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**Draft
Reconnaissance Results
Small Arms Ranges
Camp Bonneville
Vancouver, Washington**



**Department of the Army
Headquarters, I Corps and Fort Lewis
Fort Lewis, Washington**

**Contract No.
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**U.S. Army Corps of Engineers
Seattle District**

January 2002

resented by

PARSONS



**DRAFT
RECONNAISSANCE RESULTS
SMALL ARMS RANGES**

AT

**CAMP BONNEVILLE
VANCOUVER, WASHINGTON**

Prepared For:

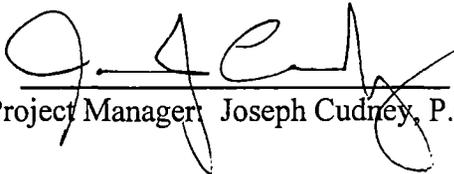
**Department of the Army
Headquarters, I Corps and Fort Lewis
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and

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1.0 INTRODUCTION

This document presents the results for the small arms reconnaissance for the former Camp Bonneville. Twenty-four documented small arms ranges have been identified within the former Camp Bonneville. The purpose of the reconnaissance investigation conducted at the small arms ranges was to collect data to characterize these ranges, included documenting evidence of the ranges and providing positional information on identified range features. The reconnaissance activities conducted at the small arms ranges were performed in conjunction with the additional site characterization reconnaissance activities conducted under contract DACA87-95-D-0018, Delivery Order No. 0031. Information collected to characterize the small arms ranges during the reconnaissance investigation included:

- Type of firing point;
- Type and height of berm structures (if present);
- Type of munitions used at each range;
- Type of targets used at each range; and
- General terrain information.

The objective of the reconnaissance activities conducted at the 24 documented small arms ranges was to confirm the existence of each range, document the location of the ranges, and to record information and characteristics of any remaining features associated with the small arms ranges. If no discernible features were present to indicate the existence of a range, only general terrain data were collected.

2.0 EQUIPMENT AND PROCEDURES

Information collected at each range was entered into a personal digital assistant (PDA) pre-loaded with the small arms reconnaissance form that contained twenty-four potential data entry fields to characterize each data collection point. The location of each data point was collected using a handheld Garmin III+ global positioning system (GPS). For each item or feature located, a waypoint on the GPS was recorded to coincide with the descriptive text of the features recorded on the PDA. A Schonstedt Magnetic Locator was used during the investigation for anomaly avoidance and for detection of anomalies at each data point.

3.0 GENERAL HISTORY

3.0.1 Camp Bonneville comprises approximately 3,839 acres and is located in southwestern Washington, approximately 10 miles northeast of Vancouver, Washington. The Department of the Army used Camp Bonneville for live fire of small arms, assault weapons, artillery, and field and air defense artillery between 1910 and 1995. Since

1947, Camp Bonneville has also provided training for a variety of military and non-military units from the National Guard, Reserves, and U.S. Air Force to federal, state, and local law enforcement agencies. Camp Bonneville includes approximately 820 acres of land leased from the State of Washington Department of Natural Resources (DNR).

3.0.2 In July of 1995, Camp Bonneville was selected for closure under the 1995 Base Realignment and Closure (BRAC) process. Applications were received from the Bureau of Prisons, U.S. Fish and Wildlife Service, and the Federal Bureau of Investigation (FBI). Since Camp Bonneville is located entirely within Clark County Washington, the Clark County Board of Commissioners established the Land Reuse Authority (LRA), which was approved by the Department of Defense to prepare a reuse plan for Camp Bonneville.

3.0.3 The reuse plan developed by the LRA called for the majority of Camp Bonneville to be transferred to Clark County for the public benefit – education, law enforcement, and parks, with no financial gain to the County. The 820 acres currently leased from the Washington DNR would either be returned to the State, the lease renewed, or the property purchased and transferred to Clark County.

4.0 INVESTIGATION RESULTS

The sections below describe the historical uses and locations of each of the twenty-four ranges investigated during the former Camp Bonneville Reconnaissance Investigation, followed by a summary of the reconnaissance results. Many of the ranges overlap one another and, therefore, some of the data points collected during an investigation of one range apply to another range located in the same area. Some of the ranges below are described as having two different ranges. The reason for this is that the Archives Search Report (ASR) describes the main range as Range 1 and the safety fan as Range 2. To be consistent with the ASR, the same nomenclature was used.

4.1 Rifle Ranges 1 and 2

4.1.1 The ASR describes the Rifle Ranges as two distinct ranges, Rifle Ranges 1 and 2. The main range is Rifle Range 1 while Rifle Range 2 is the safety fan for Range 1. Both Rifle Ranges were first used in the mid 1920's for live fire accuracy training using M1 Rifles (.30 caliber). Rifle Range 1 is located along the southern edge of the Camp Bonneville Cantonment Area and extends to the east across the old parade ground, crosses Lacamas Creek, and terminates at the eastern edge of the pond where a north-south line of pull up targets are located. The firing point is located near the road to the west of the Camp Bonneville Cantonment Area. Rifle Range 2 starts along the eastern edge of Lacamas Creek, extends eastward across an open field, and continues past the pond and wetland area to a terminus point near the eastern boundary of the Artillery Impact Area. Both Rifle Ranges 1 and 2 extends across the still present Automated Record Fire Range (ARF). A pond next to the target area of Rifle Range 1 was created when the soil was removed to build the ARF Range in the late 1980's.

4.1.2 Figure 1 depicts the relative location of the Rifle Ranges and the features identified during the reconnaissance. Thirty-one data points were collected during the

reconnaissance of Rifle Ranges 1 and 2. Features noted during the reconnaissance consisted of:

- pop-up targets on berms,
- six concrete firing positions / foxholes,
- firing-line post markers,
- a control tower, and
- down-range boundary pole markers.

It is unclear whether these features are part of the ARF Range or the historic Rifle Ranges. For those locations where no features were observed, general terrain information was recorded.

4.2 Field Fire Rifle Ranges 1 and 2

4.2.1 The ASR describes two Field Fire Rifle Ranges, where the main Field Fire Rifle Range is Range 1 and the safety fan for Range 1 is Field Fire Rifle Range 2. The ranges were first used in the late 1950's for .30 and .50 caliber weapons. Pop-up targets at varying distances were used and are the same targets that were identified at the terminus of Rifle Range 1. The Field Fire Rifle Ranges are located east of the Camp Bonneville Cantonment Area, overlapping Rifle Range 2 and a portion of Rifle Range 1 (see Section 4.1). Field Fire Rifle Range 1 consists of flat open area with moderate tree growth on the north, east, and south boundaries. Lacamas Creek borders the range on the north and a man made pond (created during installation of the ARF Range) is at the end of the range near the north-south line of pull up targets. Field Fire Rifle Range 2 fan widens significantly to the northeast and southeast with a terminus point near the eastern boundary of the Artillery Impact Area.

4.2.2 Points collected for this range are the same points used for the Rifle Ranges 1 and 2. The features found are noted in paragraph 4.1.2. Figure 1 shows the relative location of the Rifle Ranges, Field Fire Ranges, and the features observed.

4.3 Field Firing Ranges 1 and 2 / Pistol Range

4.3.1 The ASR describes the Field Firing Range as two ranges. Field Firing Range 1 is the main firing range and Field Firing Range 2 is the safety fan for Range 1. The Field Firing Ranges 1 and 2 are located to the southeast of the Camp Bonneville Cantonment Area and were first used in the late 1950's for live fire training using the M1 Rifle (.30 caliber). The Pistol Range was first used in the mid 1980's for live fire training using the M1911A1 Pistol (.45 caliber). Both ranges are located in a small open field and are bordered to the north and east by berms 150 feet in length and 200 feet in length, respectively. Beyond the eastern berm is a wetland area that extends to the tree line where the terrain begins to incline uphill toward the southern end of the Impact Area. The Field Firing Ranges 1 and 2 fans extend to the southeast and are back dropped by the

hillsides of the southern Artillery Impact Area. The firing point for Pistol Range is located in the same area as the Field Firing Ranges, with the fan extending in the same direction, but wider and extended more to the south.

4.3.2 The area encompassing the features noted during the reconnaissance investigation were surrounded by berms to the north and east sides. The features consisted of:

- berms,
- a firing point area with multiple concrete firing positions,
- an observation tower,
- boundary poles, and
- fixed paper type target stands.

4.3.3 Seventeen data points were collected at the Field Firing Ranges and the Pistol Range. Five of the data points west of the Field Firing Ranges and the Pistol Range is a second undocumented Pistol Range that was discovered during the reconnaissance. Figure 2 presents the relative locations of the ranges, the data points collected, and the features observed.

4.4 1000-Foot Range, 1000-Foot Machine Gun and Moving Target Range

4.4.1 The 1000-Foot Range began operation in 1943 and the machine gun and moving target ranges were added in 1958. The range used the M1 rifle and the M1919 machine gun, both .30 caliber. The 1000-Foot Range is located to the south of the Camp Bonneville Cantonment Area, just south of Lacamas Creek behind the FBI Range. The area of the range from the creek to the berms is flat with moderate tree growth mixed with some open areas. Beyond the berms (which were cut into the hillside) the tree growth is moderate with a slight continuous uphill incline.

4.4.2 Features noted during the reconnaissance investigation consisted of:

- two berms,
- two trenches, and
- a possible moving target.

4.3.3 Thirty-six data points were collected in this area during the investigation. Five points located south of the 1000-Foot Range are part of the Combat Pistol Range data points. Figure 3 presents the location of the ranges, data points collected, and the features identified.

4.5 25M Record Fire Field Range / Field Firing Range

4.5.1 The 25M Record Fire Field Range was first used in 1958 for measuring accuracy with the .30 and .50 caliber weapons. The Field Firing Range, which extended southward beyond the 25M Range, was added to the range in 1959 and also used both the .30 and .50 caliber weapons, but was not intended for accuracy testing. Both ranges are located to the south of the Camp Bonneville Cantonment Area, just south of Lacamas Creek. There were no noticeable backdrop berms, but the elevation in the area continually increases moving away from the firing point.

4.5.2 Nineteen points were collected during the investigation of these ranges which consisted of:

- multiple 3-foot high berms,
- area suspect of firing point, and
- one concrete bunker with a turning cable wheel system.

4.5.3 The berms ran the length of the range northwest to southeast and were noted as far south as Buck Creek. The berms appeared to have been pushed into position as evidenced by the numerous rocks and boulders contained within the berms and the relatively smooth surface between the berms. Most of the points collected marked the start, mid points, and end of some of the berms. Figure 4 illustrated the relative locations of these ranges, the data points collected, and the features identified. The five points located above the ranges are included in the Field Firing Ranges 1 and 2 and Pistol Range data.

4.6 Close Combat Range

4.6.1 The Close Combat Range was first used sometime in the early 1970's for live fire training with .30 and .50 caliber weapons in an automated pop-up target course. The range is located in the northern part of Camp Bonneville near Demolition Area #1. The majority of the area is covered with a moderate growth of large trees and some areas of brush. Overall, the area has a slight incline to the south with the western edge containing a more moderate slope.

4.6.2 This range was investigated as part of the Base-wide Reconnaissance investigation, and was identified as a suspect scarred area (1970-TEC-13) on a 1970 aerial photograph. Items found during the reconnaissance included:

- a collapsed observation stand,
- a safety lane sign nailed to a tree near the tower,
- concertina wire on the upper line near the safety sign,
- electrical post with lines running underground,

- 4' X 12' wooden boxes containing the pop-up silhouette targets, some containing 3 electrical outlets, and
- a circular exit sign nailed to a tree at the end of the range.

4.6.3 Ten data points were collected at the Close Combat Range during the reconnaissance investigation. Figure 5 presents the relative location of the range and the data points collected.

4.7 Submachine Gun Range

4.7.1 The Submachine Gun Range was first used sometime in the late 1950's for M3 Sub-machine Gun (.45 caliber) training. This range is located in the northern part of the Camp Bonneville, just south of Demolition Area #1, and to the northeast of the Camp Bonneville Cantonment Area. The area landscape currently consists of a gentle sloping open area changing into a moderate slope with moderate coverage of larger trees to the northwest.

4.7.2 This area was investigated as part of the Base-wide Reconnaissance investigation. Features noted during the investigation consisted of:

- two mortar positions,
- one mock satellite dish,
- two BRDM mock armored vehicles,
- concertina wire,
- multiple silhouette small arms targets, and
- a bunker with mock guided anti-aircraft missiles.

4.7.3 Fifty-one points collected in the Sub-machine Gun Range during the reconnaissance effort. Figure 6 presents the relative location of the range and the data points collected.

4.8 TF Range

4.8.1 Training at the TF Range took place in the late 1950's and consisted of record firing of small arms (.22, .30, .50 caliber, and 7.62mm) and machine gun firing. The TF Range is located due east of the Camp Bonneville Cantonment Area along the south edge of the Lagoon ponds. Lacamas Creek borders the area to the south and east. This range encompasses approximately three quarters of the current Ammunition Supply Point (ASP) facility. Most of the area slopes gently to the south toward the creek; with the exception of the eastern area that is a flat and open. The remainder of the area is moderate in tree growth and covered with dense brush.

4.8.2 Fifty-six points were collected during the investigation:

- four points around the ASP (one data point on the road and three data points at the boundary poles),
- the remainder along the eastern portion of the range, and
- no range related features were observed.

4.8.3 The points collected on the eastern portion of the range were collected as part of the reconnaissance investigation. Thirteen points south of the TF Range are part of the Rifle Ranges 1 and 2 and Field Firing Ranges 1 and 2. Figure 7 illustrates the relative location of the range and the data points collected.

4.9 25 Meter M60 Range / Pistol Range

4.9.1 The Pistol Range was first used in the late 1950's as a non-record fire range using the M1911A1 (.45 caliber) pistol. The 25 Meter M60 Range was added in the early 1970's and was used for firing the .30 caliber carbine, the M16 Rifle (5.56mm); the M14 (7.62mm); and the .50 caliber machine gun. These ranges are located northeast of the Camp Bonneville Cantonment Area, due north of the Lagoon Ponds. The 25 Meter M60 Range consists of an open level area with a 10-foot embankment cut into the hillside. Large trees are present on the hillside immediately beyond the apparent range berm.

4.9.2 Twelve points were collected at the 25 Meter M60 Range / Pistol Range during the investigation. Features identified consisted of:

- a 10-foot berm,
- two small arms target areas,
- 45-caliber bullet casing,
- concrete wall, and
- a firing line.

4.9.3 Figure 8 presents the relative location of the range and the data points collected.

4.10 Combat Pistol Range

4.10.1 The Combat Pistol Range was first used during the late 1980's and included the use of M1911 (.45 caliber), M9 (9mm), and .38 Special handguns. It is unknown whether this range was a free fire or a record fire range. This range is located south of the Camp Bonneville Cantonment Area, south of Buck Creek. The Combat Pistol Range extends to the east toward the southwest portion of the Artillery Impact

Area. Immature trees characterize the vegetation on the western portion of the range, while the eastern portion (beyond the range poles) of the range contains a mature older growth forest.

4.10.2 Five data points were collected during the reconnaissance of the Combat Pistol Range. Features identified consisted of:

- a control tower,
- firing point positions, and
- the range boundary poles.

4.10.3 Figure 9 presents the relative location of the range and the data points collected.

4.11 25 Meter and Machine Gun Range

4.11.1 The 25 Meter Range was first used in the 1960's for live fire exercises with weapons such as the M1 Rifle (.30 caliber) and the M14 Rifle (7.62mm). According to the Archives Search Report (ASR), this range was also used for live fire training using .30 caliber machine guns. The 25 Meter and Machine Gun Range is located south of the Camp Bonneville Cantonment Area near the southern installation boundary. This range and the 3.5-inch Rocket Range occupy the same area. The firing point of the 25 Meter and Machine Gun Range is located next to the main north-south road from the Camp Bonneville Cantonment Area. The firing point is still present along with the observation tower, one short berm, and one tall berm. The area is in an open field sloping upward to the northeast. Approximately 200ft beyond the berms the area consists of mature forest with areas of thick underbrush.

4.11.2 Twenty data points were collected at the 25 Meter and Machine Gun Range during the investigation. Features identified that were related to the 25 Meter Range consisted of:

- the covered firing line, and
- the berm structures.

4.11.3 The majority of the data points were collected during the reconnaissance investigation of the 3.5-inch Rocket Range. Figure 10 presents the location of the range and the data points collected.

4.12 Machine Gun Ranges (North and South)

4.12.1 The Machine Gun Range (South) was first used in the mid 1920's for free firing training using the M1919 Machine Gun (.30 caliber). The southern Machine Gun Range is located in the southwest corner of the installation and extends in a northwest – southeast direction, nearly parallel to the pipeline right-of-way located in the area. The

topography of the range is characterized by a gentle upward slope in both range directions from the point where Lacamas Creek traverses the range. Very dense underbrush covers the majority of the eastern area of the range with the exception of the portion located within the pipeline right-of-way.

4.12.2 Twenty-three data points were collected during the reconnaissance of the Machine Gun Range (South). Figure 11 presents the location of the range and the data points collected. No features indicating the presence of the former machine gun range were identified.

4.12.3 The Machine Gun Range (North) was first used in the mid 1950's for free firing training using .30 caliber machine guns. The northern Range extends southeast from the Camp Killpack Cantonment Area with the firing point located adjacent to the western edge of the cantonment area, just north of the former Commanding Officer's residence. The range slopes gently to the southeast and is characterized by mature forest northwest of Lacamas Creek and by flat open fields southeast of the creek. Dense underbrush is located predominantly in the areas where Lacamas Creek traverses the range.

4.12.4 Seventeen data points were collected during the reconnaissance of the Machine Gun Range (North). No features indicating the presence of the former machine gun range were identified. Figure 11 presents the location of the range and the data points collected.

4.13 Infiltration Courses (North and South)

4.13.1 The Infiltration Course (North) was first used in the early 1940's for live fire training using the M1919 Machine gun (.30 caliber). The northern Infiltration Course is located southeast of the Camp Bonneville Cantonment Area in the same vicinity as the Pistol Range/Field Firing Ranges. The land surface elevation in the area was raised during the construction of these ranges, due to the presence of wetlands. The site is now characterized by an open grass field with the raised berm of the firing positions for the ARF range. Features associated with the Infiltration Course (North) are no longer present due to the construction of the Rifle and Field Firing Ranges.

4.13.2 No data points were collected specifically for the Infiltration Course. Numerous data points associated with the Rifle and Field Firing Ranges were collected in the area. No evidence of the Infiltration Course (North) was identified during the investigation. Figure 1 shows the data points locations and paragraphs 4.1.2 and 4.3.2 contain the features identified with the data points. Figure 12 presents the location of the Infiltration Course (North).

4.13.3 The Infiltration Course (South) was first used in the early 1970's where the use of .30 caliber carbines, M16 Rifles (5.56mm), M14 Rifles (7.62mm), and .50 caliber machine guns were used for live fire training. The southern Infiltration Course is located directly south of the 3.5-inch Rocket Range near the southern installation boundary. The Infiltration Course (South) is characterized by a flat open grassed area

near the western boundary with mature forest and steadily increasing elevation to the east.

4.13.4 Twenty-seven data points were collected during the investigation of the Infiltration Course (South). Features identified consisted of:

- a berm along the northwest edge of the range, and
- a nose cone to a 3.5-inch rocket, Practice, M29.

4.13.5 These features were attributed to the 25M Range and 3.5-inch Rocket Range located just east of the Infiltration Course. There was no evidence of the infiltration course identified during the investigation. Figure 13 presents the layout of the Infiltration Course and the location of the data points collected.

4.14 M31 Sub-Caliber Ranges 1 and 2

4.14.1 The ASR recognizes the M31 Sub-Caliber Ranges as two distinct ranges, Range 1 and 2. Range 1 is the main M31 Sub-Caliber Range while Range 2 is the safety fan for Range 1. The M31 Sub-Caliber Ranges 1 and 2 are located in the southwestern portion of the installation. The ranges extend from the northeast to southwest and are bordered on the west by Lacamas Creek and to the east by the main north-south installation roadway. The southwest terminus of the range is located just beyond the pipeline right-of-way. The range is characterized by relatively flat terrain with areas of moderate to very dense underbrush. Some portions of the ranges, primarily in the areas near the creek and small streams, contained brush that was characterized as impassable. Mature trees define the outer perimeter of the range and numerous small trees are scattered throughout the range. Many small creeks were encountered throughout the range, flowing east to west toward Lacamas Creek.

4.14.2 This area was thoroughly investigated as part of the Base-wide reconnaissance effort. A total of two hundred and thirty-two data points were collected during the reconnaissance of the M31 Sub-Caliber Ranges. Features identified consisted of:

- multiple vehicle tires with the outer edges painted,
- multiple concrete wall,
- multiple earth mounds,
- two large holes or pits,
- an observation tower, and
- four firing point concrete pads at the north end of the range.

4.14.3 Figure 14 presents the location of the range and the data points collected.

4.15 500-inch Anti-Aircraft (A-A) Range and Anti-Aircraft Range

4.15.1 The Anti-Aircraft and 500-inch A-A Range were first used in the early 1940's for pedestal mounted machine gun (.22 caliber) fire training on overhead targets, parachute targets, climbing and diving targets, and horizontal targets. These areas are located in the vicinity of the Field Firing Ranges, south of the Camp Bonneville Cantonment Area. The Anti-Aircraft Range covers a large area of the central and southwest portion of the installation. The firing point for both ranges is located in a flat grassy area between the Rifle Ranges and Lacamas Creek. The range fan extends to the southeast and overlaps a portion of the Artillery Impact Area. The range fan is forested with mature trees, contains multiple creeks, and has a single passable road traversing the area from the north to the south.

4.15.2 The 500-inch A-A and Anti-Aircraft ranges were investigated as part of the Base-wide reconnaissance effort. During the investigation of these areas, eighty-one data points were collected from the Rifle Ranges 1 and 2, Field Fire Rifle Ranges 1 and 2, Field Firing Ranges 1 and 2, Pistol Range, 1000-Foot Range, Combat Pistol Range, 25M Record Fire Field Range, and Field Firing Range investigations. No items or features associated with the former ranges were identified. Figure 15 presents the location of the range and the data points collected during the investigation.

4.16 1952-TEC-22 (Undocumented Small Arms Range)

4.16.1 The area identified as 1952-TEC-22 was investigated during the Base-wide Reconnaissance investigation of Camp Bonneville based on a scarred area identified on a 1952 Aerial photograph. This area was not previously identified as a potential small arms range and is located on the western edge of the Camp Bonneville Cantonment Area, with the apparent range direction from the east to west. The area is characterized by mature forest with moderate undergrowth and steadily increases in elevation from east to west. An old road is located at the west end of the area and may have served as a partial backstop to the range.

4.16.2 Eighty-one data points were collected during the investigation of 1952-TEC-22. Features identified consisted of:

- multiple flat silhouette small arms targets nailed to trees or lying on the ground surface, and
- a possible berm oriented east-west.

4.16.3 Figure 16 presents the location of the range and the data points collected.

5.0 CONCLUSIONS

Twenty four individual documented ranges were investigated during this reconnaissance investigation. Two additional undocumented small arms ranges were also identified. A pistol range was identified west of the Field Firing Ranges and another small arms range was identified near the Camp Bonneville cantonment area. There was no evidence found of the existence of the following ranges: Machine Gun Range (North), Machine Gun Range (South), Infiltration Course (North), the 500-inch A-A and Anti-Aircraft Range. Evidence found of the remaining ranges included: berms, firing points, control towers, targets, boundary poles, and training equipment. For those ranges where berms and/or boundary poles were identified, the approximate acreage of the area from the suspected firing points to the berms/boundary poles has been calculated and is presented in Table 5.1. Table 5.1 also presents a summary of the investigation results on all the ranges.

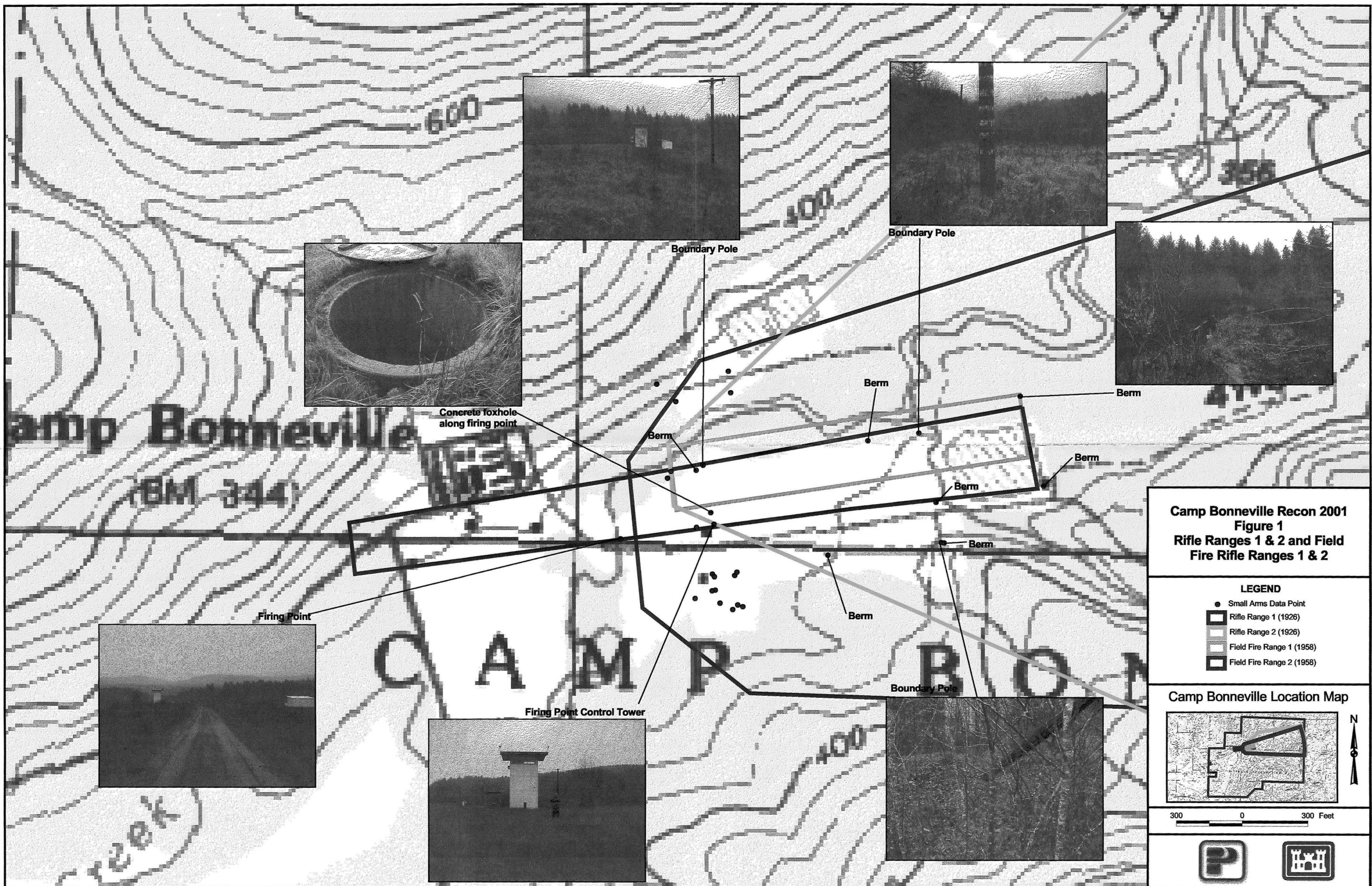
T 5.1
Summary of Findings

Range(s)	Date(s) Used	Features Identified				Acreage*	Number of Data Points Collected	Other Comments:
		Firing Points	Targets	Boundary Poles	Berms			
Rifle Ranges 1 and 2 (Section 4.1)	1920's	Yes	Yes	Yes	Yes	24	31	Control tower also identified
Field Fire Rifle Ranges 1 and 2 (Section 4.2)	1950's						31	Ranges overlap Rifle Ranges 1 and 2, Same data points and features identified at Rifle Ranges 1 and 2
Field Firing Ranges 1 and 2 / Pistol Range (Section 4.3)	1950's 1980's	Yes	Yes	Yes	Yes	1.5 for Pistol Range	17	Ranges overlap Pistol Range features, Fixed paper target stands, Observation tower also identified
1000-Foot Range, 1000-Foot Machine Gun and Moving Target Range (Section 4.4)	1940's- 1950's		Yes		Yes	4	36	Possible moving target, Two trenches also identified
25M Record Fire Field Range / Field Firing Range (Section 4.5)	1950's	Yes			Yes	13	19	Area suspect of firing point and concrete bunker with a turning cable wheel system also identified
Close Combat Range (Section 4.6)	1970's		Yes			10	10	Collapsed observation tower, safety lane sign, concertina wire, and exit sign also identified
Submachine Gun Range (Section 4.7)	1950's		Yes				51	Mortar positions, mock satellite dish, bunker with mock anti-aircraft missiles, BRDM mock armored vehicles and concertina wire also identified
TF Range (Section 4.8)	1950's			Yes		1.5	56	No range related features observed
25 Meter M60 Range / Pistol Range (Section 4.9)	1950's 1970's	Yes	Yes		Yes	2	12	45-caliber bullet casing and concrete wall also identified
Combat Pistol Range (Section 4.10)	1980's	Yes		Yes		2.1	5	Control tower i
25 Meter and Machine Gun Range (Section 4.11)	1960's	Yes			Yes	3.2	20	Range overlaps the 3.5-inch Rocket Range
Machine Gun Ranges (North and South) (Section 4.12)	1920's 1950's						23 and 17	No evidence of the ranges identified
Infiltration Courses (North and South) (Section 4.13)	1940's 1970's				Yes		0 and 27	Course overlaps Rifle and Field Firing Ranges, 3.5-inch Rocket, Practice, M29 nose, No evidence of courses identified

Table 5 (continued)
Summary of Findings

Range(s)	Date(s) Used	Features Identified				Acreage*	Number of Data Points Collected	Other Comments:
		Firing Points	Targets	Boundary Poles	Berms			
M31 Sub-Caliber Ranges 1 and 2 (Section 4.14)	1970's	Yes				27.5	232	Vehicle tires, concrete walls, earth mounds, pits or holes and observation tower also identified
500-inch A-A Range and Anti-Aircraft Range (Section 4.15)	1940's						81	No evidence of ranges identified
1952-TEC-22 (Undocumented Small Arms Range) (Section 4.16)	1950's		Yes		Yes		81	Possible berm oriented east-west
Undocumented Pistol Range (Section 4.3)	Unkn.	Yes		Yes		1	5	Located west of the Field Firing and Pistol Ranges

* - Approximate Acreage from Estimated Firing Point Area to Berms/Boundary Poles (If Identified)



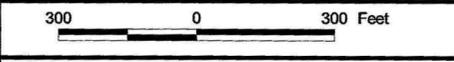
Camp Bonneville Recon 2001
Figure 1
Rifle Ranges 1 & 2 and Field
Fire Rifle Ranges 1 & 2

LEGEND

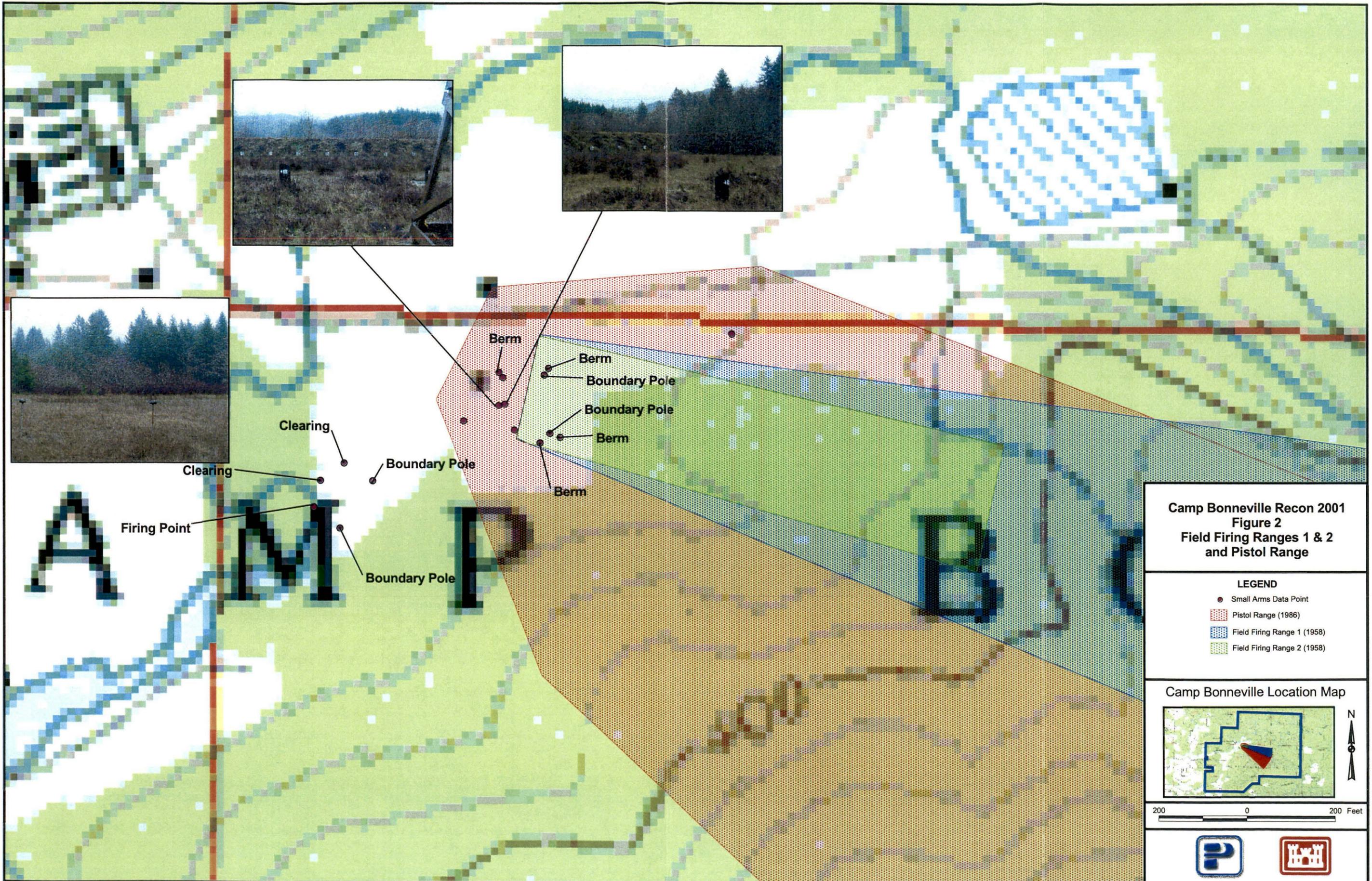
- Small Arms Data Point
- ▭ Rifle Range 1 (1926)
- ▭ Rifle Range 2 (1926)
- ▭ Field Fire Range 1 (1958)
- ▭ Field Fire Range 2 (1958)

Camp Bonneville Location Map

A small map showing the location of Camp Bonneville within a larger geographic context. It includes a north arrow pointing upwards.



Two icons: a parking symbol (a 'P' in a square) and a building symbol (a square with a tower-like structure).

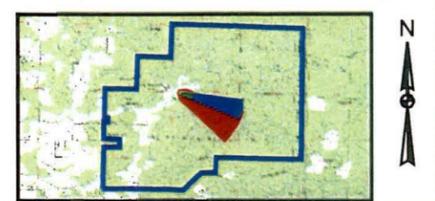


Camp Bonneville Recon 2001
Figure 2
Field Firing Ranges 1 & 2
and Pistol Range

LEGEND

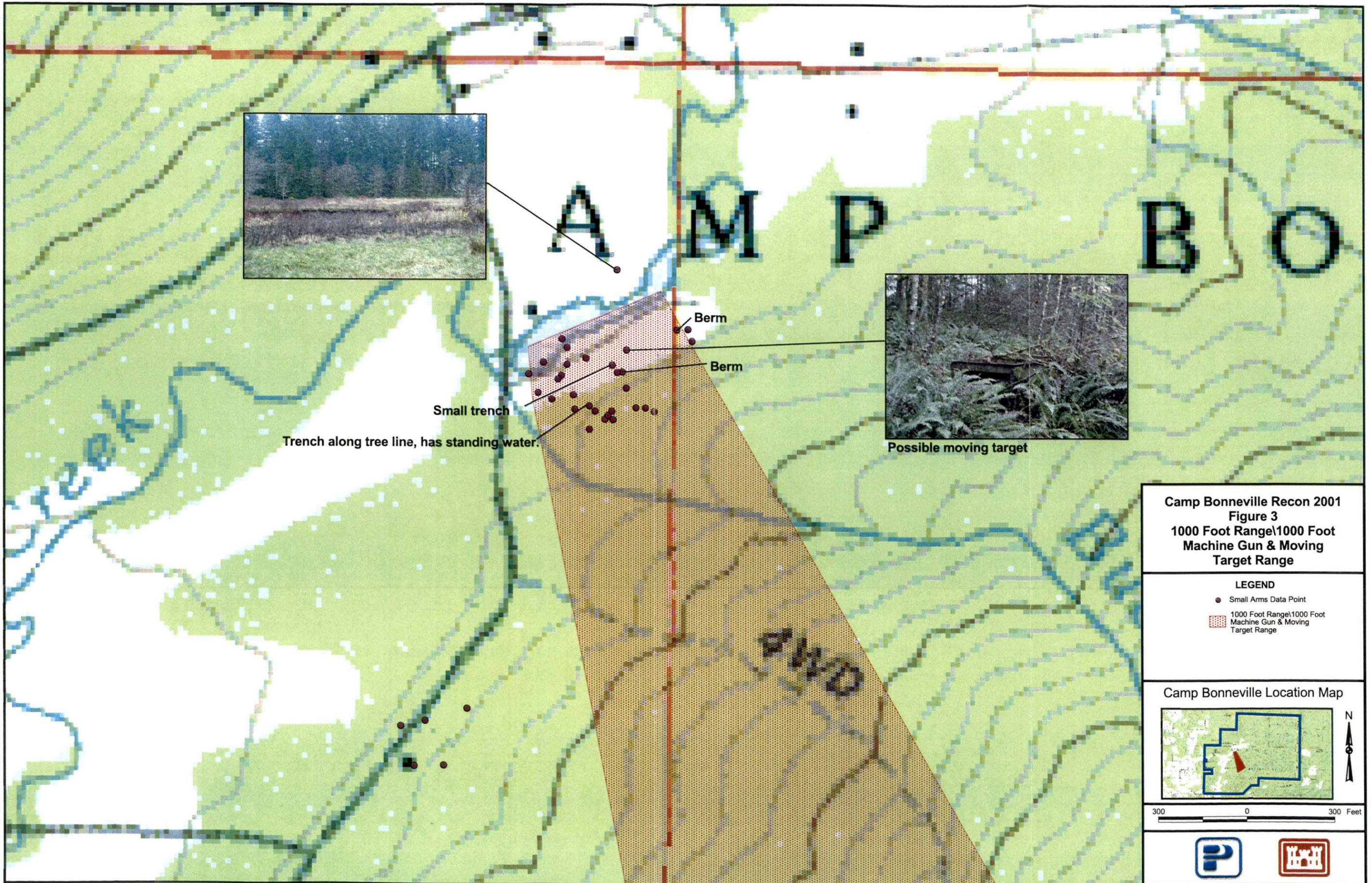
- Small Arms Data Point
- Pistol Range (1986)
- Field Firing Range 1 (1958)
- Field Firing Range 2 (1958)

Camp Bonneville Location Map



200 0 200 Feet



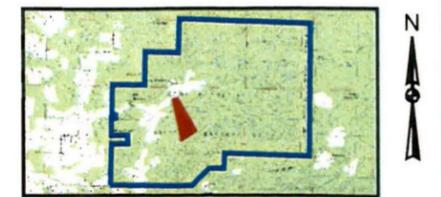


**Camp Bonneville Recon 2001
Figure 3
1000 Foot Range\1000 Foot
Machine Gun & Moving
Target Range**

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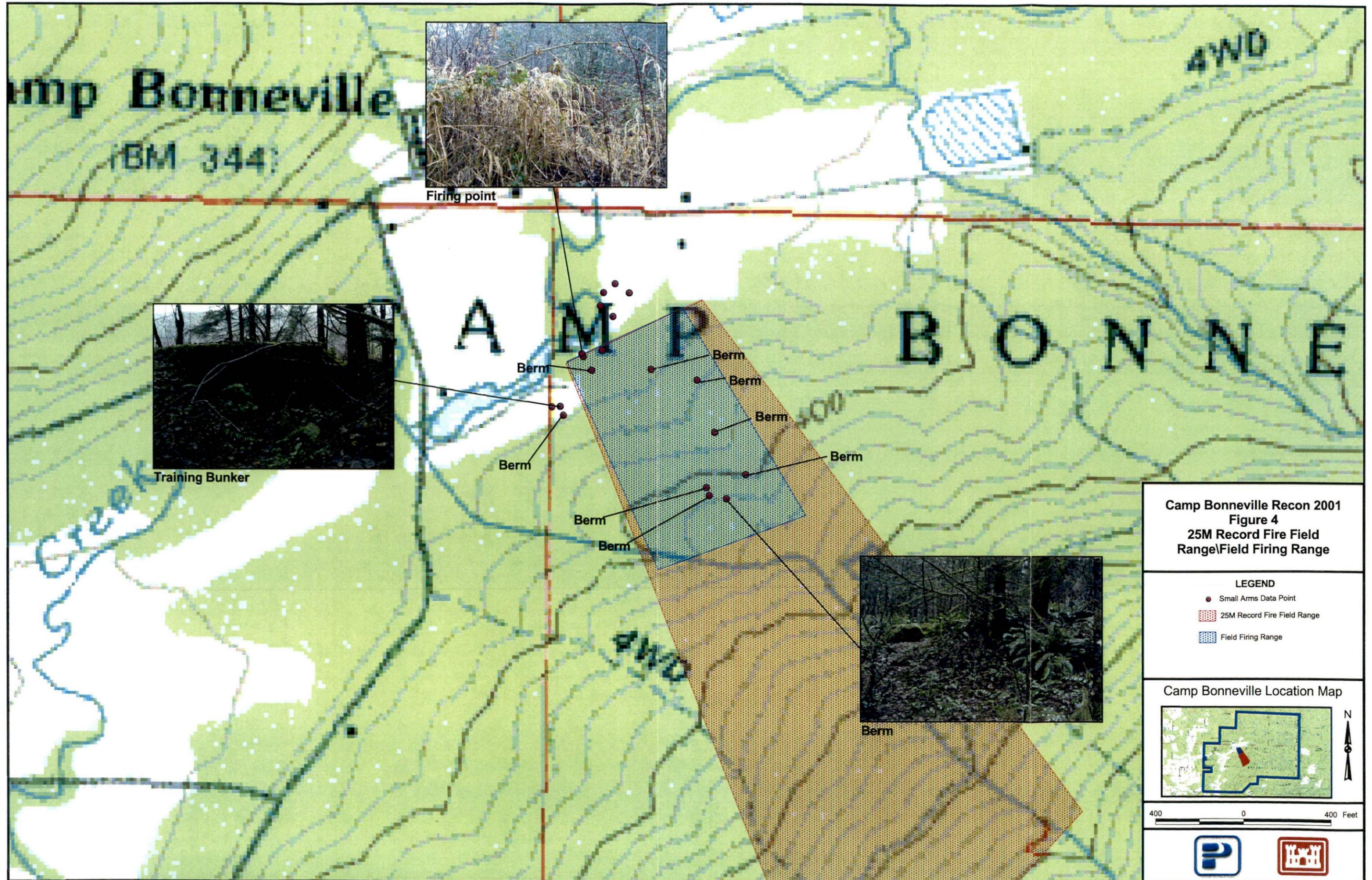
- Small Arms Data Point
- 1000 Foot Range\1000 Foot Machine Gun & Moving Target Range

Camp Bonneville Location Map



300 0 300 Feet



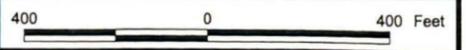


Camp Bonneville Recon 2001
 Figure 4
 25M Record Fire Field Range\Field Firing Range

LEGEND

- Small Arms Data Point
- ▨ 25M Record Fire Field Range
- ▨ Field Firing Range

Camp Bonneville Location Map





Observation stand



Wooden rectangular crate (4x12) with 3 electrical outlets.



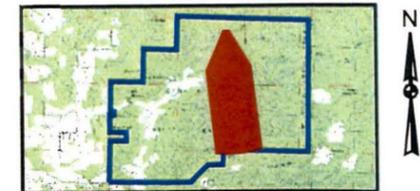
Exit sign on tree. North side of tree.

Camp Bonneville Recon 2001
Figure 5
Close Combat Range

LEGEND

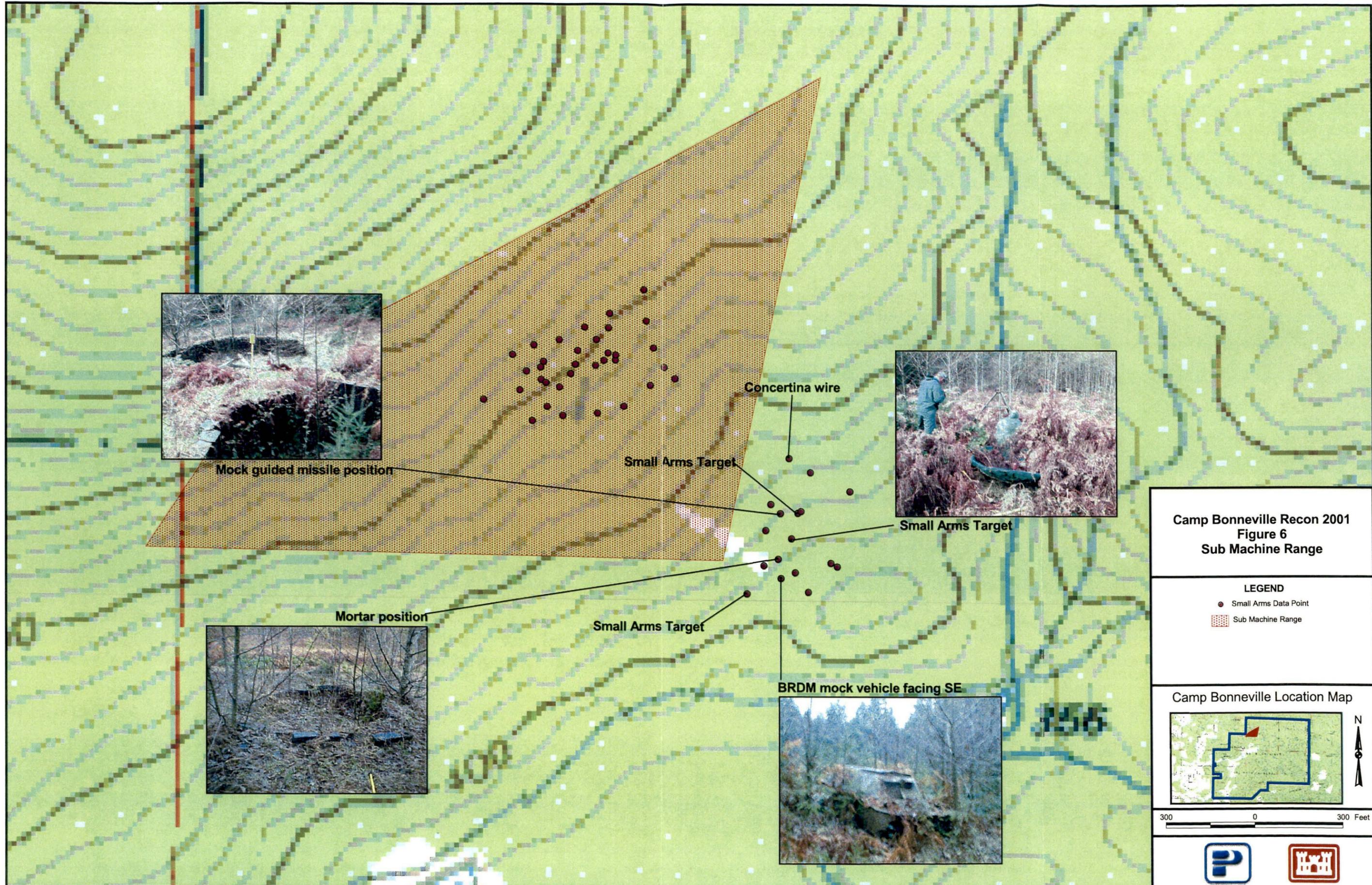
- Small Arms Data Point
- ▨ Close Combat Range

Camp Bonneville Location Map



300 0 300 Feet





Camp Bonneville Recon 2001
Figure 6
Sub Machine Range

LEGEND

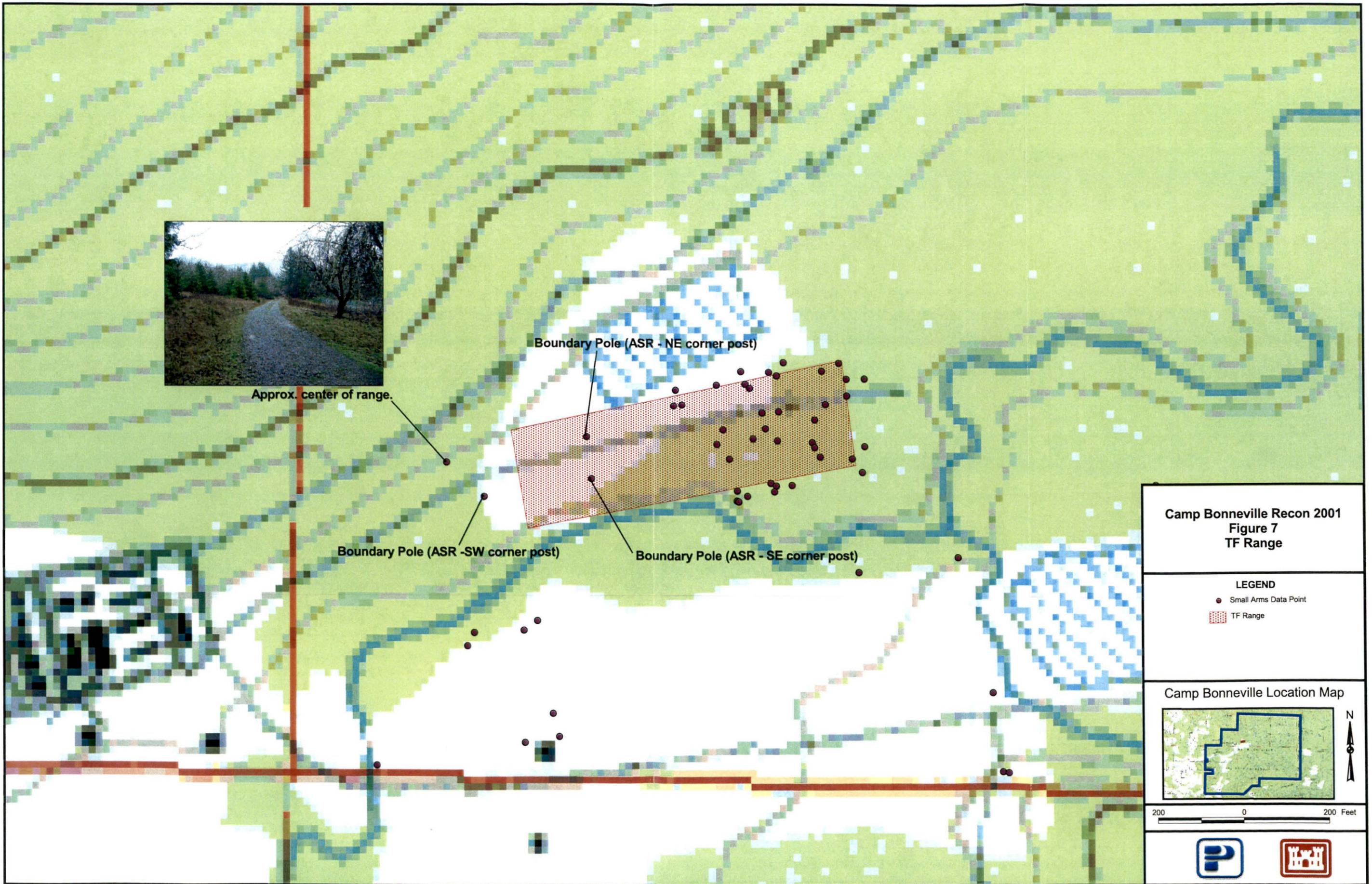
- Small Arms Data Point
- ▨ Sub Machine Range

Camp Bonneville Location Map



300 0 300 Feet





Approx. center of range.

Boundary Pole (ASR - NE corner post)

Boundary Pole (ASR -SW corner post)

Boundary Pole (ASR - SE corner post)

**Camp Bonneville Recon 2001
Figure 7
TF Range**

LEGEND

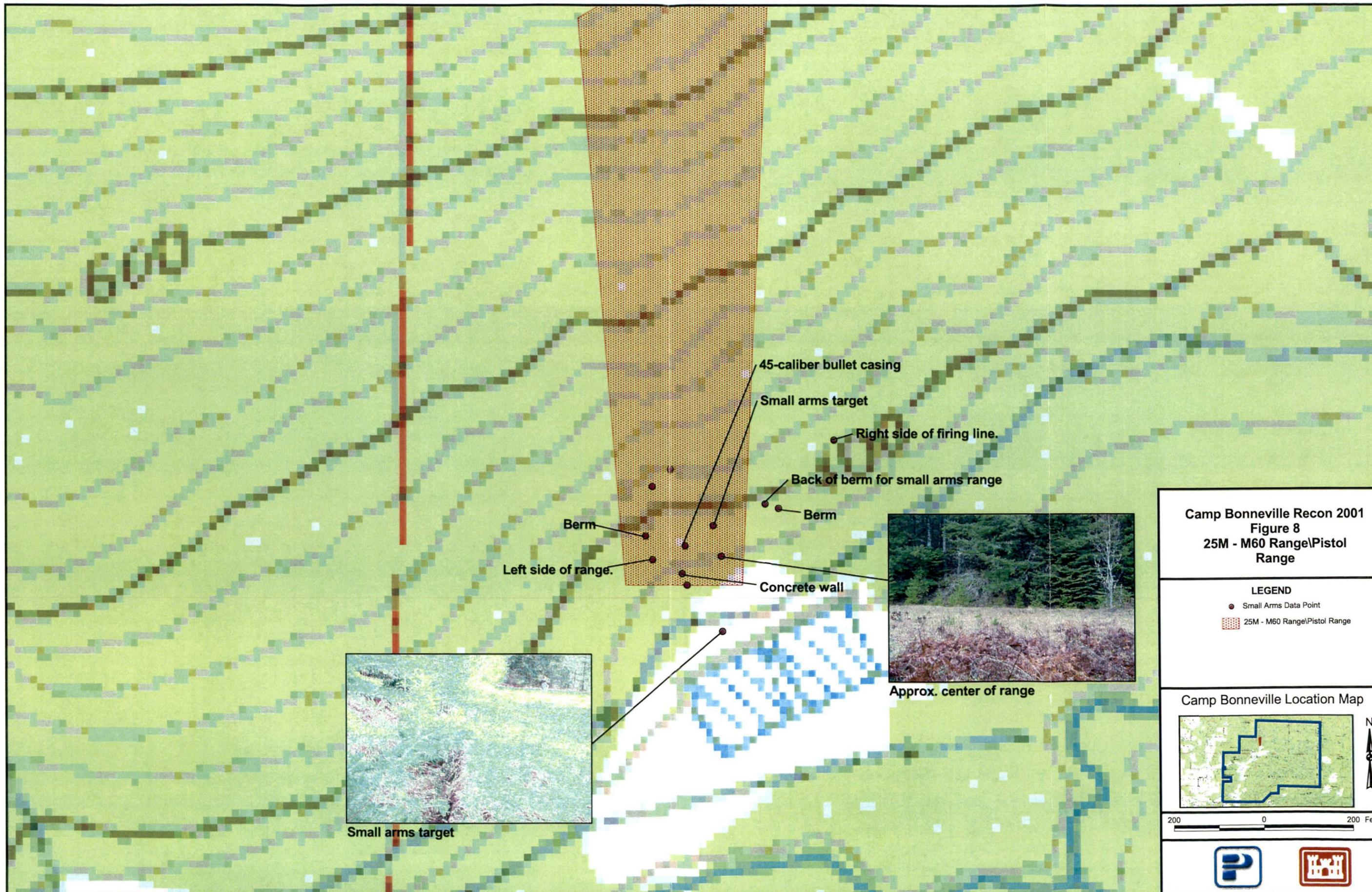
- Small Arms Data Point
- ▨ TF Range

Camp Bonneville Location Map



200 0 200 Feet





Camp Bonneville Recon 2001
 Figure 8
 25M - M60 Range\Pistol Range

LEGEND

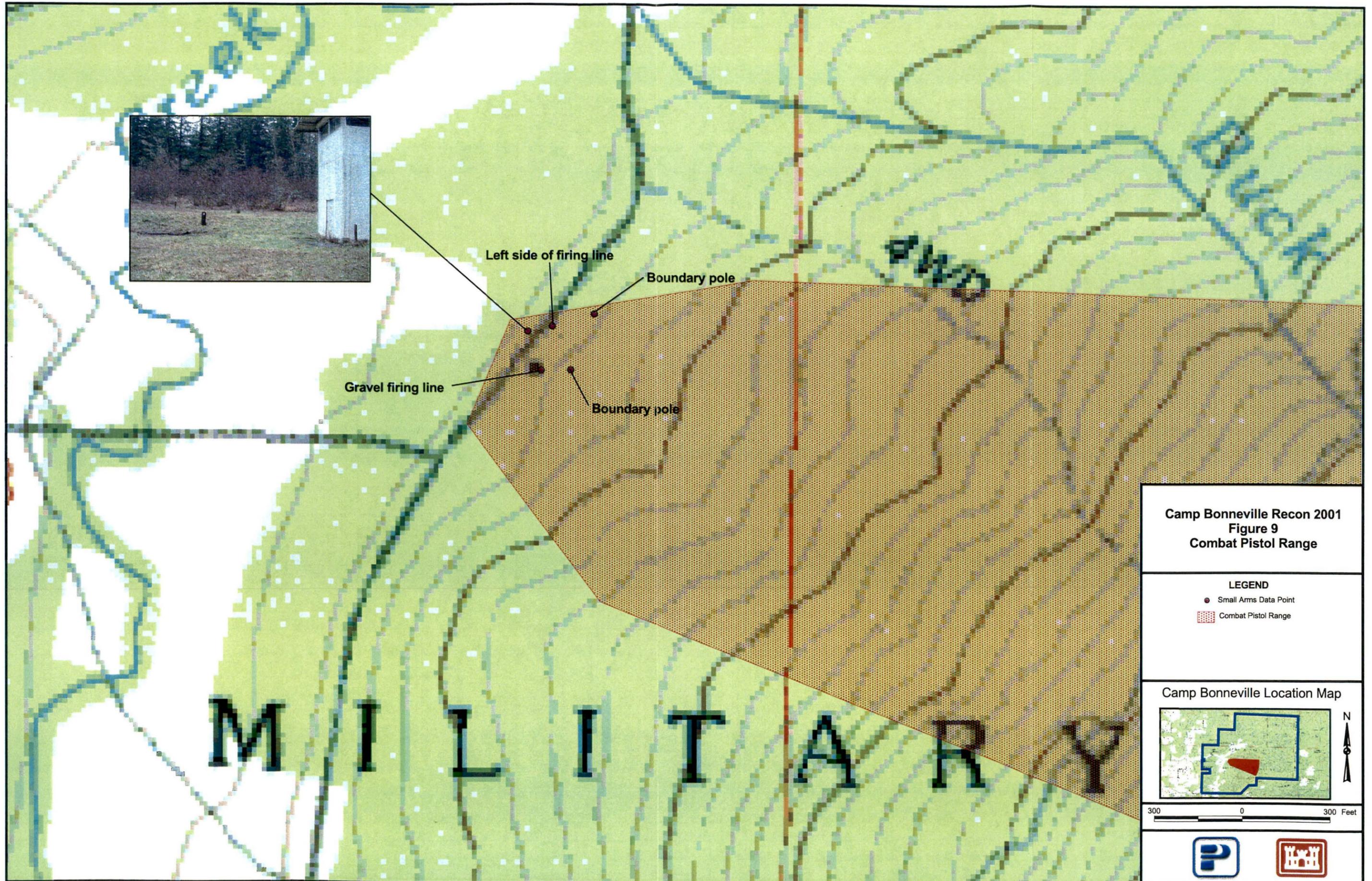
- Small Arms Data Point
- ▨ 25M - M60 Range\Pistol Range

Camp Bonneville Location Map



200 0 200 Feet



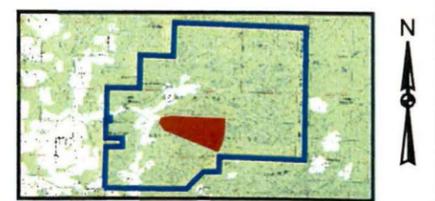


Camp Bonneville Recon 2001
 Figure 9
 Combat Pistol Range

LEGEND

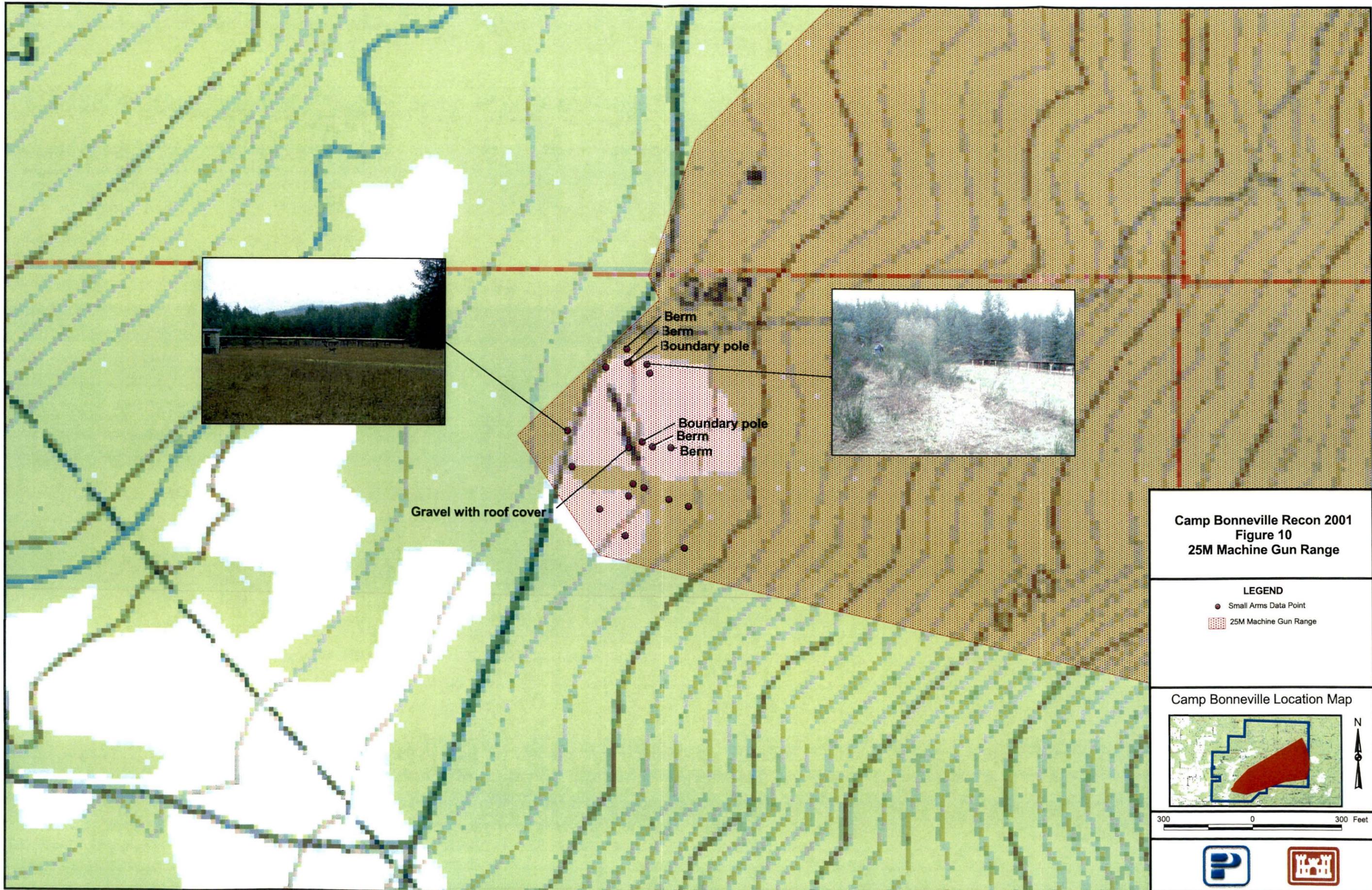
- Small Arms Data Point
- ▨ Combat Pistol Range

Camp Bonneville Location Map



300 0 300 Feet



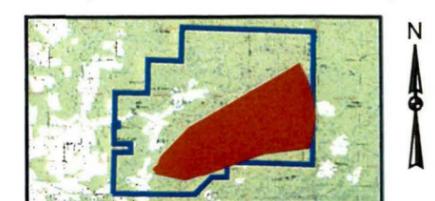


Camp Bonneville Recon 2001
 Figure 10
 25M Machine Gun Range

LEGEND

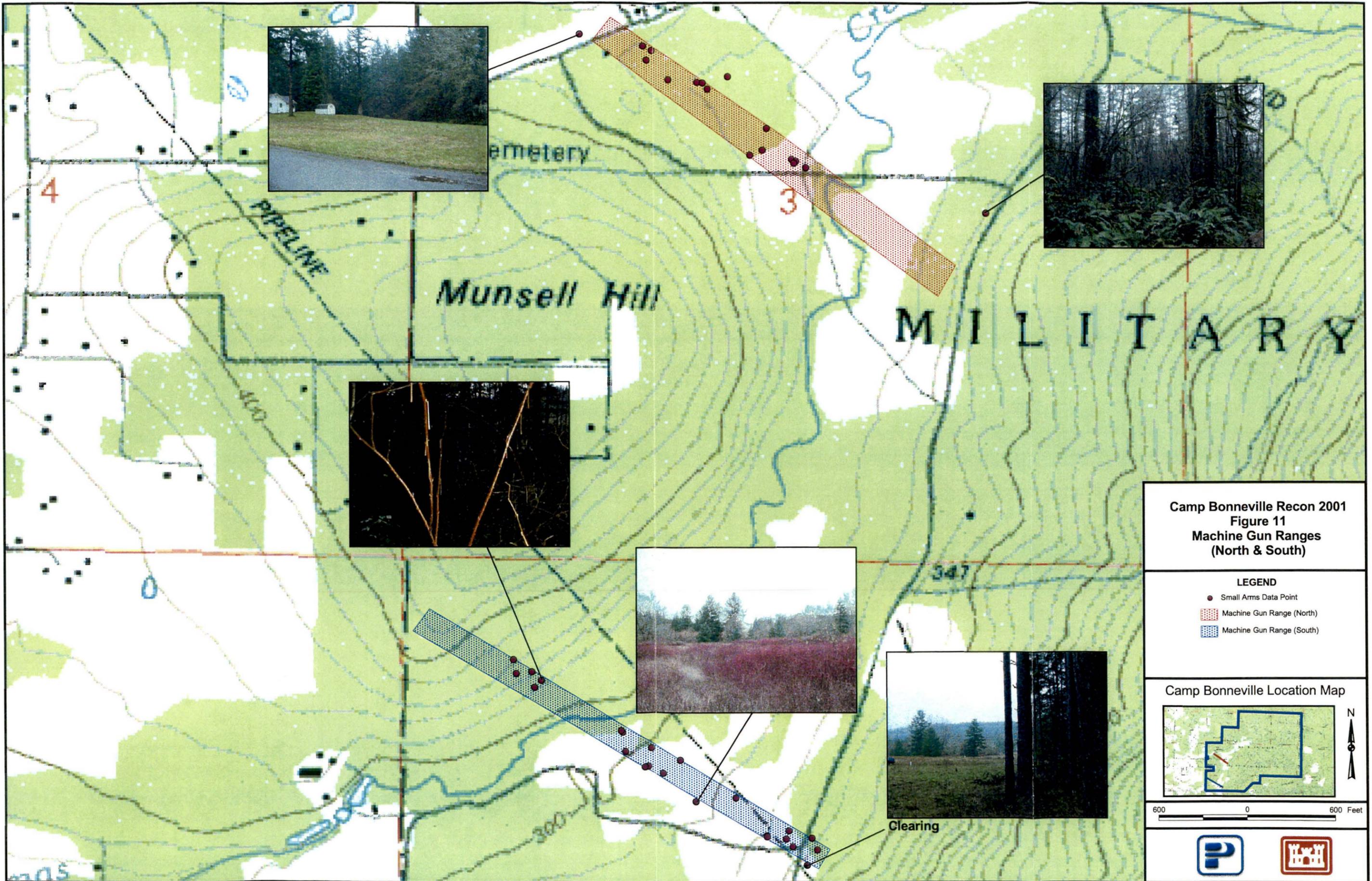
- Small Arms Data Point
- ▨ 25M Machine Gun Range

Camp Bonneville Location Map



300 0 300 Feet





Camp Bonneville Recon 2001
 Figure 11
 Machine Gun Ranges
 (North & South)

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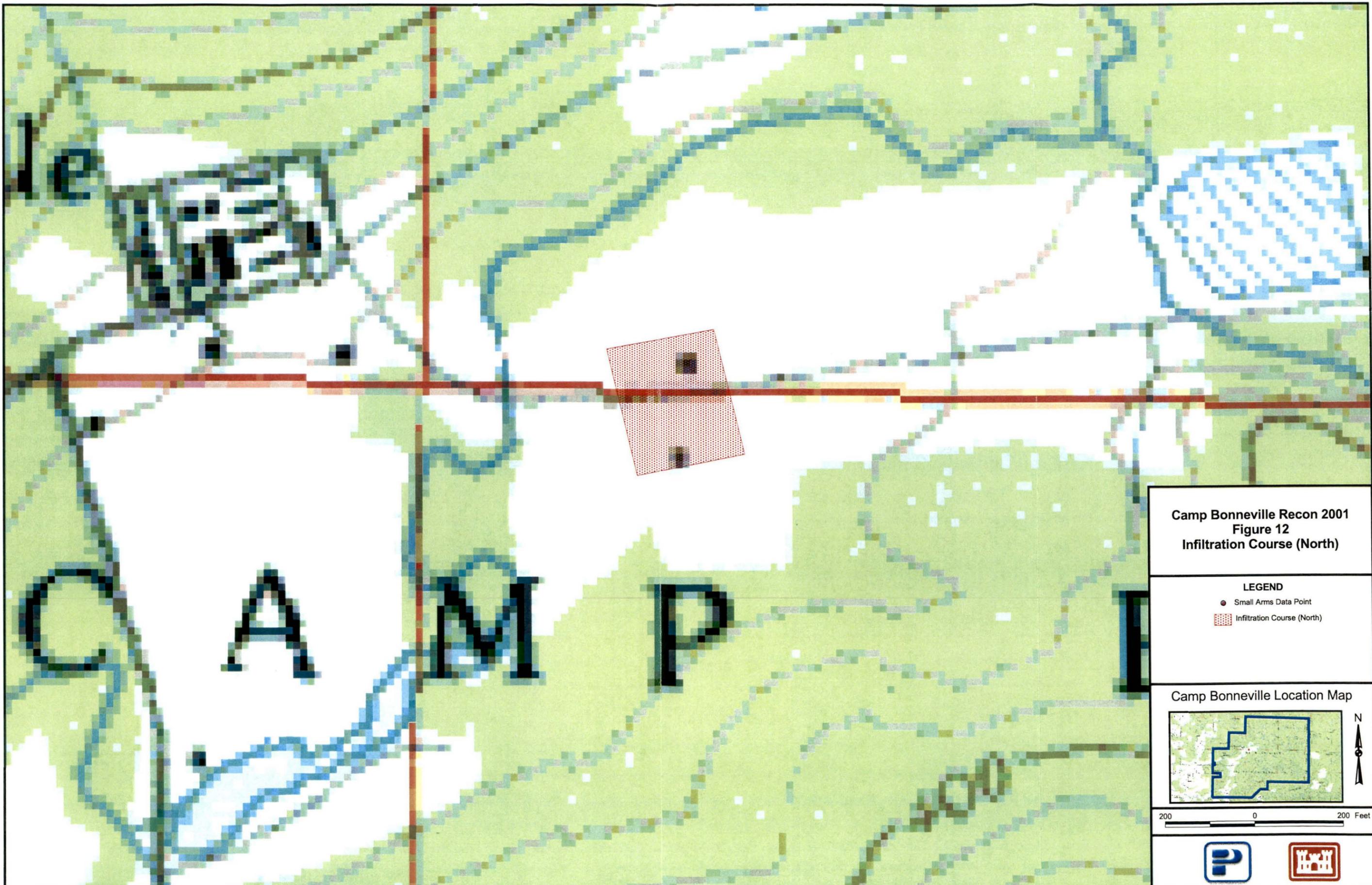
- Small Arms Data Point
- ▨ Machine Gun Range (North)
- ▨ Machine Gun Range (South)

Camp Bonneville Location Map



600 0 600 Feet





Camp Bonneville Recon 2001
 Figure 12
 Infiltration Course (North)

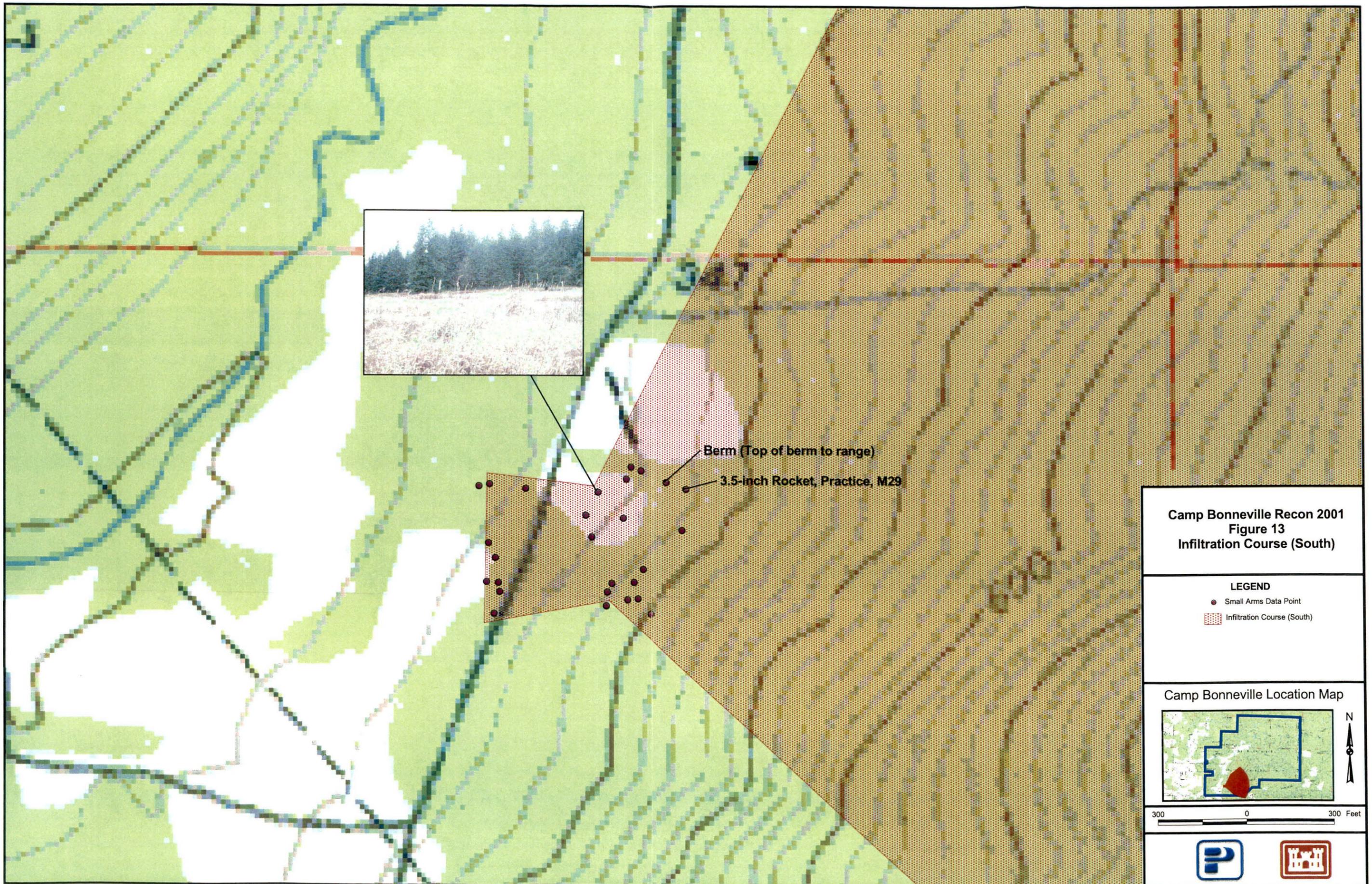
- LEGEND**
- Small Arms Data Point
 - ▨ Infiltration Course (North)

Camp Bonneville Location Map



200 0 200 Feet





Camp Bonneville Recon 2001
 Figure 13
 Infiltration Course (South)

LEGEND

- Small Arms Data Point
- ▨ Infiltration Course (South)

Camp Bonneville Location Map



300 0 300 Feet



Munsel Hill

MILLIT

Concrete Pad

Concrete Pads

A large tire about 4 ft. diameter

Small tire (2.5-ft dia.)

Observation Tower

Concrete wall, 4 by 12 ft

Concrete wall - rebar enforced 4 ft tall X 20ft long

Ten foot diameter hole

2 car tires

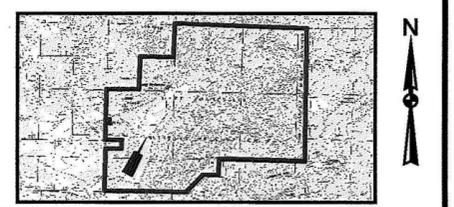
Pit 30ft dia 10-15ft depth

Camp Bonneville Recon 2001
Figure 14
M31 Sub-Caliber Ranges 1 & 2

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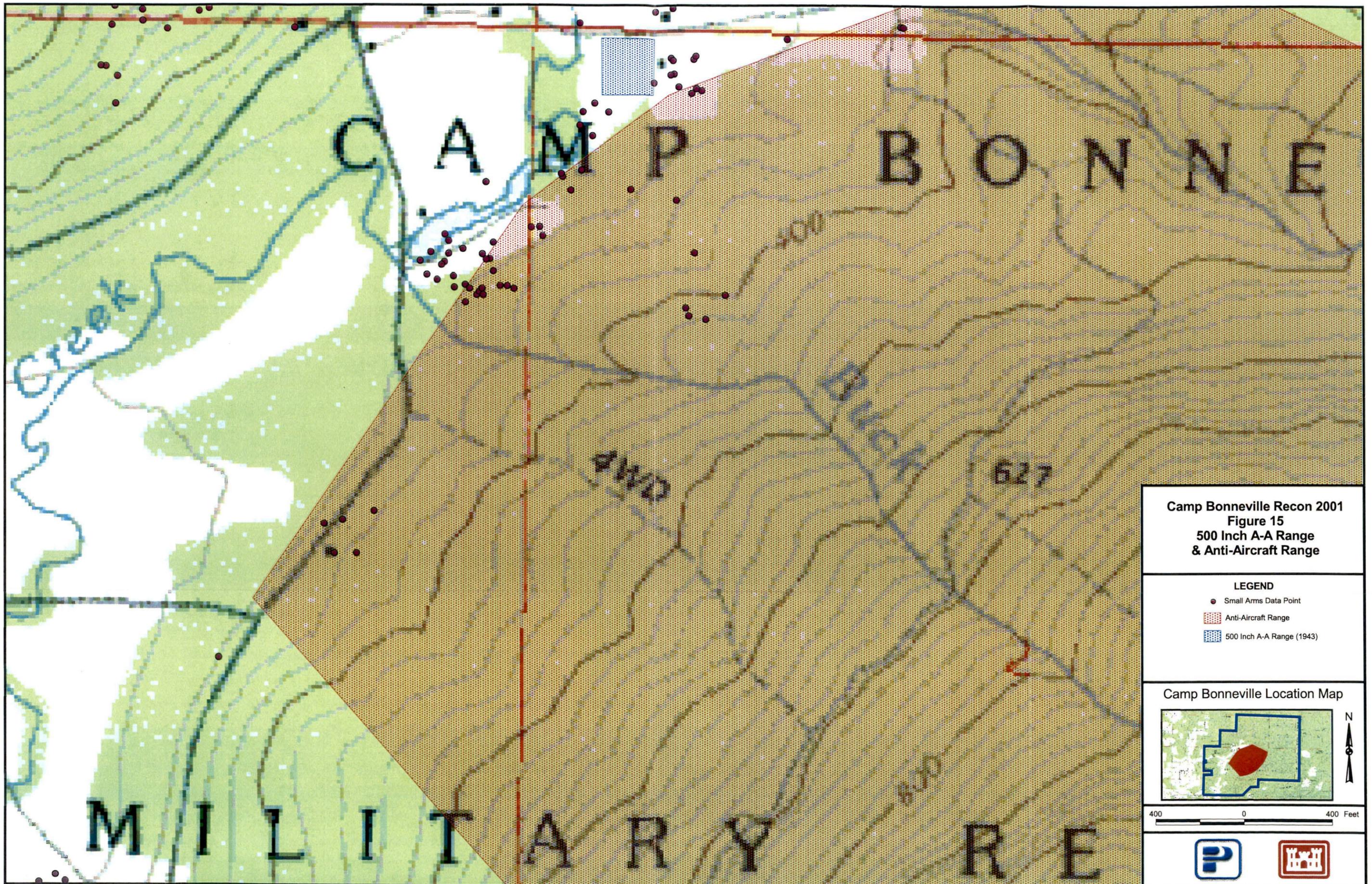
- Small Arms Data Point
- ▨ Sub-Caliber Range 1
- ▨ Sub-Caliber Range 2

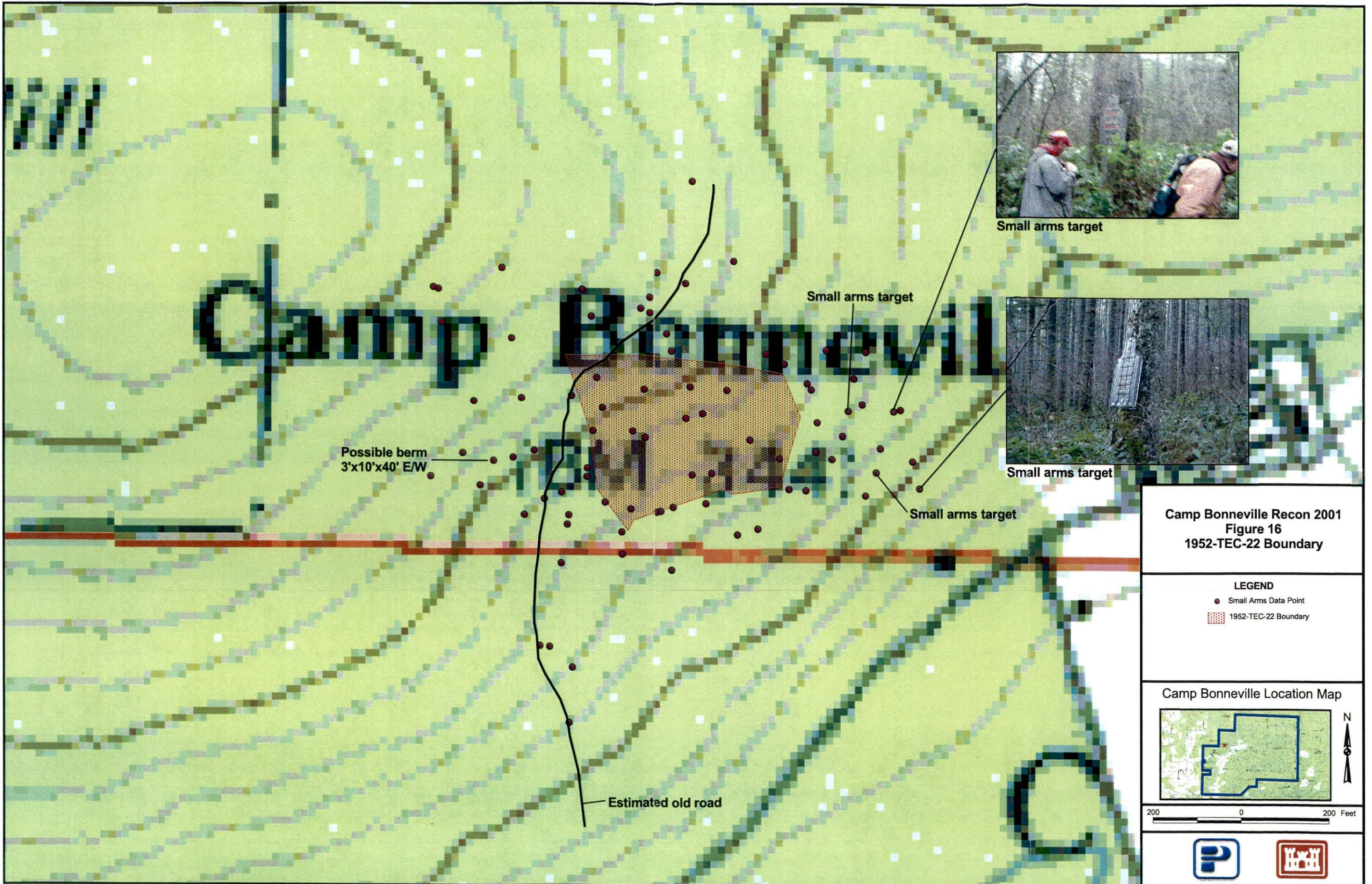
Camp Bonneville Location Map



300 0 300 Feet







Camp Bonneville Recon 2001
 Figure 16
 1952-TEC-22 Boundary

LEGEND

- Small Arms Data Point
- ▨ 1952-TEC-22 Boundary

Camp Bonneville Location Map



200 0 200 Feet

