Chains

Survey commenced June 18, 1915 and executed with a Young and Sons light mountain transit No. 8390, with Smith solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other and reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was approved by Mr. G.D.D. Kirkpatrick, Assistant Supervisor of Surveys, at Salt Lake City, Utah.

All measurements were made with steel tapes 5.00 chs. in length, the first 100 lks. being graduated to lks. and the remainder to 10 lks. Vertical angles were read with a clinometer.

I examine the adjustments of the transit and find them correct, then to test the solar apparatus by comparing its indications resulting from observations made during a.m. and p.m. hours with a meridian determined by observation on Polaris I proceed as follows:

At my camp in T. 30 N.,R. 22 E., sec. 33,latitude 40° 25'N., longitude, 119° 31'W., at 9h., a.m.,l.m.t., I set off 40° 25' on the lat. arc and 23° 24.5'N. on the decl. arc and determine a meridian with the solar, marking a point in that meridian on a stake firmly driven in the ground about 5 chs. N. of my station.

At this station, I set off 23° 24.5' N. on the decl. arc and at about 12h. 1 m., p.m.,l.m.t., observe the sun on the meridian, the resulting latitude is 40° 25'.

At 3h.0m., p.m., l.m.t., I set off 40° 25' on the lat. arc and 23° 25'N. on the decl. arc and determine with the solar at this station a meridian which coincides with the meridian determined this morning.

At 9h. 14.6m., p.m., l.m.t., I observe Polaris in accordance with instructions in the Manual, and mark a point in the line thus determined on a stake firmly driven in the ground about 5 chs. N. of my station.

Time of observation, June 18, p.m.----------		9h.14.6m
Equivalent to a.m., time of June 18----------		21h.14.6m
U.C.Polaris,Greenwich,June 18,a.m.	7h. 46.9m	
Reduced to local longitude--------	1.3	
U.C.Polaris at observation station, a.m.,----------	7h. 45.6m	7h.45.6m
Hour angle of Pol. at observation----------		13h.29.0m
Subtract from----------		23h.56.1m
Time argument for table----------		10h.27.1m

Azimuth of Polaris at observation 0° 34.5'E. June 18,1915

June 19: At 6h. 30m. a.m., l.m. t.,I lay off the azimuth of Polaris 0° 34.5' to the west, and note that the Polaris meridian coincides with my solar meridian. I conclude therefore that the adjustments of the instrument are satisfactory.

June 19, 1915.

July 9: At 9h. 40m., a.m., l.m.t., I set off 40° 30' on the lat. arc and 22° 27' N. on the decl. arc and determine a meridian with the solar at the Standard Corner of Ts. 31 N., Rs. 21 and 22 E., which is an iron post, 3 ins. diam., 6 ins. above a mound of stone, firmly set with a brass cap mkd.

T. 31 N.
R21E | R22E
S36 | S31
S | C
1912

with a mound of stone, 4 ft. base, 3 ft. high, N. of cor.