

## Directions for Forecasting Weather Review

(Source: [http://www.srh.weather.gov/srh/jetstream/synoptic/surface\\_press.htm](http://www.srh.weather.gov/srh/jetstream/synoptic/surface_press.htm))

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### **Objective:**

Using a black colored pencil, lightly draw lines connecting identical values of sea level pressure.

Remember, these lines, called isobars, do not cross each other. Isobars are usually drawn for every four millibars, using 1000 millibars as the starting point. Therefore, these lines will have values of 1000, 1004, 1008, 1012, 1016, 1020, 1024, etc., or 996, 992, 988, 984, 980, etc.

### **Procedure:**

Begin drawing from the 1024 millibars station pressure over Salt Lake City, Utah (highlighted in gray). Draw a line to the next 1024 value located to the northeast (upper right). Without lifting your pencil draw a line to the next 1024 value located to the south, then to the one located southwest, finally returning to the Salt Lake City value. Remember, isobars are smooth lines with few, if any, kinks.

The result is an elongated circle, centered approximately over Eastern Utah. The line that was drawn represents the 1024 millibars line and you can expect the pressure to be 1024 millibars everywhere along that line. Repeat the procedure with the next isobar value. Remember, the values between isobars is 4. Since there are no 1028 millibars values on the map, then your next line will follow the 1020 millibars reports. Then continue with the remaining values until you have all the reports connected with an isobar.

### **Analysis:**

Isobars can be used to identify "Highs" and "Lows". The pressure in a high is *greater* than the surrounding air. The pressure in a low is *lower* than the surrounding air.

- \* Label the center of the high pressure area with a large blue "H".
- \* Label the center of the low pressure area with a large red "L".

High pressure regions are usually associated with dry weather because as the air sinks it warms and the moisture evaporates. Low pressure regions usually bring precipitation because when the air rises it cools and the water vapor condenses.

- \* Shade, in green, the state(s) would you expect to see rain or snow.
- \* Shade, in yellow, the state(s) would you expect to see clear skies.

In the northern hemisphere the wind blows clockwise around centers of high pressure. The wind blows counterclockwise around lows.

- \* Draw arrows around the "H" on your map to indicate the wind direction.
- \* Draw arrows around the "L" on your map to indicate the wind direction.