

## MINERAL SURVEY NO. 987

## CHAINS

This survey was made with a Kueffel and Esser transit No. 97636 with horizontal limb 6.25 ins. diam., having two double opposite verniers, reading to 30 seconds of arc, and full vertical circle 4.75 ins. diam., having a double vernier reading to one minute of arc. The instrument was in good condition at the time of the survey and all adjustments were in good order.

All azimuths in this record were determined by the method of deflection angles referred to the meridian determined by the following observation:

May 4, 1981, at a point from which Cor. No. 4, bears S. 28° 23' 30" E. 179.98 feet; thence N. 85° 19' 32" E. 75.92 feet, at latitude 43° 08' 09" N. and longitude 123° 07' 19" W., elevation 1150 feet above sea level, and temperature 50° F., I make a series of six altitude observations upon the sun at approximately equal time intervals, three each with telescope in direct and reversed positions, observing opposite limbs of the sun and reading the horizontal angle from site to southward SW. to the sun.

Mean time of observation, 120th meridian, corrected to standard time	=2 <sup>h</sup> 30 <sup>m</sup> p.m.
Mean zenith angle to the sun's center	=40° 28' 37"
Mean vertical angle to the sun's center	=49° 31' 23"
Mean horizontal angle from site station to the sun's center	=87° 40' 53"
True bearing to site A-4	=S. 28° 23' 31" E.

The lines were measured with a Lufkin tape 200 feet in length, graduated every foot with a foot added, graduated to tenths; the tape was checked on a base line and found to be correct, also, 475 feet on the southerly line and 752.14 feet on the northerly line were electronically measured distances, made with a Beetle 2000 in good condition and adjustments.

All lines and connections of this survey were run by direct methods where the lines were accessible; the inaccessible lines were run by traverse methods, as shown by the calculation sheets herewith submitted.

The magnetic declination observed at each corner of the survey gave a uniform value of 19° 00' E.

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STAR PLACER CLAIM

Beginning at cor. No. 1 of Star Placer Claim