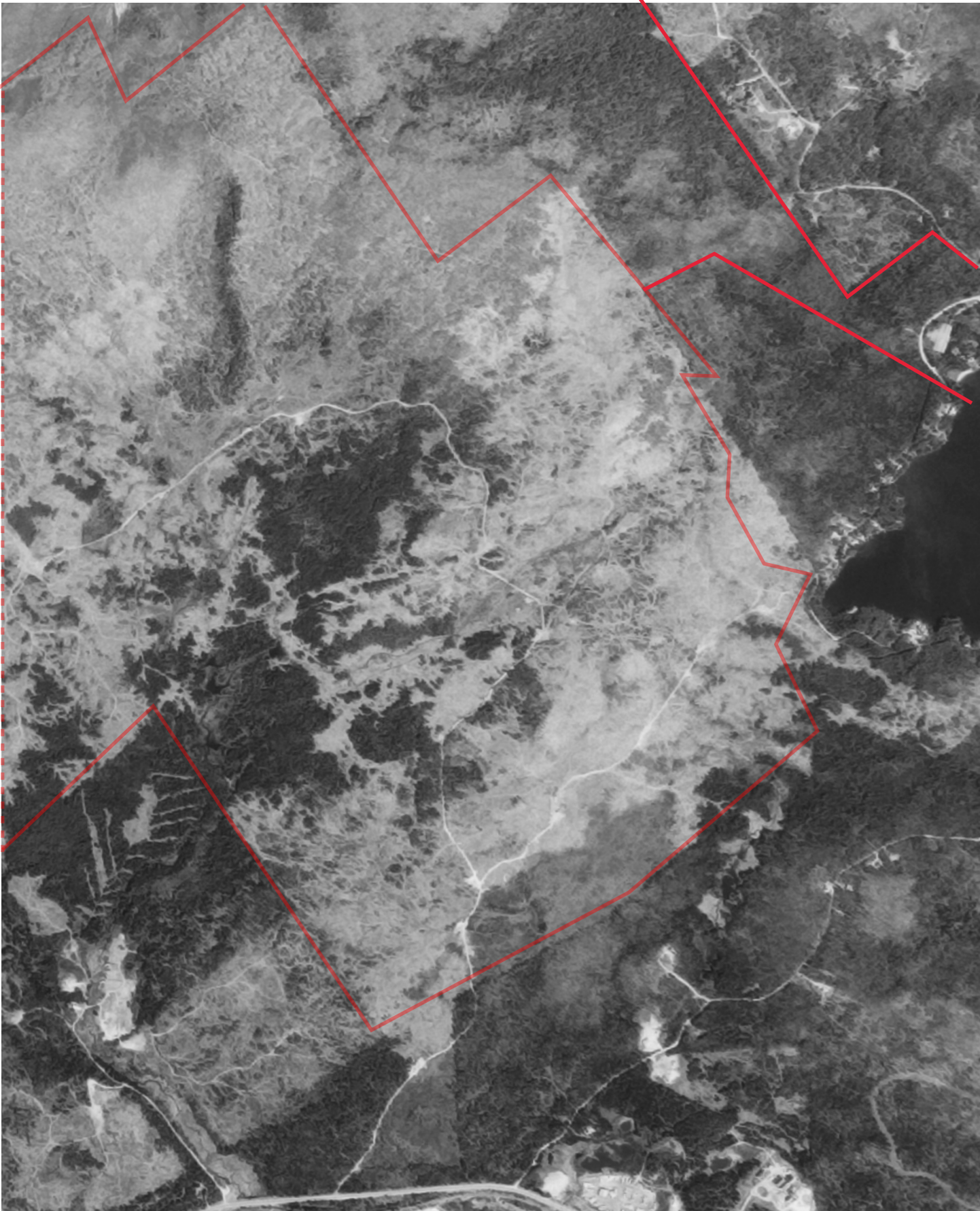


**FLIGHT YEAR:**  
1993

**South Portion**

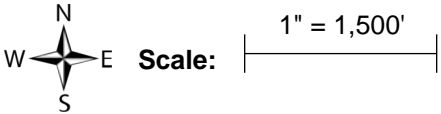


**Scale:** |-----|  
1" = 1,500'



**FLIGHT YEAR:**  
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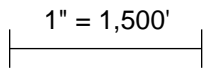
**North Portion**


Scale:  1" = 1,500'



**FLIGHT YEAR:**  
1999


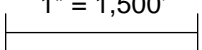
**South Portion**

Scale:  1" = 1,500'



**FLIGHT YEAR:**  
2008


**North Portion**

W  E **Scale:**  1" = 1,500'



**FLIGHT YEAR:**  
2008

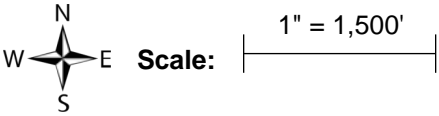
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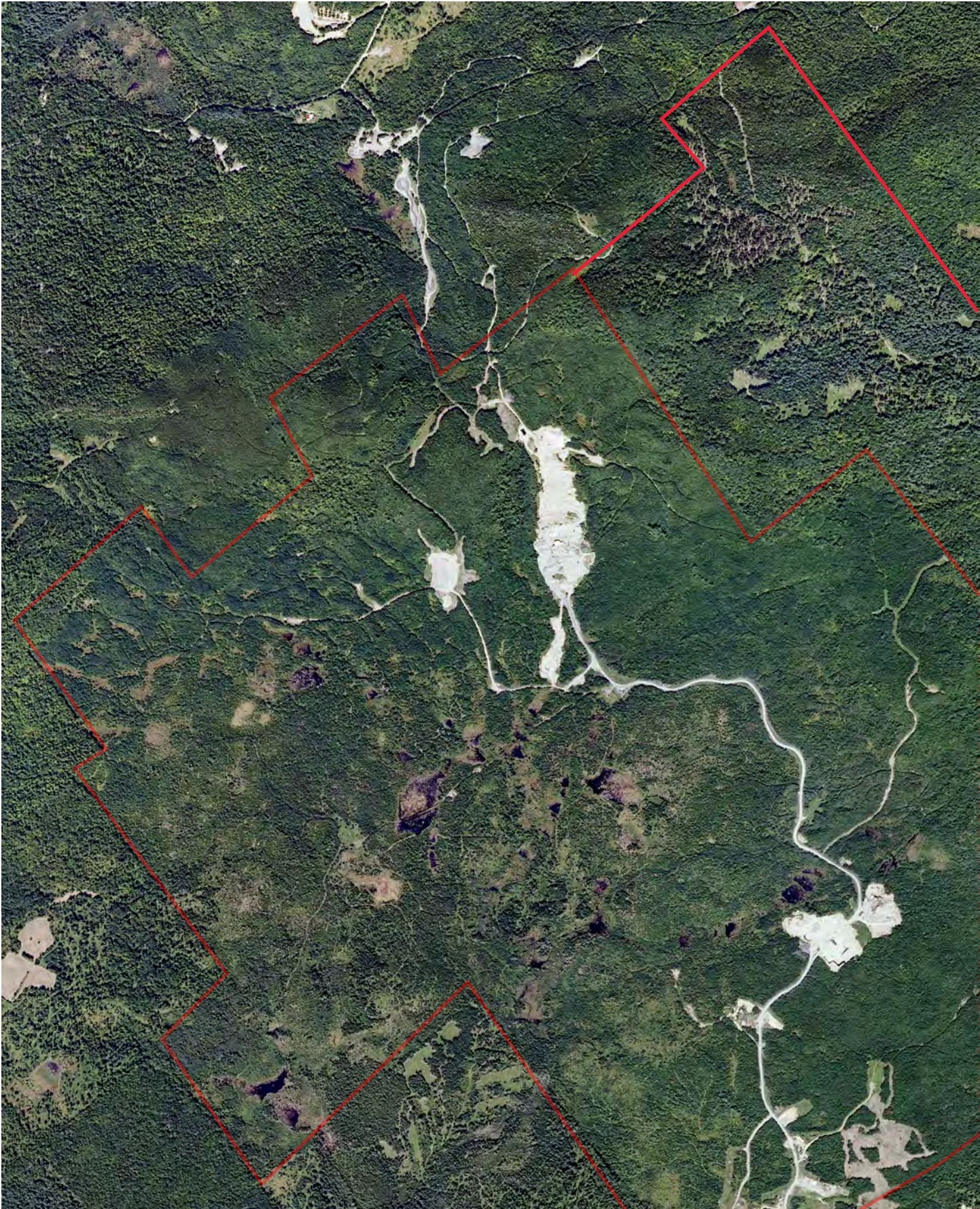
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**FLIGHT YEAR:**  
2009


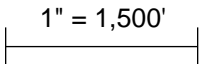
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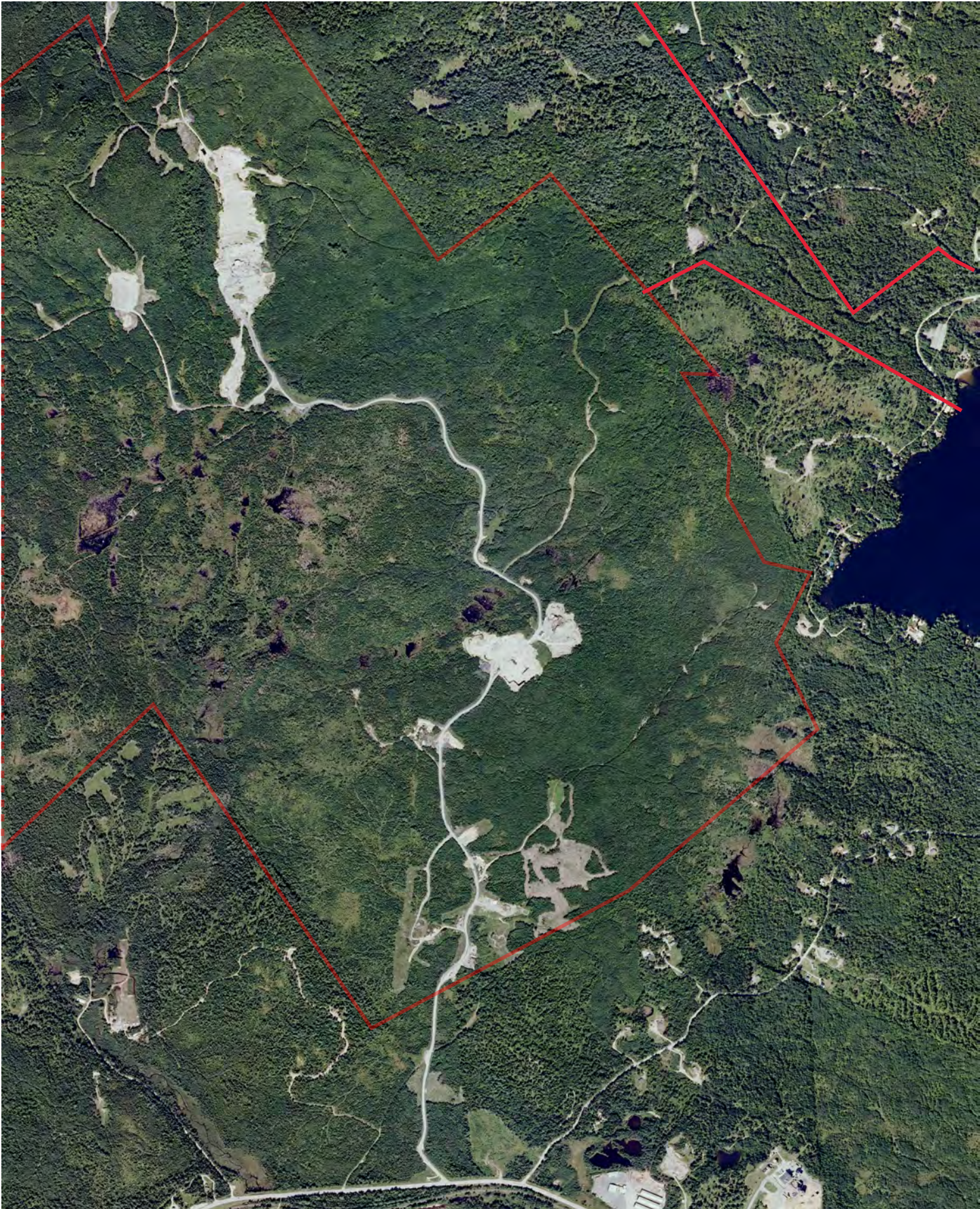
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**FLIGHT YEAR:**  
2009


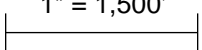
**South Portion**

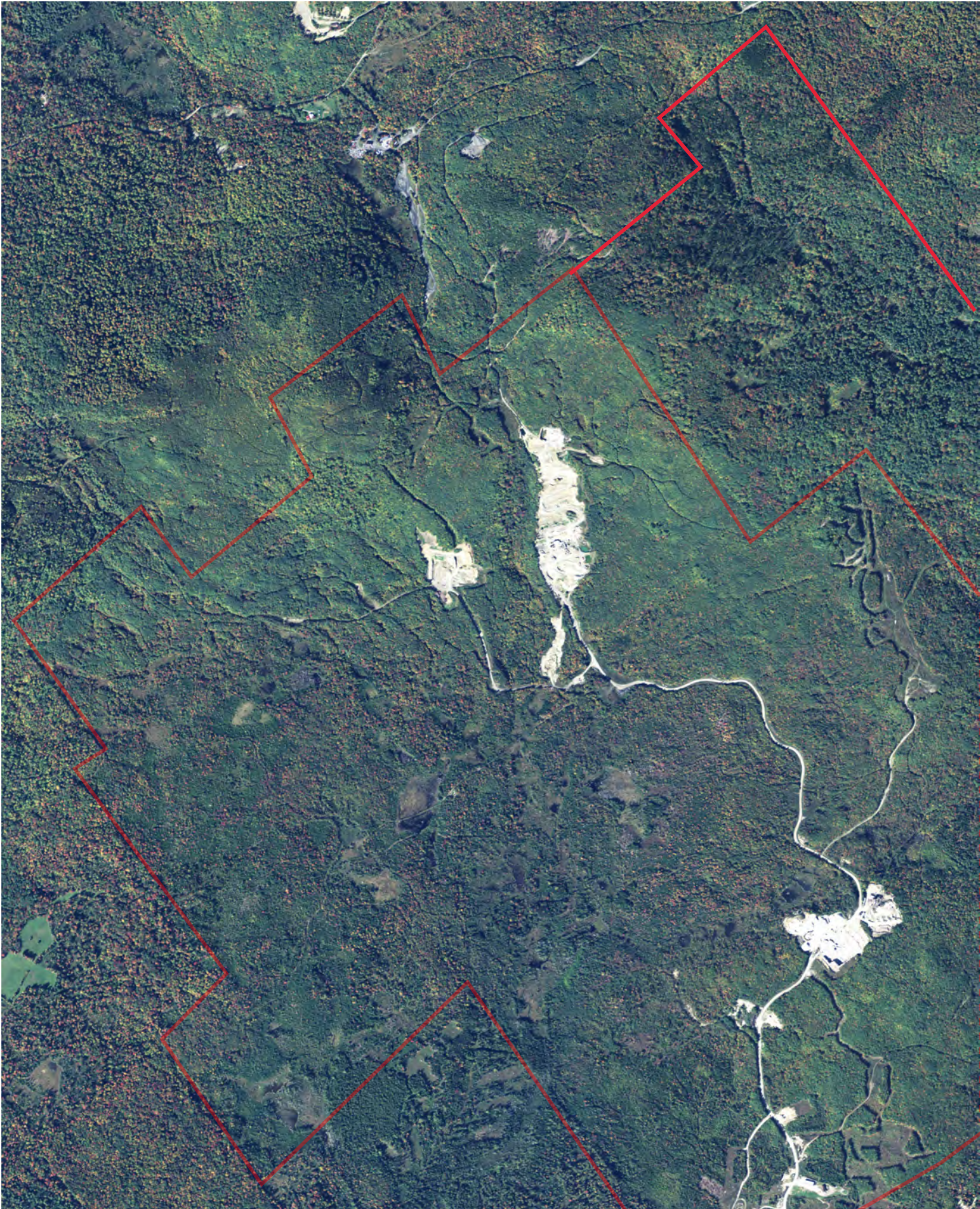
 **Scale:**  1" = 1,500'



**FLIGHT YEAR:**  
2011

**North Portion**


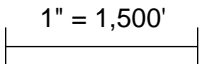
W  E **Scale:**  1" = 1,500'

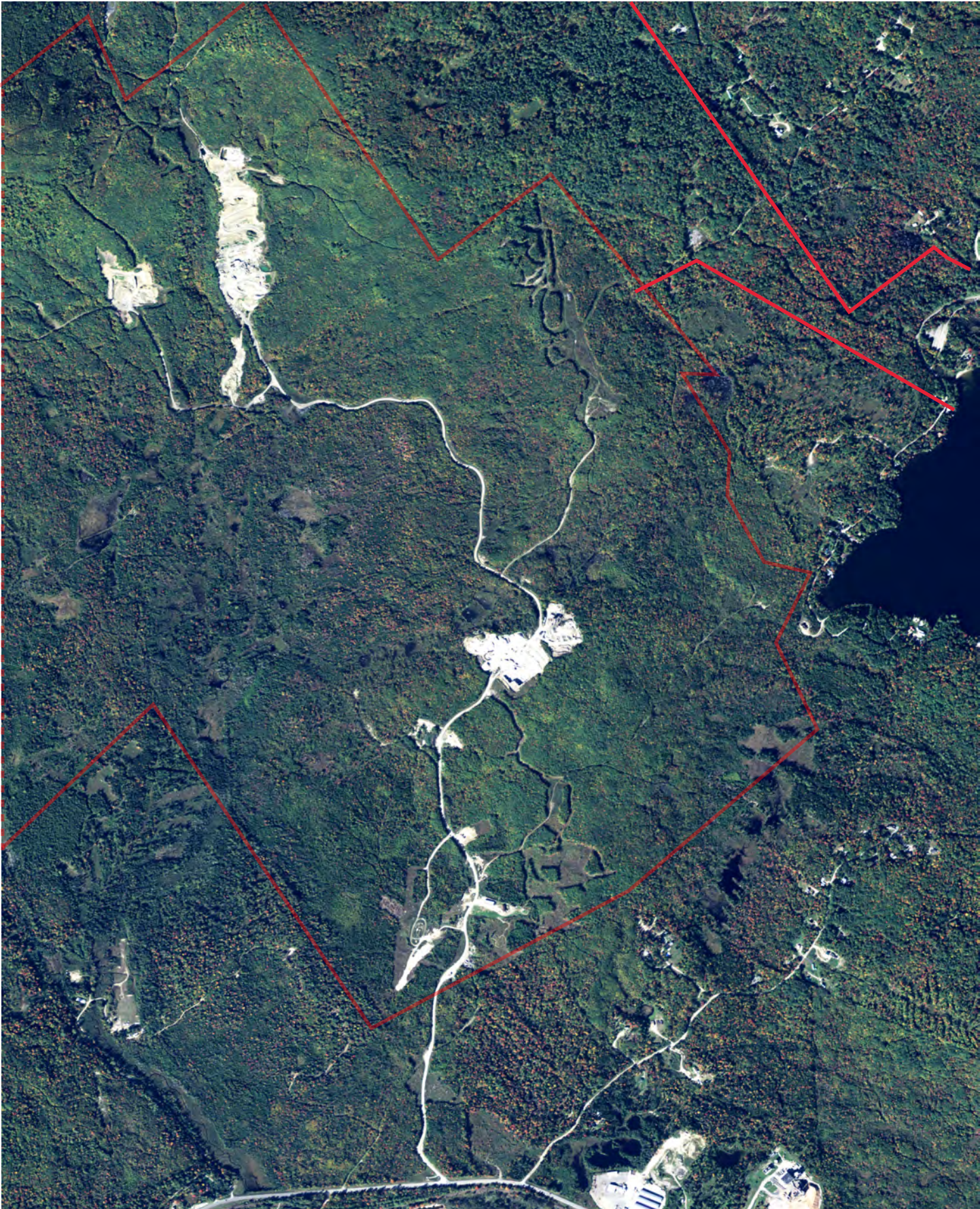




**FLIGHT YEAR:**  
2011


**South Portion**

 **Scale:**  1" = 1,500'



**FLIGHT YEAR:**  
2012


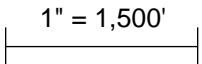
**North Portion**

W  E **Scale:** |-----| 1" = 1,500'



**FLIGHT YEAR:**  
2012


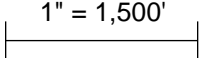
**South Portion**

 **Scale:**  1" = 1,500'



**FLIGHT YEAR:**  
2014


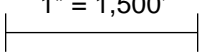
**North Portion**

 **Scale:**  1" = 1,500'



**FLIGHT YEAR:**  
2014

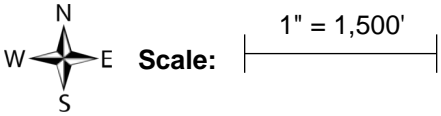
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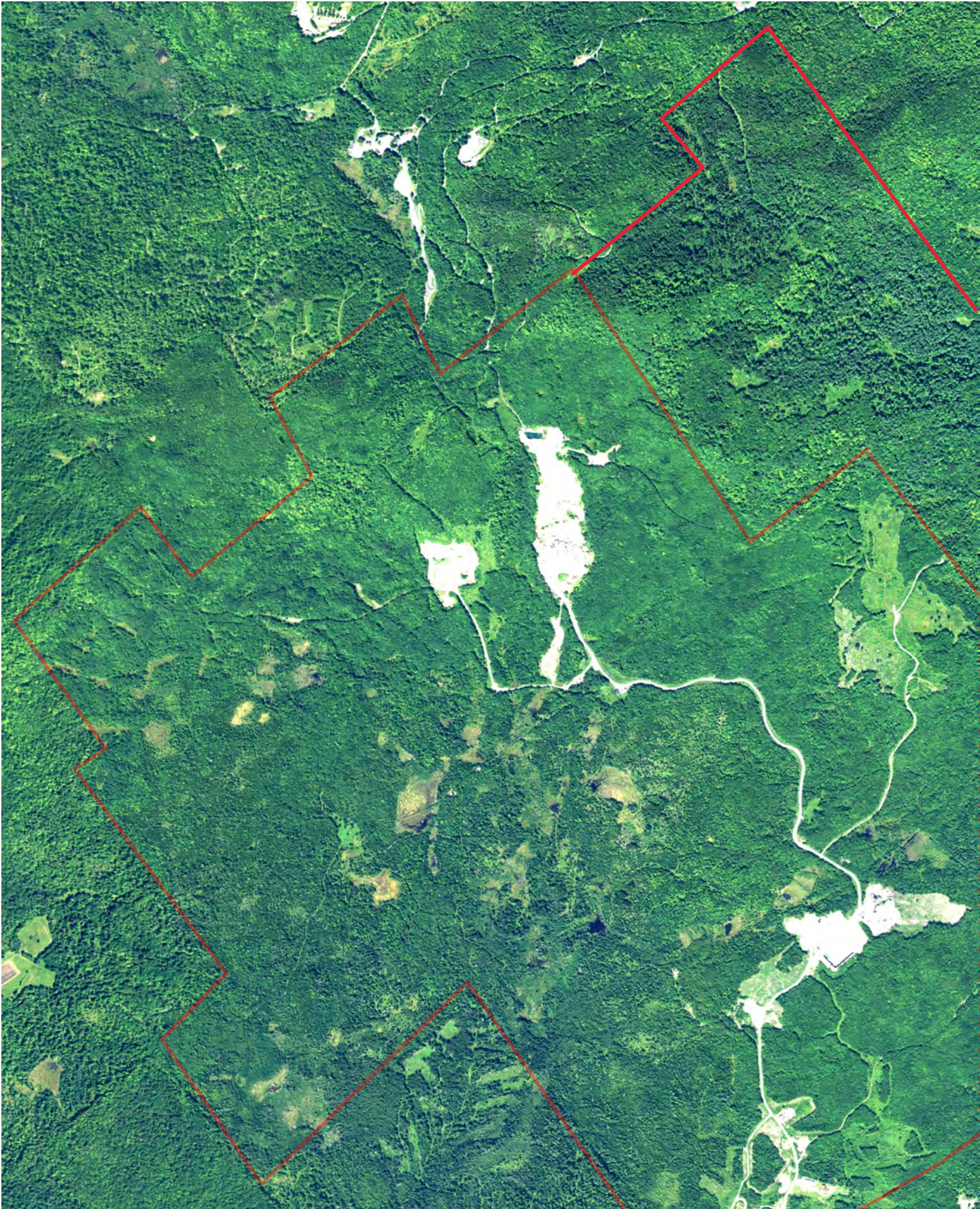
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**FLIGHT YEAR:**  
2016


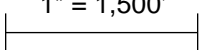
**North Portion**

Scale:  1" = 1,500'



**FLIGHT YEAR:**  
2016

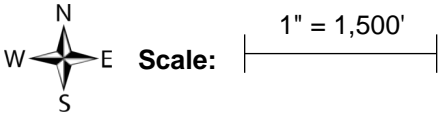
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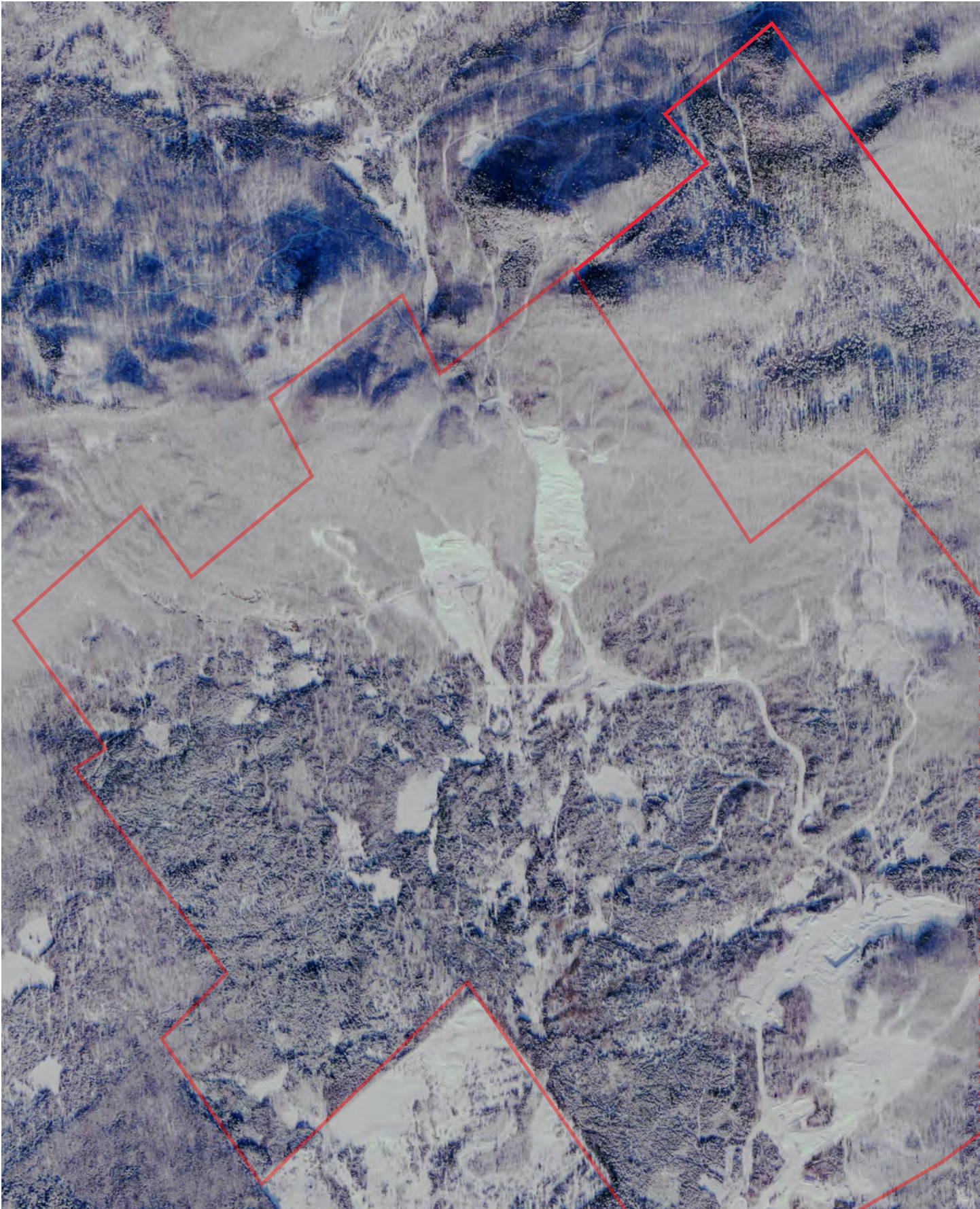
 **Scale:**  1" = 1,500'



**FLIGHT YEAR:**  
2019

**North Portion**

Scale:  1" = 1,500'



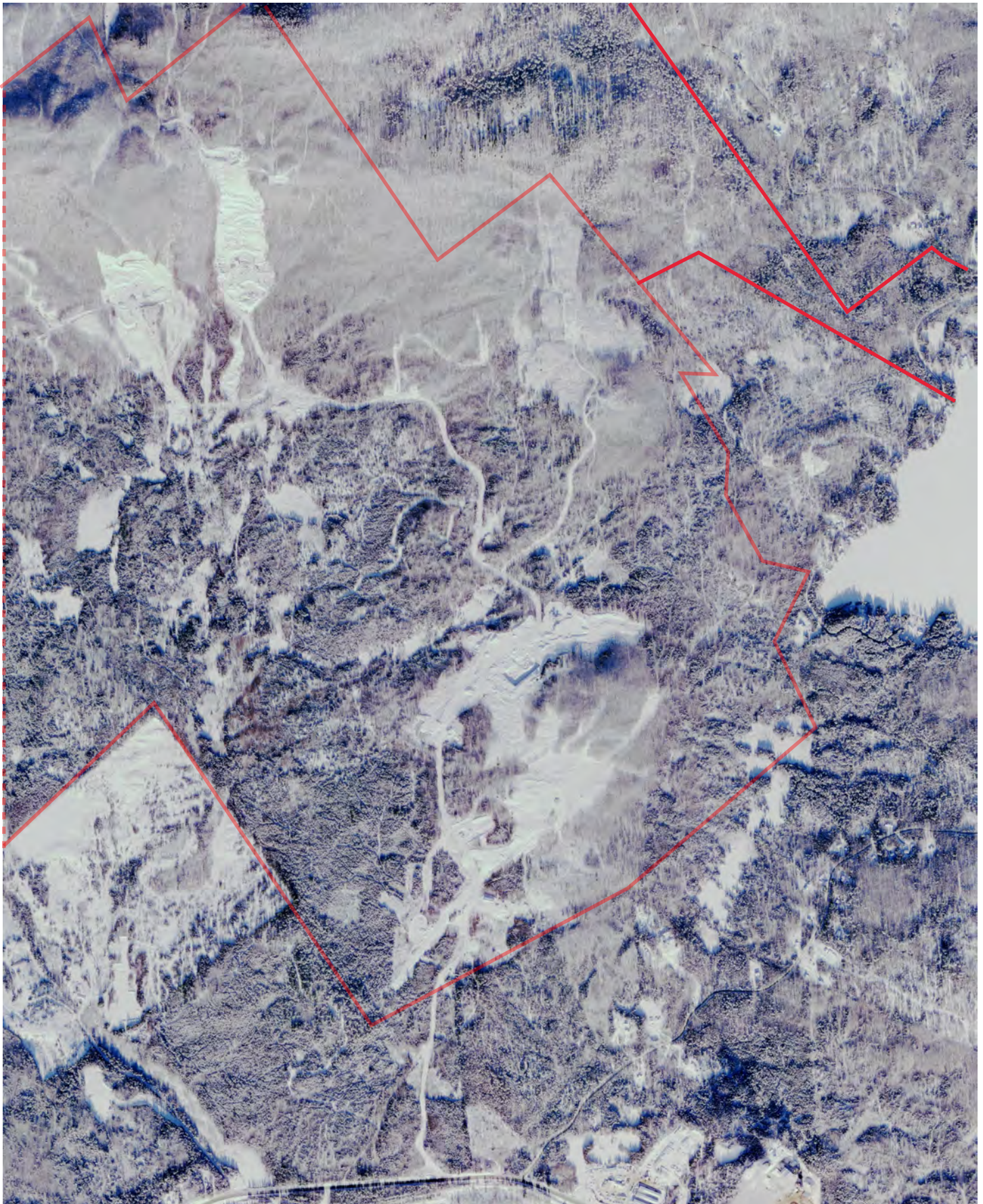


**FLIGHT YEAR:**  
2019

**South Portion**



**Scale:** 1" = 1,500'





## Historical Topographic Map Report | 2021

Order Number: 48516

Report Generated: 01/18/2021

Project Name: Granite State LF

Project Number: 1101

Chick and Forest Lake Property  
Dalton  
Whitefield, NH

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2 Corporate Drive  
Suite 450  
Shelton, CT 06484  
Toll Free: 866-211-2028  
[www.envirositecorp.com](http://www.envirositecorp.com)

Envirosite’s Historical Topographic Map Report is designed to assist in evaluating a subject property resulting from past activities. Envirosite’s Historical Topographic Map Report includes a search of USGS historical topographic maps, dating back to the early 1900s.

**TOPOGRAPHIC MAPS FOUND:**

	<u>Map Name:</u>	<u>Year:</u>	<u>Revision Year:</u>	<u>Scale:</u>
1.	<u>Whitefield</u>	1900	N/R	1 : 62500
2.	<u>Whitefield</u>	1935	N/R	1 : 48000
3.	<u>Whitefield</u>	1935	N/R	1 : 62500
4.	<u>Whitefield</u>	1938	N/R	1 : 62500
5.	<u>Whitefield</u>	1938	N/R	1 : 62500
6.	<u>Bethlehem</u>	1982	N/R	1 : 25000
7.	<u>Bethlehem</u>	1995	N/R	1 : 24000
8.	<u>Bethlehem</u>	2012	N/R	1 : 24000
9.	<u>Bethlehem</u>	2015	N/R	1 : 24000
10.	<u>Bethlehem</u>	2018	N/R	1 : 24000

The USGS 7.5 minute series includes scales 1:24,000 / 1:25,000 / 1:31,680. The USGS 15 minute series includes scales 1:48,000 / 1:62,500 / 1:63,360. The USGS 30x60 minute series scale is 1:100,000.

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SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

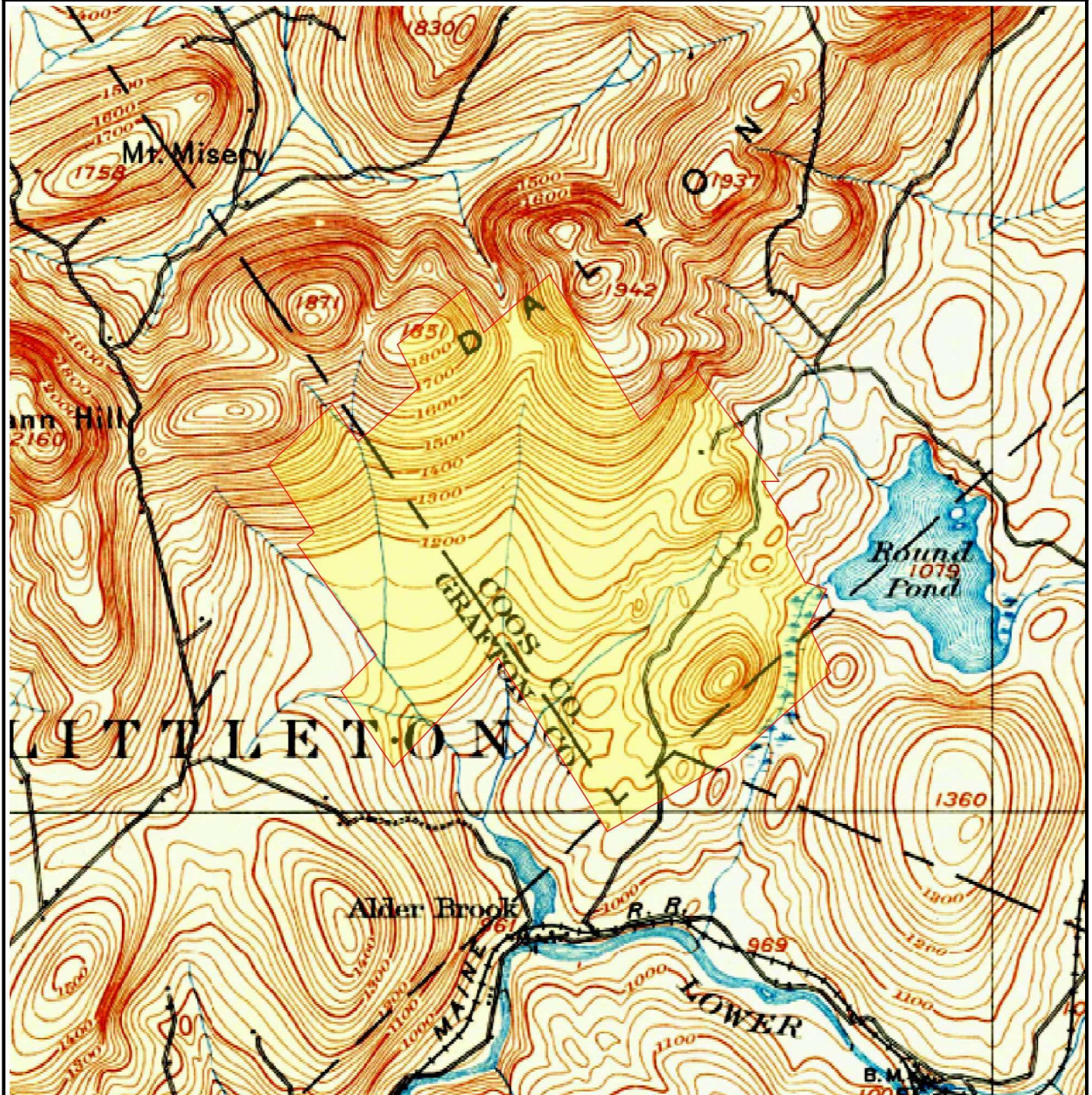
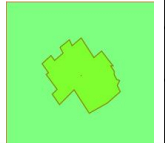
MAP NAME: Whitefield

MAP YEAR: 1900

REVISION YEAR: N/R

SCALE: 1 : 62500

Part 1



SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

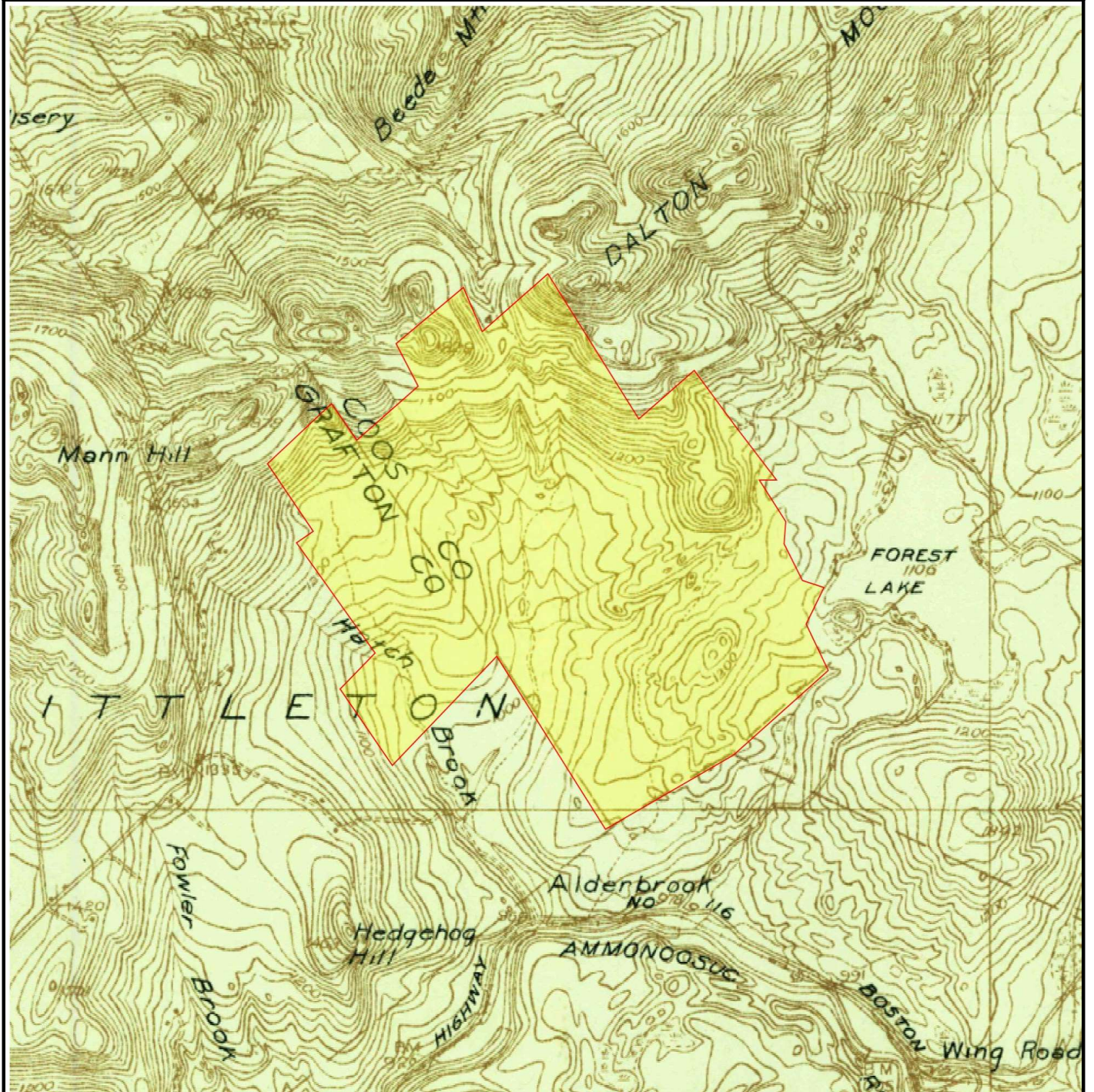
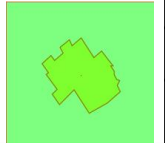
MAP NAME: Whitefield

MAP YEAR: 1935

REVISION YEAR: N/R

SCALE: 1 : 48000

Part 1



SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

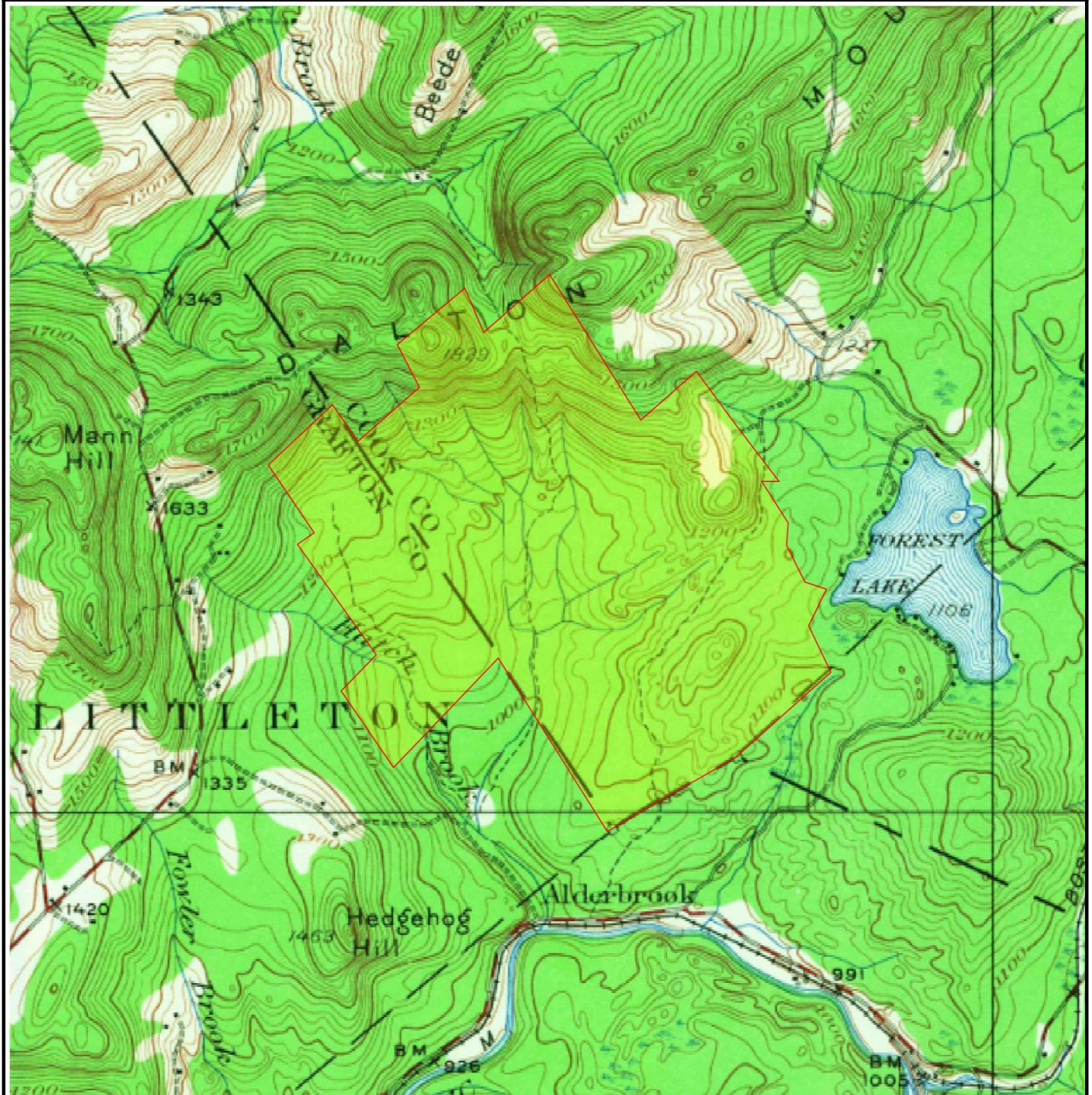
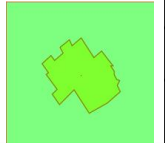
MAP NAME: Whitefield

MAP YEAR: 1935

REVISION YEAR: N/R

SCALE: 1 : 62500

Part 1



SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

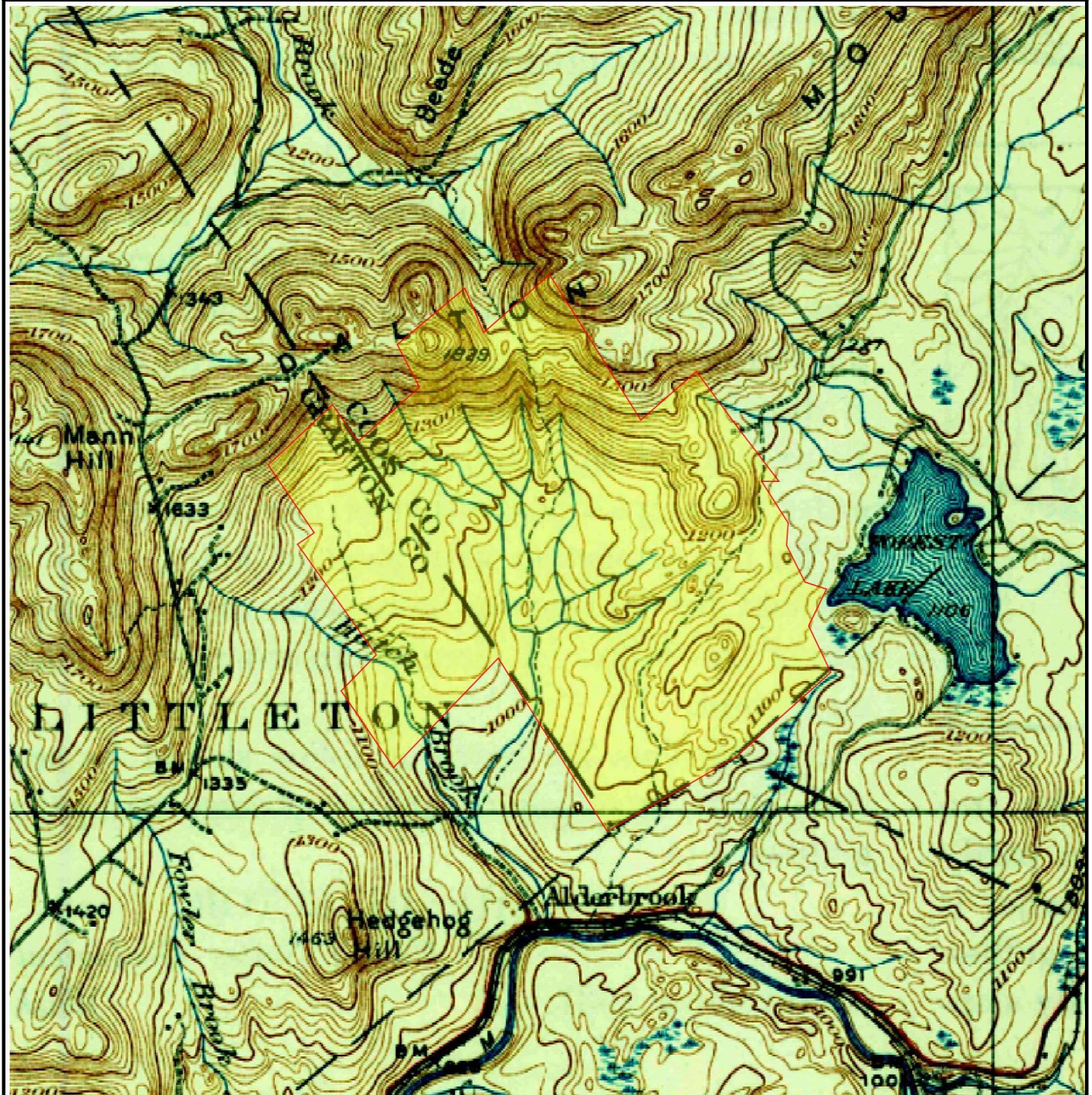
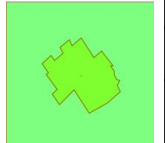
MAP NAME: Whitefield

MAP YEAR: 1938

REVISION YEAR: N/R

SCALE: 1 : 62500

Part 1



SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

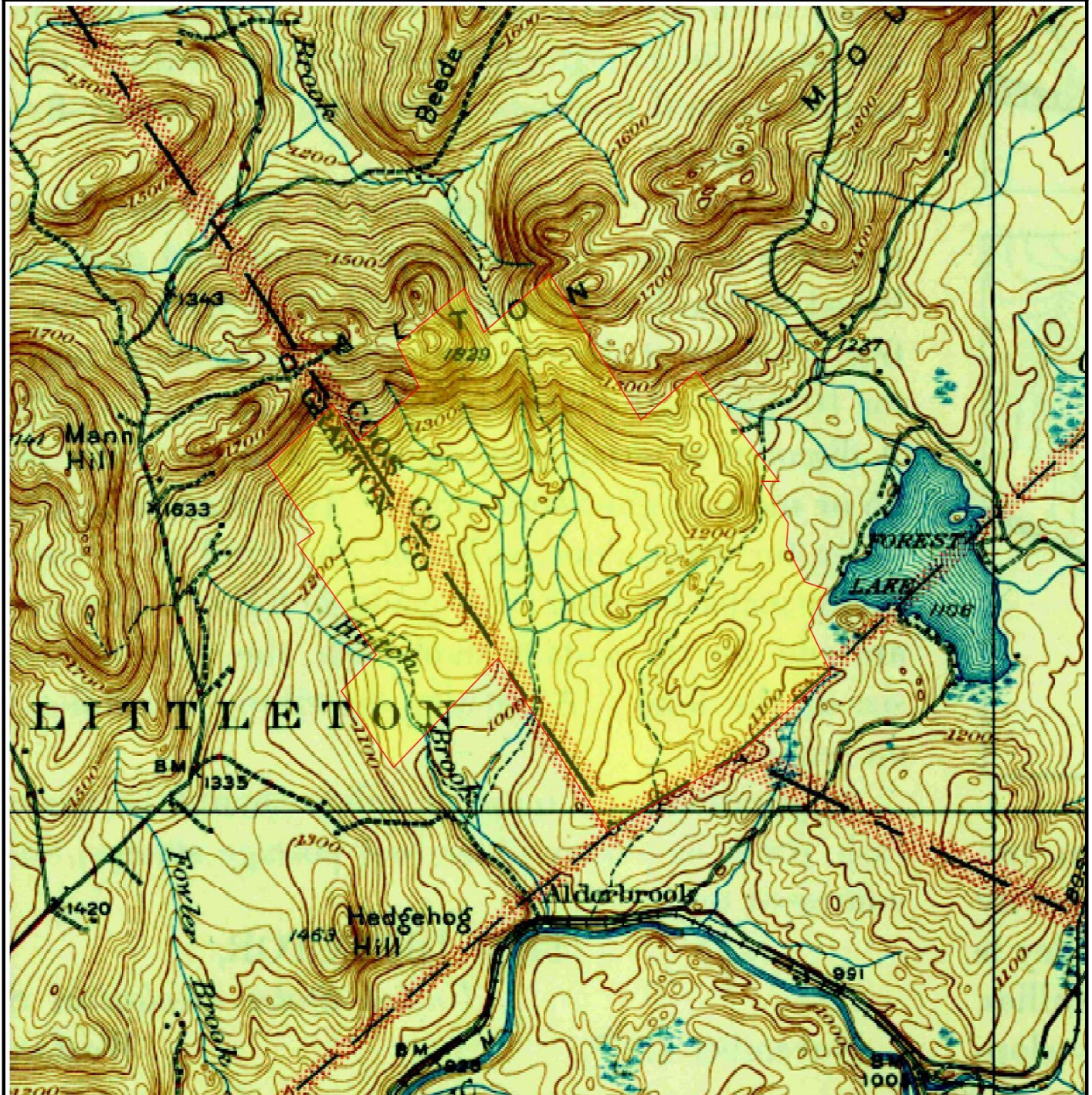
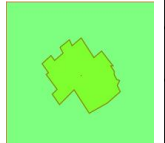
MAP NAME: Whitefield

MAP YEAR: 1938

REVISION YEAR: N/R

SCALE: 1 : 62500

Part 1





SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

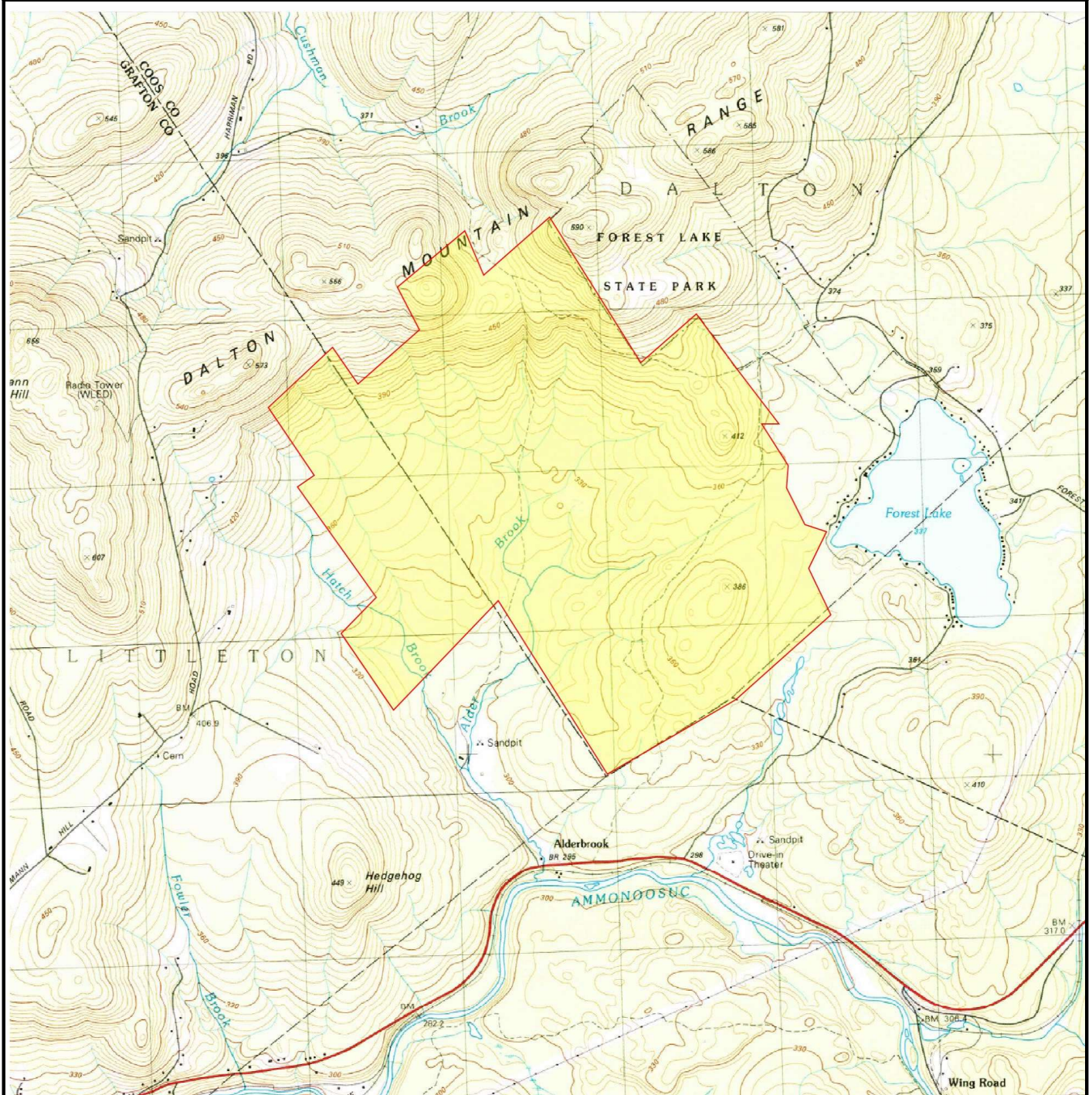
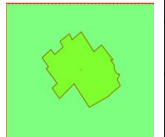
MAP NAME: Bethlehem

MAP YEAR: 1982

REVISION YEAR: N/R

SCALE: 1 : 25000

Part 1



SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

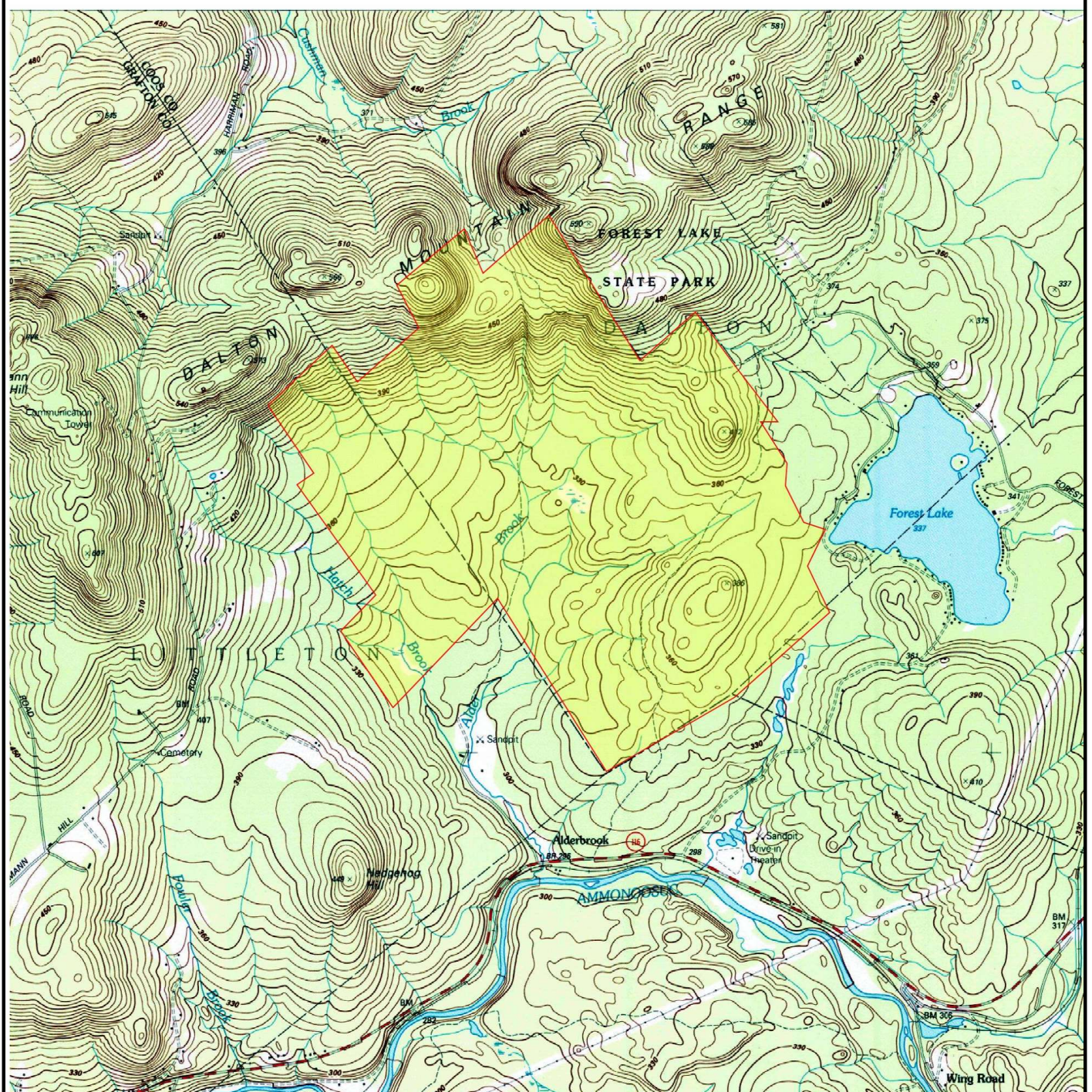
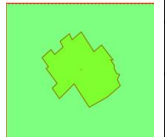
MAP NAME: Bethlehem

MAP YEAR: 1995

REVISION YEAR: N/R

SCALE: 1 : 24000

Part 1



SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

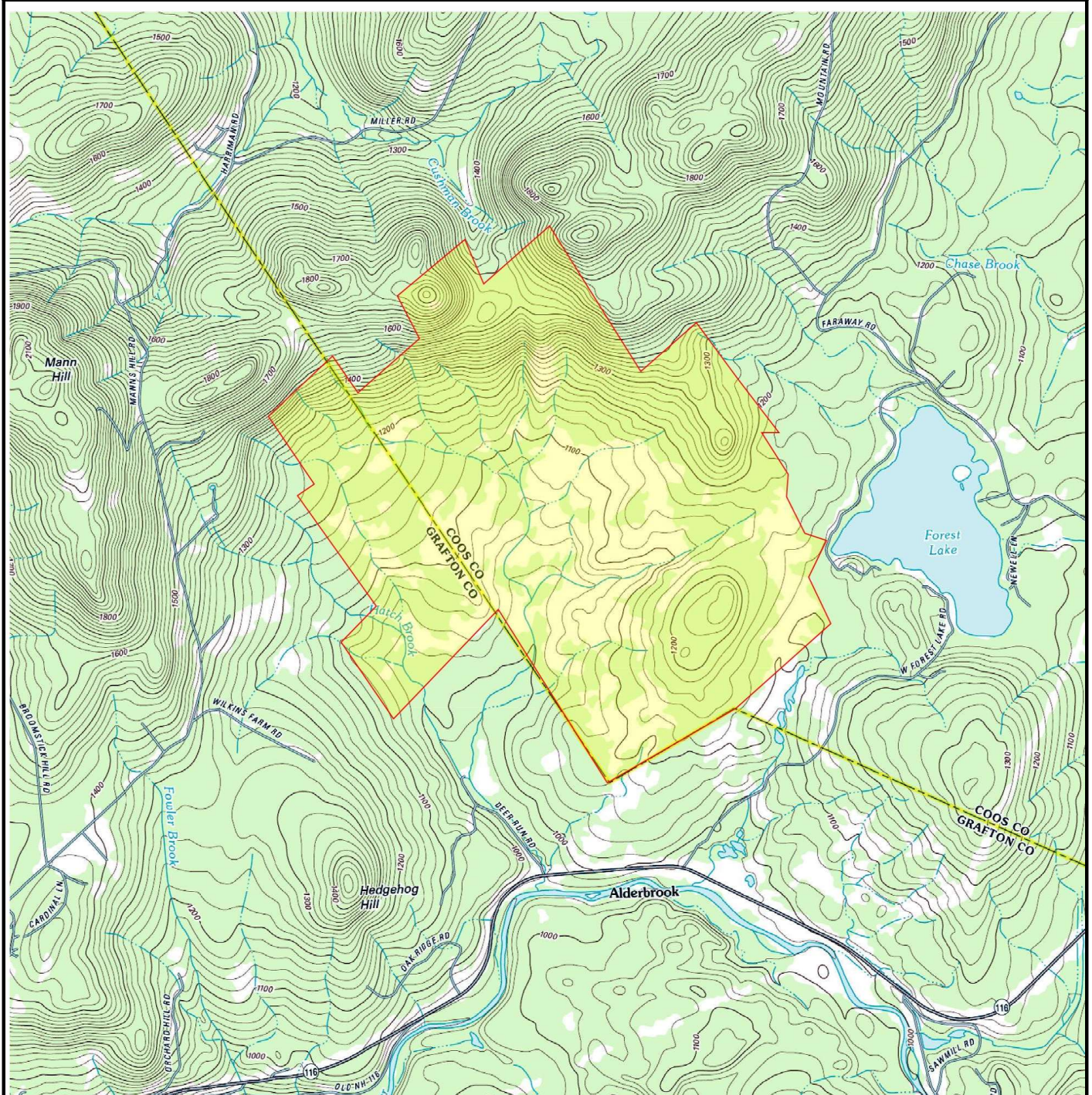
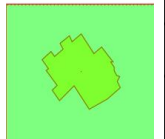
MAP NAME: Bethlehem

MAP YEAR: 2012

REVISION YEAR: N/R

SCALE: 1 : 24000

Part 1



SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

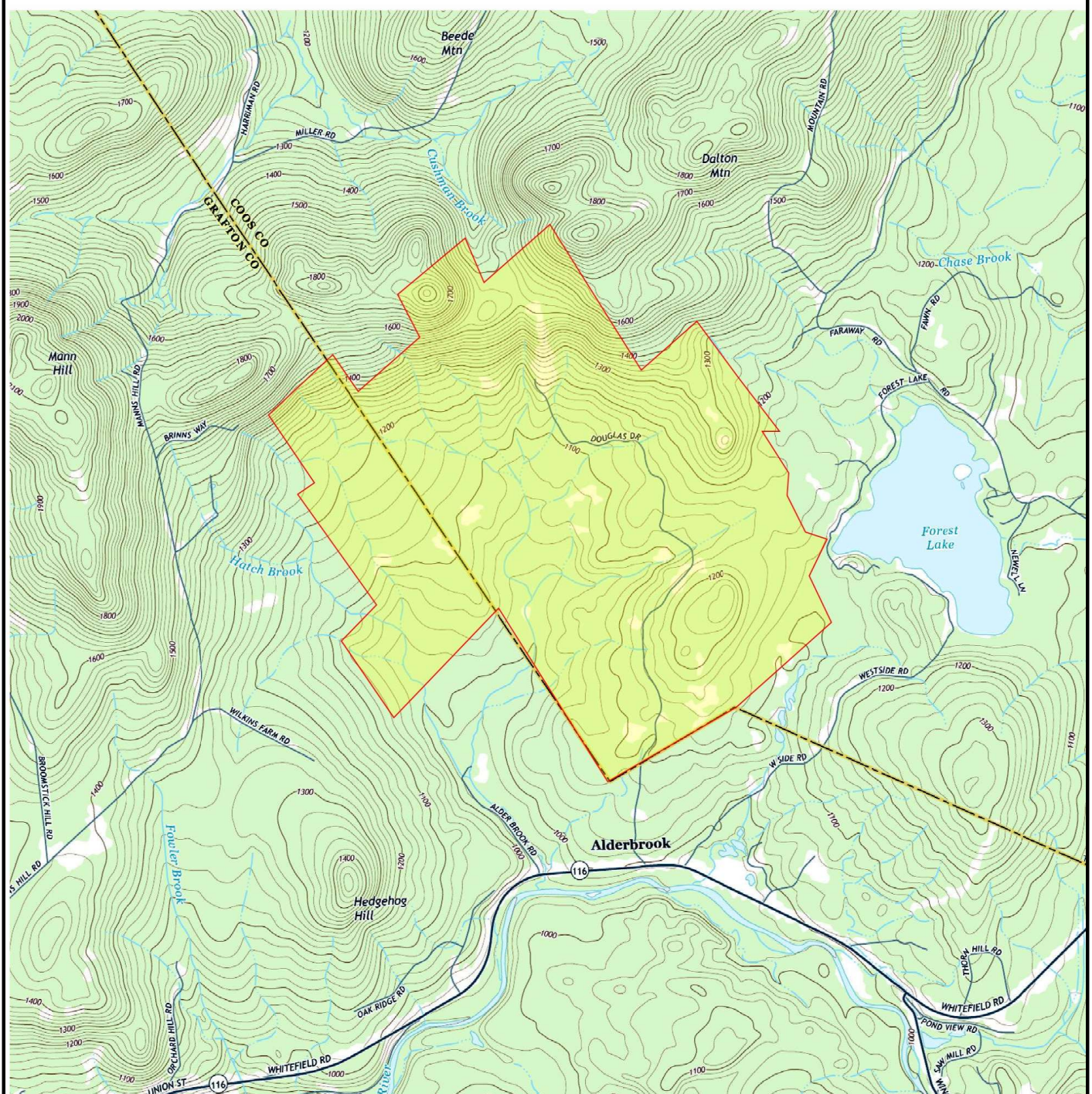
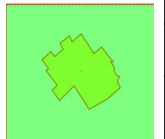
MAP NAME: Bethlehem

MAP YEAR: 2015

REVISION YEAR: N/R

SCALE: 1 : 24000

Part 1

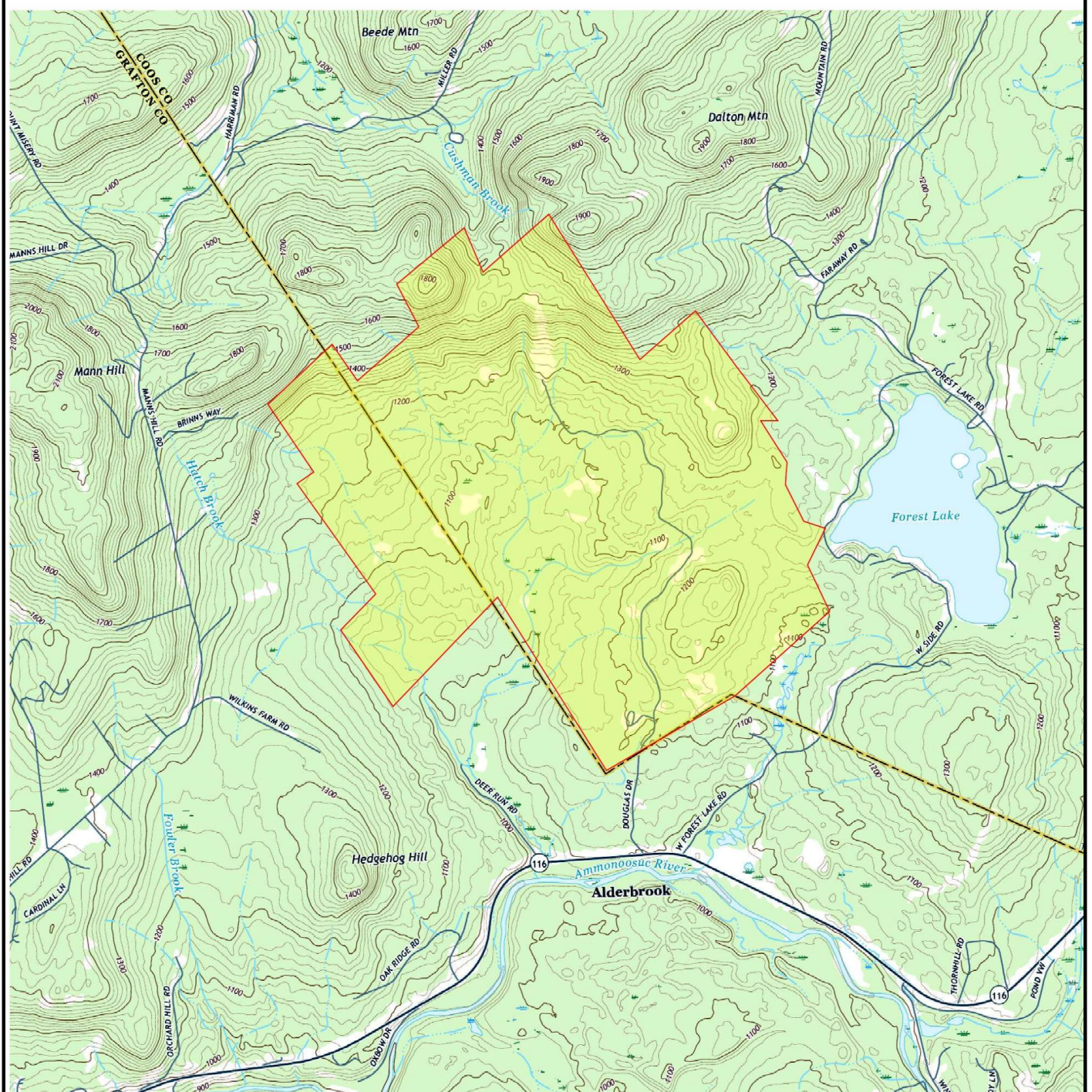
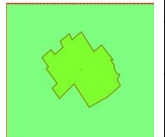


SUBJECT NAME: Chick and Forest Lake Property  
ADDRESS: Dalton, Whitefield, NH  
LAT/LONG: 44.347930 / -71.701431

PREPARED FOR: CMA Engineers Portland  
ORDER #: 48516  
REPORT DATE: 01/18/2021

SUBJECT QUAD:

MAP NAME: Bethlehem      MAP YEAR: 2018      REVISION YEAR: N/R  
SCALE: 1 : 24000      Part 1



# Appendix U

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## *Blasting Plan*

**Granite State Landfill, LLC**  
**Dalton, NH**  
**Blasting Plan**  
**Prepared by: CMA Engineers, Inc.**

This document has been prepared to meet the Blasting Plan requirements of the New Hampshire Department of Environmental Services (NHDES) Alteration of Terrain (AoT) program (Env-Wq 1503.11[k][1]) in support of the Granite State Landfill (GSL) AoT permit application for development of the landfill, associated infrastructure, and roadway improvements.

Blasting of bedrock is not anticipated to be required over the development of the Granite State Landfill based on subsurface data reviewed to date. Attempts to remove any unexpected bedrock highs will initially be performed using mechanical methods, such as ripping with an excavator. If mechanical methods are not adequate, blasting will be utilized to remove the rock.

There are no public drinking water supplies within 2,000 feet of the project area so a plan to monitor groundwater to detect contamination in sufficient time to protect the wells is not required by the AoT Rules. A monitoring plan is required in the event blast quantities exceed 5,000 cubic yards, which is not anticipated. GSL has a significant network of monitoring wells at the site that are capable of screening for contaminants in groundwater after blasting activities occur.

Any locations where blasting of bedrock occur shall be documented on the project record drawings.

In compliance with Section Env-Wq 1510 of the AoT Rules, the following Best Management Practices shall be implemented during blasting activities.

Env-Wq 1510.01 Purpose. The purpose of this part is to establish best management practices for blasting to minimize the potential for groundwater contamination, to ensure that the groundwater can be used for existing and future drinking water supply sources.

Env-Wq 1510.02 Applicability. This part shall apply to all projects for which an AOT permit is required that will involve blasting of bedrock.

Env-Wq 1510.03 Loading Practices. The following blast hole loading practices shall be implemented:

- (a) The driller shall maintain drilling logs to document:
  - (1) The depths and lengths of voids, cavities, and fault zones or other weak zones encountered; and
  - (2) Groundwater conditions;
- (b) The driller shall communicate the contents of the drilling logs directly to the blaster;
- (c) Explosive products shall be managed on site such that they are:
  - (1) Used in the borehole;
  - (2) Returned to the delivery vehicle; or
  - (3) Placed in secure containers for off-site disposal;
- (d) Spillage around the borehole shall be:
  - (1) Placed in the borehole; or
  - (2) Cleaned up and returned to an appropriate vehicle for handling or placement in secured containers for off site disposal;

- (e) Loaded explosives shall be detonated as soon as possible and not left in the blast holes overnight, unless weather or other safety concerns reasonably dictate that detonation should be postponed;
- (f) Loading equipment shall be cleaned in an area where wastewater can be properly contained and handled in a manner that prevents release of contaminants to the environment; and
- (g) Explosives shall be loaded in accordance with industry standard practices for priming, stemming, decking and column rise to maintain good continuity in the column load to promote complete detonation.

Env-Wq 1510.04 Explosive Selection. Explosive products shall be selected that are:

- (a) Appropriate for site conditions and safe blast execution; and
- (b) Have the appropriate water resistance for the site conditions present.

Env-Wq 1510.05 Prevention of Misfires. Industry-standard practices shall be implemented to prevent misfires.

Env-Wq 1510.06 Muck and Rock Management.

- (a) For purposes of this part, the following definitions apply:
  - (1) "Blasted material" means all of the earth material loosened as a result of the blasting;
  - (2) "Muck" means the blasted material remaining after the rocks have been removed; and
  - (3) "Rocks" means the larger pieces of blasted material that are separated from the muck for use elsewhere, including for feedstock of a rock crushing operation.
- (b) Muck shall be removed from the blast area as soon as reasonably possible.
- (c) Rocks shall be managed so as to prevent water supply wells or surface waters from being contaminated by runoff.

Env-Wq 1510.07 Spill Prevention Measures and Spill Mitigation.

- (a) Fuel and other regulated substances shall be managed as required by Env-Wq 401.04.
- (b) Personnel working at the blast site shall be trained in how to respond to a spill of the regulated substances being used at the site.

Env-Wq 1510.08 Fueling and Maintenance of Construction Equipment.

- (a) If any construction equipment, including but not limited to earthmoving, excavation, and boring equipment, will be fueled from a tank truck or other container that is moved around the site, the following shall apply:
  - (1) Portable containment equipment that is sized to contain the most likely volume of fuel to be spilled during a fuel transfer shall be used, where the most likely volume to be spilled is determined based on the fuel transfer rate, the amount of fuel being transferred, the distance between the hose nozzle and pump shut off switch, and the response time of personnel and equipment available at the facility;



(2) The containment equipment shall be positioned to catch any fuel spills due to overfilling the equipment and any other spills that might occur at or near the fuel filler port to that equipment;

(3) The type of containment equipment used and its positioning and use shall account for all of the drip points associated with the fuel filling port and the hose from the fuel delivery truck; and

(4) Personnel shall not leave the immediate area while fuel is being transferred, to ensure that any spills will be of limited volume.

(b) If the site will have a fixed location for fueling construction equipment, the following shall apply:

(1) All fuel containers, including but not limited to skid-mounted tanks, drums, and five gallon cans, shall have secondary containment that:

a. Is capable of containing 110% of the volume of the largest fuel storage container; and

b. Has an impervious floor;

(2) Secondary containment for tanks may comprise a metal, plastic, polymer or precast concrete vault providing 110 percent of the volume of the largest fuel storage container;

(3) For fuel containers, secondary containment may comprise containment pallets;

(4) The area where fuel is transferred shall be a flat, impervious area that: a. Is adjacent to the fuel container(s); and b. Extends beyond the full reach, or length, of the fuel hose; and

(5) Secondary containment areas may be in the form of a basin that is:

a. Sloped down to a central low point or bermed along the perimeter;

b. Lined with a continuous sheet of 20 mil or thicker polymer material or appropriate geomembrane liner; and

c. Backfilled with at least 6 inches of sand.

# Appendix V

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## *Groundwater Separation Plan*