

Structure/Isopach Map Standards for Class I Applications



The purpose of a structure map is to display the elevation of formations, reservoirs, or geologic markers using the most up-to-date subsurface data available. The purpose of an isopach map is to display the variation in thickness of formations, reservoirs, or geologic markers. Structure maps and Isopach maps should be at a scale no smaller than 1 inch to 500 feet. Please ensure that all elements on the map (i.e. illustrations, data, contour lines and text), are clearly legible. Additionally, in order to ensure consistency, please use the following list of items as a reference when reviewing and/or creating structure and isopach maps:

1. Geological structure and isopach maps should be constructed from data collected from all available sources including boreholes, wells, seismic data, etc., and must be prepared to professional geological standards. At a minimum, map elements shall include: north arrow, map legend, subsea depths or thicknesses, contour interval(s), a bar scale, Louisiana licensed professional geoscientist (PG) stamp or seal, the map preparer's full name, and date of preparation.
 - a. The report should include a table which lists all wells and well data used to construct the map. This table should include, for each well, the operator name, well name, well number, state serial number, , total depth (TVD and MD if directional), and reference elevation.
2. The map legend should include and define all symbols (such as well type and well status) or Map ID number tying well to tabular data, colors, and lines used in the drawings. All symbols, colors and lines must be clearly distinguishable.
3. Each well used to construct the structure map or isopach map must be identified on the map with the state serial number (or other identifying number if the map is too crowded), total depth (TVD and MD if applicable), surface and bottom hole location (if well is directional).
4. Faults, shear zones, unconformities or any other geological feature, if identified or inferred, should be indicated on the structure or isopach map.
5. Dashed lines should be used to depict inferred contours in areas where there is little or no data.
6. Changes in contour intervals should be clearly labeled and differentiated by using different line widths.
7. Class I Applications submitted to the Injection and Mining Division should include a structure map and an isopach map of each of the following:
 - a. Proposed/Existing Injection Zone
 - b. Proposed/Existing Injection Interval(s)
 - c. Upper and Lower Confining Zones

NOTE: Isopach maps of the Confining Zones should display *net shale*, while isopach maps of each Injection Interval should display *net sand*. Injection Zone Isopach maps can be constructing using either *net* or *gross sand*. Isopach maps should be labeled "net" or "gross" to establish clarification.
8. All geological interpretations, including structure and isopach maps, must include a licensed Louisiana Professional Geoscientist (PG) stamp/seal with the name and date of the geoscientist who either prepared or approved the map.