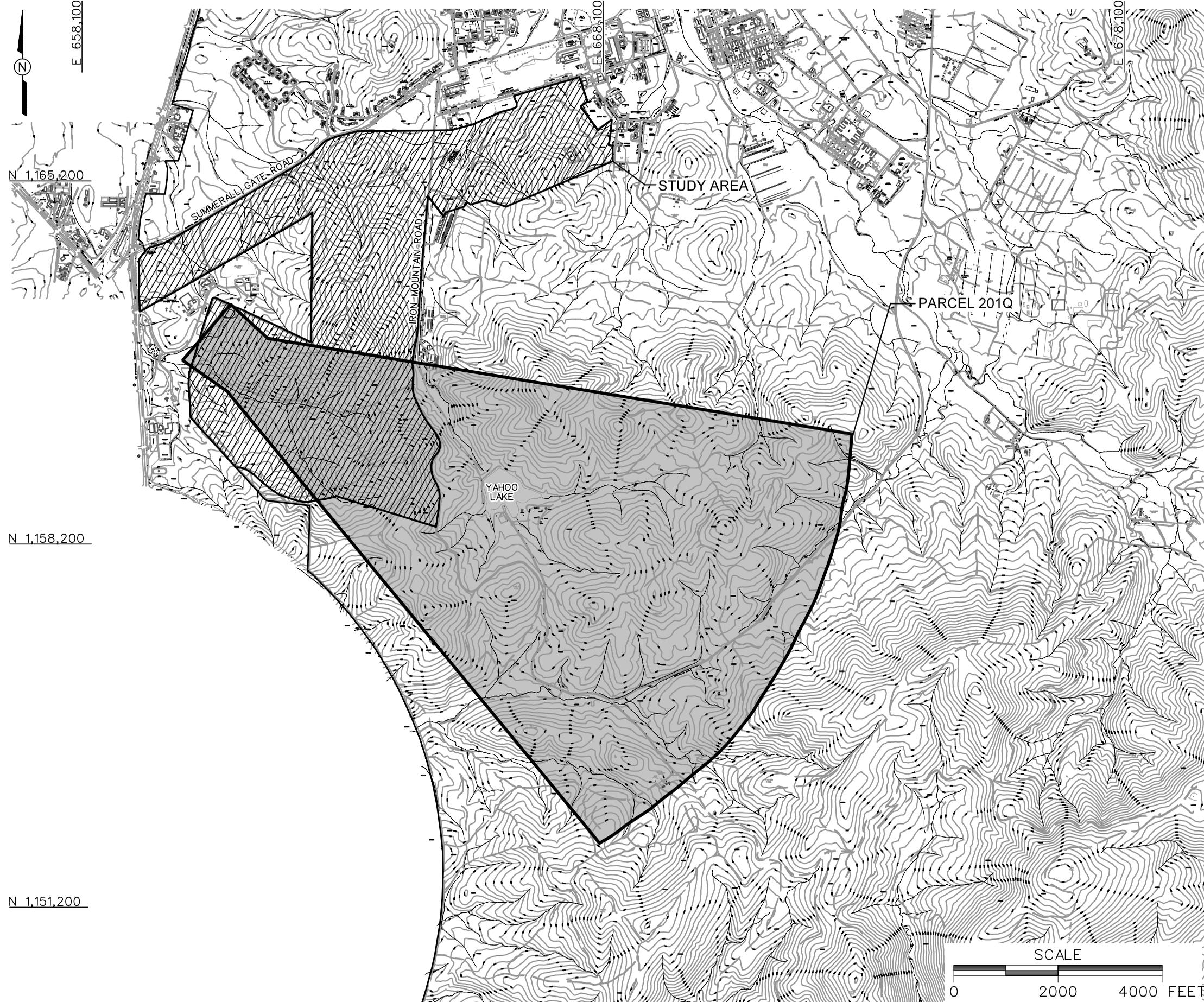


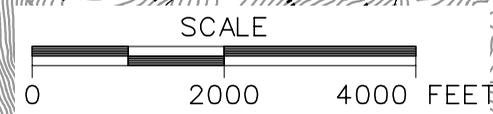
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 PROJ. NO.: 796887  
 INITIATOR: J. RAGSDALE  
 PROJ. MGR.: J. YACOB  
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 ENGR. CHCK. BY: J. RAGSDALE  
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- LEGEND**
- UNIMPROVED ROADS AND PARKING
  - PAVED ROADS AND PARKING
  - BUILDING
  - TREES / TREELINE
  - PARCEL BOUNDARY
  - BRIDGE
  - CULVERT WITH HEADWALL
  - SURFACE DRAINAGE / CREEK
  - MANMADE SURFACE DRAINAGE FEATURE
  - FENCE
  - UTILITY POLE

**FIGURE 1-19**  
**SITE MAP**  
**FORMER RIFLE RANGE**  
**PARACEL 201Q**

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 CALHOUN COUNTY, ALABAMA  
 Contract No. DACA21-96-D-0018



is insufficient detail on Figure 10 of the ASR to match the two range locations with EBS range parcels. These ranges overlap and the orientation is easterly. The following are the descriptions of the two ranges listed in the ASR, not included in discussions above.

**Washington Tank Range.** This tank range first appears on the 1958 Range Map and is listed as Tank, Tables 1, 2, and 3. The range was abandoned by 1967 (USACE, 1999a) (Figure 1-21). Use of the range is unknown, but it may have been associated with the reserve units located on Highway 21. The range orientation is to the east.

Several ranges (Parcels 114Q-X, 115Q, 116Q-X, 151Q, 200Q, 201Q, and 231Q) overlap the Washington Tank Range. The range observations, noted by IT personnel during the site walk in July 2000, have been described in the sections for the overlapping ranges listed above (Figure 1-3).

**1950 Rocket Launcher Range.** The 1950 Range Map shows a 2.36-inch rocket launcher range north of the 60-millimeter mortar range (USACE, 1999a) (Figure 1-21). The range was abandoned sometime before 1958. This range does not appear to be the same as Former Rocket Launcher Range, Parcel 229Q-X, because the locations and orientations are different. The two range locations are separated by almost a mile. The orientation of the 1950 Rocket Launcher Range, as shown on Plate 10 of the ASR, is to the east, southeast and Former Rocket Launcher Range, Parcel 229Q-X, orientation is to the south.

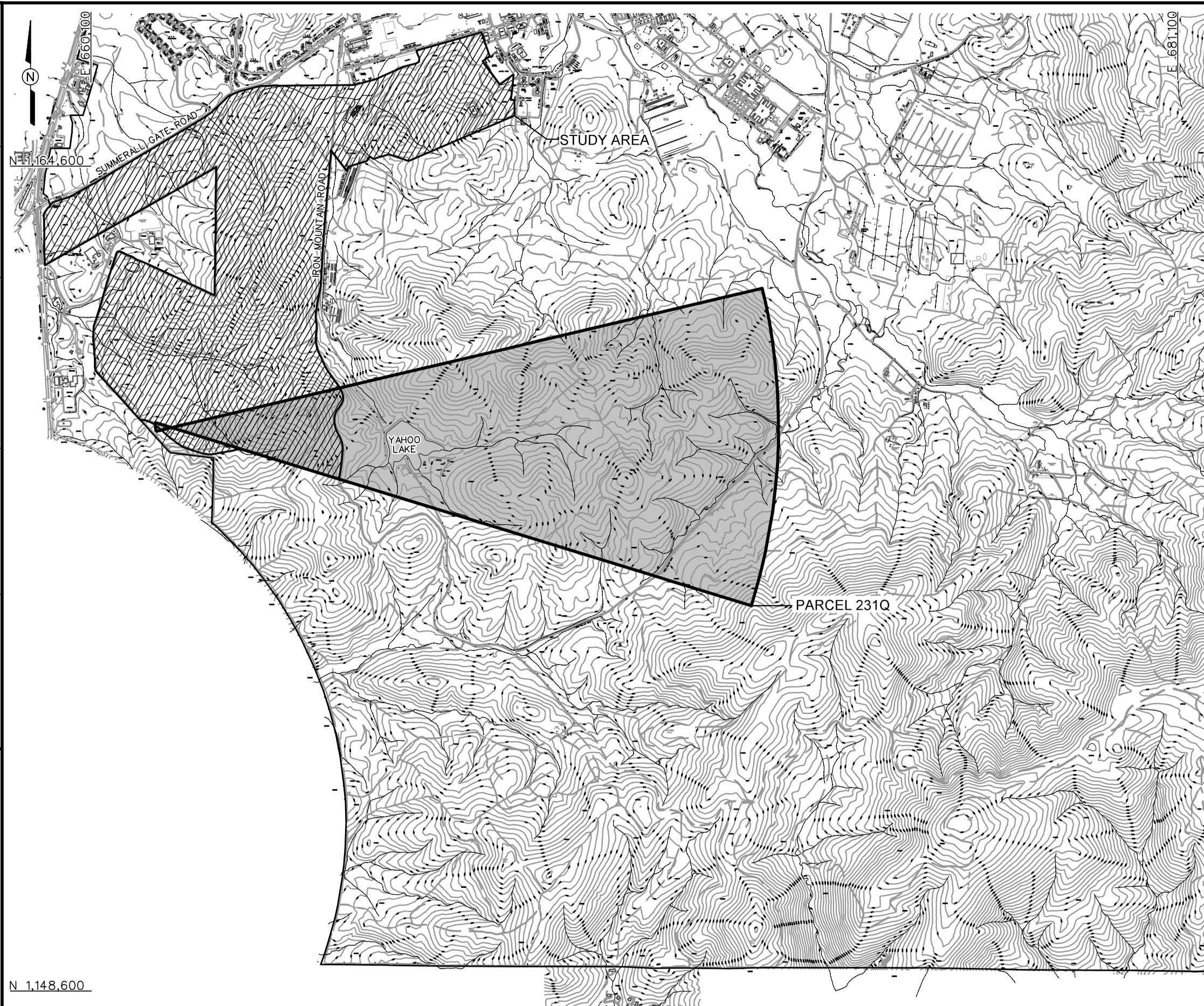
Several ranges (Parcels 114Q-X, 115Q, 116Q-X, 151Q, 200Q, 201Q, and 231Q) overlap the 1950 Rocket Launcher Range. The range observations, noted by IT personnel during the site walk in July 2000, have been described in the sections for the overlapping ranges listed above (Figure 1-3).

### **1.2.3 Soil Descriptions**

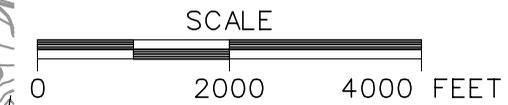
Soils at the Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, consist of primarily three soil series. These are as follows:

- The stony rough land series of soils
- The Anniston and Allen Series of soils

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 PROJ. NO.: 796887  
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 PROJ. MGR.: J. YACOB  
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 ENGR. CHCK. BY: J. RAGSDALE  
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- LEGEND**
- UNIMPROVED ROADS AND PARKING
  - PAVED ROADS AND PARKING
  - BUILDING
  - TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 5 FOOT)
  - TREES / TREELINE
  - PARCEL BOUNDARY
  - SURFACE DRAINAGE / CREEK
  - UTILITY POLE
  - FENCE
  - BERM



**FIGURE 1-20**  
**SITE MAP**  
**FORMER RANGE O.Q-2A**  
**PARCEL 231Q**

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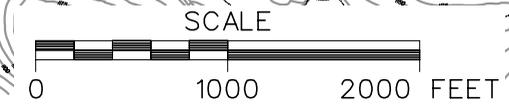
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- LEGEND**
- UNIMPROVED ROADS AND PARKING
  - PAVED ROADS AND PARKING
  - BUILDING
  - TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 5 FOOT)
  - TREES / TREELINE
  - PARCEL BOUNDARY
  - SURFACE DRAINAGE / CREEK
  - UTILITY POLE
  - FENCE
  - BERM

**FIGURE 1-21**  
**RANGES WITHOUT PARCEL NUMBERS**  
**WASHINGTON TANK RANGE AND**  
**1950 ROCKET LAUNCHER RANGE**

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 CALHOUN COUNTY, ALABAMA  
 Contract No. DACA21-96-D-0018



SOURCE: U.S. ARMY CORPS OF ENGINEERS (USACE), 1999, "ARCHIVES SEARCH REPORT, MAPS, FORT McCLELLAN, ANNISTON, ALABAMA", JULY.

- The Philo and Stendal Series of soils.

The soils of the higher elevations of Iron Mountain, Wheeler Hill, Blue Mountain, Reynolds Hill and Cable Hill consist of the stony rough land, sandstone (Ss) series (U.S. Department of Agriculture [USDA], 1961). This miscellaneous land type consists of rough mountainous area with many outcrops of sandstone and quartzite bedrock, loose rock fragments, and scattered patches of sandy soil material. It also includes rock escarpments on higher parts of the mountains where quartzite of the Weisner Formation is common. Slopes are generally more than 25 percent. The soil material is generally shallow over bedrock. Depth to bedrock is typically less than 3 feet. Depth to groundwater is usually more than 20 feet.

Next lower in elevation is the Anniston and Allen Series of soils. The Anniston and Allen Series consist of four mapping units depending on the slope of the terrain in the area. These mapping units are as follows:

- Anniston and Allen gravelly loams, 2 to 6 percent slopes, eroded (AcB2)
- Anniston and Allen gravelly loams, 6 to 10 percent slopes, eroded (AcC2)
- Anniston and Allen gravelly loams, 10 to 15 percent slopes, eroded (AcD2)
- Anniston and Allen gravelly loams, 15 to 25 percent slopes, eroded (AcE2).

The Anniston and Allen Series of soils consist of strongly acid, deep well drained soils that have developed in old local alluvium. The parent material washed from the adjacent higher lying Linker, Muskingum, Enders, and Montevallo soils, which developed from weathered sandstone, shale, and quartzite. The surface sandstone and quartzite gravel and cobbles, as much as 8 inches in diameter, are on the surface and throughout the soil. The depth to bedrock at these sites ranges from 2 feet to greater than 10 feet. The depth to the water table is likely greater than 20 feet. The typical soil description is 2 to 10 feet of well-drained stony loam to clay loam over stratified local alluvium, limestone or shale bedrock. Shallow groundwater direction at the site is likely controlled by topography.

This mapping unit consists of friable soils that have developed in old alluvium on foot slopes and along the base of mountains. The color of the surface soil ranges from very dark brown and dark brown to reddish brown and dark reddish brown. The texture of subsoil ranges from light clay loam to clay or silty clay loam. The alluvium ranges in thickness from 2 to more than 8 feet. Infiltration and runoff are medium, permeability is moderate, and the capacity for available moisture is high. Organic matter is moderately low.

Soils that fall into the Anniston and Allen gravelly loams, 2 to 6 percent slopes, eroded (AcB2) consist of friable soils that have developed in old alluvium on foot slopes and along the base of mountains (USDA, 1961). The color of the surface soil ranges from very dark brown and dark brown to reddish brown and dark reddish brown. The texture of subsoil ranges from light clay loam to clay or silty clay loam. The alluvium ranges in thickness from 2 feet to more than 8 feet. Infiltration and runoff are medium, permeability is moderate, and the capacity for available moisture is high. Organic matter is moderately low.

Soils that fall into the Anniston and Allen gravelly loams, 6 to 10 percent slopes, eroded (AcC2) consist of friable soils that have developed in old alluvium on foot slopes and along the base of mountains (USDA, 1961). Severely eroded places maybe more common in this unit on the surface with a few gullies in places. The color of the surface soil ranges from very dark brown and dark brown to reddish brown and dark reddish brown. The texture of subsoil ranges from light clay loam to clay or silty clay loam. The alluvium ranges in thickness from 2 to more than 8 feet. Infiltration and runoff are medium, permeability is moderate, and the capacity for available moisture is high. Organic matter is moderately low. Some severely eroded areas may be common on the surface for the AcC2 soil type, as well as a few shallow gullies.

Soils that fall into the Anniston and Allen gravelly loams, 10 to 15 percent slopes, eroded (AcD2) consists of friable soils that have developed in old alluvium on foot slopes and along the base of mountains (USDA, 1961). These soils have stronger slopes, a thinner solum, and more rapid runoff than the Anniston and Allen gravelly loams, 6 to 10 percent slopes, eroded (AcC2). The color of the surface soil ranges from reddish-brown to dark reddish brown gravelly clay loam. The texture of subsoil ranges from light clay loam to clay or silty clay loam. The alluvium ranges in thickness from 2 to more than 8 feet. Infiltration is slow and the capacity for available moisture is low.

Soils that fall into the Anniston and Allen gravelly loams, 15 to 25 percent slopes, eroded (AcE2) consists of surface soil that is very dark brown to very dark grayish-brown gravelly loam, 6 to 8 inches thick (USDA, 1961). These soils have stronger slopes, a thinner solum and more rapid runoff than Anniston and Allen gravelly loams, 10 to 15 percent slopes, eroded (AcD2) and a low capacity to hold water. In many places, severely eroded patches and shallow gullies are common. The plow layer is reddish-brown to dark reddish-brown gravelly clay loam.

The third series of soils found at the Ranges West of Iron Mountain Road is the Philo and Stendal Series of soils. The Philo Series consists of strongly acid, moderately well-drained soils that are developing in local and general alluvium. The parent material washed mainly from sandstone and shale, but some of it originated from limestone. Philo soils occur on first bottoms along most streams in the northern part of Calhoun County. The surface soil is very dark grayish-brown to dark-brown fine sandy loam, and the subsoil is dark-brown, slightly mottled fine sandy loam.

The Stendal Series consists of strongly acid, somewhat poorly drained soils that are developing in general alluvium that washed chiefly from sandstone and shale. Some of the material originated from limestone. These soils occur on first bottoms along most streams in the northern part of Calhoun County. The surface soil is a dark grayish-brown fine sandy loam and the subsurface soil is a dark-brown, mottled fine sandy loam.

Soils that fall into the Philo and Stendal soils local alluvium, 0 to 2 percent slopes (PkA) are found only in the northern section of the Ranges West of Iron Mountain Road along the large stream that flows north under Summerall Gate Road (USDA, 1961). This mapping unit is on foot slopes along and at the heads of small drainages or draws.

### **1.3 Scope of Work**

The scope of work for activities associated with the SI at the Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, as specified by the statement of work (USACE, 1997 and 1999b), includes the following tasks:

- Develop the SFSP attachment.
- Develop the SSHP attachment.
- Develop the site-specific UXO safety plan attachment.
- Conduct a surface and near-surface UXO survey for the purpose of UXO avoidance over all areas to be included in the supplemental sampling effort.
- Provide downhole UXO support for the purpose of UXO avoidance for all intrusive drilling to determine buried downhole hazards.

- Collect 101 surface soil samples, 101 subsurface soil samples, 76 groundwater samples, 22 surface water samples, and 22 sediment samples to determine whether potential site-specific chemicals (PSSC) are present at the Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, and to provide data useful for supporting any future planned corrective measures and closure activities.
- Samples will be analyzed for the parameters listed in Section 4.5.

Several of the Ranges West of Iron Mountain Road fall within the “Possible Explosive Ordnance Impact Areas” shown on Plate 10 of the *Archives Search Report, Maps* (USACE, 1999a), and therefore, UXO surface sweeps and downhole surveys of soil borings will be required to support field activities at the Ranges West of Iron Mountain Road. The surface sweeps and downhole surveys will be conducted to identify anomalies for the purpose of UXO avoidance. The site-specific UXO safety plan will be used to support hazardous toxic and radiologic waste (HTRW) and construction activities at the Ranges West of Iron Mountain Road should incidental ordnance, explosives, and UXO be encountered and require avoidance or disposal.

At completion of the field activities and sample analyses, draft and final SI summary reports will be prepared to summarize the results of the activities, to evaluate the absence or presence of PSSCs at these sites, and to recommend further actions, if appropriate. SI sampling reports will be prepared in accordance with current U.S. Environmental Protection Agency (EPA), Region IV and the Alabama Department of Environmental Management (ADEM) guidelines.