

# CAST IRON MONUMENT

By Jerry Penry, PS



On December 6, 2014, a static GPS observation on the Cast Iron Monument located on the state line between Rulo, Nebraska and White Cloud, Kansas, was performed. A Topcon Hiper V receiver was used for the 4 hour-34 minute continuous observation. A 10'-5" tall tripod was used to center over a punch mark on the top of the Cast Iron Monument. The receiver was centered over the point by use of an optical tribrach and checked with a plumb bob. The file was then submitted to OPUS for processing.



The results were as follows with the horizontal position being NAD\_83(2011) and the vertical position being NAVD88 using Geoid 12A:

**Latitude: 39°59'59.66595"**  
**Longitude: 95°19'55.47565"**

**Ortho Height: 976.547 feet (Top of Monument)**  
**Ortho height: 970.691 feet (Base of monument)**

The road surface elevation below the monument is approximately 853 feet (Google Earth) making the base of the Cast Iron Monument on top of the bluff approximately 118 feet above the road. The observation was made by David Hoffart, Gene Thomsen, and Jerry Penry all of Lincoln, Nebraska.



This current position compares to a previous position obtained by the KsDOT under Bill Haverkamp, PS, in 1993, with the horizontal position being NAD\_83.

Latitude:  
39°59'59.67194"  
Longitude:  
95°19'55.47320"

