

{05} Topography

Map Interpretation & GPS
Spring 2010
M. Pesses

Topographic features

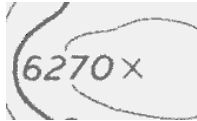

CONTROL DATA AND MONUMENTS	CONTROL DATA AND MONUMENTS - continued
Principal point**	Vertical control
U.S. mineral or location monument	Third-order or better elevation, with tablet
River mileage marker	Third-order or better elevation, recoverable mark, no tablet
Boundary monument	Bench mark coincident with found section corner
Third-order or better elevation, with tablet	Spot elevation
Third-order or better elevation, recoverable mark, no tablet	LAND SURVEYS
With number and elevation	Public land survey system
Horizontal control	Range or Township line
Third-order or better, permanent mark	Location approximate
With third-order or better elevation	Location doubtful
With checked spot elevation	Protractal
Coincident with found section corner	Protractal (AK 1:62,500 scale)
Unmonumented**	Range or Township labels
	Section line
	Location approximate
	Location doubtful
	Protractal (AK 1:62,500 scale)
	Section numbers

Representing Relief

- ‡ Spot heights
- ‡ Contours
- ‡ Hypsometric tinting
- ‡ Shaded relief


Representing terrain

- ‡ The most basic way is through **spot heights**
- ‡ Easy to read, but not continuous

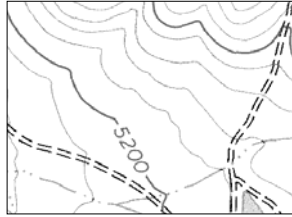

Contours

- ‡ A line on the map that connects the same elevation values



Index contours

- ‡ Heavier line weight
- ‡ Drawn at an interval
- ‡ Labeled



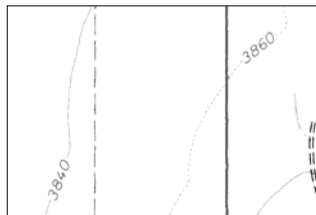
Intermediate contours

- ‡ In between index contours
- ‡ Specific interval
- ‡ Not labeled



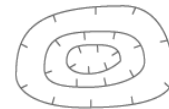
Supplementary contours

- ‡ Finer than the contour interval
- ‡ Used for flat areas
- ‡ Dashed line



Depression contours

- ‡ Shows downward slope
- ‡ Tick marks



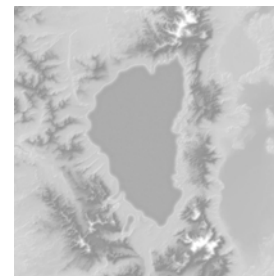
Isobaths

- ‡ Tied in with the water surface, not vertical datum

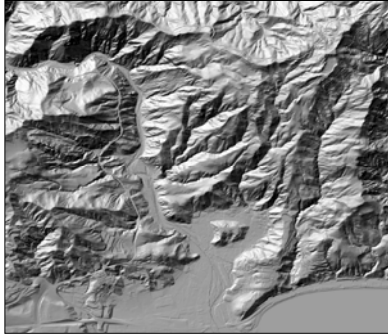


Hypsometric tinting

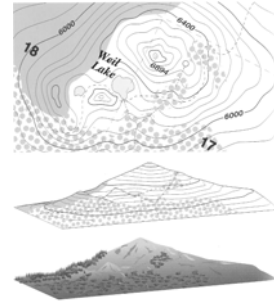
- ‡ Using color to mark elevation change



Shaded Relief

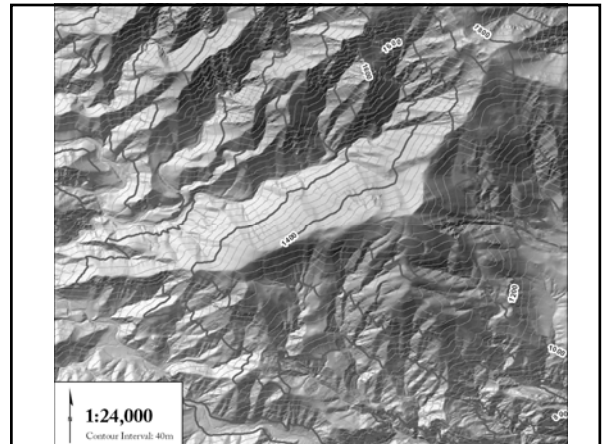
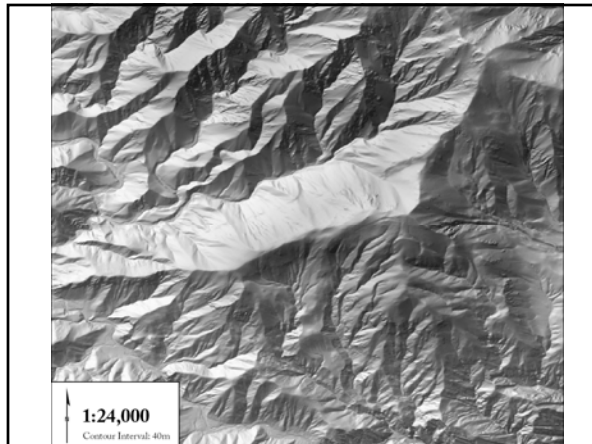
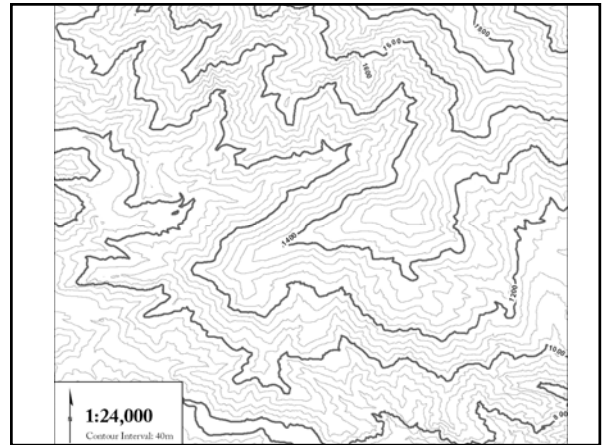


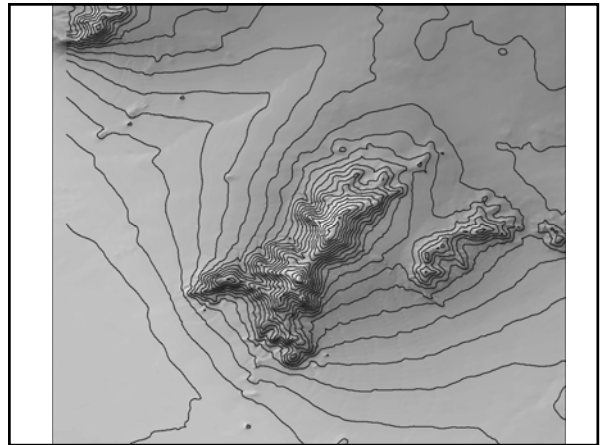
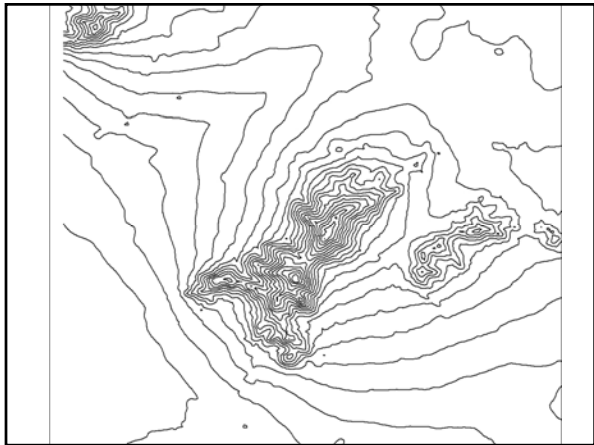
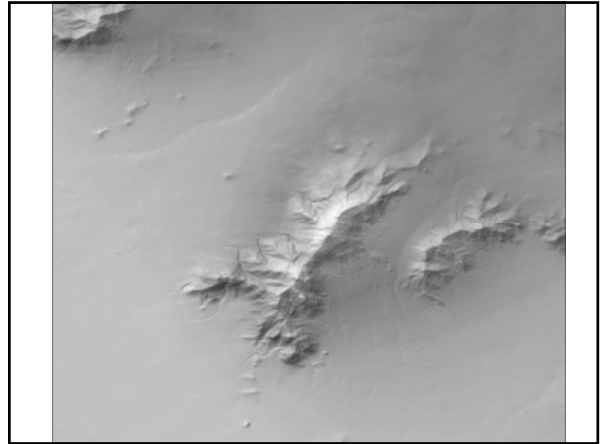
Understanding contours



Understanding contours

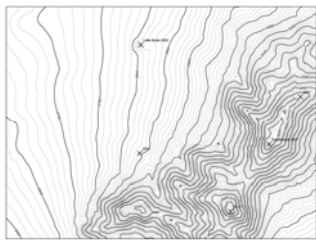
- ‡ Peaks
- ‡ Slope
- ‡ Drainage & valleys





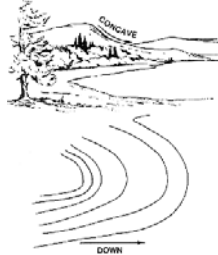
Reading contours

- ‡ Contour intervals are standard
 - the closer they are, the steeper the terrain.



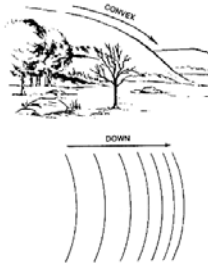
Reading contours

- ‡ **Concave slope**
 - Lines that are tightly spaced at the top of a hill and widen at the bottom



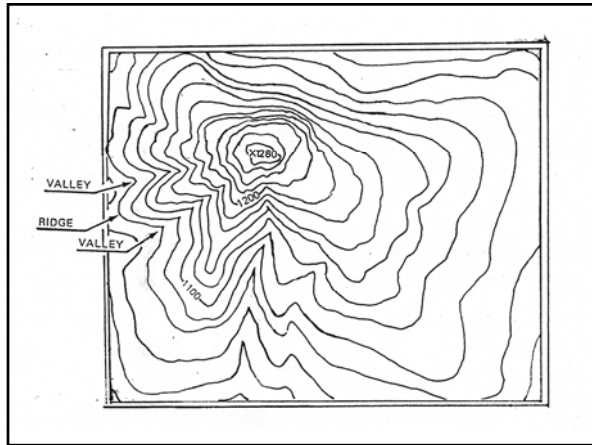
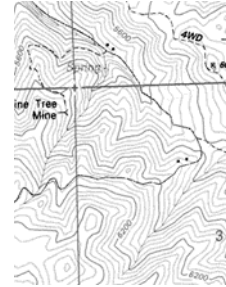
Reading contours

- ‡ Convex slope
 - Wide at top, close at bottom



Finding drainage

- ‡ V-shape = water cut valleys
- ‡ "Points" upstream



Map Interpretation

- ‡ Stovepipe Wells NE, Death Valley

Drawing a profile

- ‡ A cross section of the terrain
- ‡ Useful to 'see' the slope

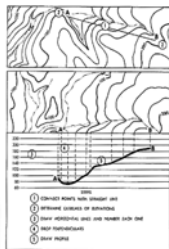


Figure 18.8 Drawing a profile.
Source: Introduction to the Study of Geography, 10th Edition, © 2008, The McGraw-Hill Companies, Inc.