

# GEOG 467 Field School

## Traversing Basics

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Objectives: **Gain proficiency in traversing & plotting**

Date: **Wednesday April 27, 2016**

The Plan for the day:

- Lecture: Review of Traversing & Plotting; “Reading the Ground – ecosystem typing”
- Field: Traverse a “closed loop” – end of Dumont Road, just past *the Wastelands Moto-X* (Figure 1)
- Back in classroom: Plot the traverse – submit individual maps for evaluation by 4:30 pm.

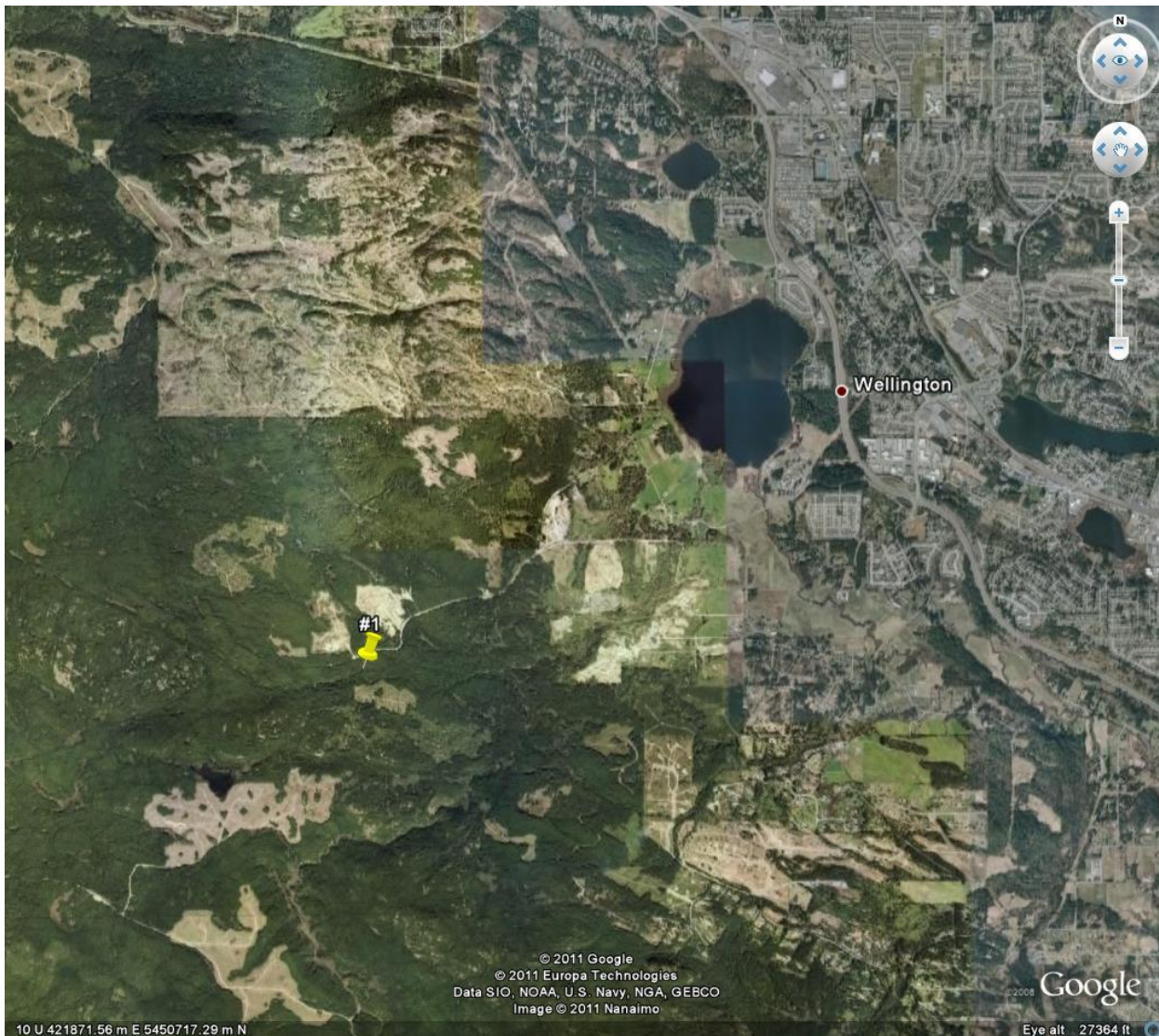


Figure 1: Field Location



**Assignment:**

- Each crew will start at their assigned POC located on the road (Figure 2)
- Traverse north “up the hill”, about 100 m, may get to (or cross) bike trail “Styx” (Figure 3)
- Traverse “sideways” (on trail??) for ~50-100 m in the designated direction (east or west)
- Turn south and traverse downhill until you reach the road
- Turn and traverse back to your POC (**must “close the loop”**)
- Wrap chain and complete field notes
- Should take approximately 1.5 hours

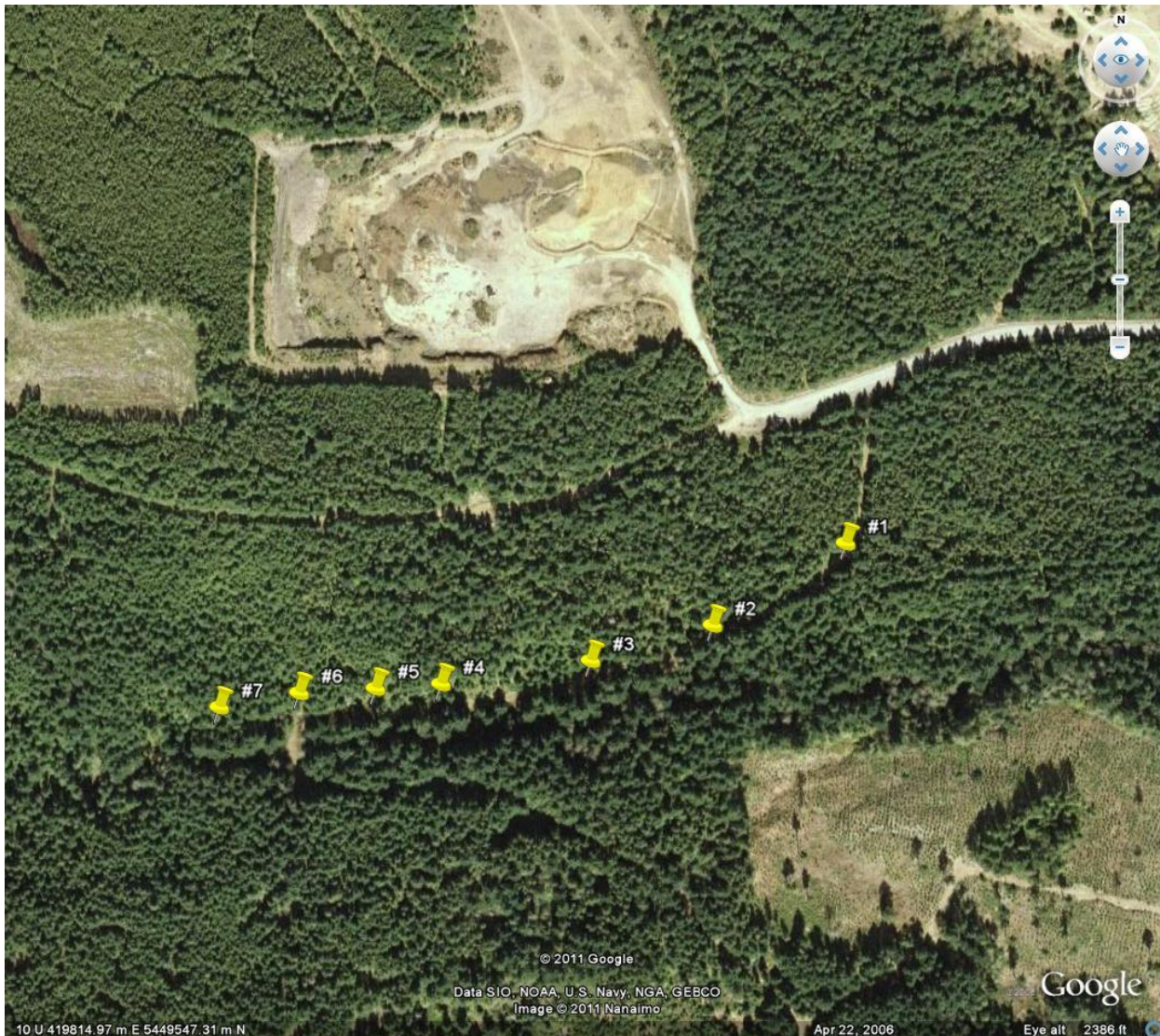


Figure 2: POC's for Traverse

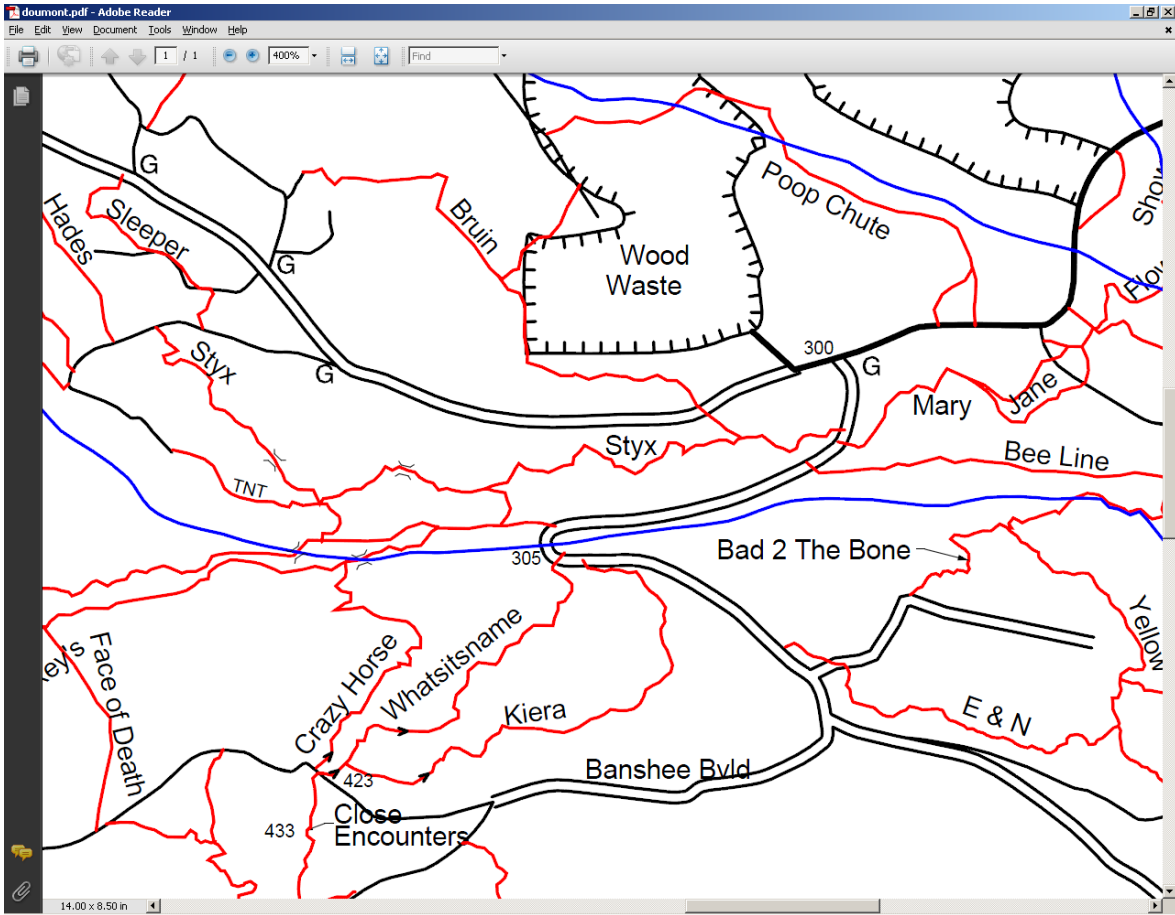
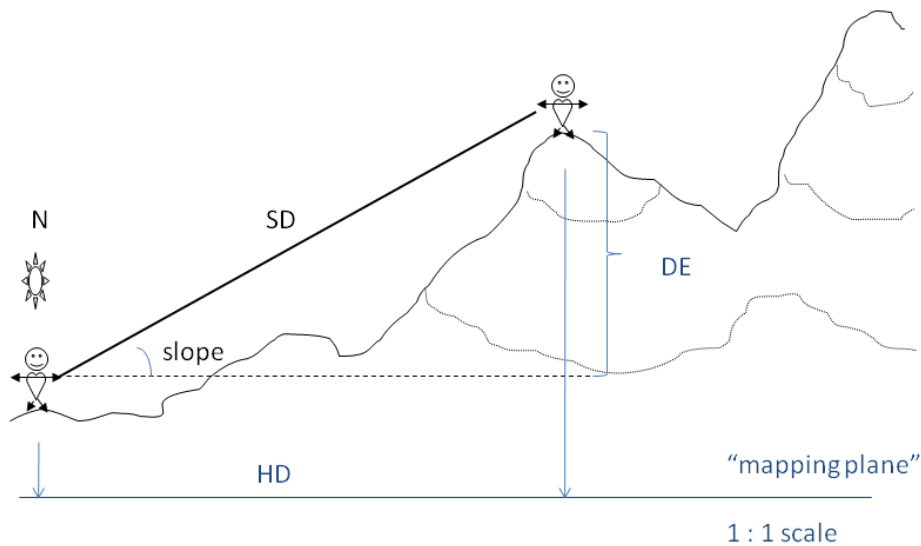


Figure 3: Trail Map

## Traversing Basics

- raw measures: SD (note chain is straight), slope (of chain), bearing
- Calculate: HD & DE (note loss of detail)
- mapping: Brg & HD (label with Elev → spot ht.) – discussed later



**Hints - how to traverse:**

- Check that you have all your gear (compass, clinometer, tape (chain), field book, flagging tape)
- Unravel the chain while on the road (it's far easier)
  
- Only the lead person need "carry the chain" (you are not taking a snake for a walk)
- Leave the bloody thing unwrapped until you are finished traversing
  
- Stand at your POC (kick a mark in the ground that you can find later to "close the loop")
- Lead person takes a bearing and sights on *something* (like a tree), then takes the "0" end of the chain and walks off towards that *something*. Check your bearing every 15m or so.
  
- Communicate as needed (Trailing person calls "coming up", "chain"; leading person calls "mark" once the tape has been pulled taught. Then measure the distance and drop the chain.
  
- Once at the next station follow this routine:
  - Record the slope distance (in meters, to 2 decimal place)
  - Confirm bearings – target, be within 2 degrees – record **forward** bearing (three digits)
  - Confirm slope % (not degrees) – record **forward** shot in percent (record + or -)
  
- Calculations:
  - $HD = \text{COS}(\text{ArcTAN}(\text{Slope\%})) * SD$  [more precise than  $HD = \text{COS}(\text{slope degrees}) * SD$ ]
  - $DE = \text{Slope\%} * HD$
  - Note that Slope% must be a proportion for calculations. E.g. +25% = 0.25 for calculations
  
- Station marked with a letter and the cumulative distance (use HD)
- Recording the new elevation for the station is a good idea
- Remember notes "zigzag up" from the bottom

STN	BRG	S.D. (m)	Slope%	H.D. (m)	D.E. (m)	Elev. (m)
Stn D = 0	+ 125.7					103.9
	056	45.2	-04	45.2	-1.8	
Stn C = 0	+ 80.5 =	Road C/L	(5 m wide	Gravel rd)		105.7
	043	32.6	-20	32.0	-6.4	
Stn B = 0	+ 48.5					112.1
	185	50.0	+25	48.5	+12.1	
Stn A = 0	+ 000 =	P.O.C.				100.0