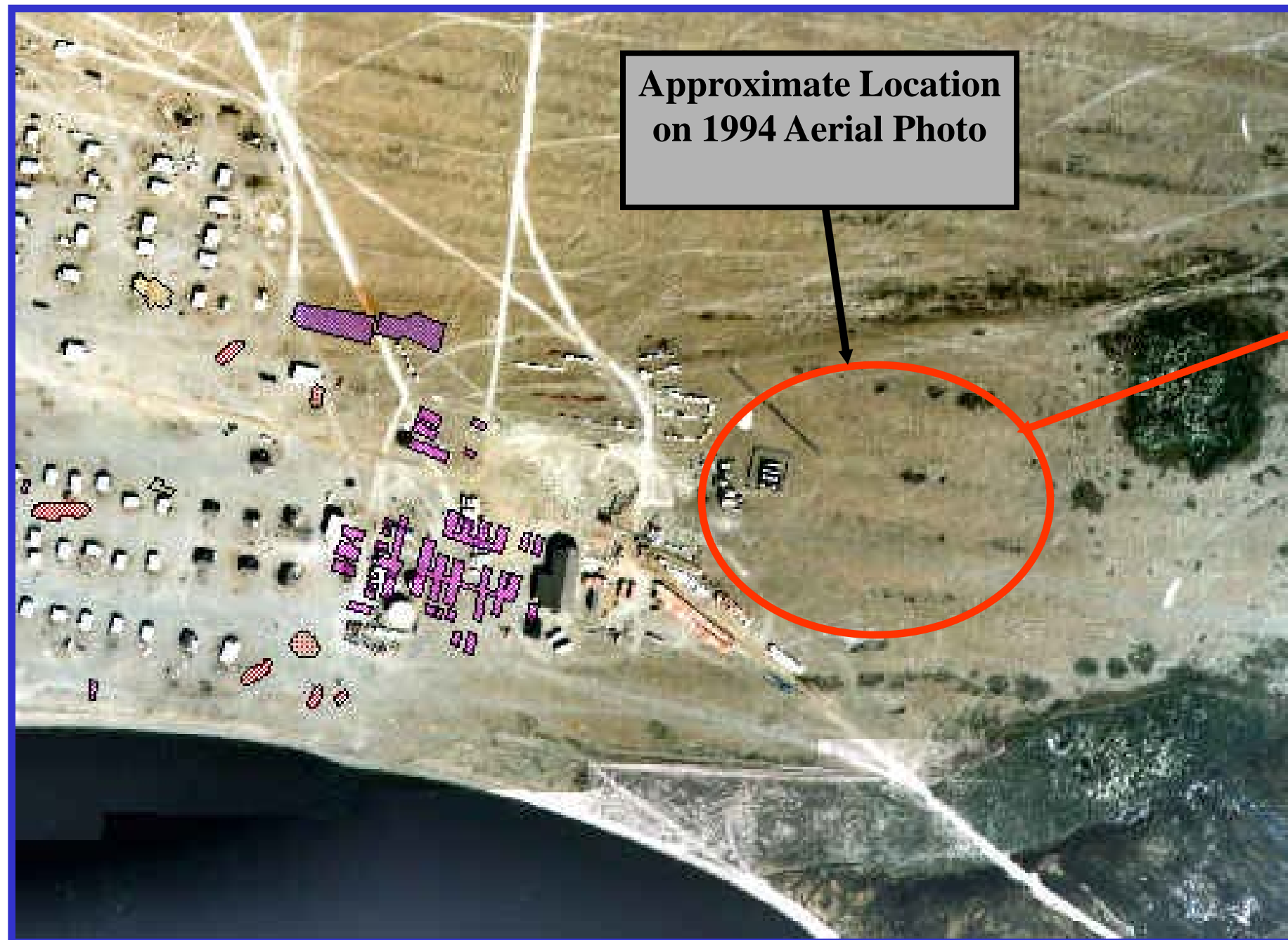
Gambell Sites, AK - STUDY AREA 1



1953
Oblique
Photo



Gambell Sites, AK - STUDY AREA 1



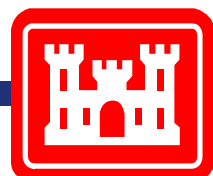
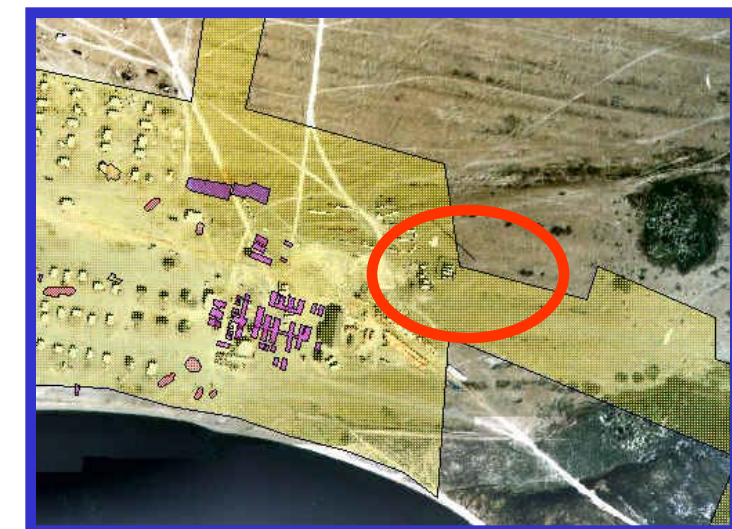
Possible Debris Burial Feature found only on 1953 Oblique Photo

1994 Aerial Photo With 1955 Identified Features



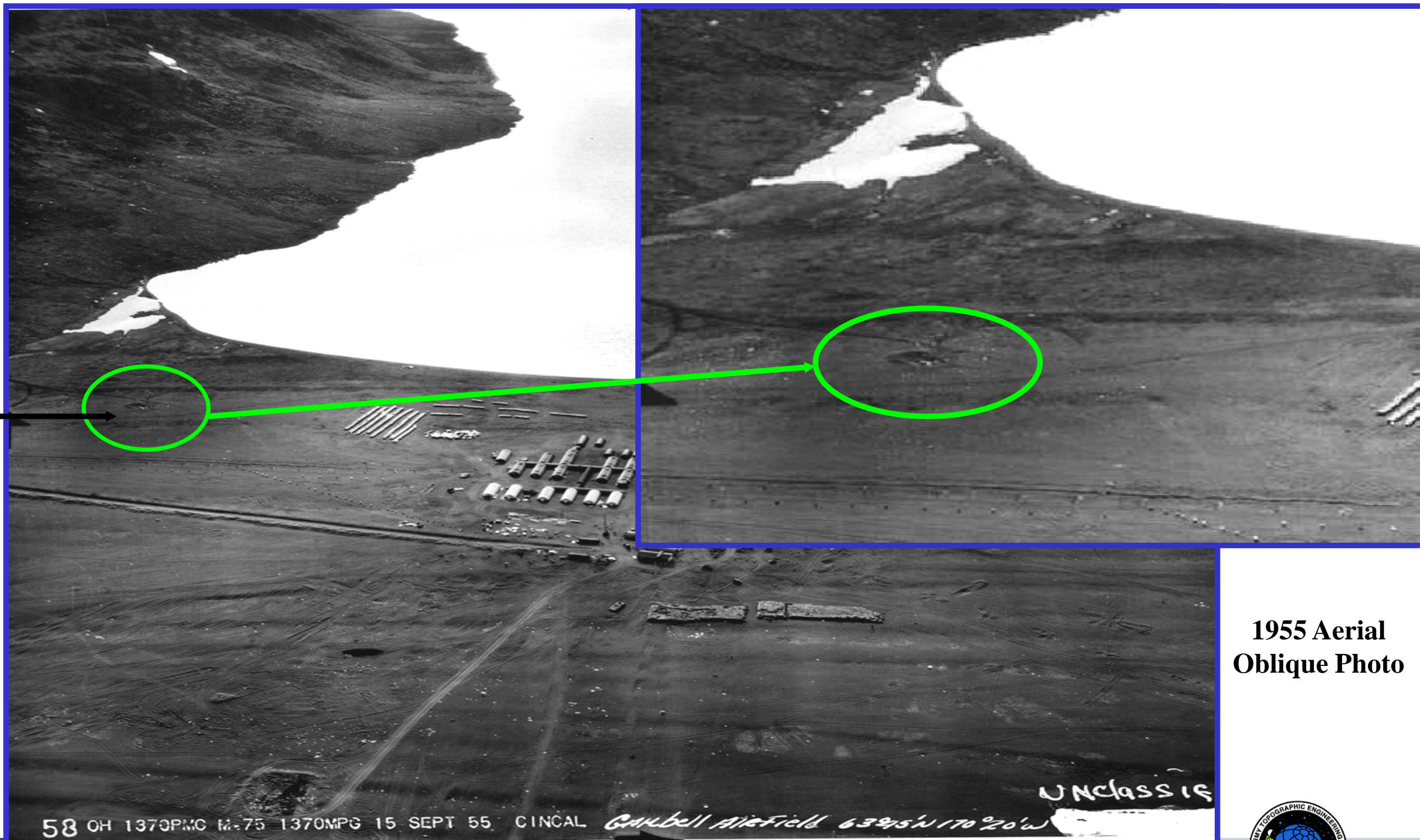
1953 Oblique Photo

Note: ASR Army Site #1
1954 - 1962

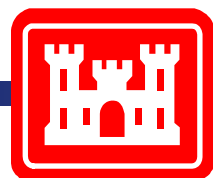


Gambell Sites, AK - STUDY AREA 1

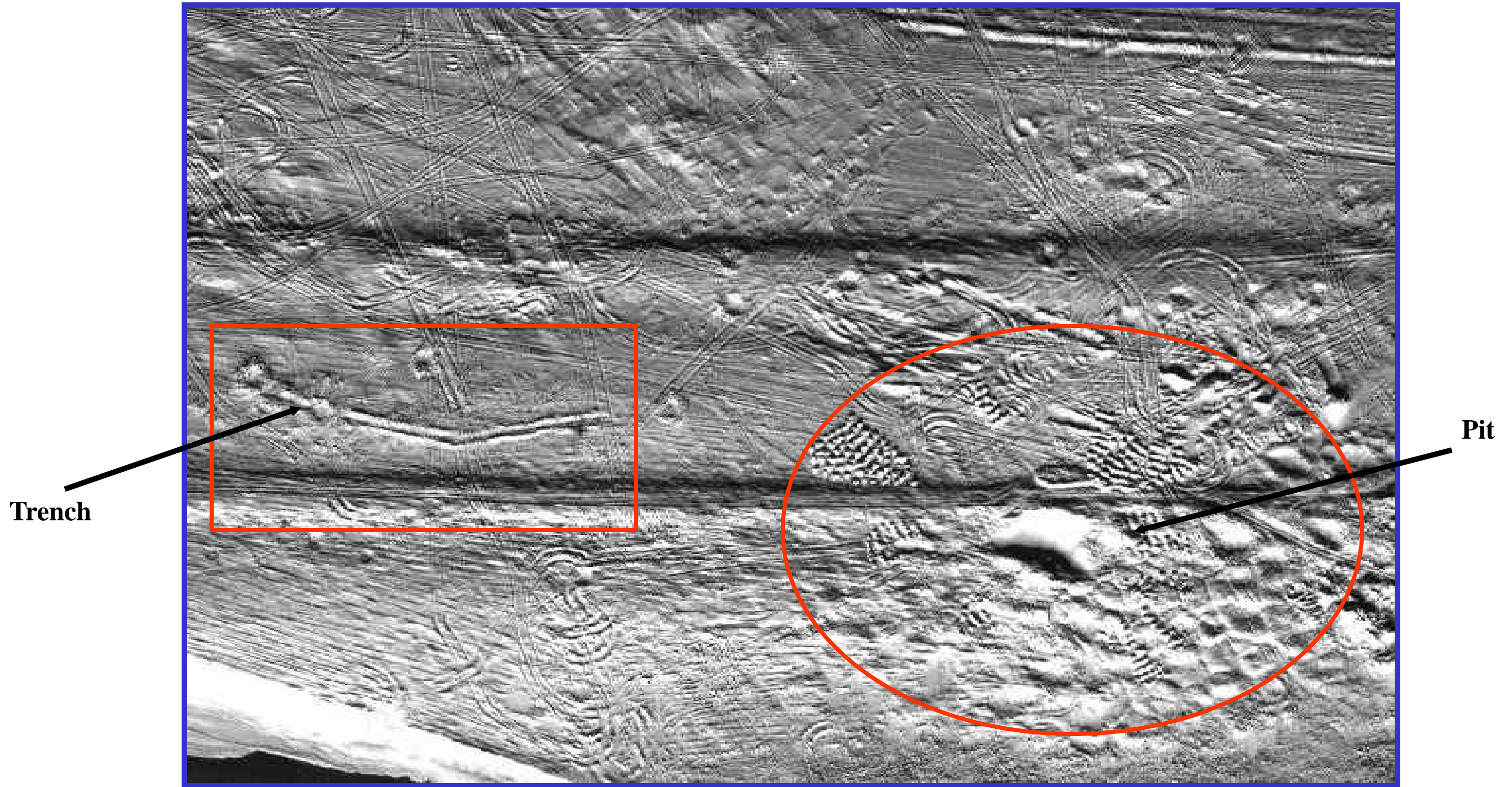
Possible Pit
Feature



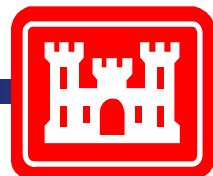
1955 Aerial
Oblique Photo



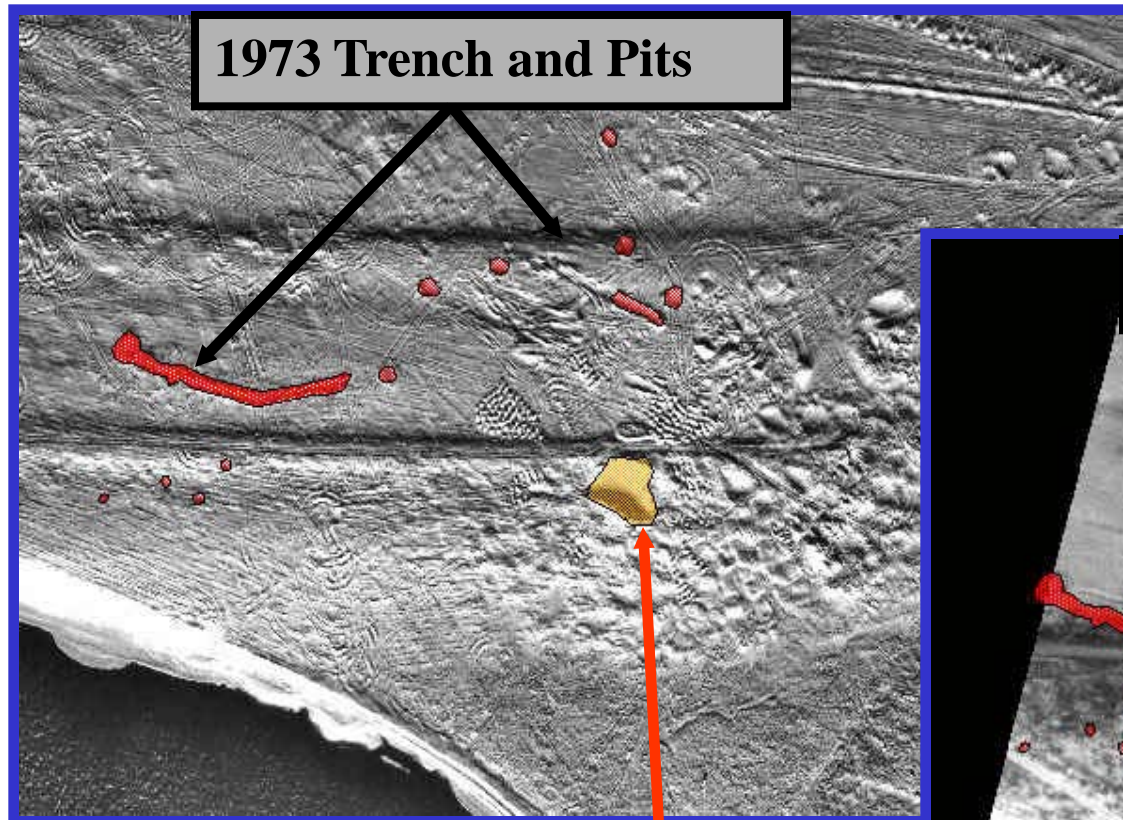
Gambell Sites, AK - STUDY AREA 1



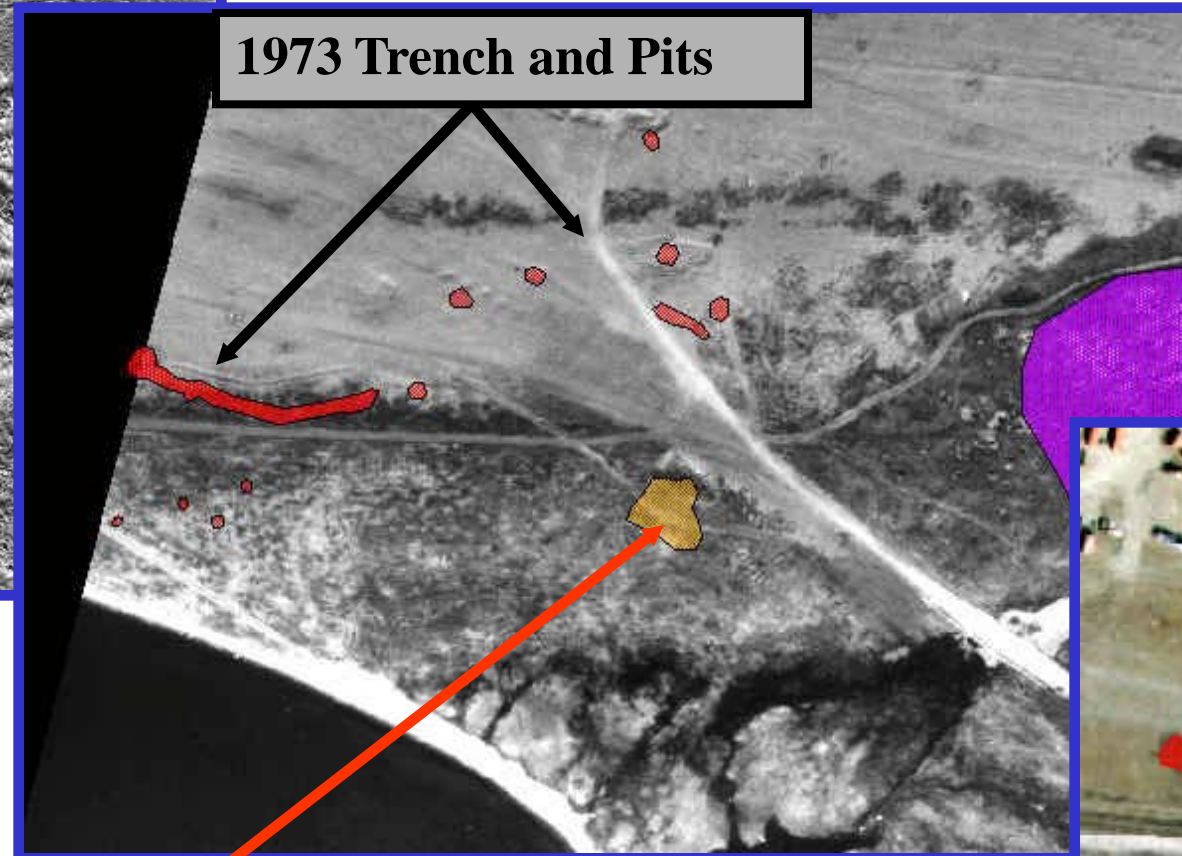
1973 Aerial Photo



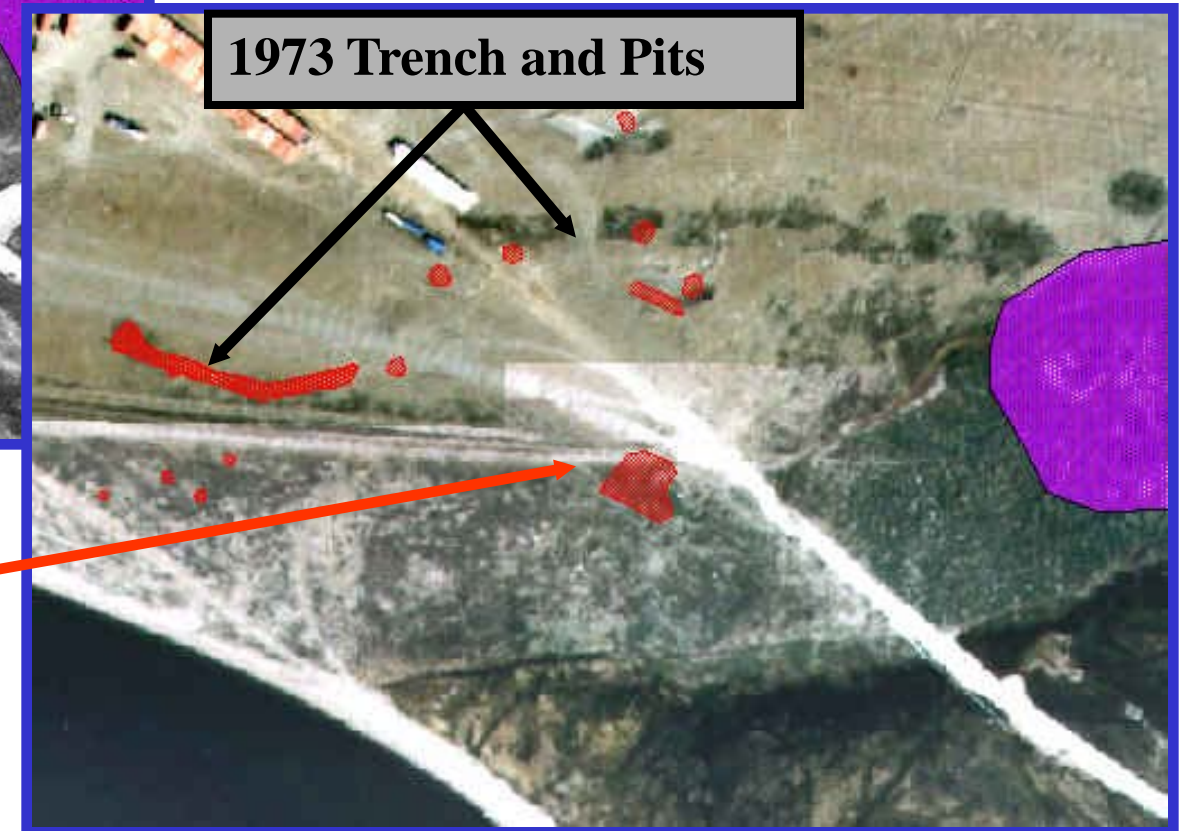
Gambell Sites, AK - STUDY AREA 1



1973 Aerial Photo

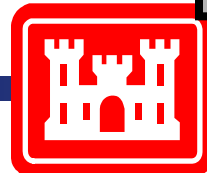


1980 Aerial Photo



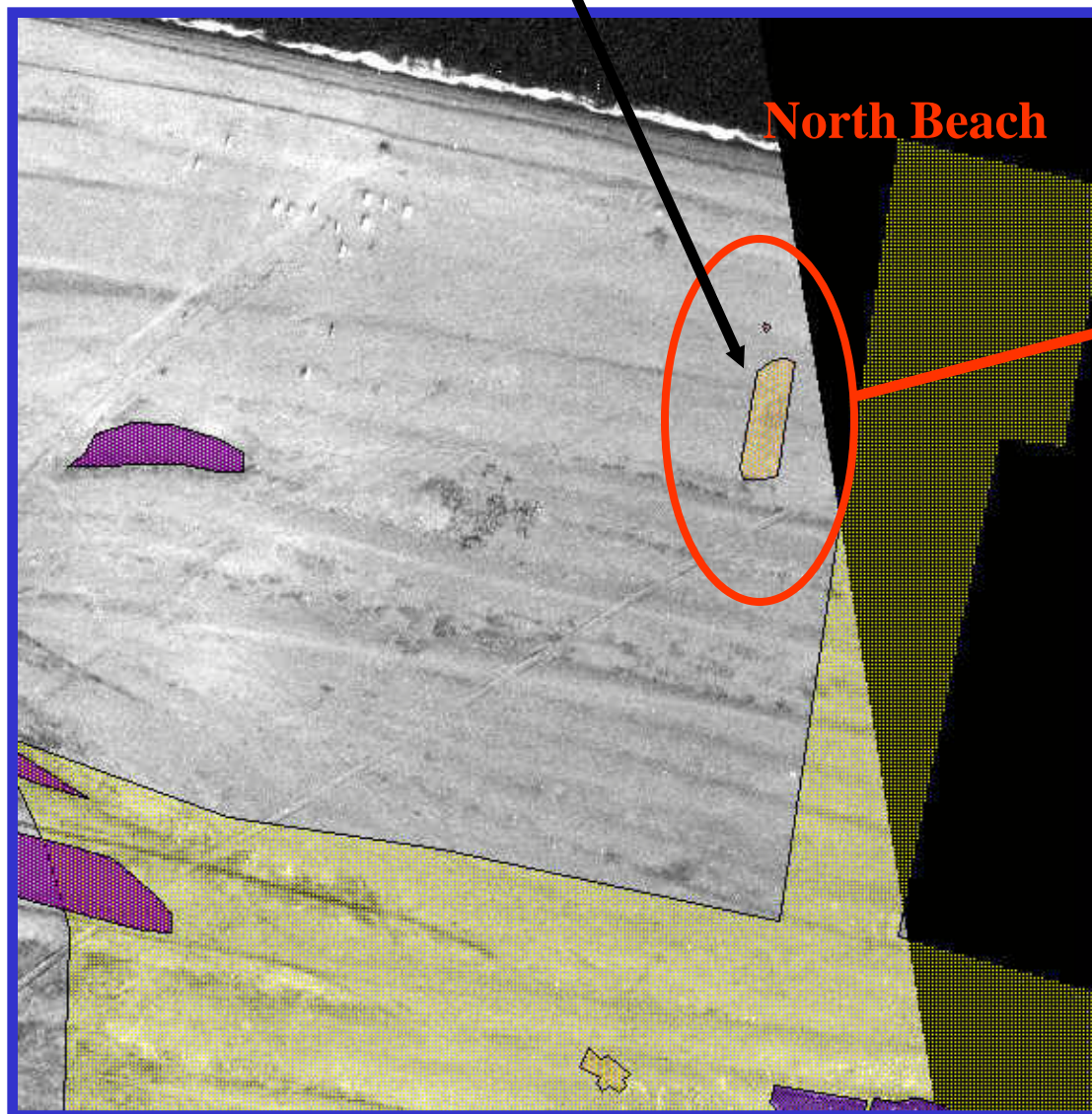
1994 Aerial Photo

Pit Feature Location

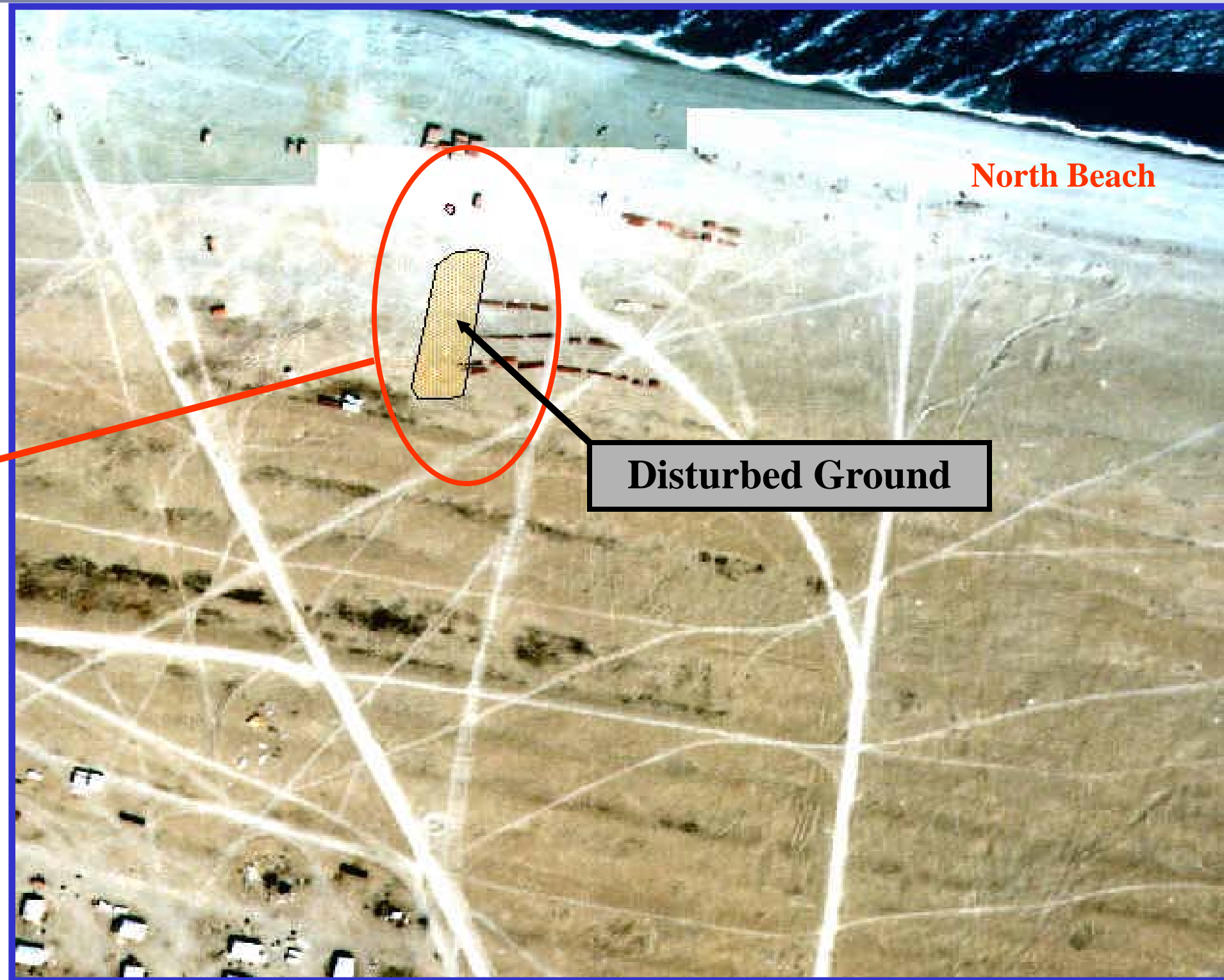


Gambell Sites, AK - STUDY AREA 1

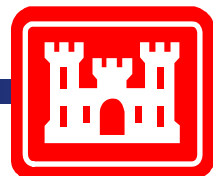
1955 Disturbed Ground



1955 Aerial Photo

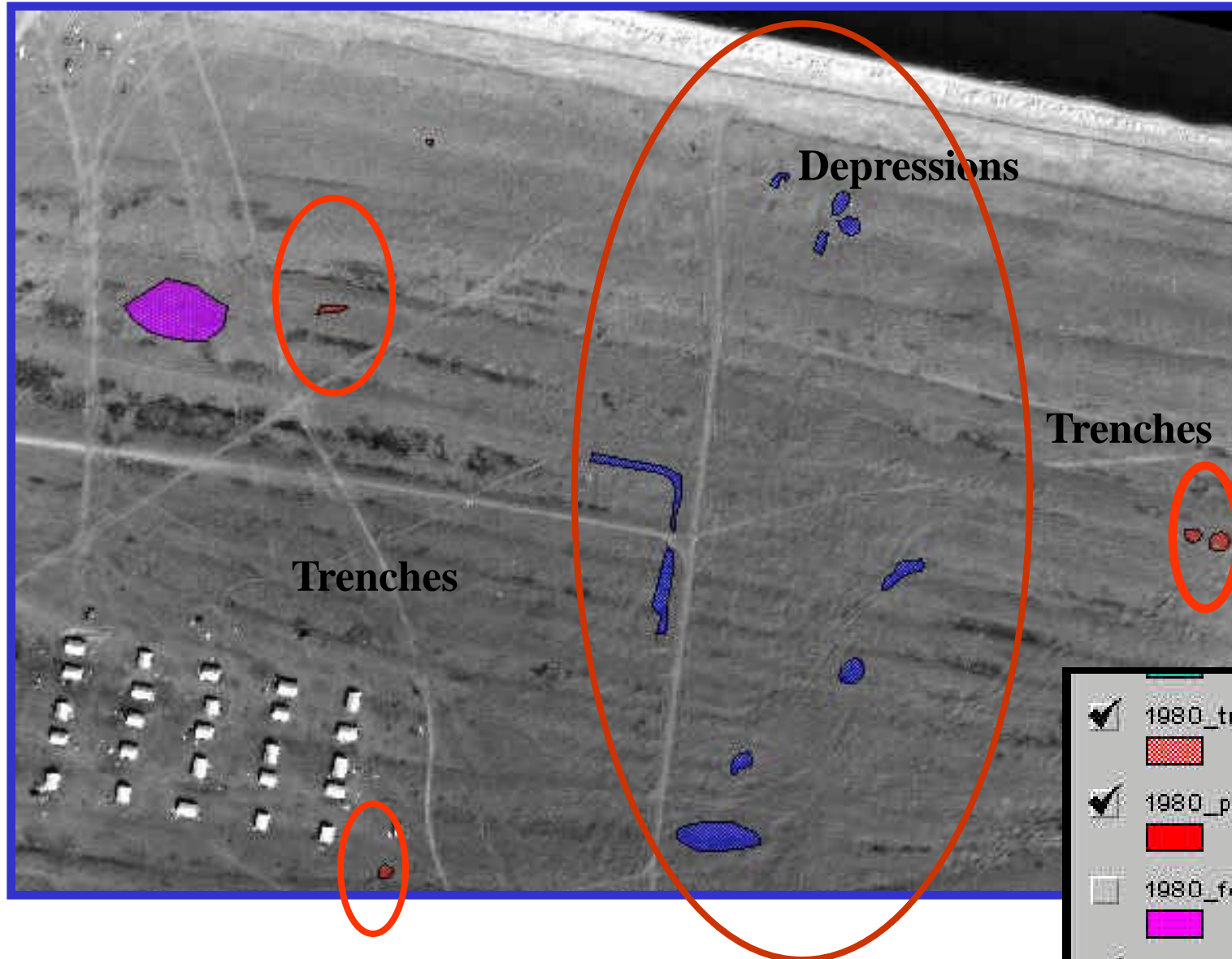


1955 Feature on 1994 Aerial Photo

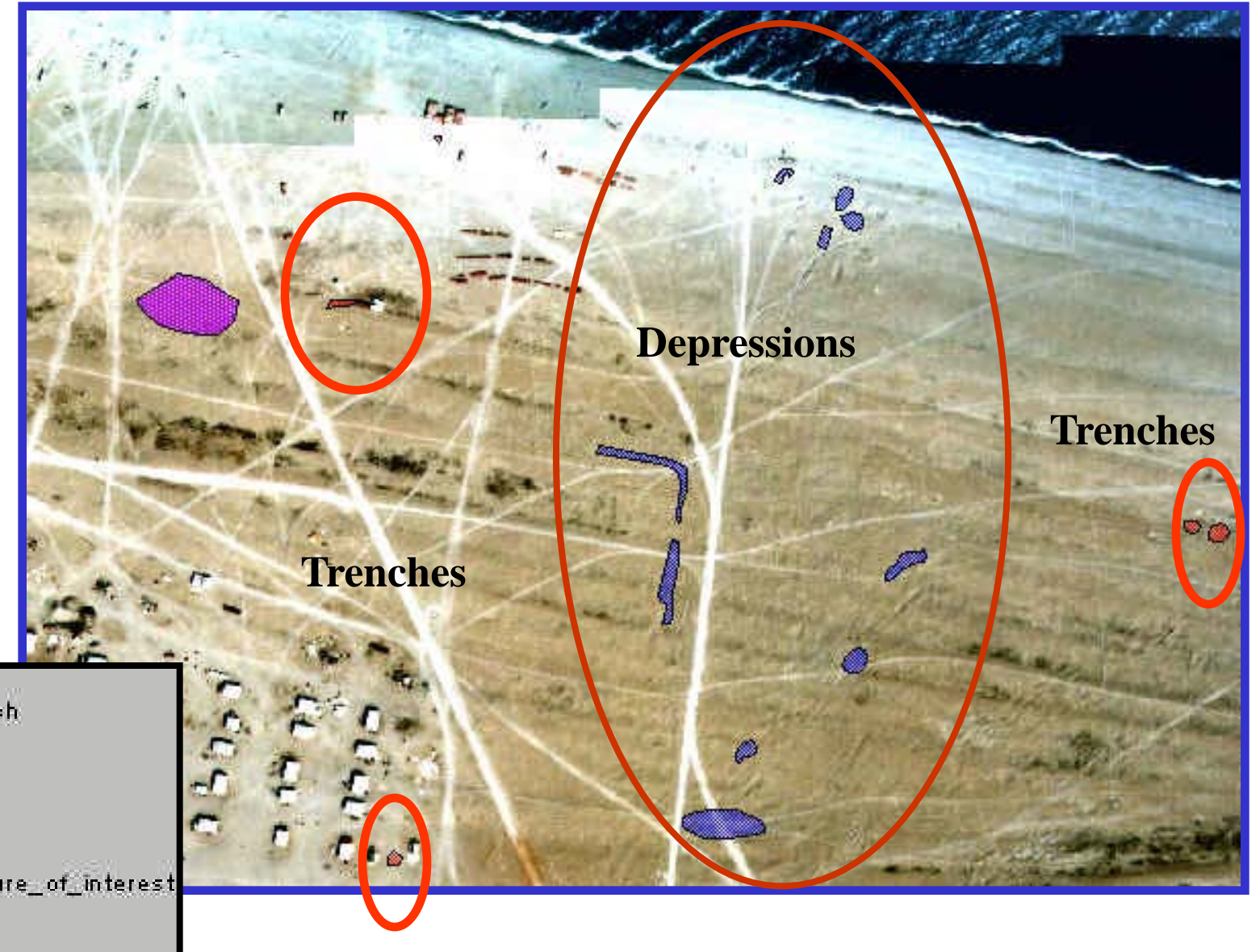


Gambell Sites, AK - STUDY AREA 1

1980 Identified Features

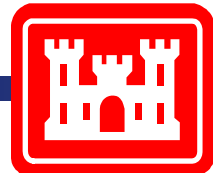


1980 Aerial Photo



1980 Features on 1994 Aerial Photo

- 1980_trench
- 1980_pits
- 1980_feature_of_interest
- 1980_disturbed_ground
- 1980_depressions

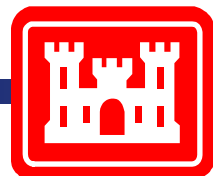


Gambell Sites, AK - RUNWAY AREA



Mounded Material and Leaking Drum Stack Found near Runway Evident in 1972 Aerial Photos

1994 Aerial Photo with Mounded Material Identified from 1972 Aerial Photo

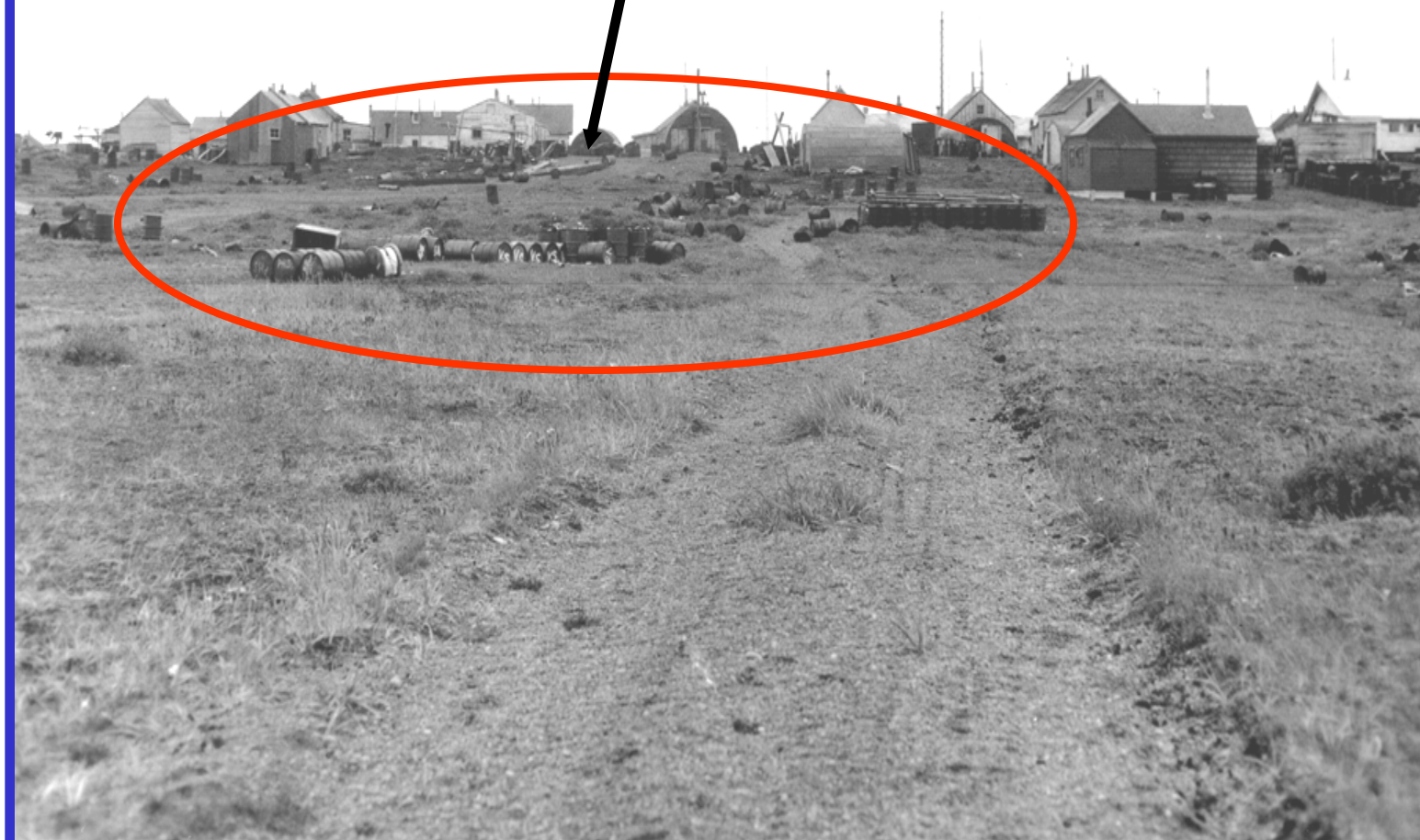


Gambell Sites, AK - July 1960 Ground Photos

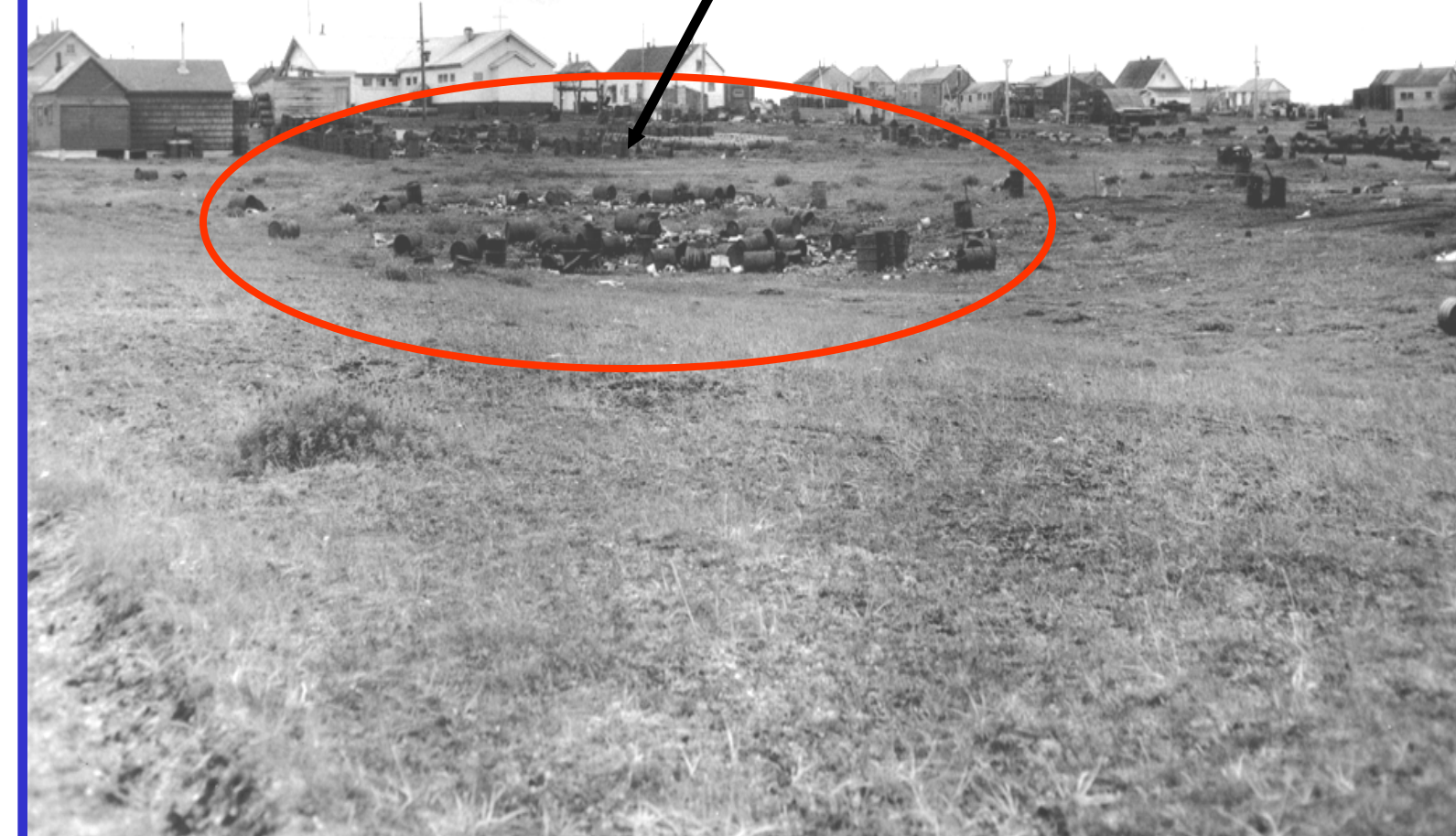
Note Drums near Village of Gambell



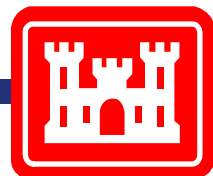
Note Drums near Village of Gambell



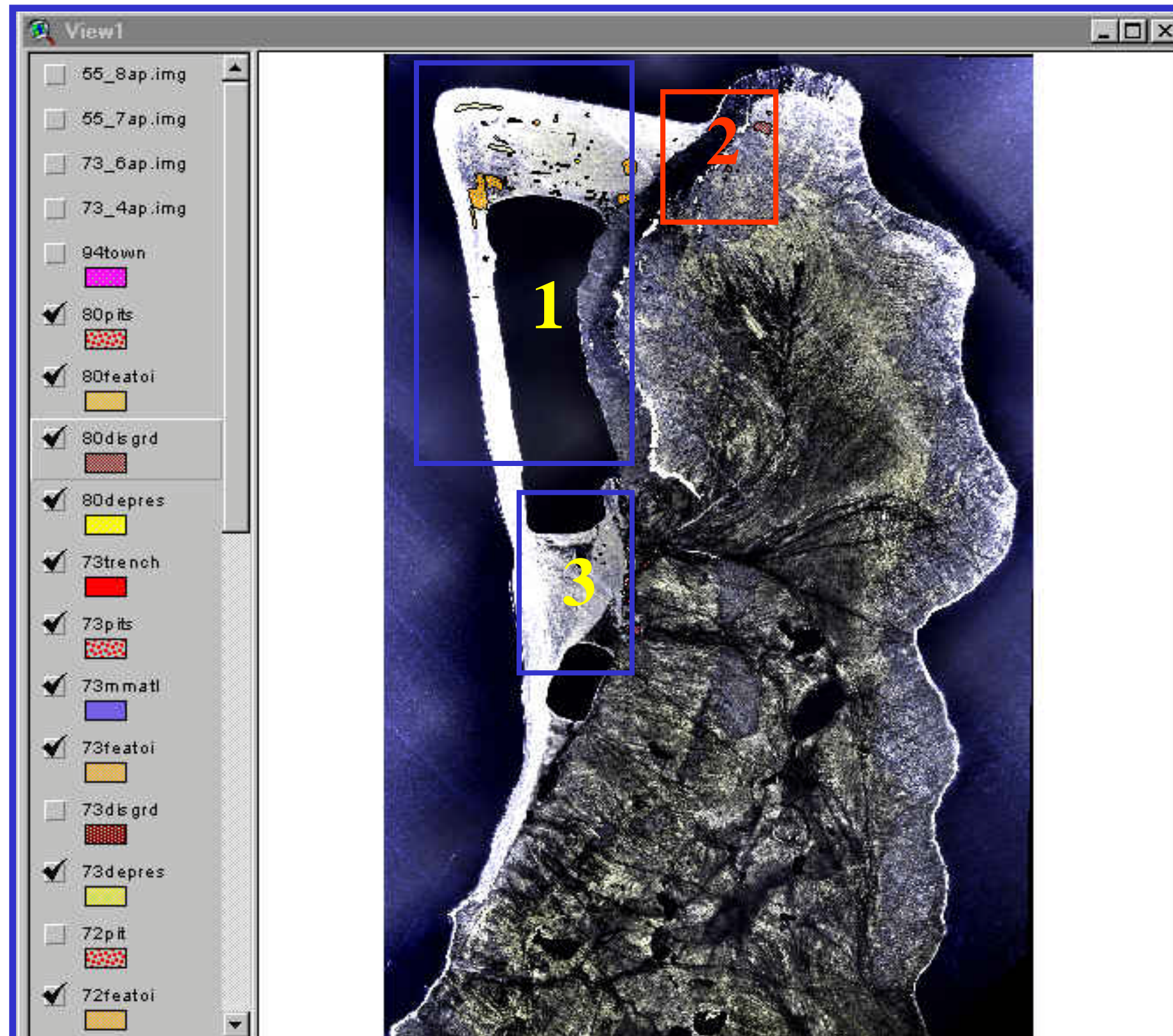
July 1960



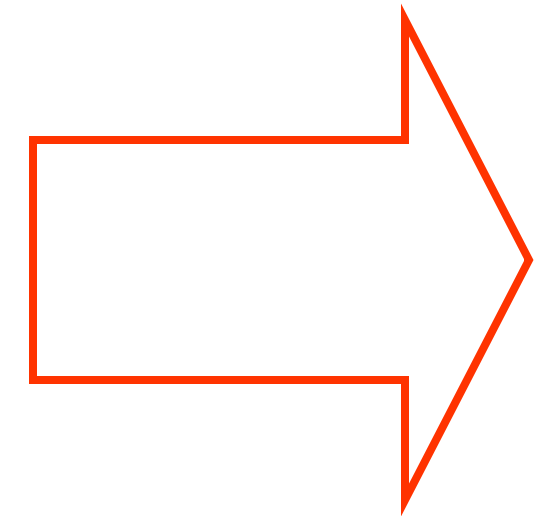
July 1960



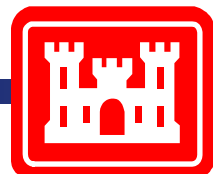
Gambell Sites, AK - STUDY AREA 2



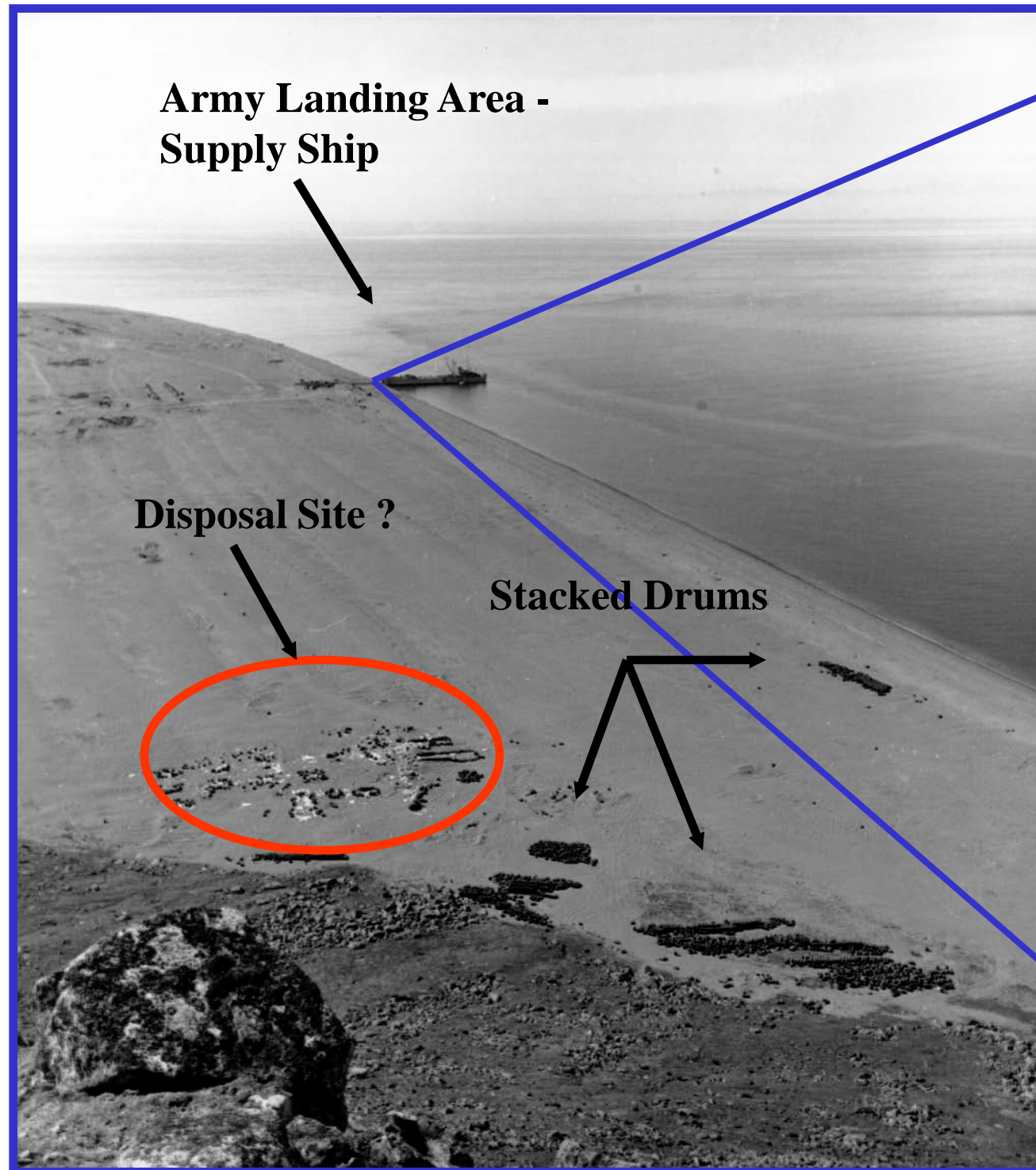
2



STUDY AREA 2



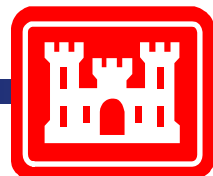
Gambell Sites, AK 1953 - Ground Photos



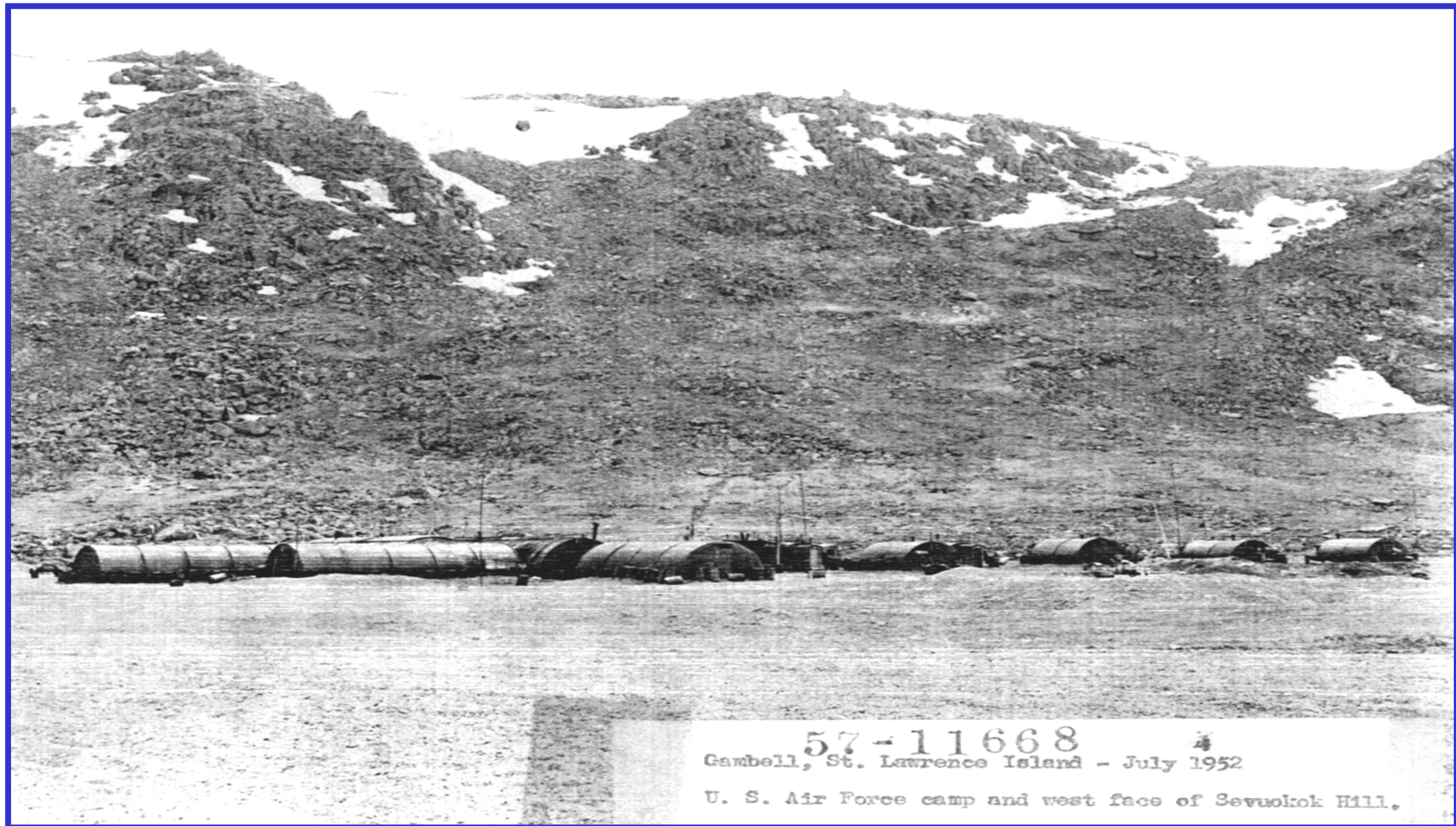
1953 North Beach



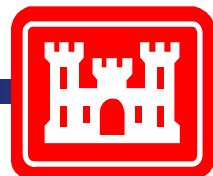
Handling of Drums 1953 - North Beach



Gambell Sites, AK - STUDY AREA 2

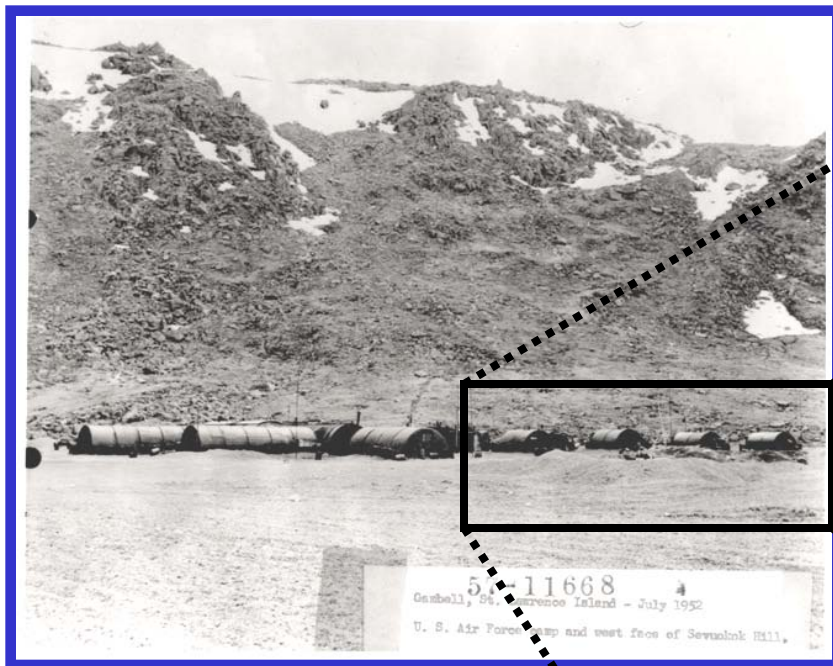


U.S. Air Force Installation "Camp" - July 1952



Gambell Sites, AK - STUDY AREA 2

Air Force Installation at Base of Sevuokuk Mountain



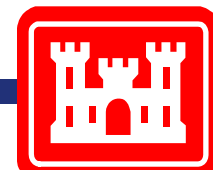
51-11668
Gambell, St. Lawrence Island - July 1952
U. S. Air Force camp and west face of Sevuokuk Hill.

July 1952
Looking East



Berm Surrounding Equipment

July 1952

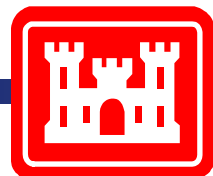
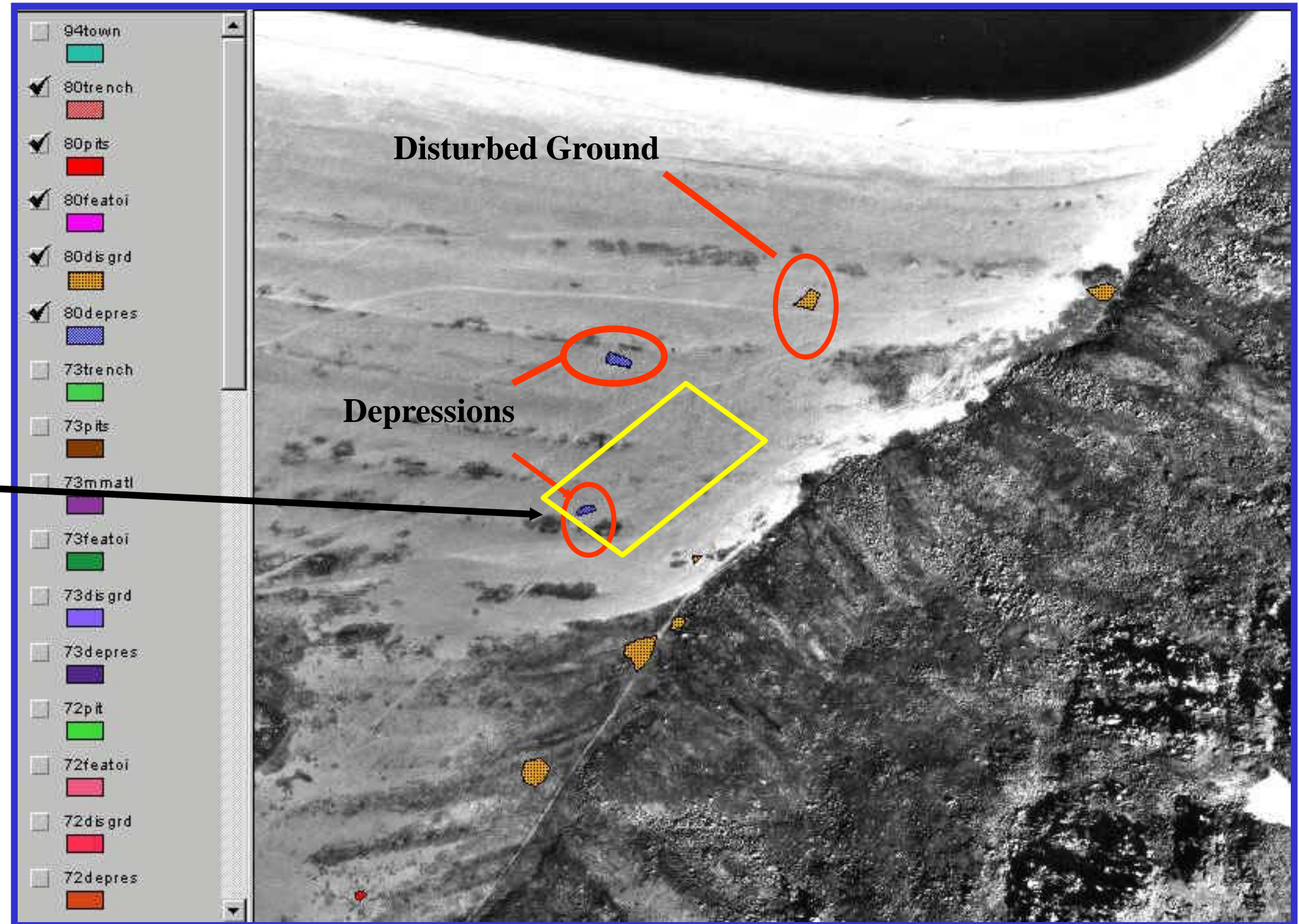


Gambell Sites, AK - STUDY AREA 2

**Air Force
Installation
Area**

**Note: Yellow Rectangle
indicates approximate
location of Air Force
Installation
(Military Housing/Operations)**

1980 Aerial Photo

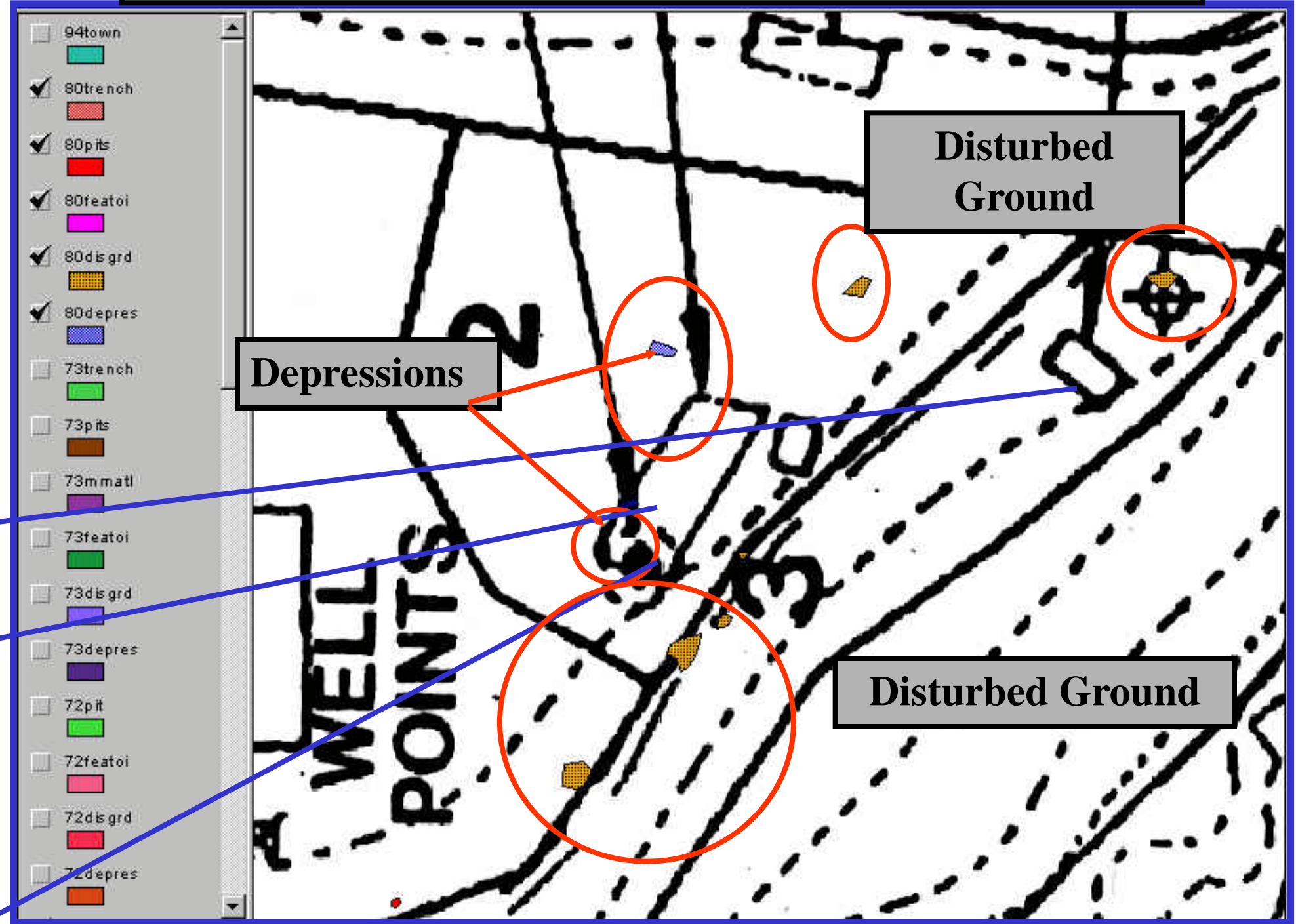


Gambell Sites, AK - STUDY AREA 2

July 1952



Depressions and Disturbed ground from 1980 Aerial Photos



Depressions

Disturbed Ground

Disturbed Ground

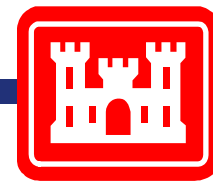
Former Communications Facility *Burial Area*

Former Military (AF) Housing/Operations *Burial Area*

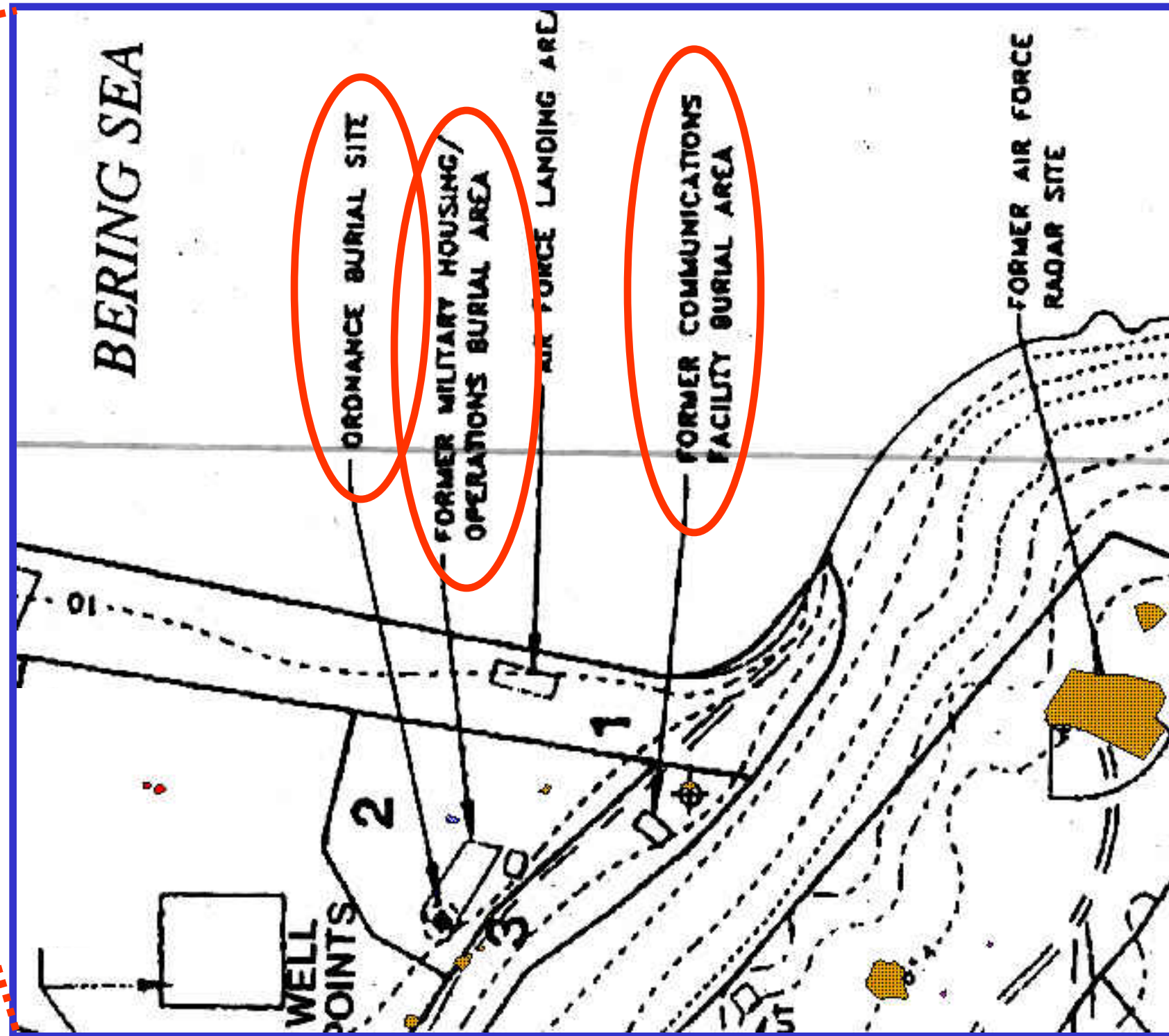
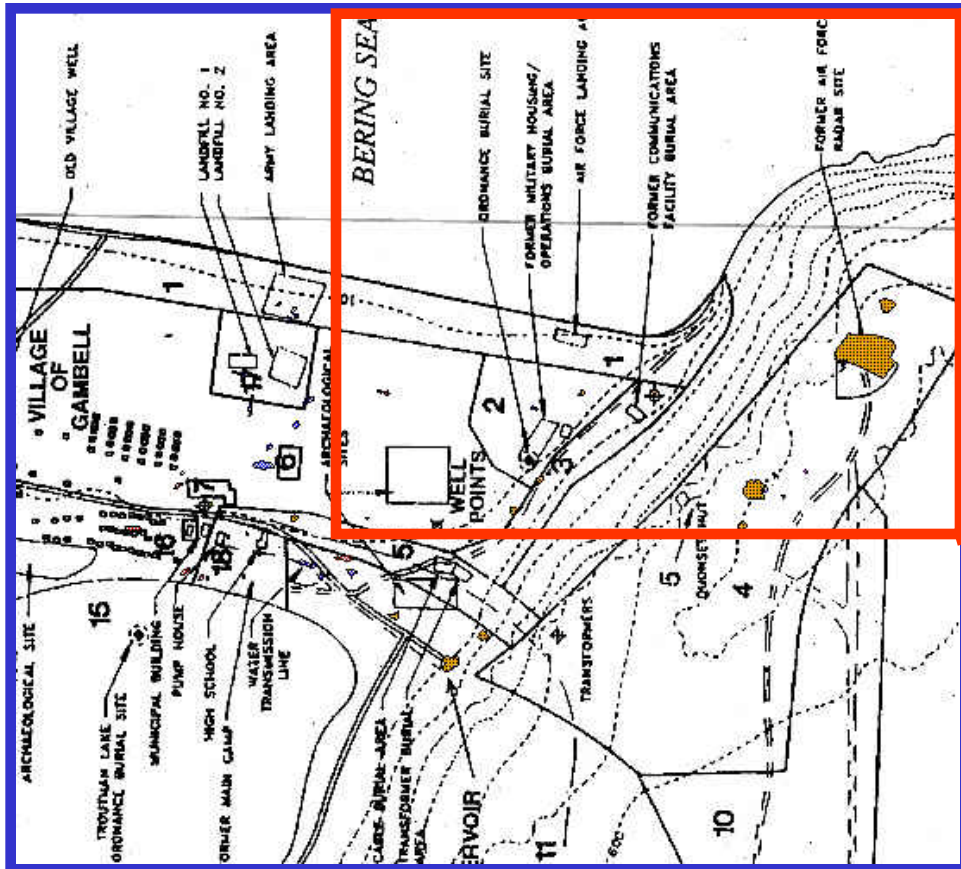
Identified as Burial Areas on Fig. 2-2 of Site Investigation Report

Ordnance Burial Site

Figure 2-2 of SI Report

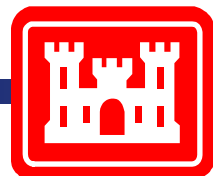


Gambell Sites, AK - STUDY AREA 2

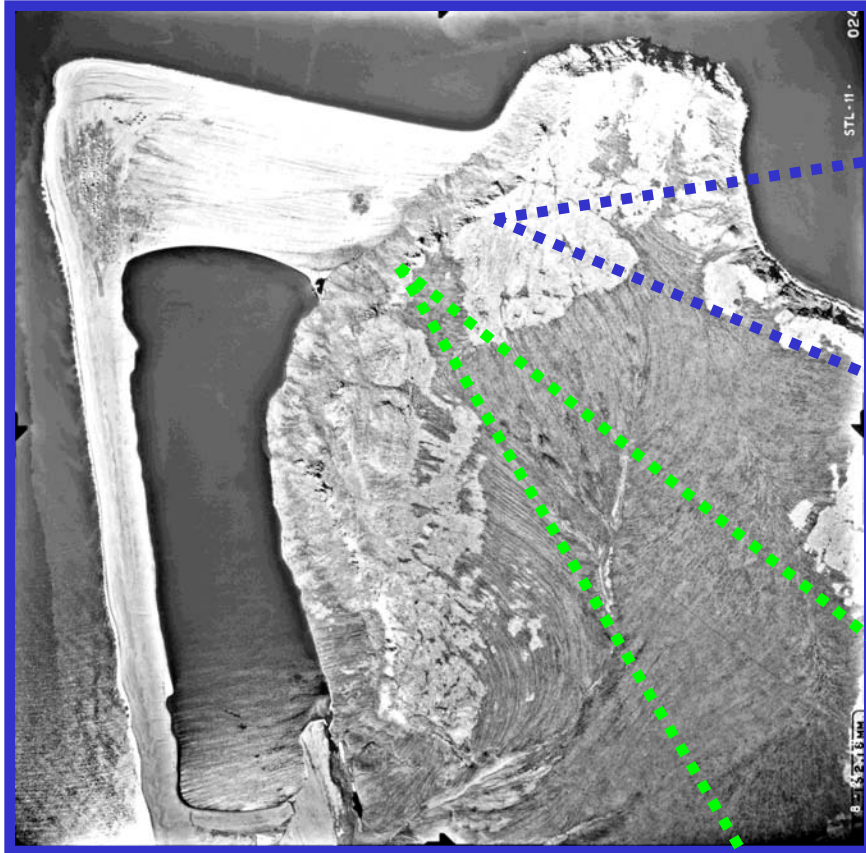


**Disturbed Ground
Identified from
1980 Aerial
Photography**

Details from Figure 2-2 of Site Investigation Report



Gambell Sites, AK - STUDY AREA 2



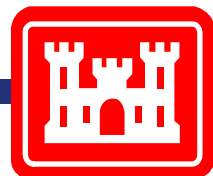
1948 Aerial Photo

Top of
Sevoukuk
Mountain

Quonset Hut
Detail
July 1960

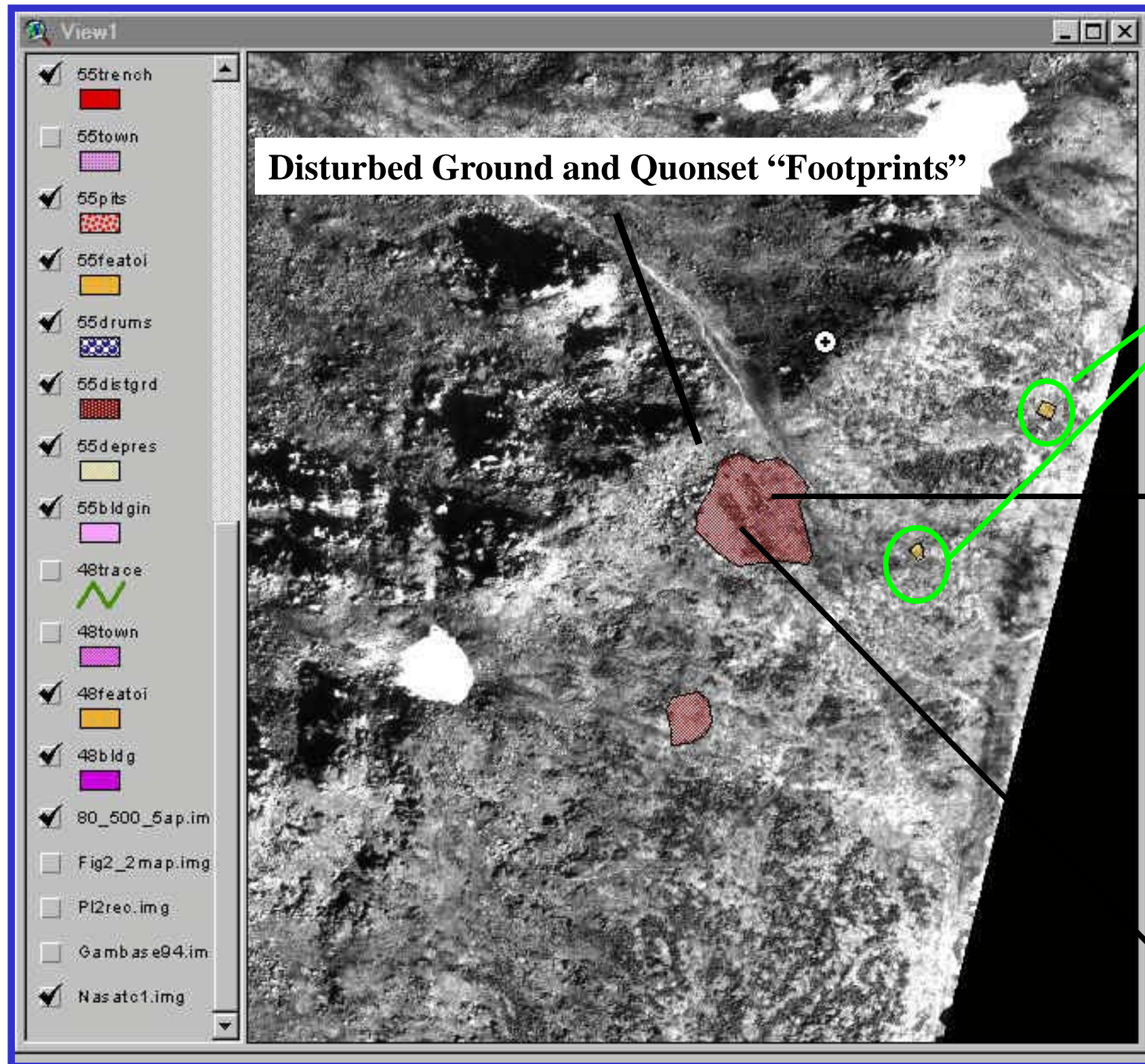


Tramway Detail
December 5, 1953

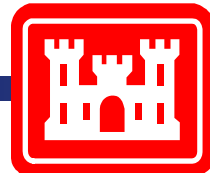


Gambell Sites, AK - STUDY AREA 2

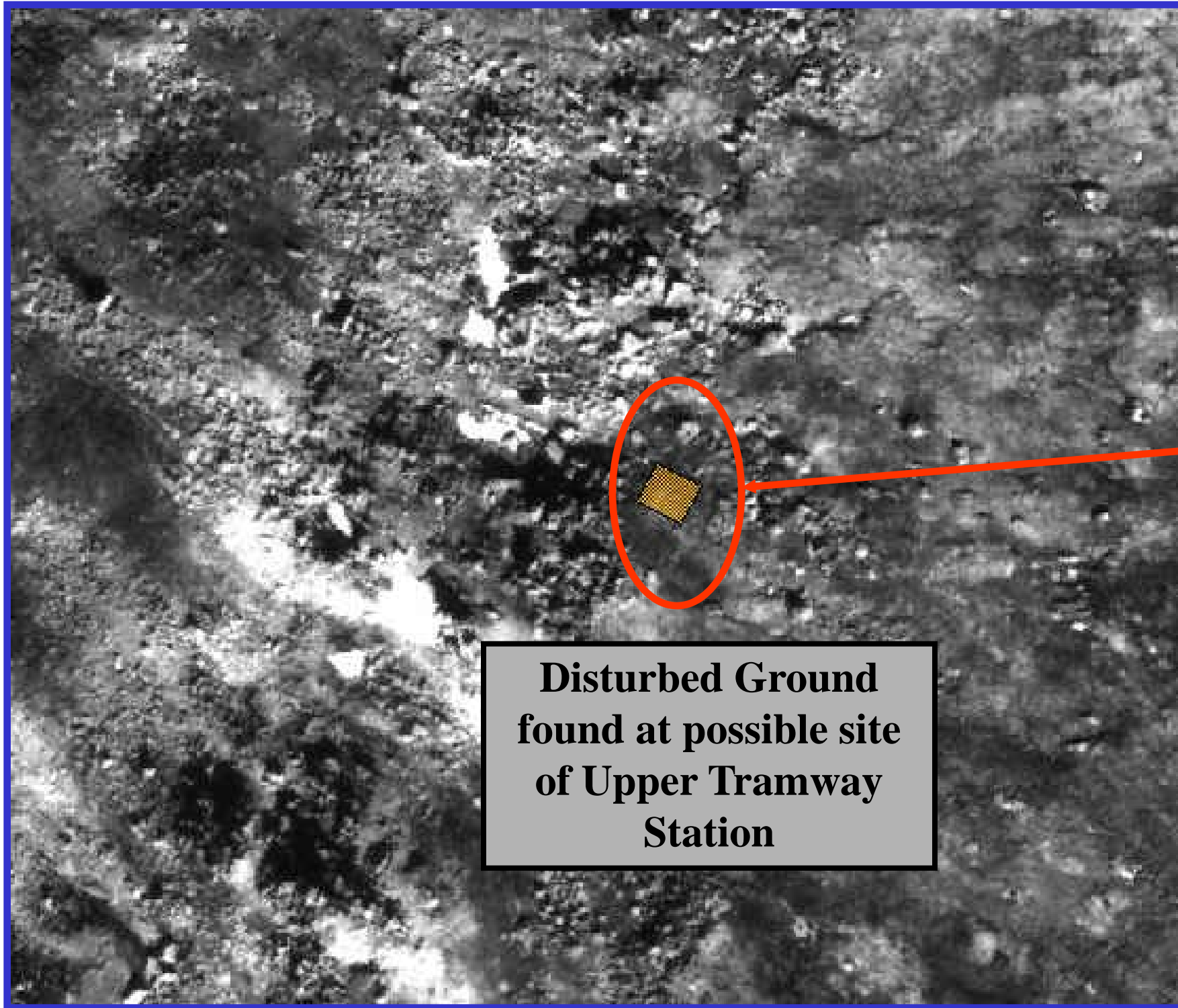
1980
Aerial
Photo



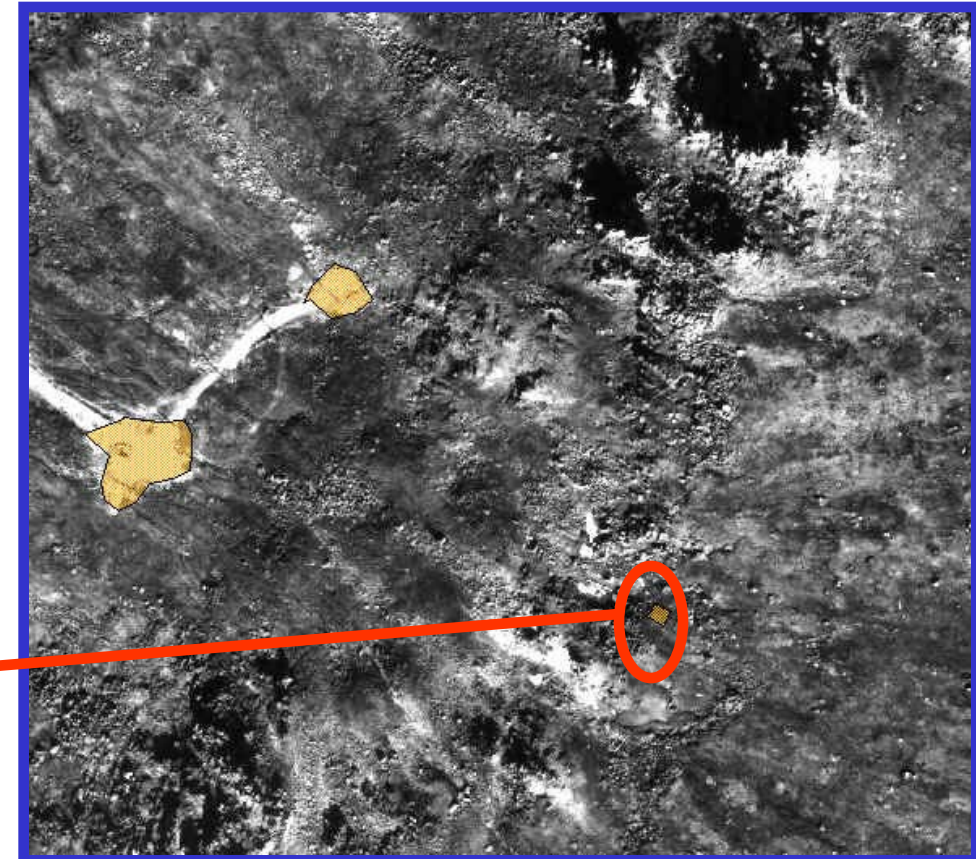
Building Footprint
Remnants Found on
1980 Aerial
Photography



Gambell Sites, AK - STUDY AREA 2



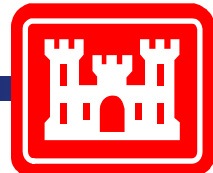
1980 Aerial Photo



1980
Aerial
Photo

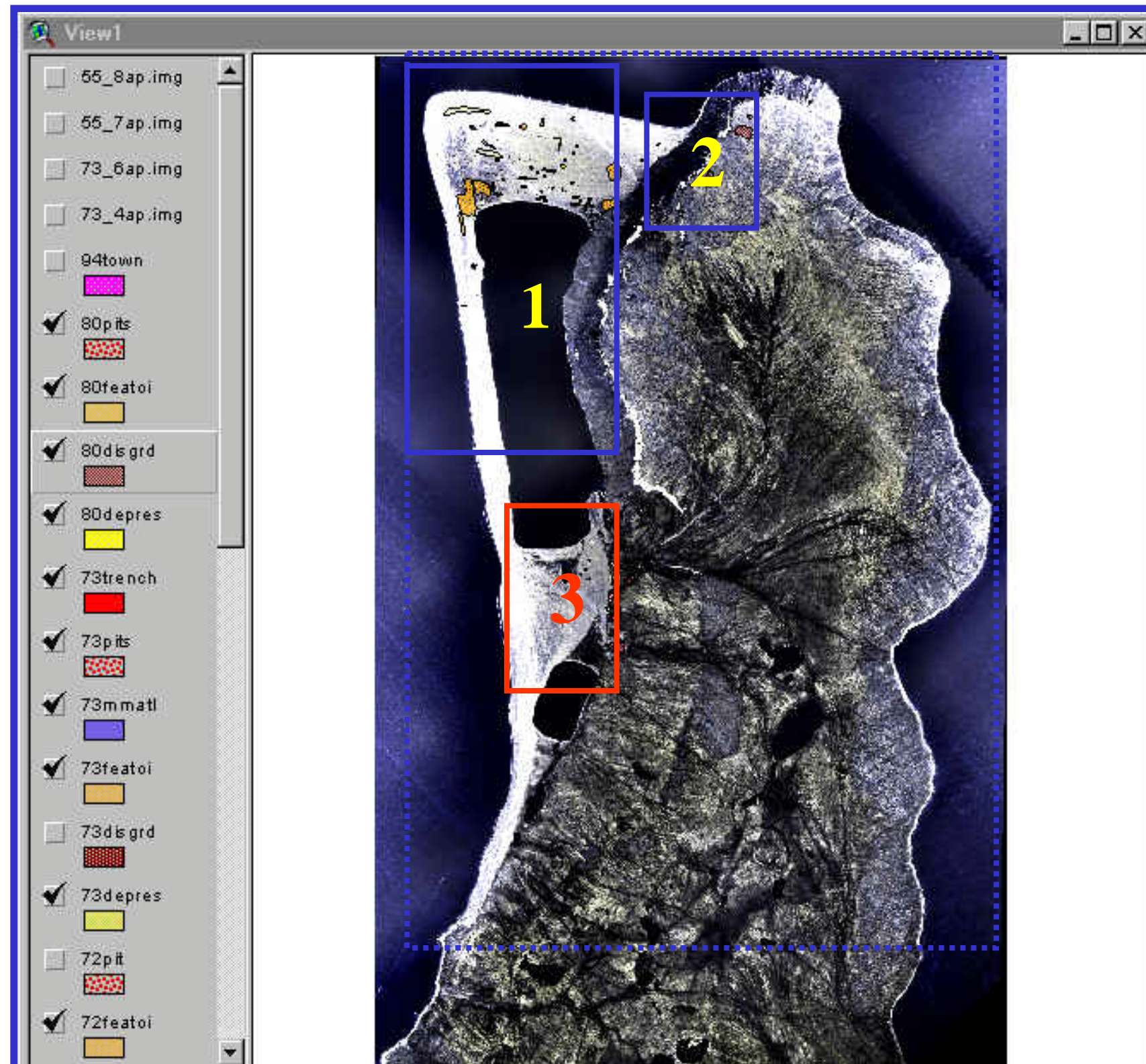


December 5
1953

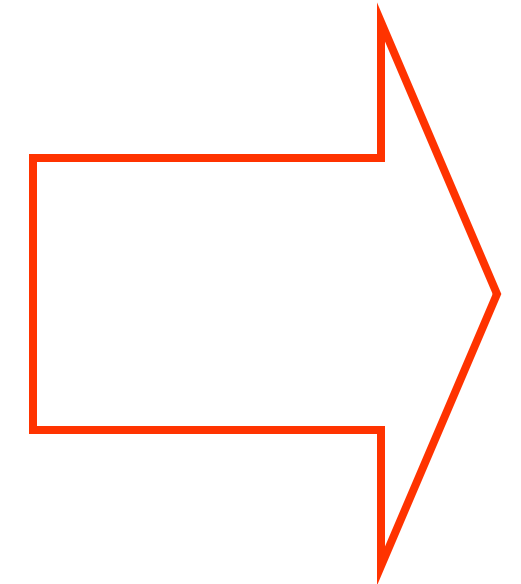


Gambell Sites, AK - STUDY AREA 3

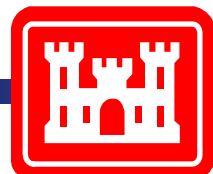
South of
Troutman Lake



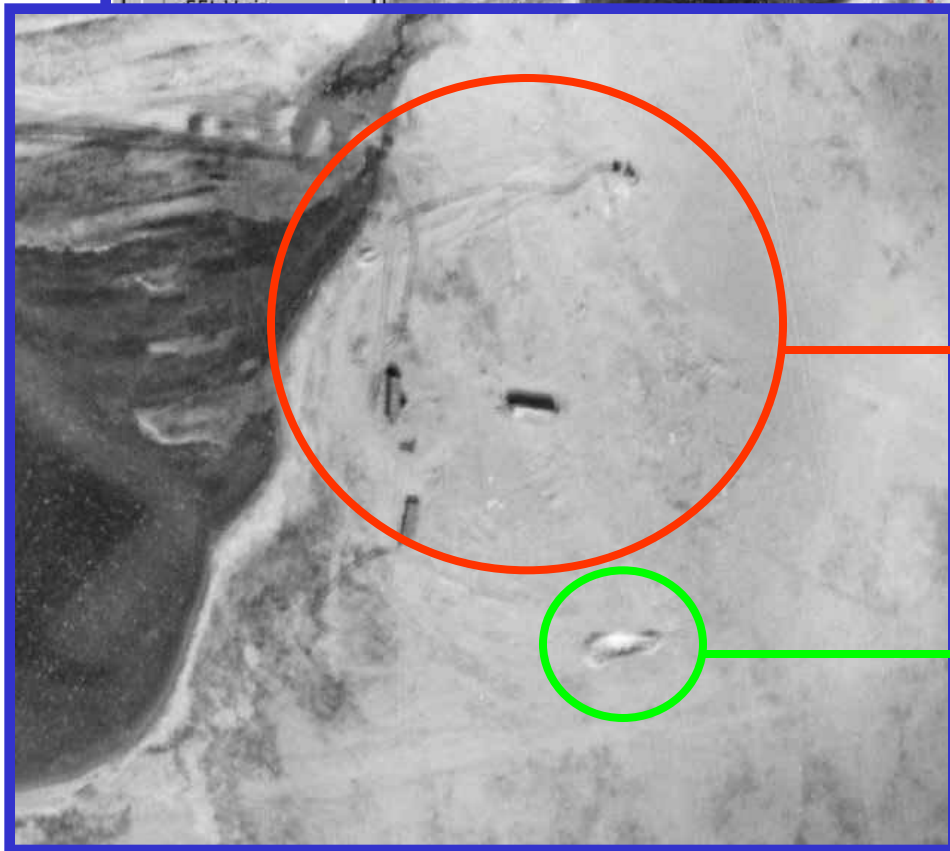
3



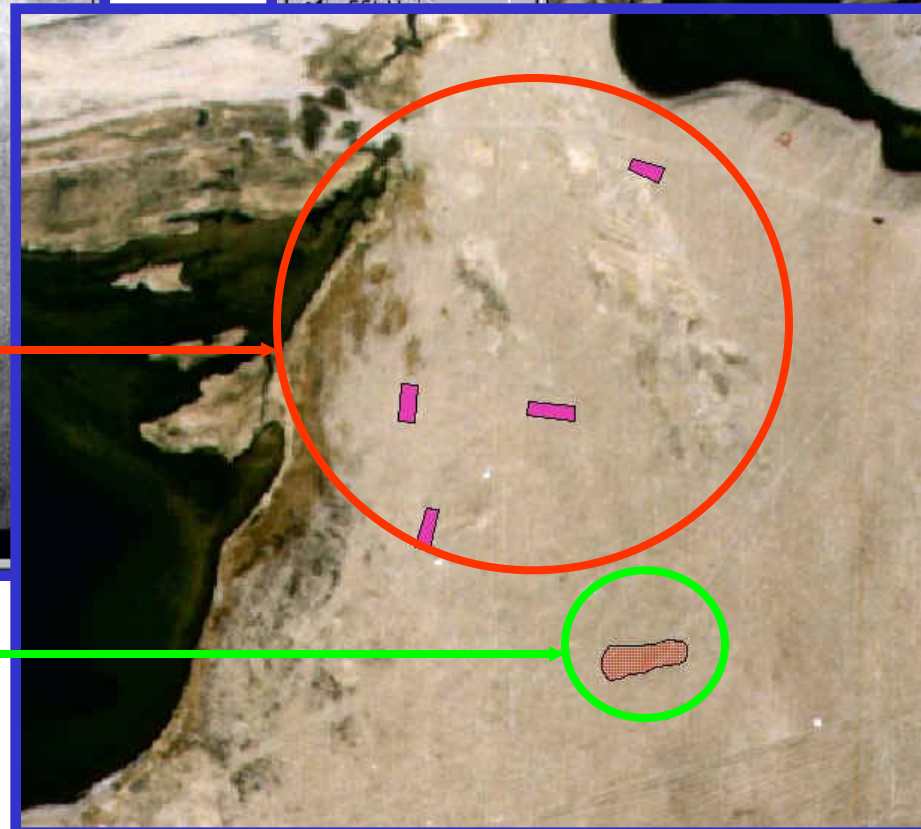
STUDY AREA 3



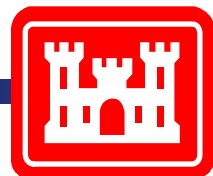
Gambell Sites, AK - STUDY AREA 3



Buildings
and Pit



*Identified as Former Radar
Power Station area in Table 2-1
of SI Report*

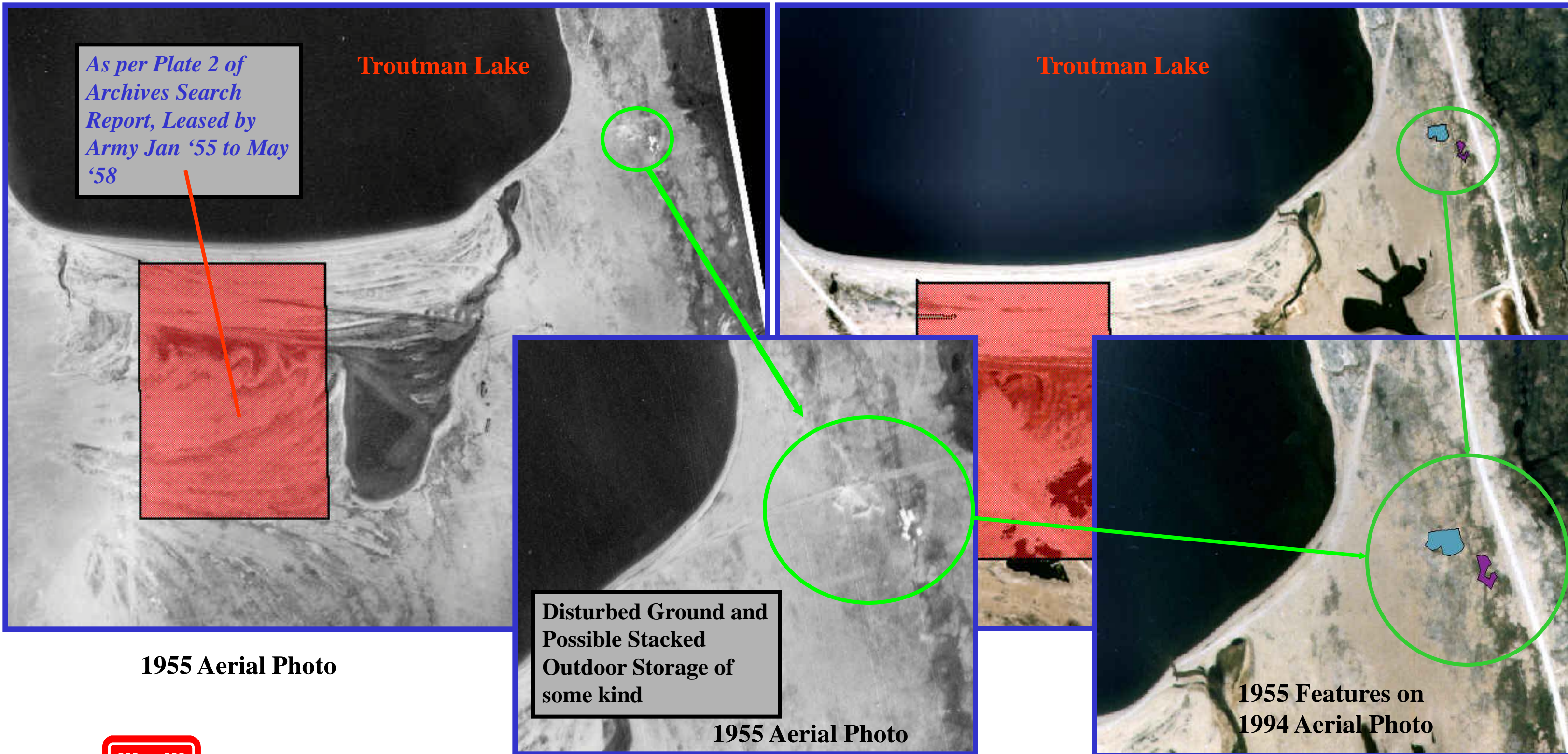


1955 Aerial Photo

1955 Features on 1994 Aerial Photo



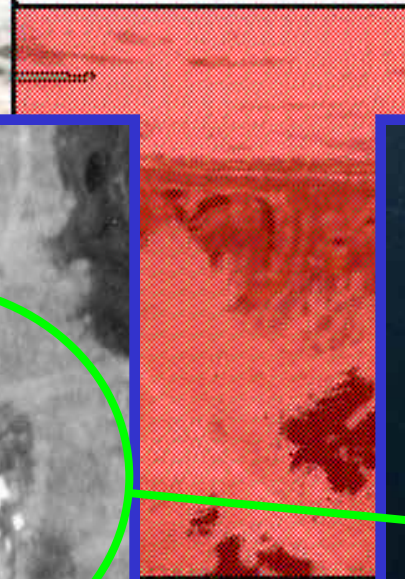
Gambell Sites, AK - STUDY AREA 3



As per Plate 2 of Archives Search Report, Leased by Army Jan '55 to May '58

Troutman Lake

Troutman Lake

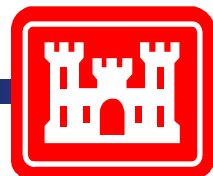


Disturbed Ground and Possible Stacked Outdoor Storage of some kind

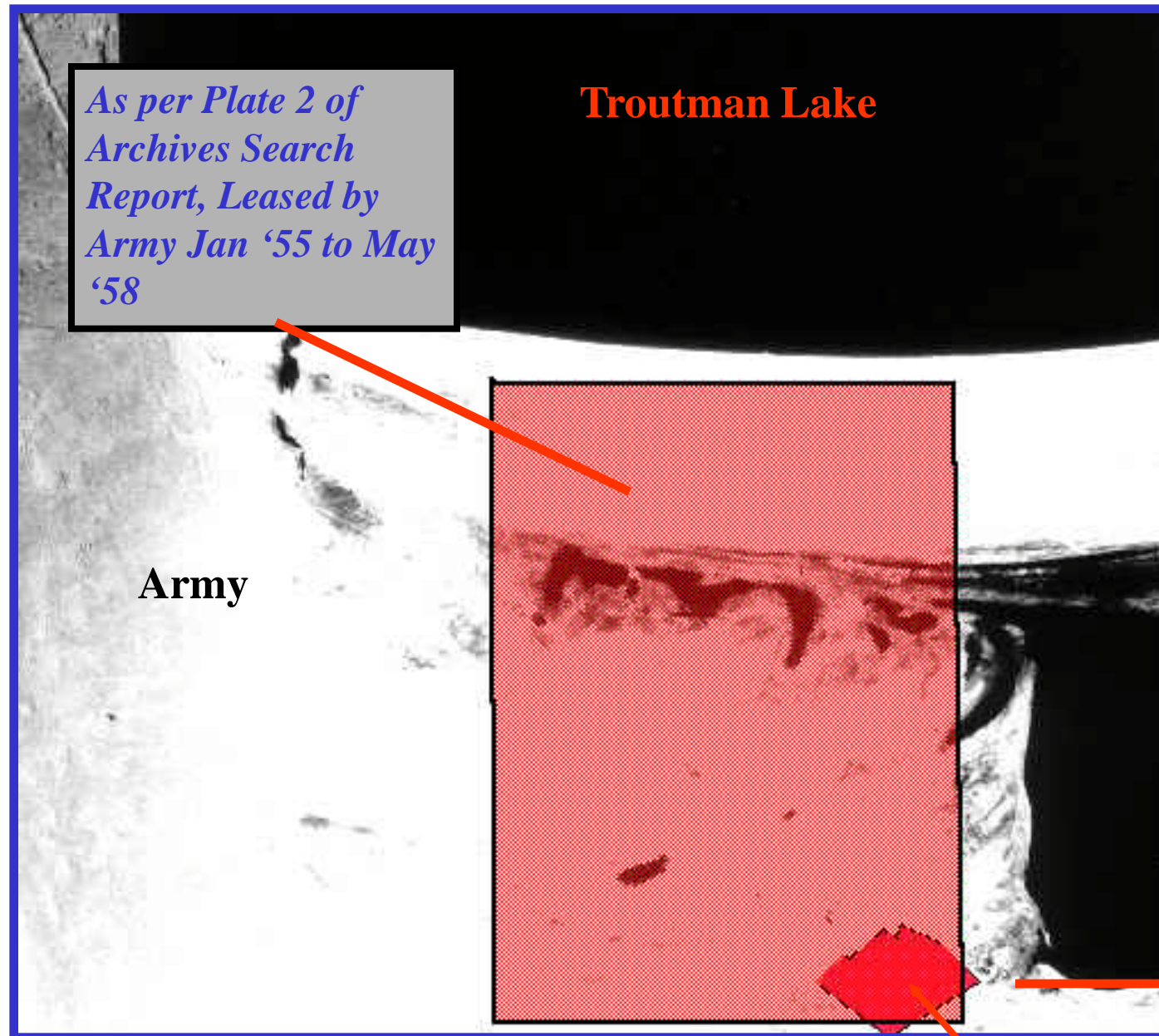
1955 Aerial Photo

1955 Aerial Photo

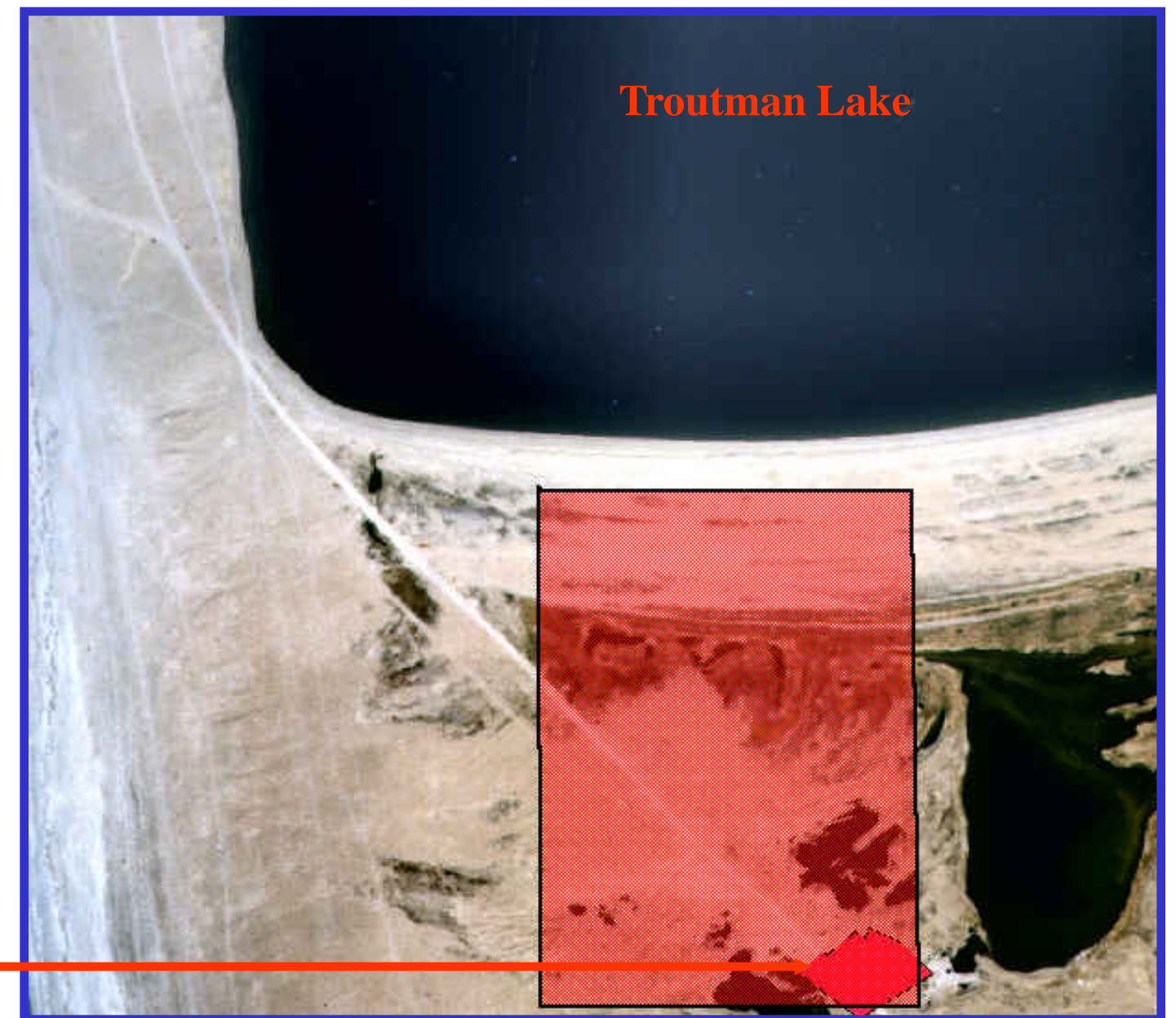
1955 Features on 1994 Aerial Photo



Gambell Sites, AK - STUDY AREA 3

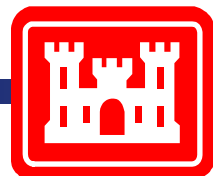


1972 Aerial Photo

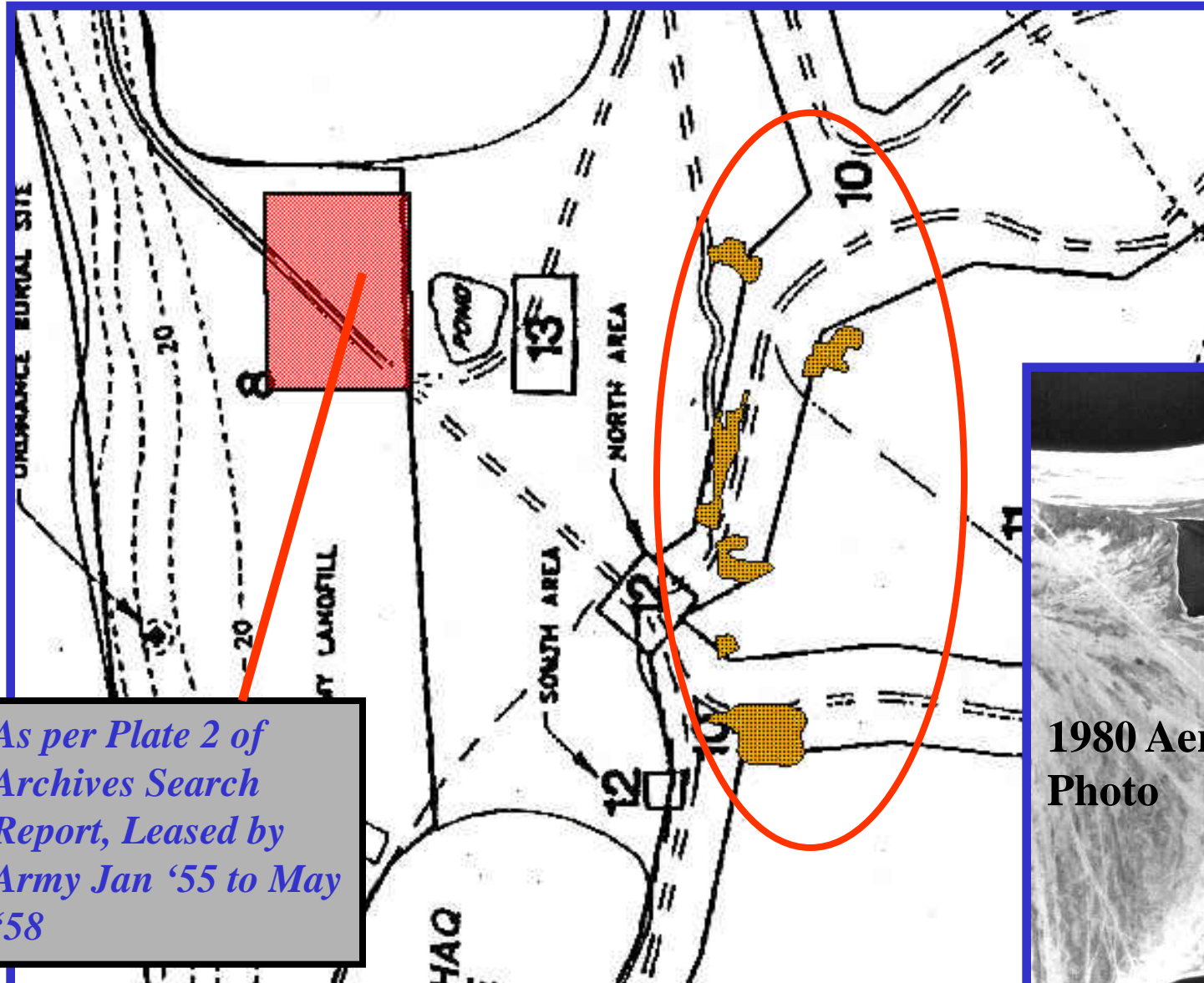


1972 Ground Disturbance on 1994 Aerial Photo

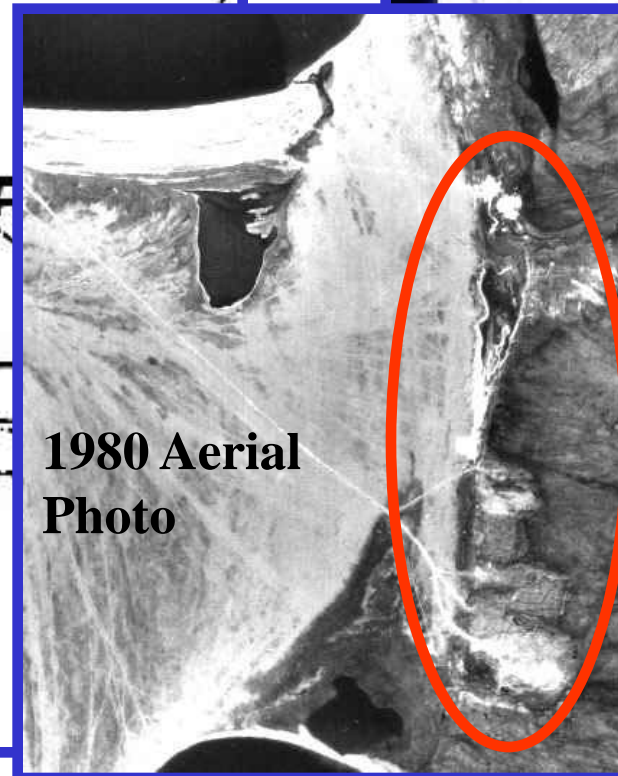
Ground Disturbance Not Identified until 1972 Timeframe with Aerial Photos



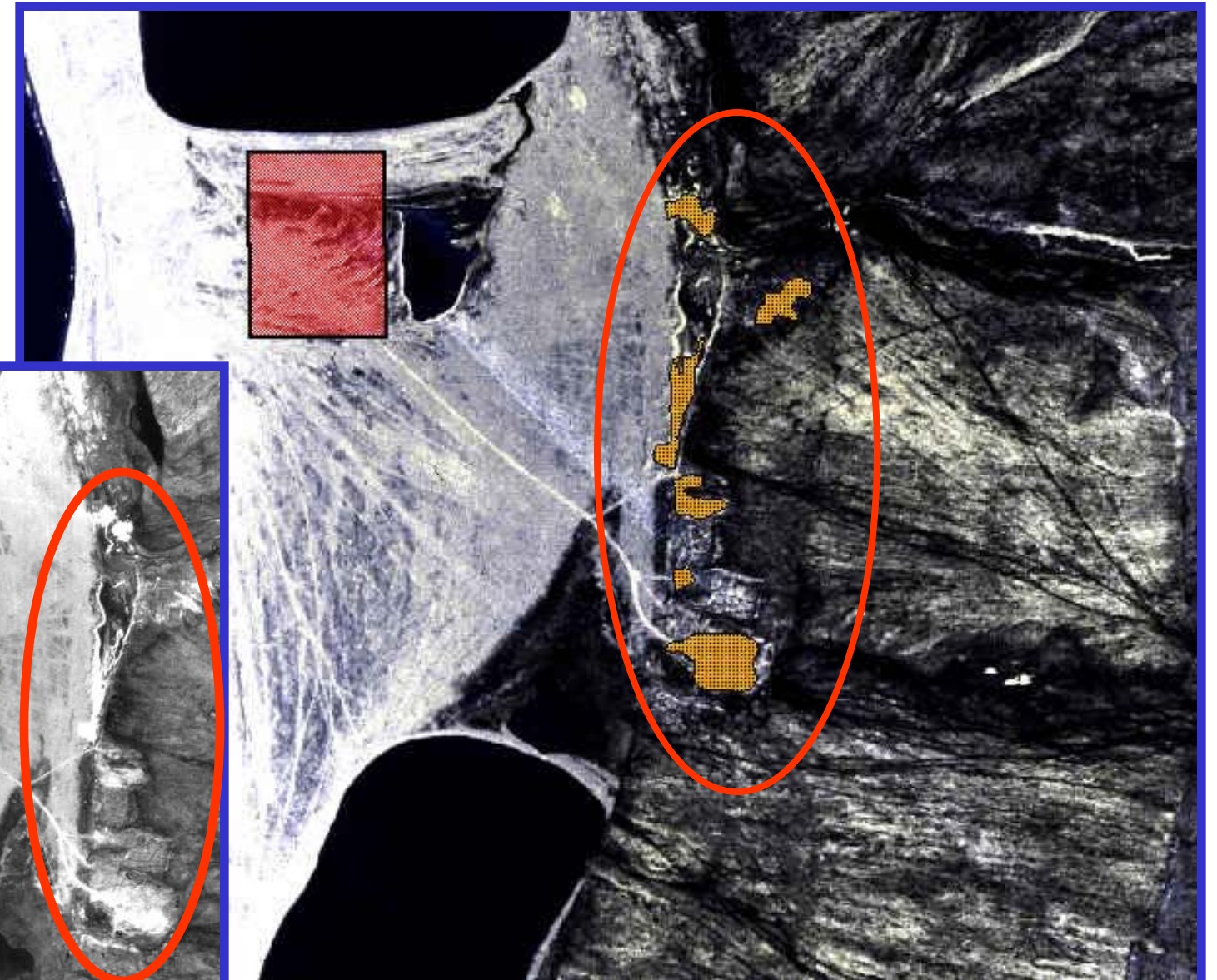
Gambell Sites, AK - STUDY AREA 3



As per Plate 2 of Archives Search Report, Leased by Army Jan '55 to May '58

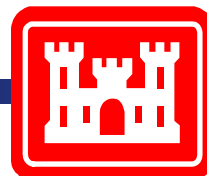


1980 Aerial Photo



1980 Disturbed Ground on 1984 Air Photo Base Map

1980 Disturbed Ground features overlaid upon SI Report Figure 2-2
Note: # 12 = Lake Disposal Site (SI Report)



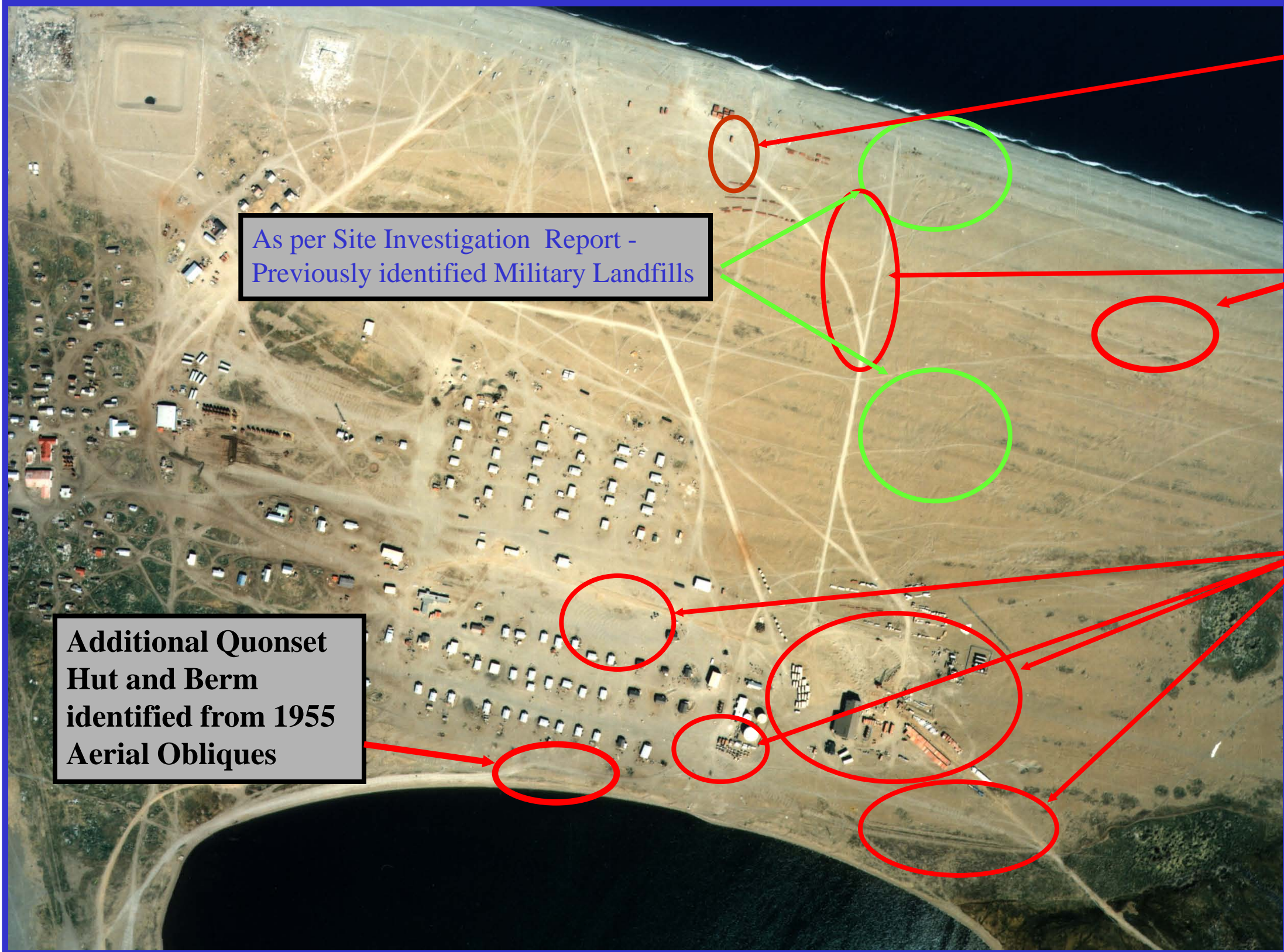
Gambell Sites, AK

Gambell Sites, Alaska Summary of Findings



Gambell Sites, AK - Study Area 1

1994 Aerial
Photography



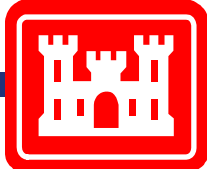
As per Site Investigation Report -
Previously identified Military Landfills

Additional Quonset
Hut and Berm
identified from 1955
Aerial Obliques

Possible Disturbed
Ground Identified
on 1955 Aerial
Photos

Possible
Depressions and
Pits identified on
1980 Aerial Photos

Possible
1953/55/73
Trenches,
Disturbed
Ground, and
Depressions
(approximate)



Gambell Sites, AK - STUDY AREA 1

Historic Features
on 1994 Aerial Photo
Base Map

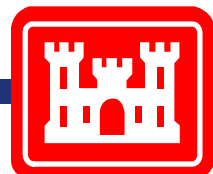


1994 Aerial Photo

- ✓ 1980_trench
- ✓ 1980_pits
- 1980_feature_of_interest
- ✓ 1980_disturbed_ground
- ✓ 1980_depressions

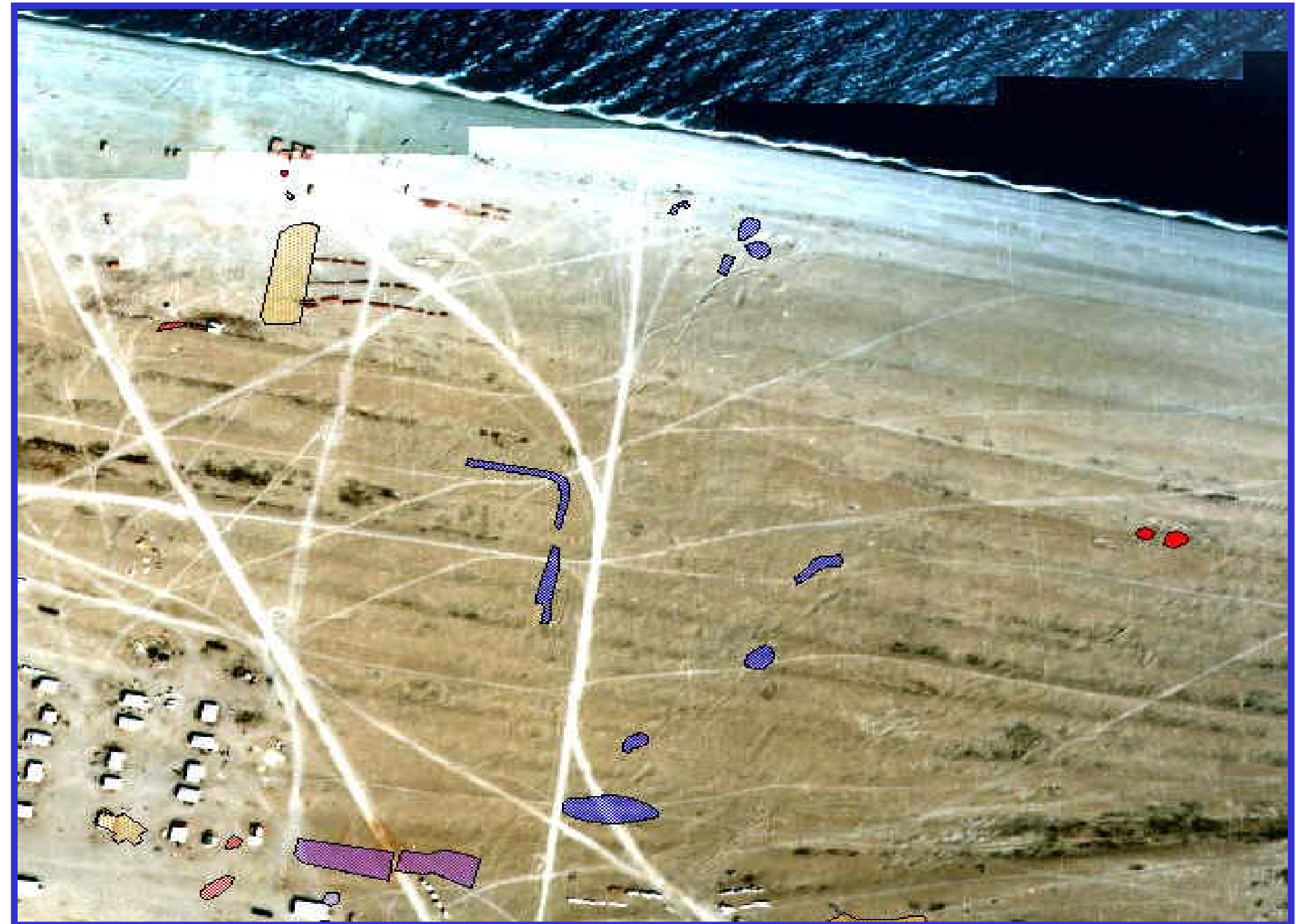
- ✓ 1955_trenchs
- ✓ 1955_pits
- ✓ 1955_bldgs_of_interest
- ✓ 1955_features_of_interes
- ✓ 1955_drums
- ✓ 1955_disturbed_ground
- ✓ 1955_depressions

- ✓ 1973_trenchs
- ✓ 1973_pits
- ✓ 1973_mounded_matl
- ✓ 1973_features_of_interes
- ✓ 1973_disturbed_ground
- ✓ 1973_depressions
- ✓ 1972_pits
- ✓ 1972_feature_of_interest
- ✓ 1972_disturbed_ground
- ✓ 1972_depressions



Gambell Sites, AK - STUDY AREA 1

Historic features
on 1994 Aerial Photo
Base Map

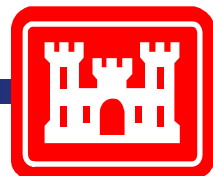


1994 Aerial Photo

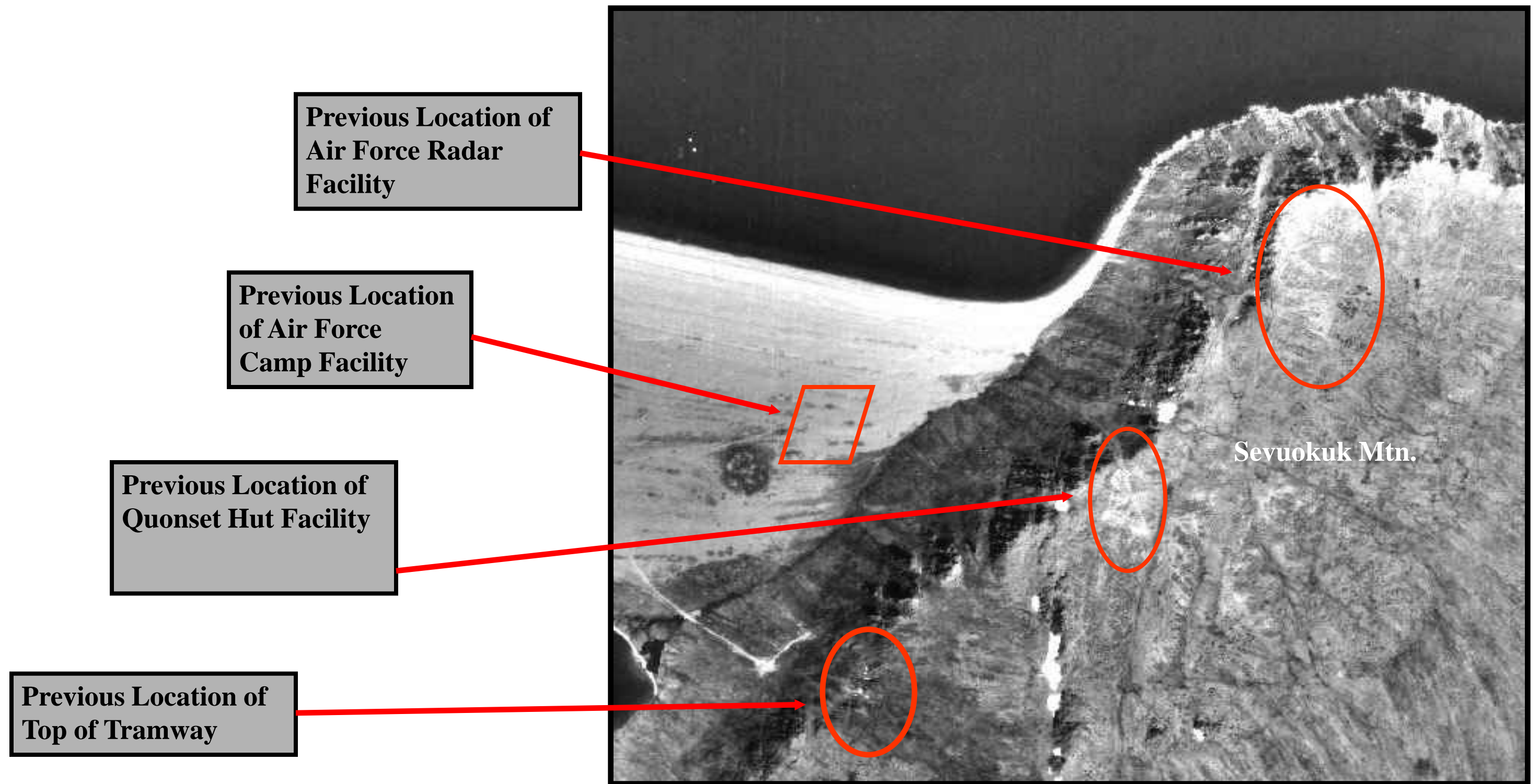
- ✓ 1980_trench
- ✓ 1980_pits
- 1980_feature_of_interest
- ✓ 1980_disturbed_ground
- ✓ 1980_depressions

- ✓ 1955_trenchs
- ✓ 1955_pits
- ✓ 1955_features_of_interes
- ✓ 1955_drums
- ✓ 1955_disturbed_grd
- ✓ 1955_depressions
- ✓ 1955_bldgs_of_interest

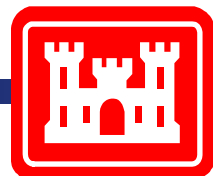
- ✓ 1973_trenchs
- ✓ 1973_pits
- ✓ 1973_mounded_matl
- ✓ 1973_features_of_interes
- ✓ 1973_disturbed_ground
- ✓ 1973_depressions
- ✓ 1972_pits
- ✓ 1972_feature_of_interest
- ✓ 1972_disturbed_ground
- ✓ 1972_depressions



Gambell Sites, AK - STUDY AREA 2

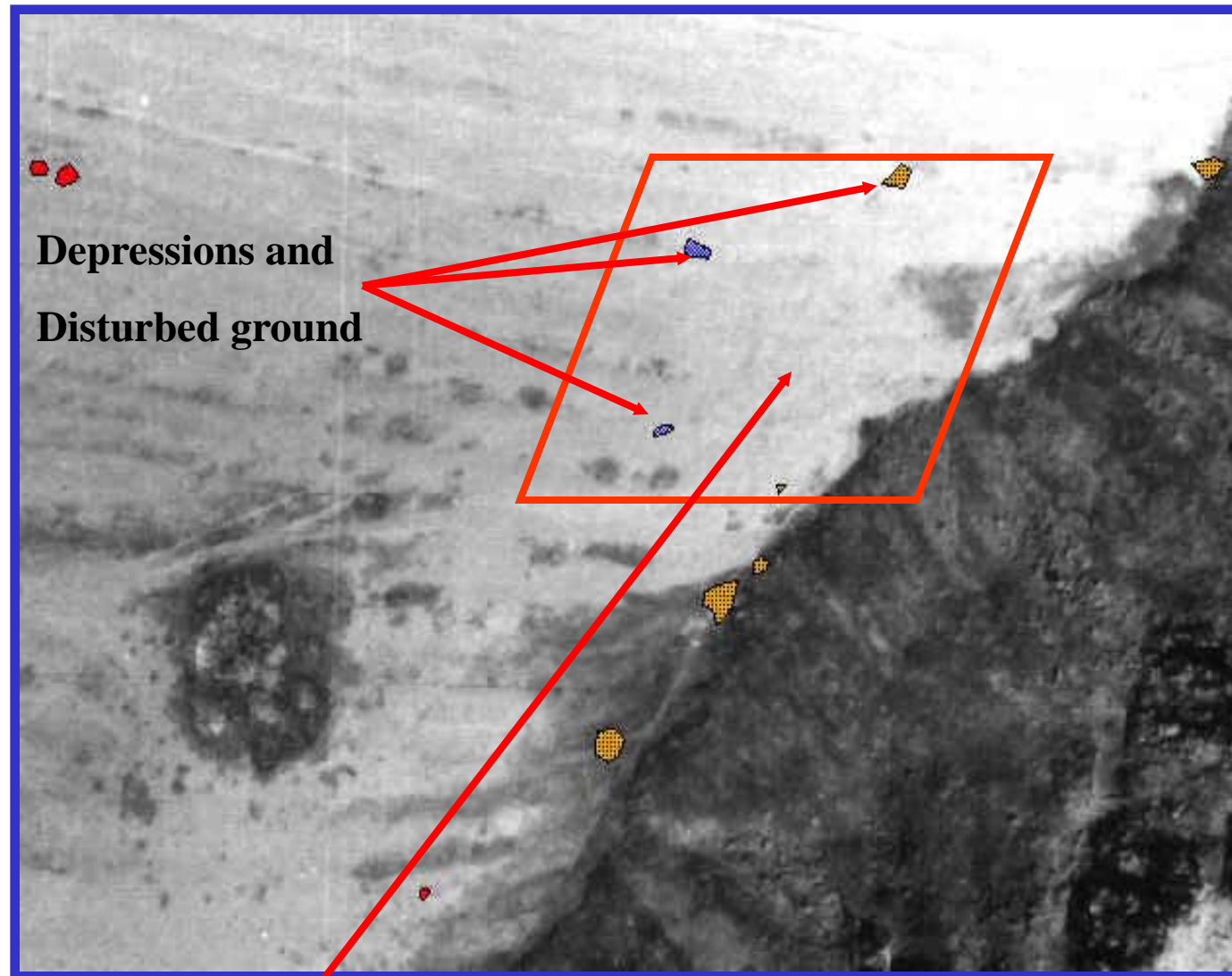


1980 Aerial Photo



Gambell Sites, AK - STUDY AREA 2

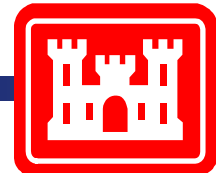
Base of Sevuokuk Mountain



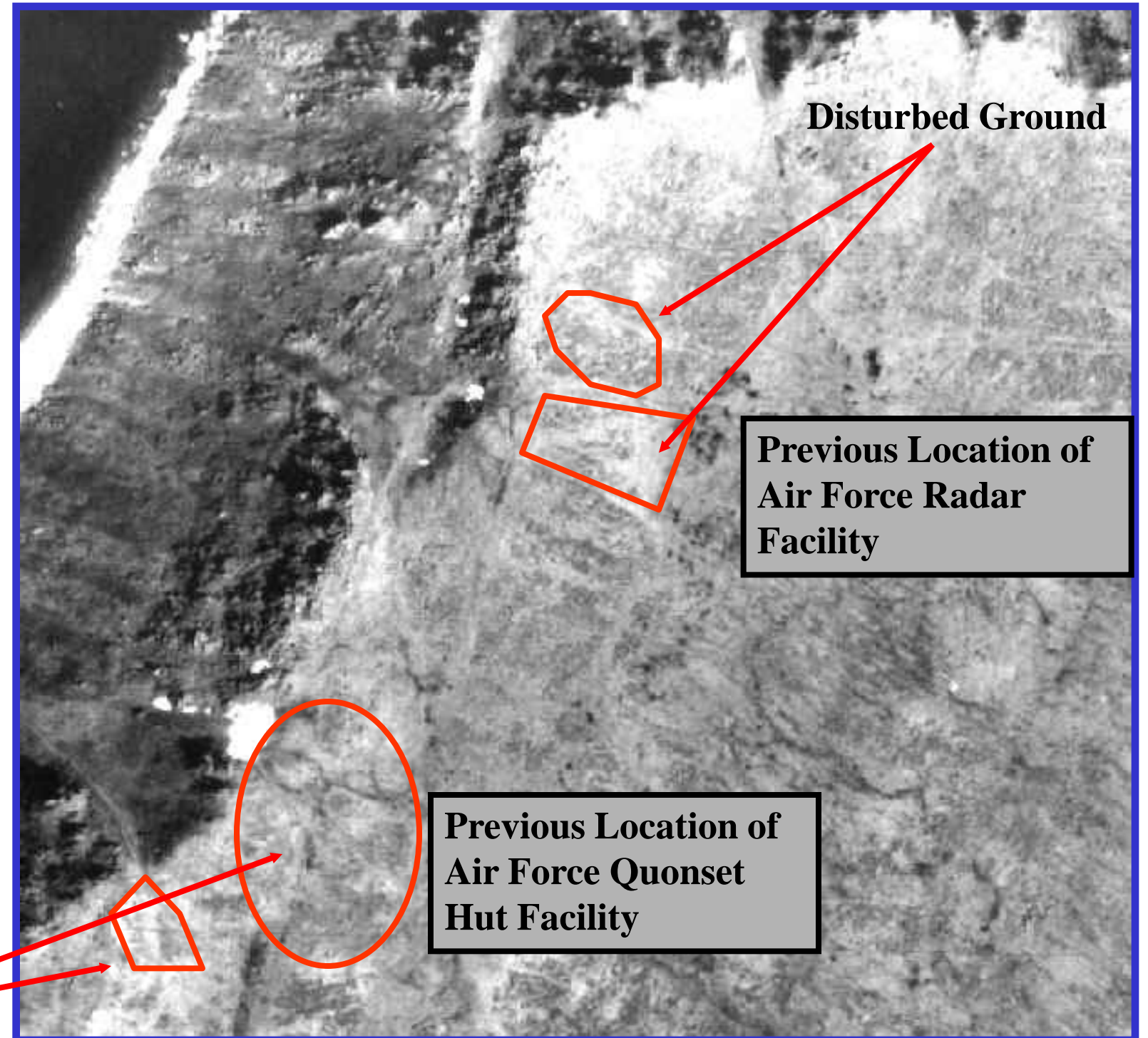
1980 Aerial Photo

Approximate Location of Former Air Force Facility

Building footprints found on 1980 Aerial Photos



Top of Sevuokuk Mountain



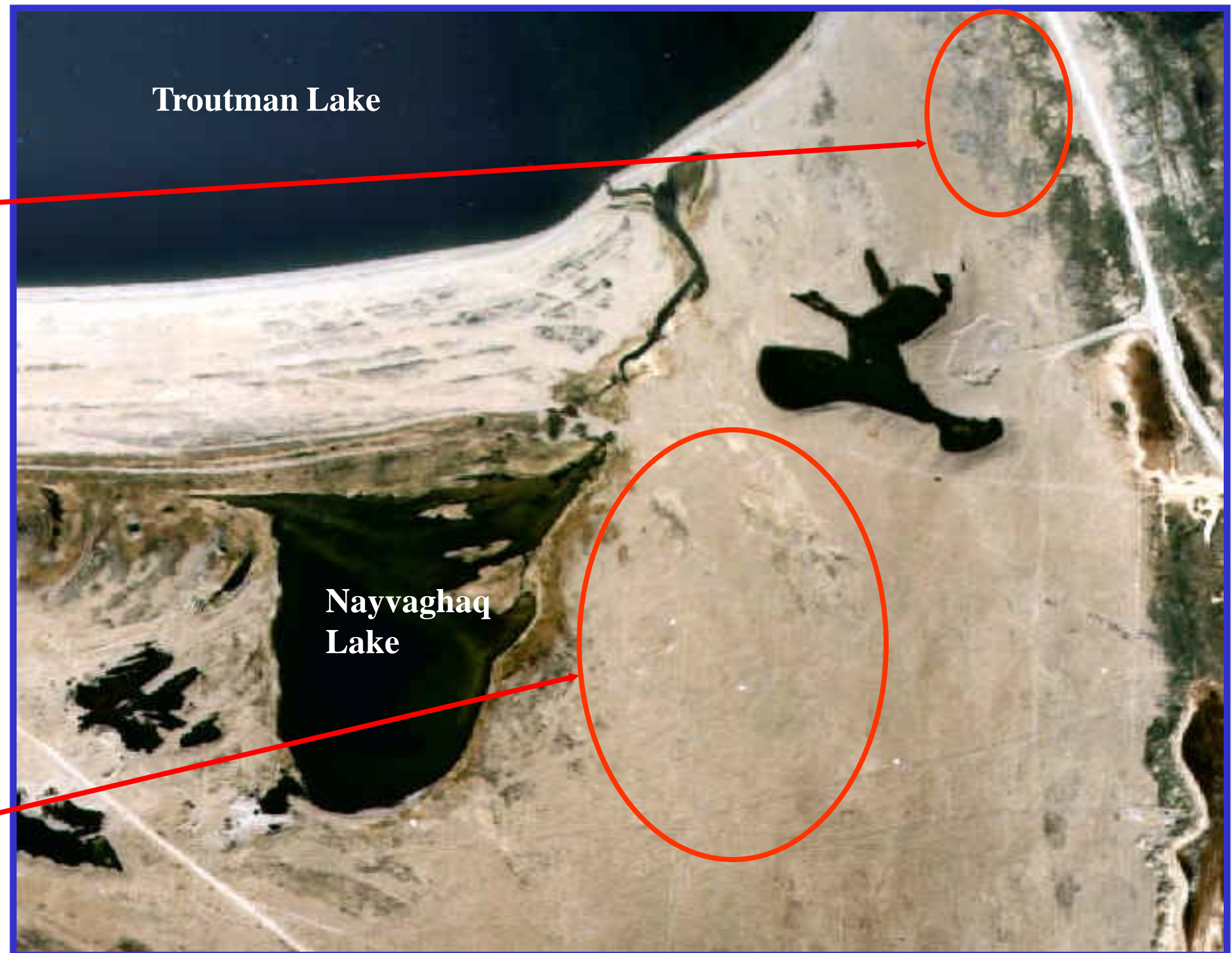
1980 Aerial Photo



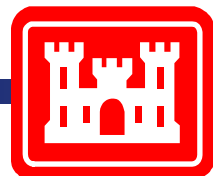
Gambell Sites, AK - STUDY AREA 3

Disturbed Ground and Outdoor Storage were ID'd from 1955 Aerial Photos

Buildings and Pit were ID'd from 1955 Aerial Photos



1994 Aerial Photo

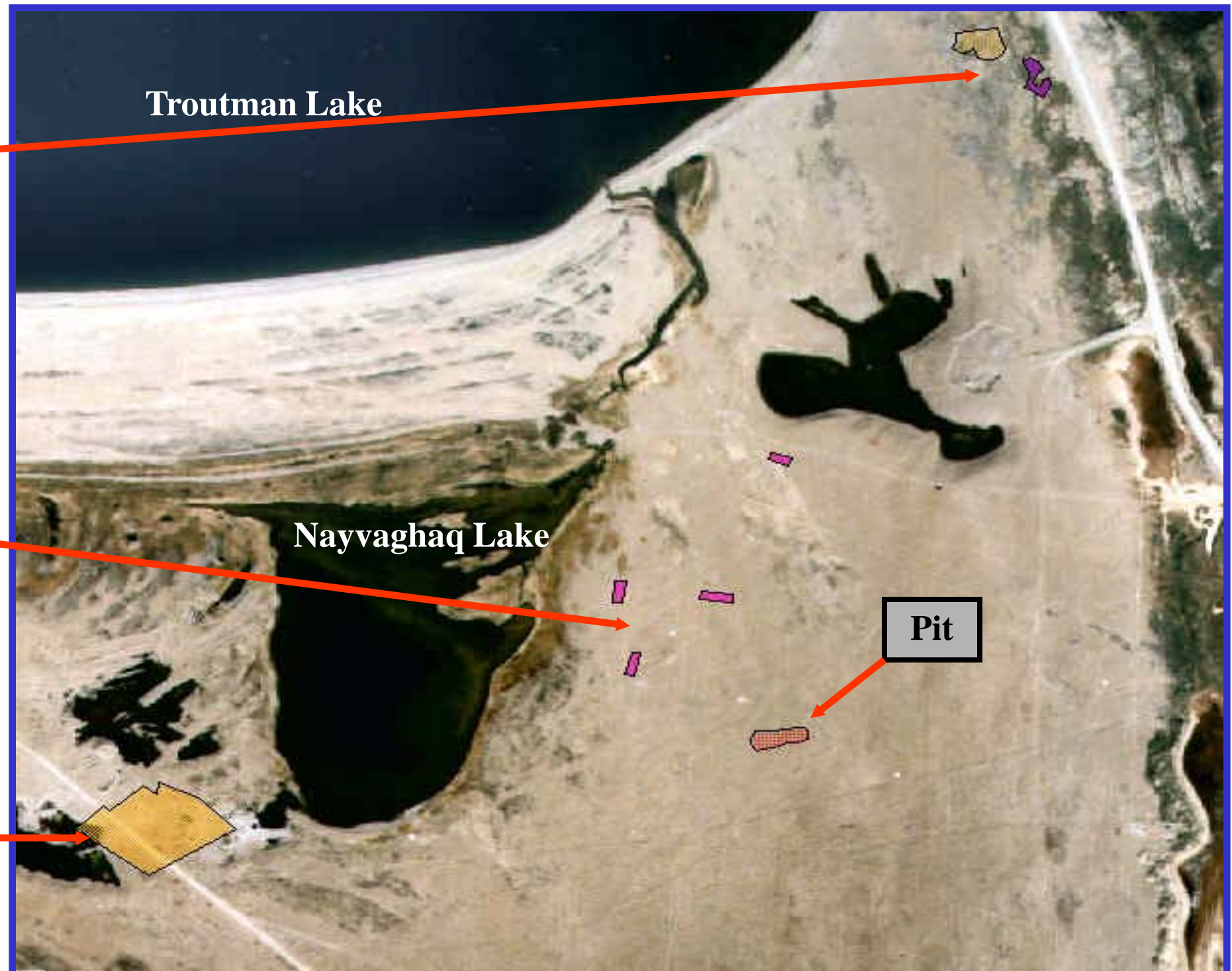


Gambell Sites, AK - STUDY AREA 3

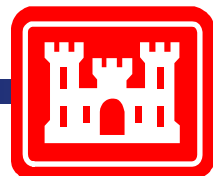
Disturbed Ground and Stacked Storage found on 1955 Aerial Photography

Buildings found on 1955 Aerial Photography

Disturbed Ground found on 1972 Aerial Photography



1994 Aerial Photo



Gambell Sites, AK

PROJECT POCs:

Joseph Harrison

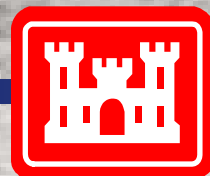
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US Army Corps of Engineers

57-11668 - 4
Gambell, St. Lawrence Island - July 1952

U. S. Air Force camp and west face of Sevukok...

