

## **NJCU Field Methods: Incorporate GPS into Geologic Mapping of High Point State Park**

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### **A. Pre-Field Exercise**

**Location:** NJCU Campus, Jersey City, NJ

**Task:** Map locations of 4 boards hammered in ground that represent outcrops of Ordovician and Silurian rocks and measure their strikes and dips. *(see p.2 for base map)*

**Participants:** High Point Teams (no more than 3 people each)

#### **Deliverables:**

- Airphoto of map area with outcrop locations accurately plotted (see p.2), including:
  - 4 Outcrop (board) locations, with formation location, contact, and strike and dip of bedding plotted accurately on map
  - North arrow
  - Scale Bar (1" = 50 feet)
  - 3 map boundaries already produced on airphoto:
    - NW map boundary = East side of Vodra Hall
    - NE map boundary = West side of Guarnieri library
- True-scale Cross-section (same scale horiz & vert) perpendicular to trend of "fold" axis

**Due date: prior to High Point State Park Geologic Mapping Exercise**

### **B - Field Exercise – High Point State Park**

**Location:** High Point State Park, Hwy 23, north of Sussex, NJ

**Task:** Prepare a geologic map and cross section, with locations of outcrops, for a defined field area within High Point State Park *(see p.3-5 for base maps and outcrop locations)*.

**Participants:** Self-selected teams ( $\leq 3$  people)

#### **Deliverables:**

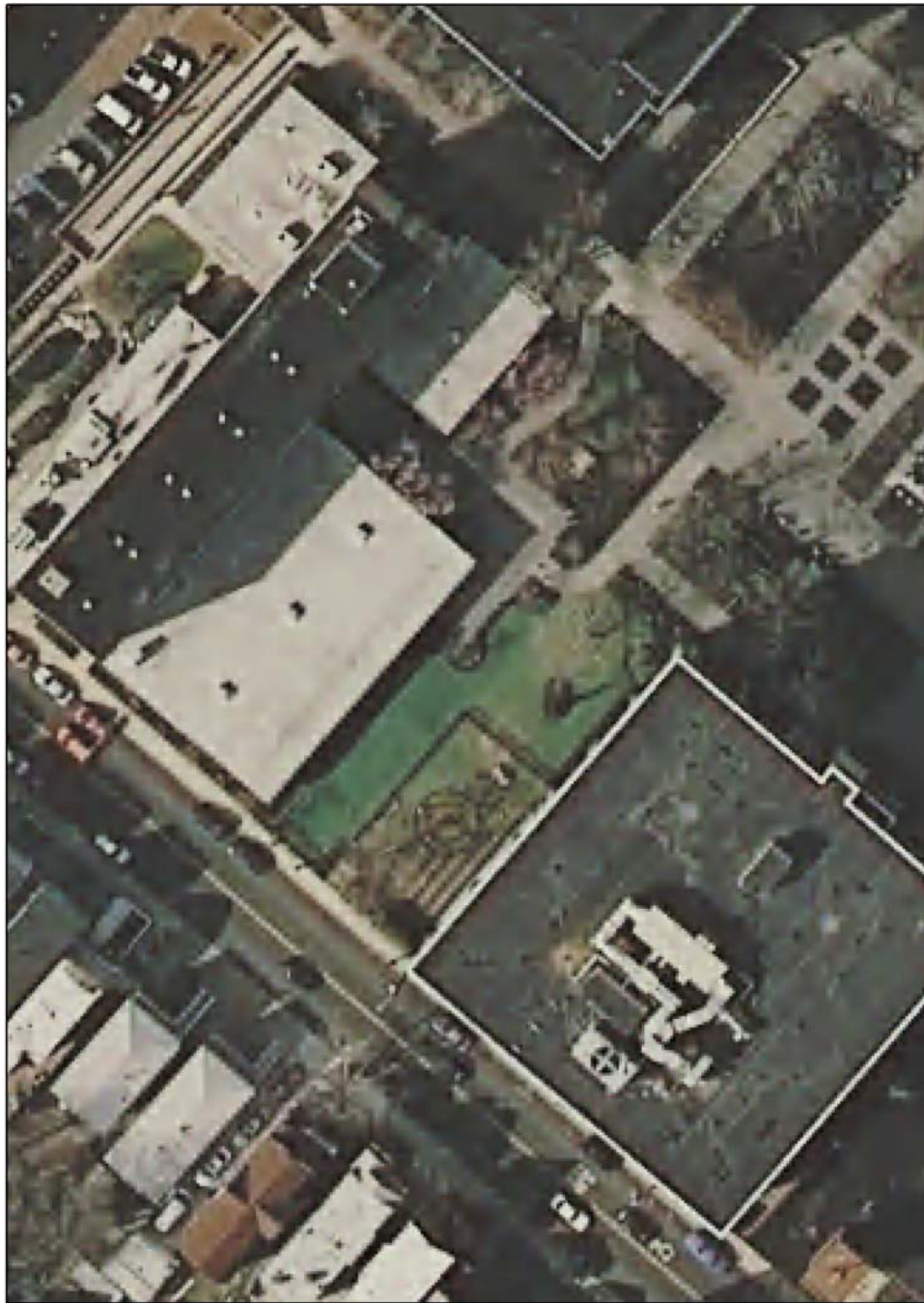
- Geologic map of Silurian and Ordovician Rocks in the area, showing:
  - Martinsburg (Ordovician)-Shawangunk (Silurian) formation contact (solid where known, dashed where inferred)
  - Outcrop locations, shown in deeper shade of Fm color, with Strike & Dip of bedding
- True-scale cross-section perpendicular to strike
- Copies of all field notes of team members
- Short (+/- 500 words) narrative describing field procedure
- Powerpoint presentation (including scanned image of group geologic map) of local and regional geologic history, from Late Precambrian to present

**Due Date: After completion of Exercises 1, 2, and 3 (estimated early December)**

**Evaluation:** As with earlier group exercises, individual grades are based upon:

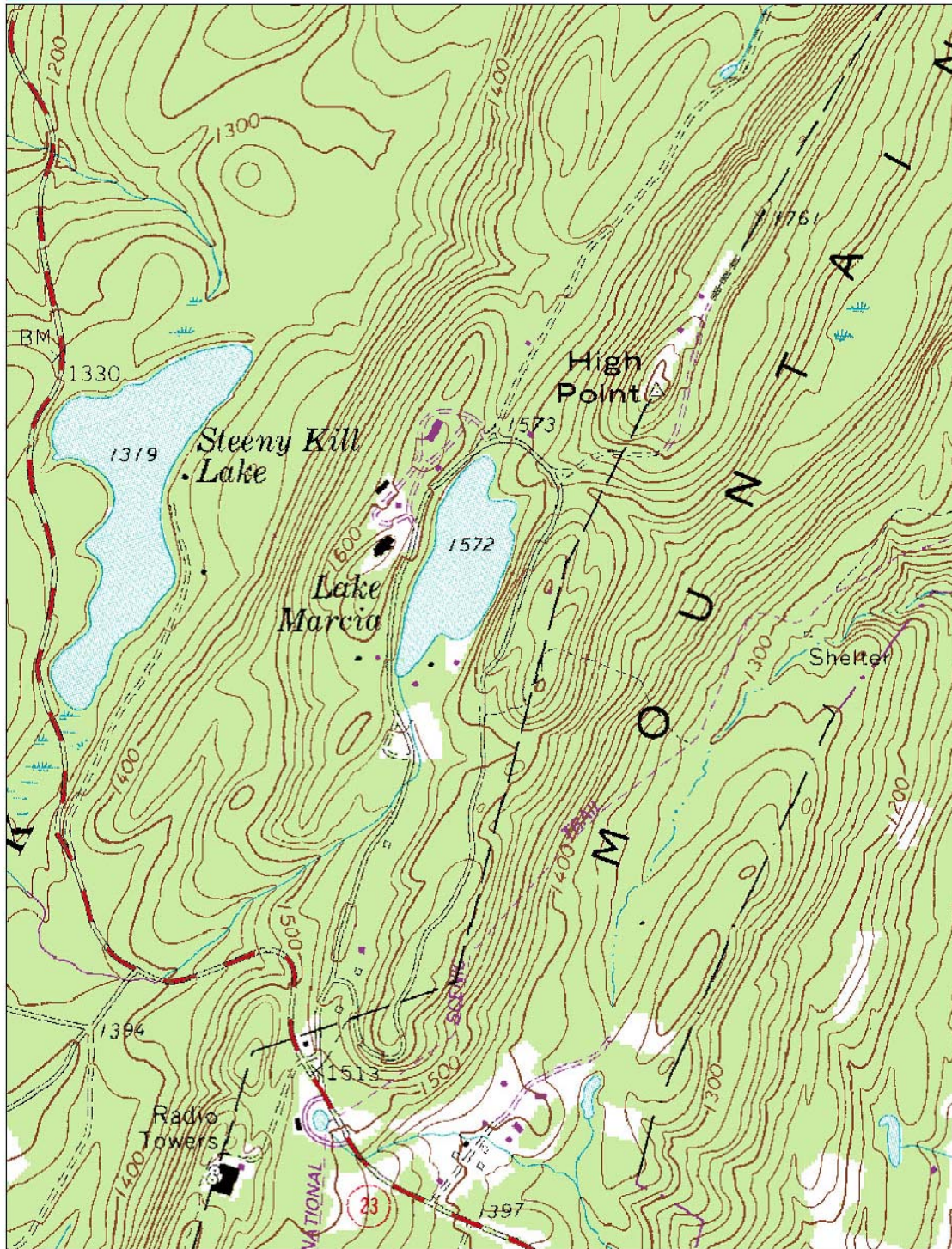
- Quality of group product (50%)
- Individual effort and participation (50%)

## NJCU Field Methods Campus S&D



0 50 100 200 Feet

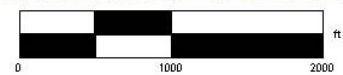




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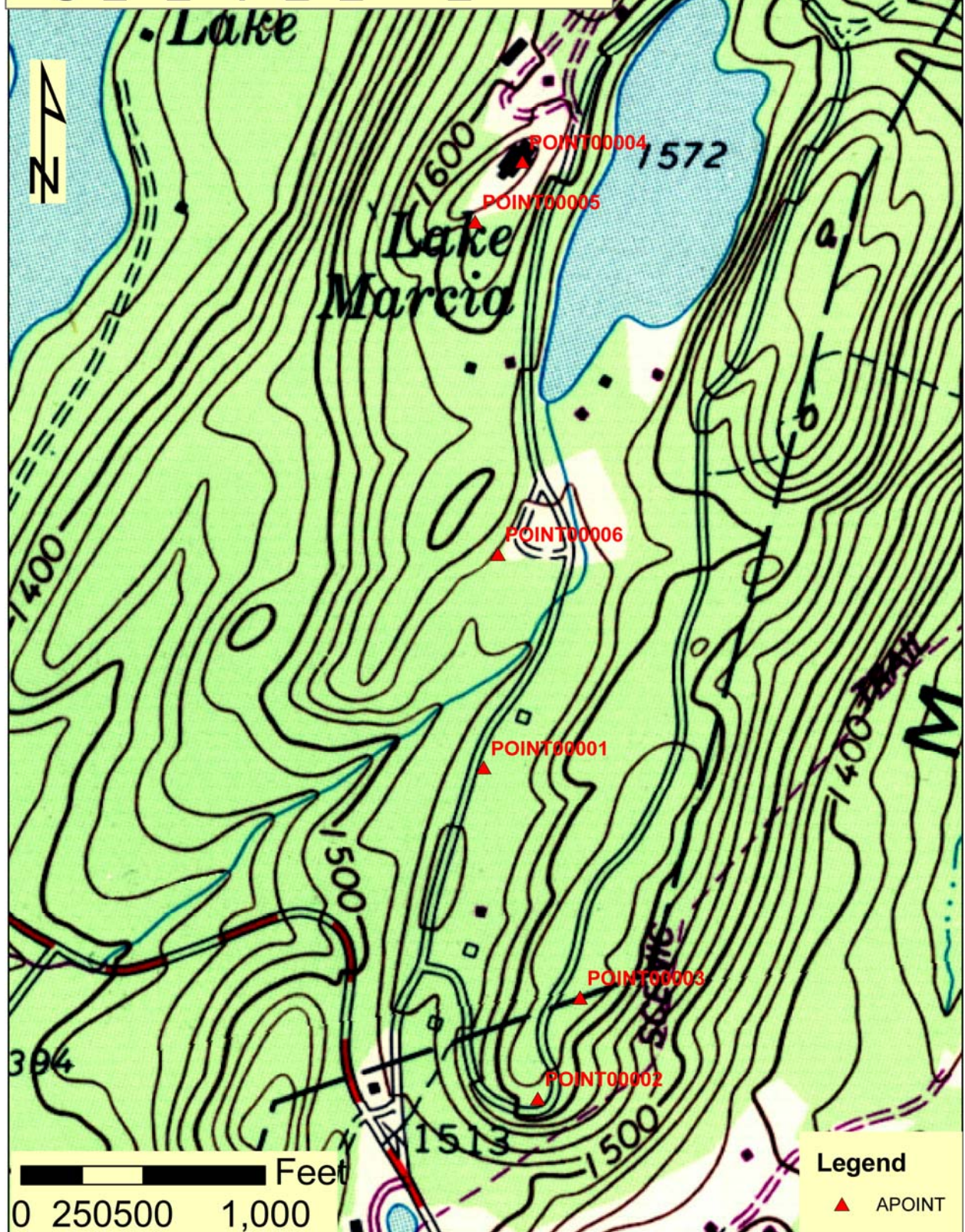
www.delorme.com



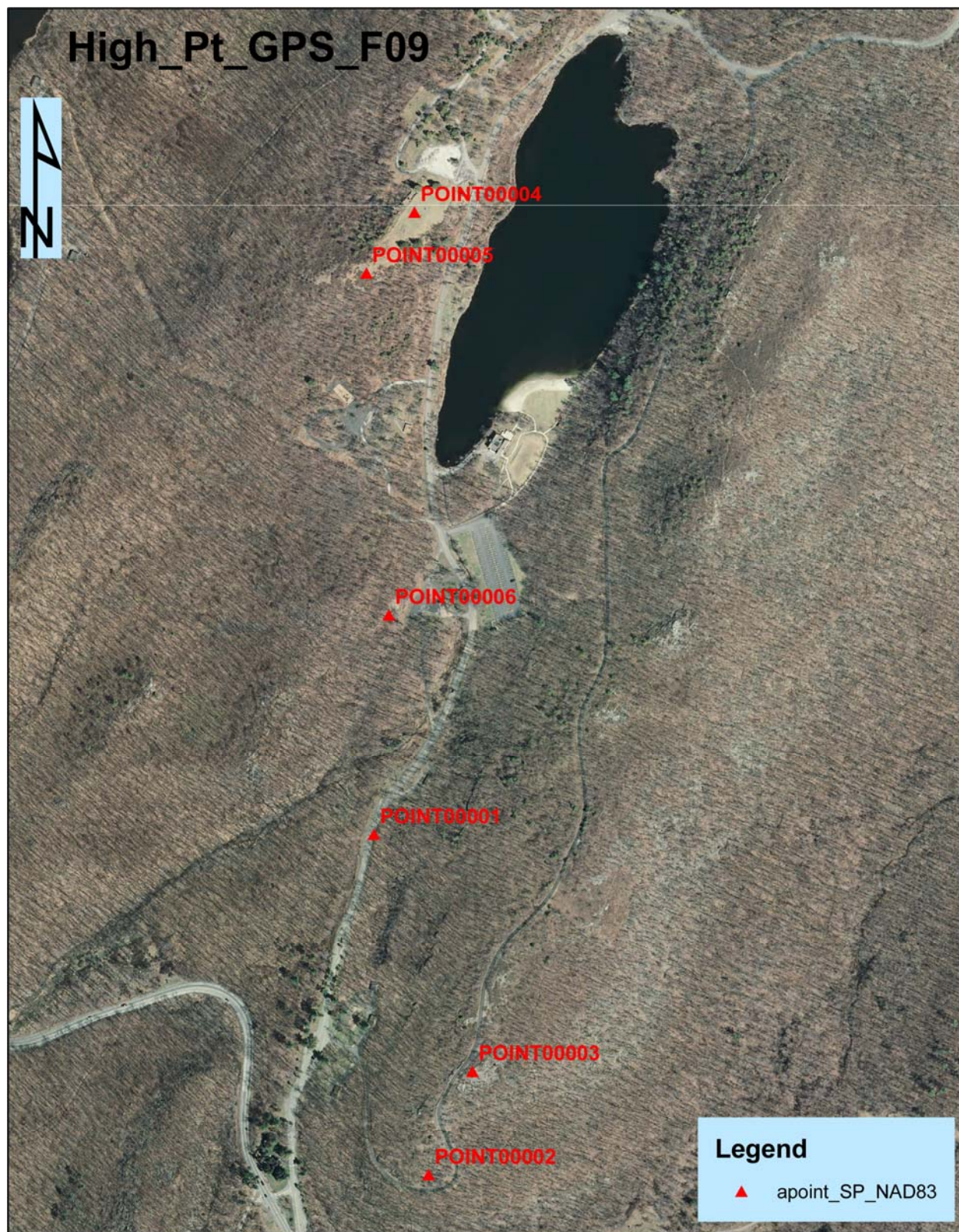
Data Zoom 14-0



# High\_Pt\_Topo\_w\_GPS\_NAD27







0 250 500 1,000 1,500 2,000 Feet