

GEOG 201. Map Interpretation & GPS

Assignment 05. Mastering Sketch Maps

Map 1 – Plane crash

You are part of a team responsible for locating and mapping the remains of a plane crash that took place in the Mojave Desert. While hiking transects, your team finds a portion of the wreckage in an area roughly spanning 250' from east to west by 175' from north to south. You find a tall Joshua tree near the southeast corner of the site, which is roughly two miles, at 070° from the intersection of County Line Road and Cypress Road. From there you create a site boundary using the following trees in the area:

- Joshua Tree 2 (from tallest tree): 015°, 56.25 ft
- Joshua Tree 3: 030°, 28.125 ft
- Joshua Tree 4: 355°, 50 ft
- Joshua Tree 5: 246°, 31.25 ft
- Joshua Tree 6: 281°, 75 ft
- Joshua Tree 7: 259°, 100 ft
- Joshua Tree 8: 220°, 37.5 ft
- Joshua Tree 9: 120°, 43.75 ft
- Joshua Tree 10: 200°, 75 ft
- Joshua Tree 11: 090°, 150 ft
- Back to datum: 070°, 37.5 ft

Within this site boundary you found the following pieces of wreckage:

- Metal from fuselage at 020° from J. Tree 9, 090° from J. Tree 8
- Metal from fuselage at 046° from J. Tree 10, 304° from J. Tree 11
- Engine component at 225° from J. Tree 5, 172° from J. Tree 6
- Portion of vertical stabilizer 023° from J. Tree 11, 270° from J. Tree 2
- Computer debris at 094° from J. Tree 8, 050° from J. Tree 9
- Electrical wiring at 102° from J. Tree 9, 188° from J. Tree 6

Your final map should show all of these points in their exact locations, use different symbology for the different elements, indicate the location of the nearest roads, and contain a legend, scale bar, representative fraction scale, verbal scale, north arrow, a title, and your name.

Map 2 – archaeological site

You got fired from your airplane wreckage job (for stealing compasses), but luckily found work as a field archaeologist. You are out with a team surveying a wilderness area outside of Fall River Mills in Northern California for potentially important prehistoric sites. You discover a lithic scatter with some faunal remains. The site runs approximately 100 ft from north to south by 70 ft from east to west. You select a large granite boulder as your datum, which rests in the northwest of your site. According to your topo map, the coordinates appear to be 615,050 mE, 4,558,420 mN, UTM Zone 10. From there you map the following site boundary:

- To Point 2 – Pine tree: 180°, 20 ft
- To Point 3 – Oak tree: 144°, 12.5 ft
- To Point 4 – Oak tree: 210°, 20 ft
- To Point 5 – Oak tree: 175°, 15 ft
- To Point 6 – Granite boulder: 168°, 27.5 ft
- To Point 7 – Basalt boulder: 103°, 21.25 ft
- To Point 8 – Pine tree: 028°, 25 ft
- To Point 9 – Pine tree: 049°, 27.5 ft
- To Point 10 – Basalt boulder: 003°, 32.5 ft
- To Point 11 – Rhyolite boulder: 331°, 20 ft
- To Point 12 – Pine tree: 279°, 25 ft
- Back to Datum – 271°, 25 ft

Within the site you find the following artifacts:

- Debitage (stone tool debris) at 209° from point 11, 269° from point 10
- Small mammal bones at 327° from point 7, 058° from point 6
- Obsidian biface (double-edged blade) at 097° from point 5, 136° from point 4
- Obsidian conical flake core (big hunk of obsidian used for tool making material) at 247° from point 10, 308° from point 9
- Three obsidian flake blanks (raw materials for bifaces) at 176° from point 12, 127° from datum
- Round cobble hammerstone (used to modify obsidian) at 045° from point 2, 156° from datum
- Elk antler tip (for pressure flaking of stone tools) at 075° from point 3, 113° from point 2
- Broken obsidian projectile point at 353° from point 8, 266° from point 9

Your final map should show all of these points in their exact locations, use different symbology for the different elements, indicate the UTM coordinates of your datum, and contain a legend, scale bar, representative fraction scale, verbal scale, north arrow, a title, and your name.