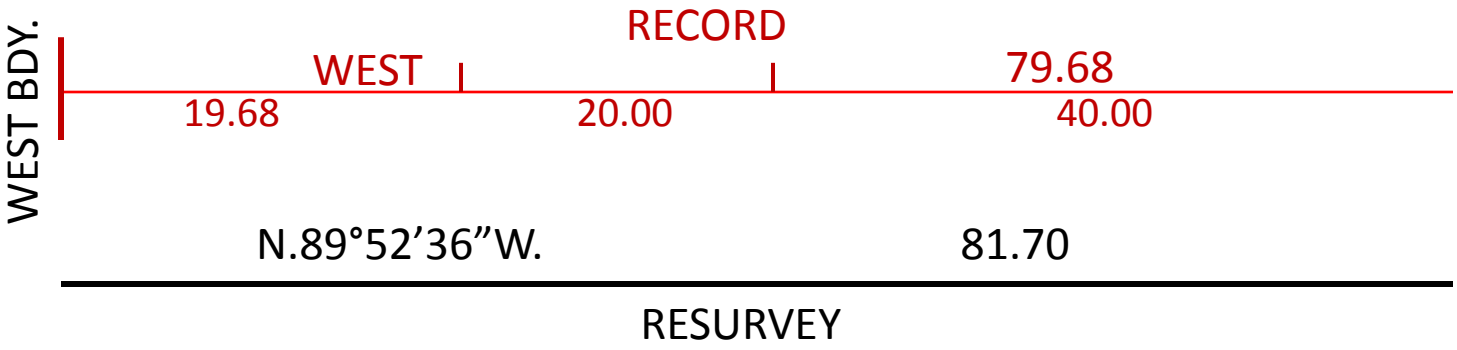
SUBDIVISION OF SECTIONS

- THE SURVEYOR IS OFTEN CALLED UPON TO SUBDIVIDE A SECTION, EXCEPT IN THE CASE OF A REGULAR SECTION, THE RULES OF SECTION SUBDIVISION CAN BE MISUNDERSTOOD AND CAUSE SOME PROBLEMS. I WILL PROVIDE SOME BASIC CONSIDERATIONS WITH IRREGULAR SECTIONS. WE WILL DEAL WITH THE USE OF LOTS AND THEIR AREAS AS A MEANS FOR DETERMINING THE PROPER LOCATION OF CONTROL CORNERS NEEDED TO CORRECTLY SUBDIVIDE UNUSUAL SECTIONS.

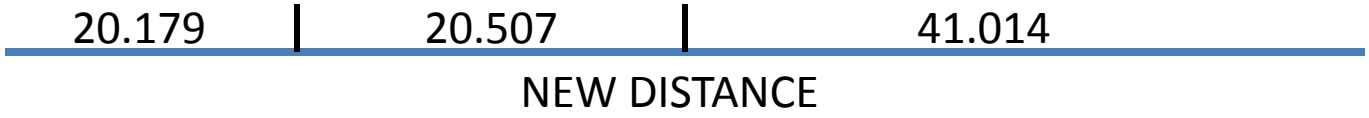
- Before subdividing; establish or reestablish the controlling corners on the section lines.
- Methods for establishing corner positions
  - 1-single proportion
  - 2-double proportion
  - 3-one point control
  - 4-two point control
  - 5-three point control

SINGLE PROPORTION



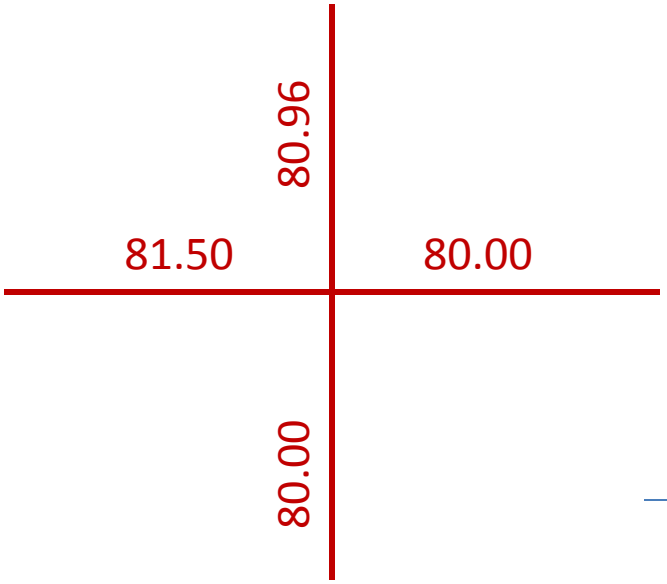
COMPUTE POSITIONS FOR THE LOST 1/4, ALSO THE W 1/16, (WHICH WAS NOT SET IN THE ORIGINAL SURVEY).

$$\frac{\text{RESURVEY}}{\text{RECORD}} = \text{FACTOR} \qquad \frac{81.70}{79.68} = 1.02535$$

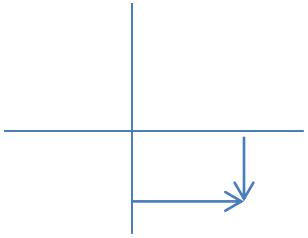


DOUBLE PROPORTION

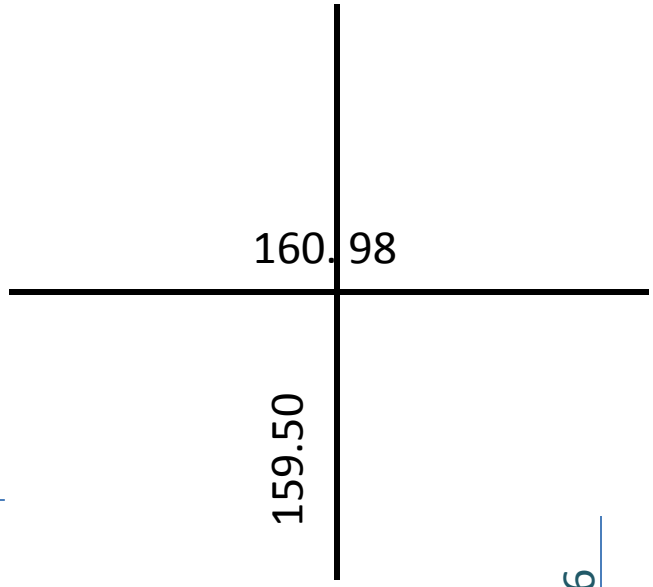
TWO SINGLE PROPORTIONS; NORTH-SOUTH & EAST-WEST



RECORD



Cardinal offsets



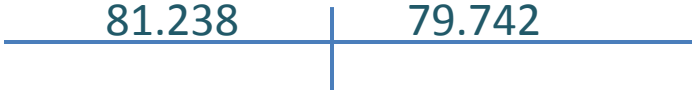
RESURVEY

EAST-WEST

$$\frac{160.98}{161.50} = 0.9968$$

NORTH-SOUTH

$$\frac{159.50}{160.96} = 0.9909$$

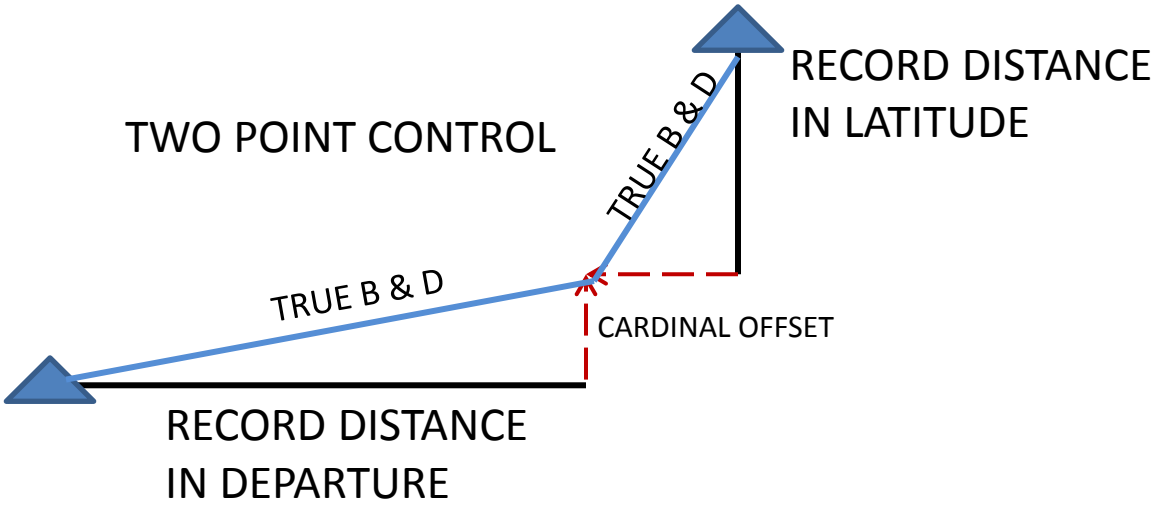


RECORD MEASUREMENTS

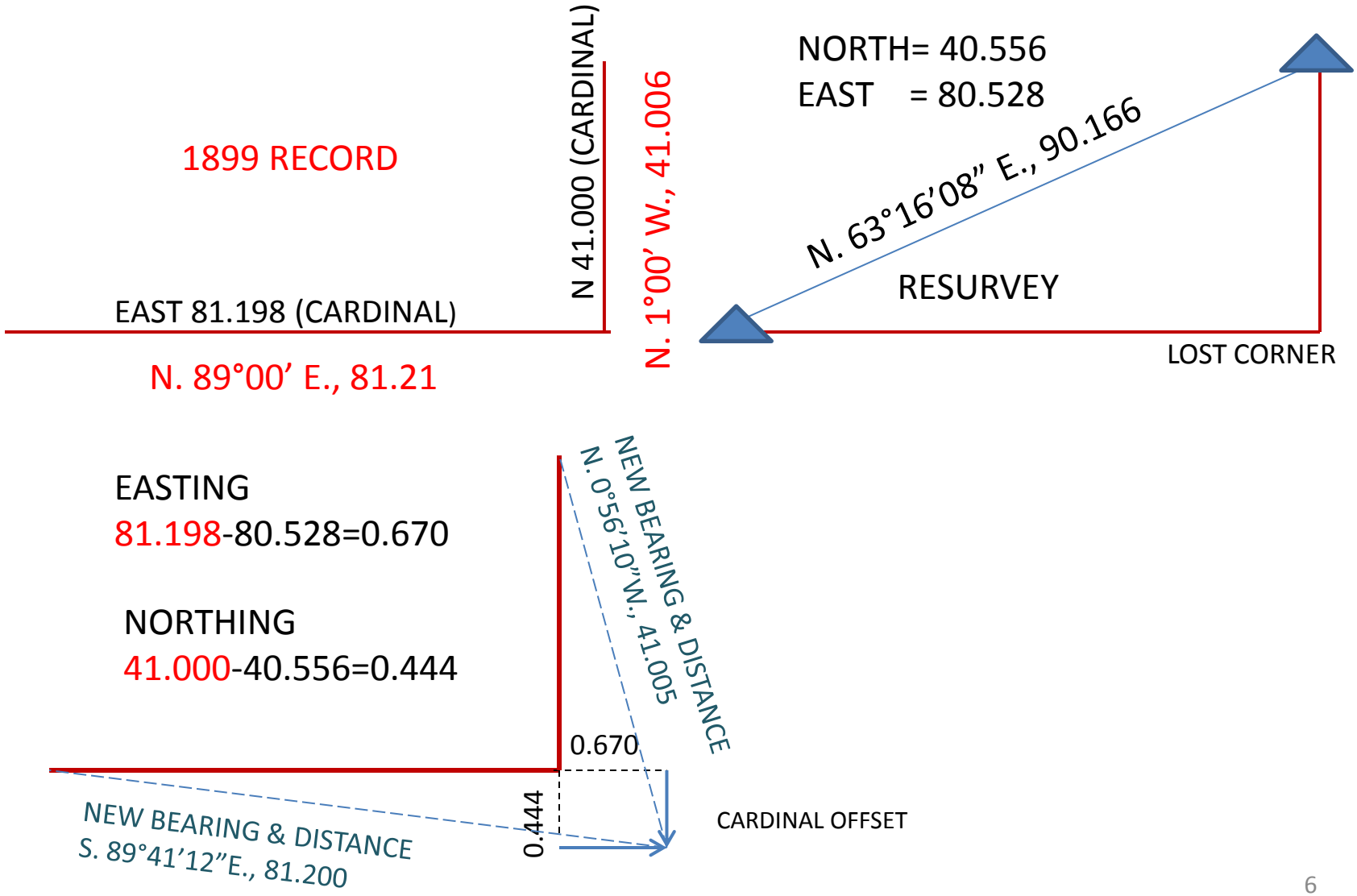
ONE POINT, TWO POINT, AND THREE POINT CONTROL

ONE POINT CONTROL

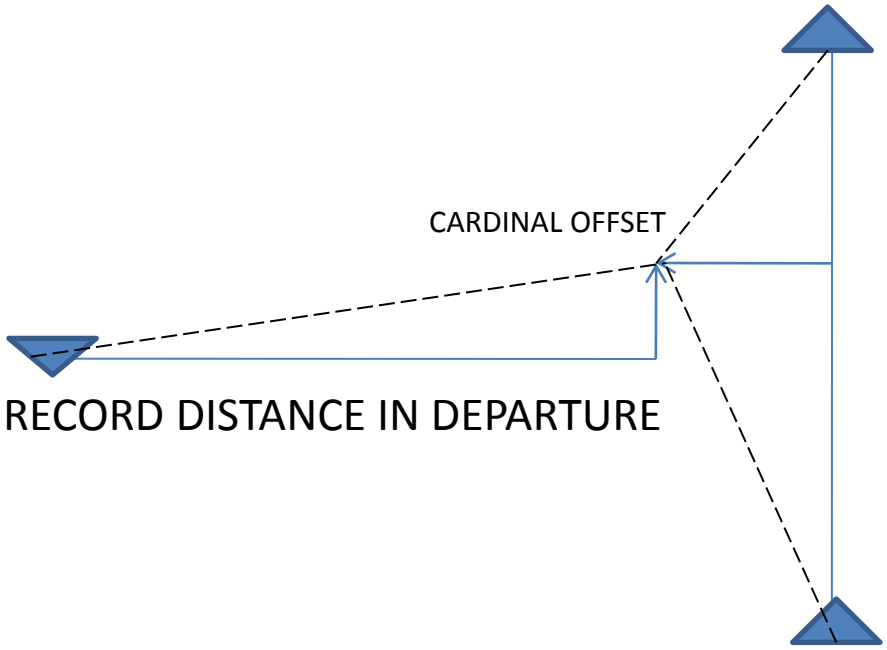
RECORD BEARING AND DISTANCE



EXAMPALE OF A TWO POINT CONTROL

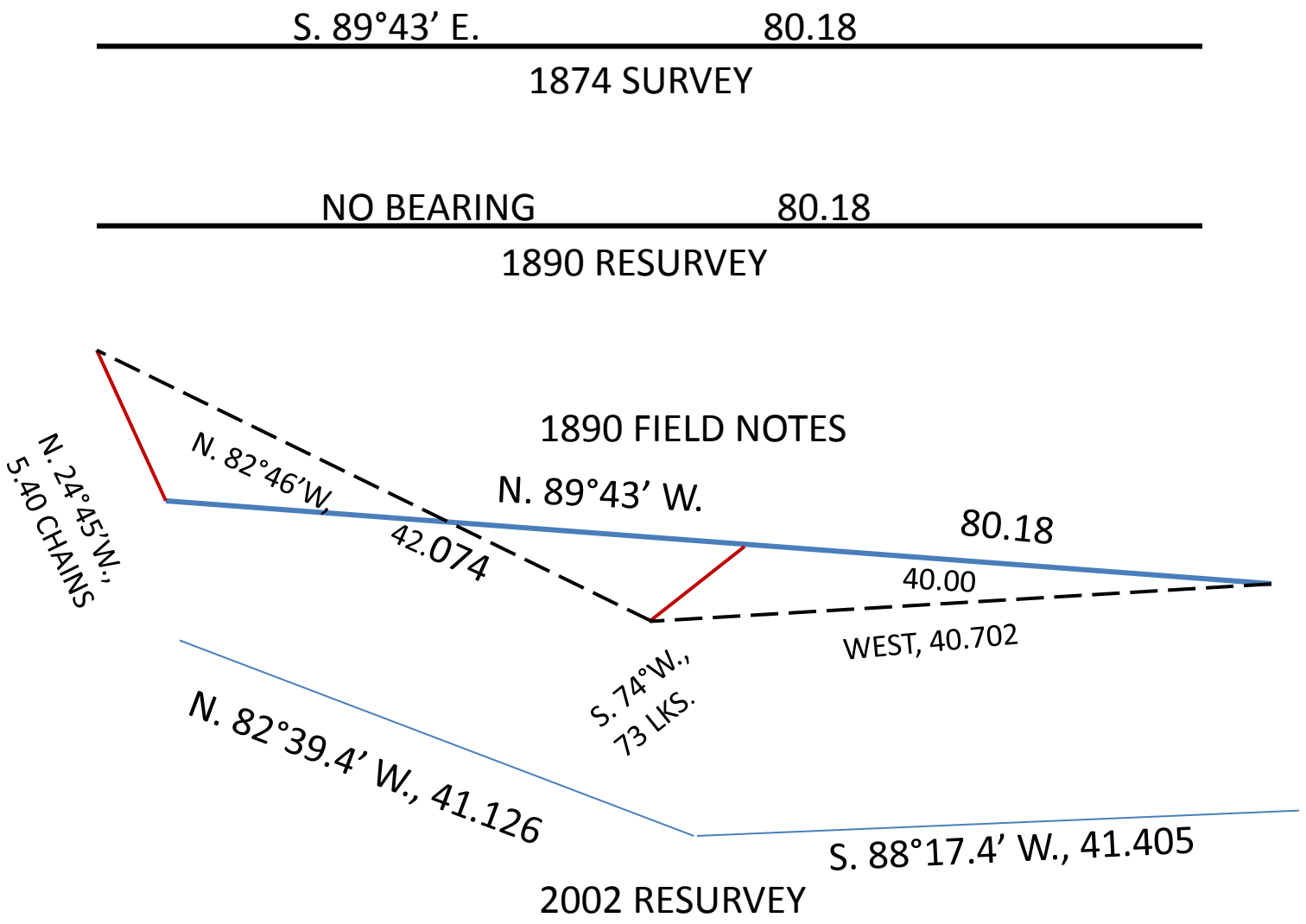


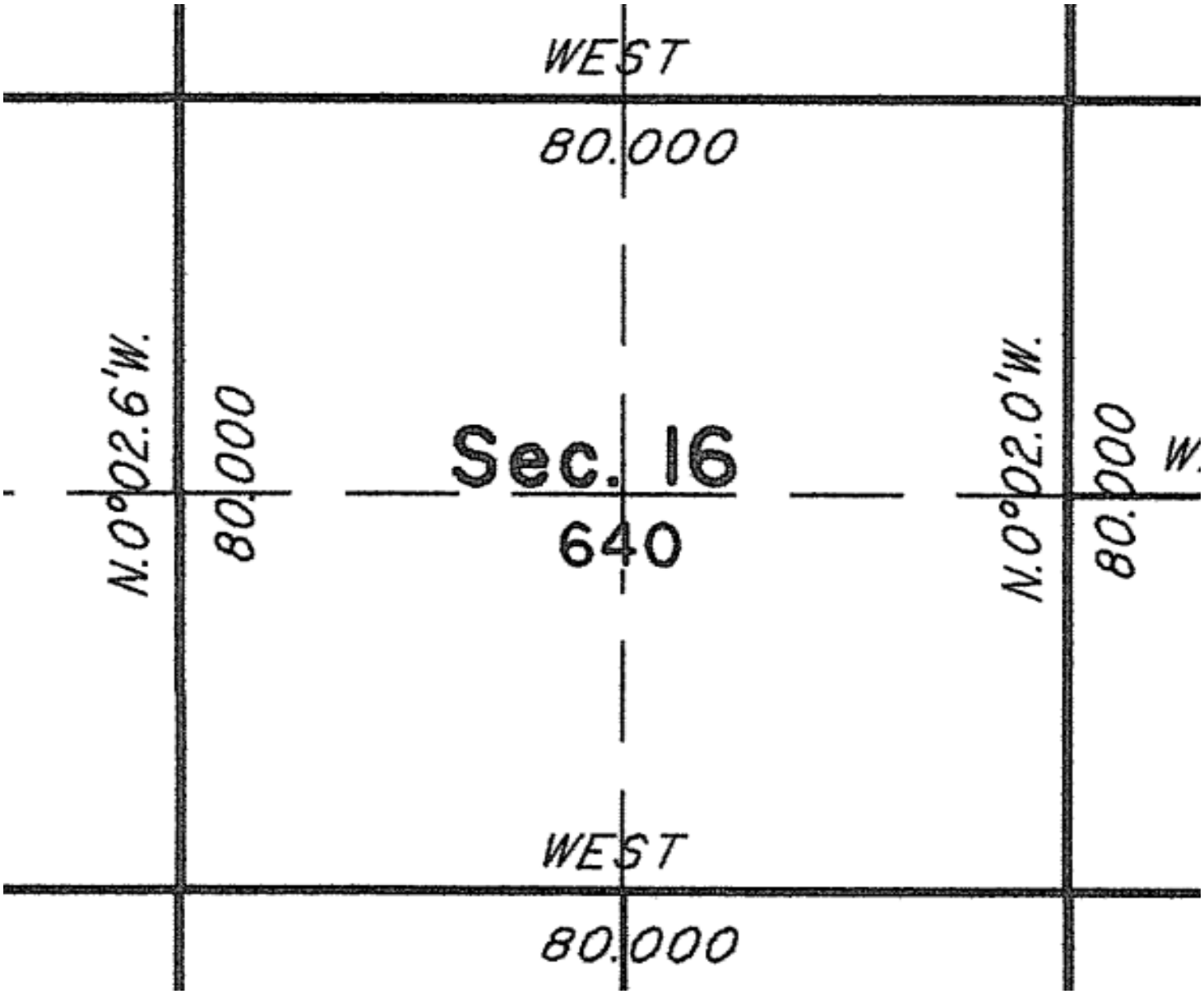
THREE POINT CONTROL

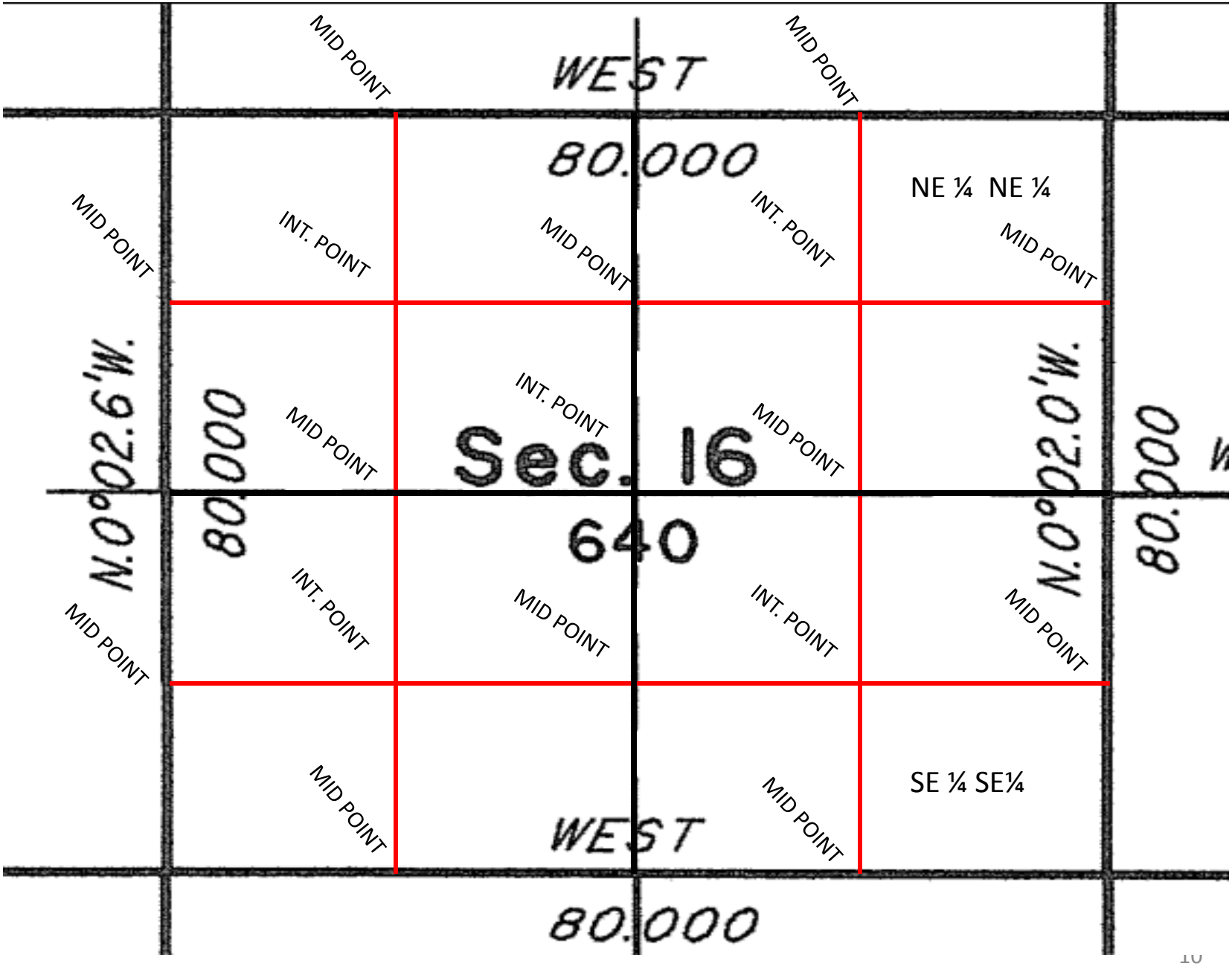


SINGLE PROPORTION
IN LATITUED

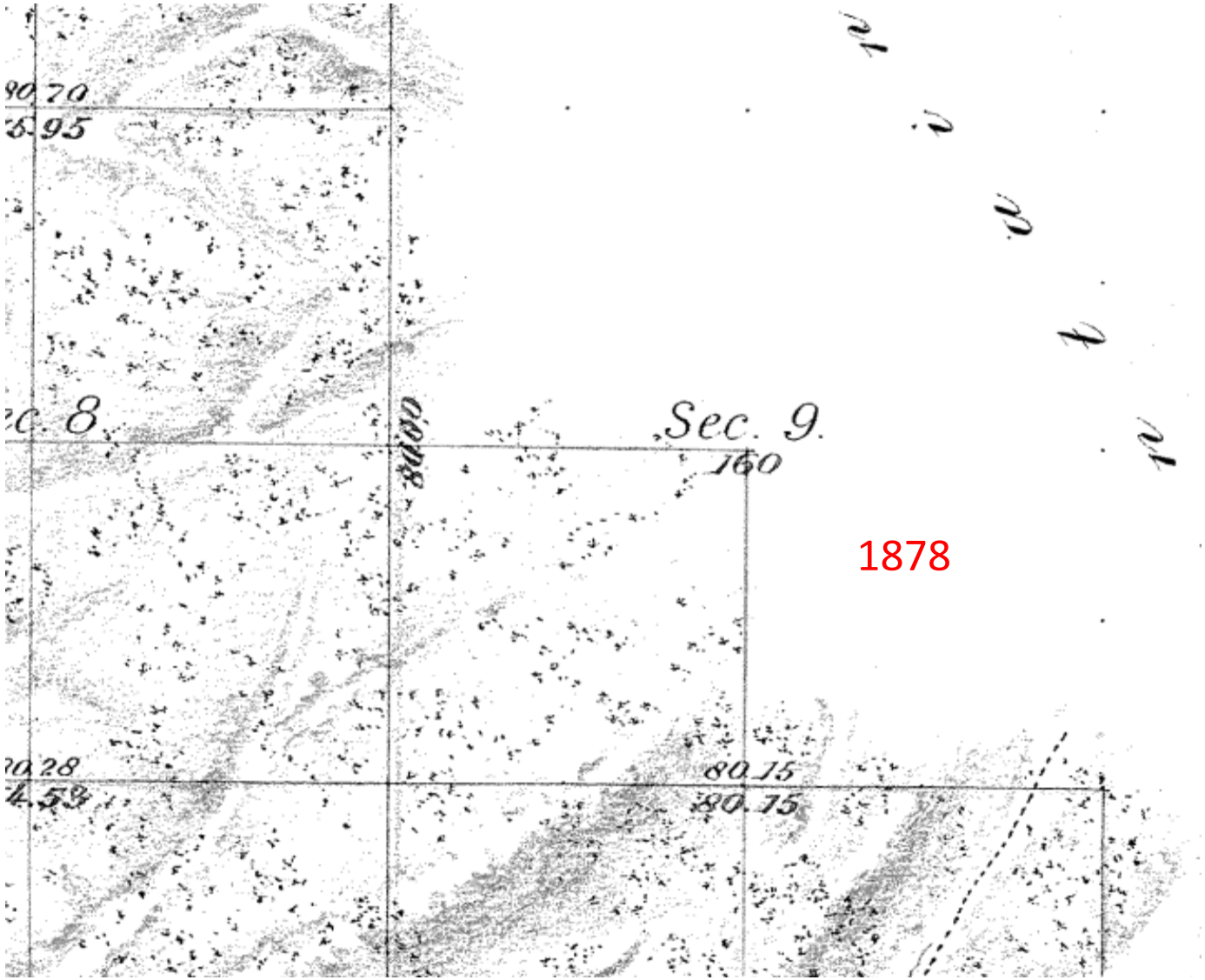
SOUTH BOUNDARY OF SECTION 6



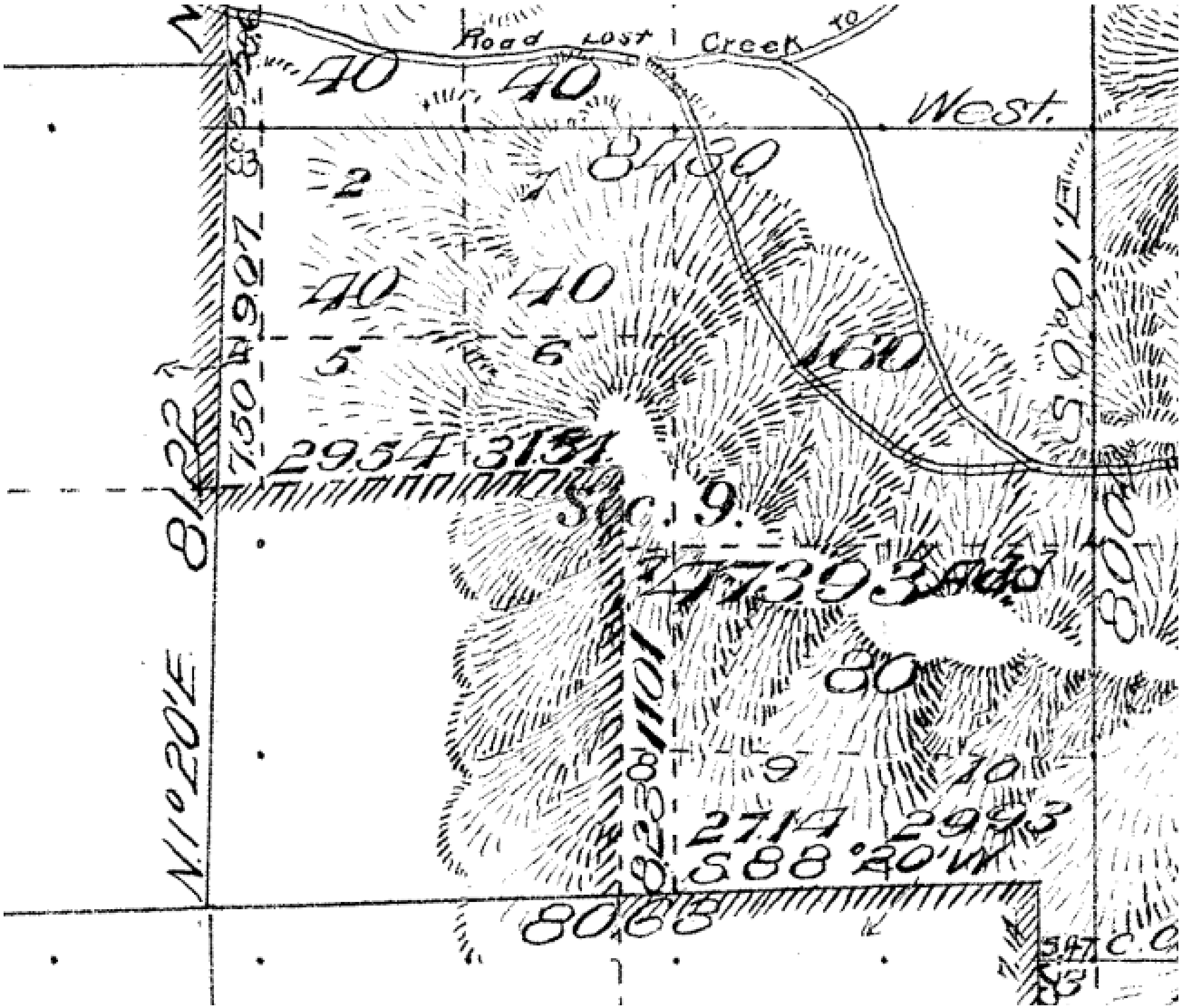

WEST
80.000
N.0°02.6'W.
80.000
Sec. 16
640
N.0°02.0'W.
80.000
WEST
80.000

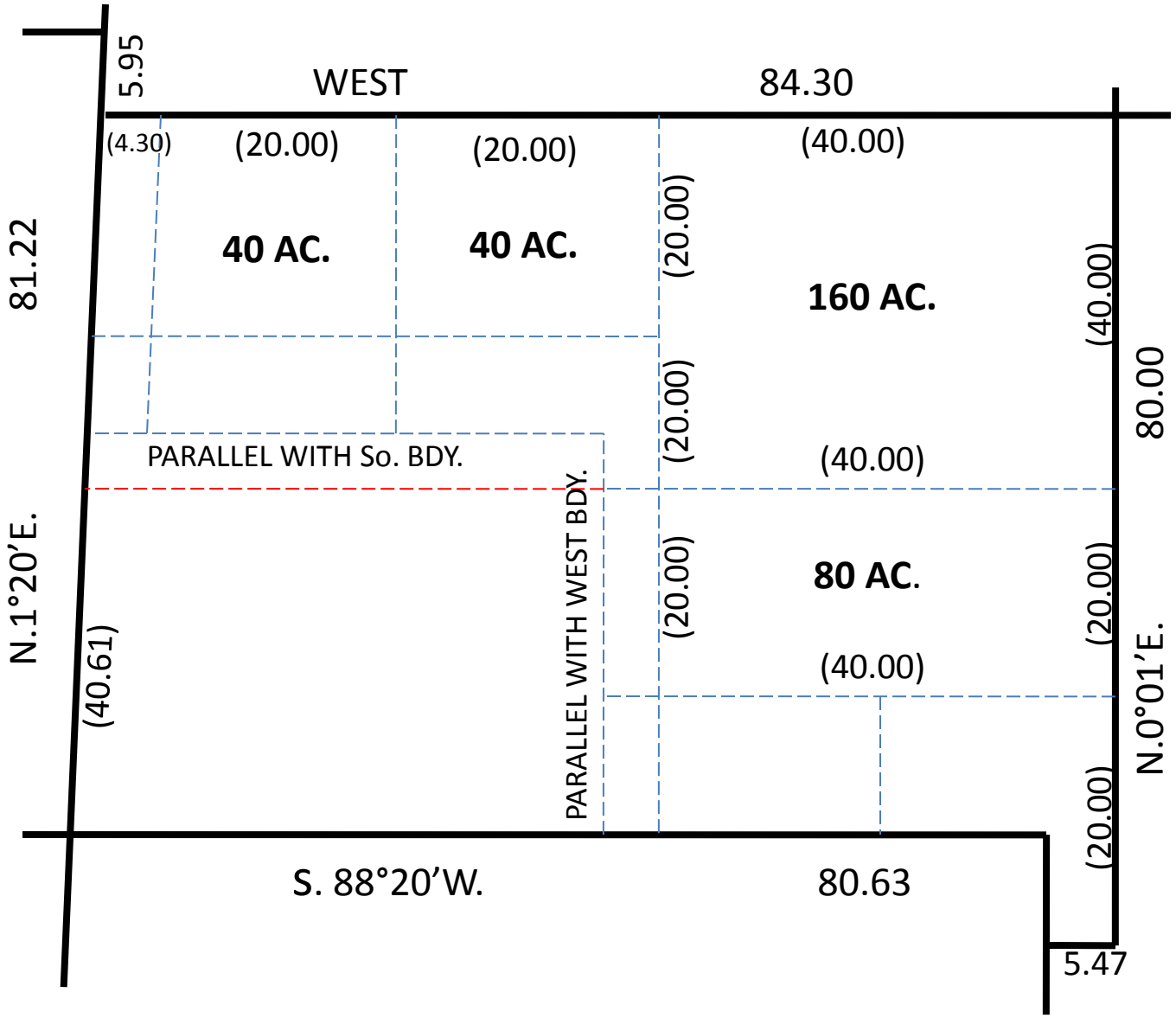

MID POINT
WEST
MID POINT
80.000
NE ¼ NE ¼
INT. POINT
MID POINT
INT. POINT
MID POINT
MID POINT
N.0°02.6'W.
INT. POINT
MID POINT
Sec. 16
MID POINT
N.0°02.0'W.
80.000
80.000
640
INT. POINT
MID POINT
INT. POINT
MID POINT
MID POINT
MID POINT
SE ¼ SE¼
MID POINT
WEST
80.000

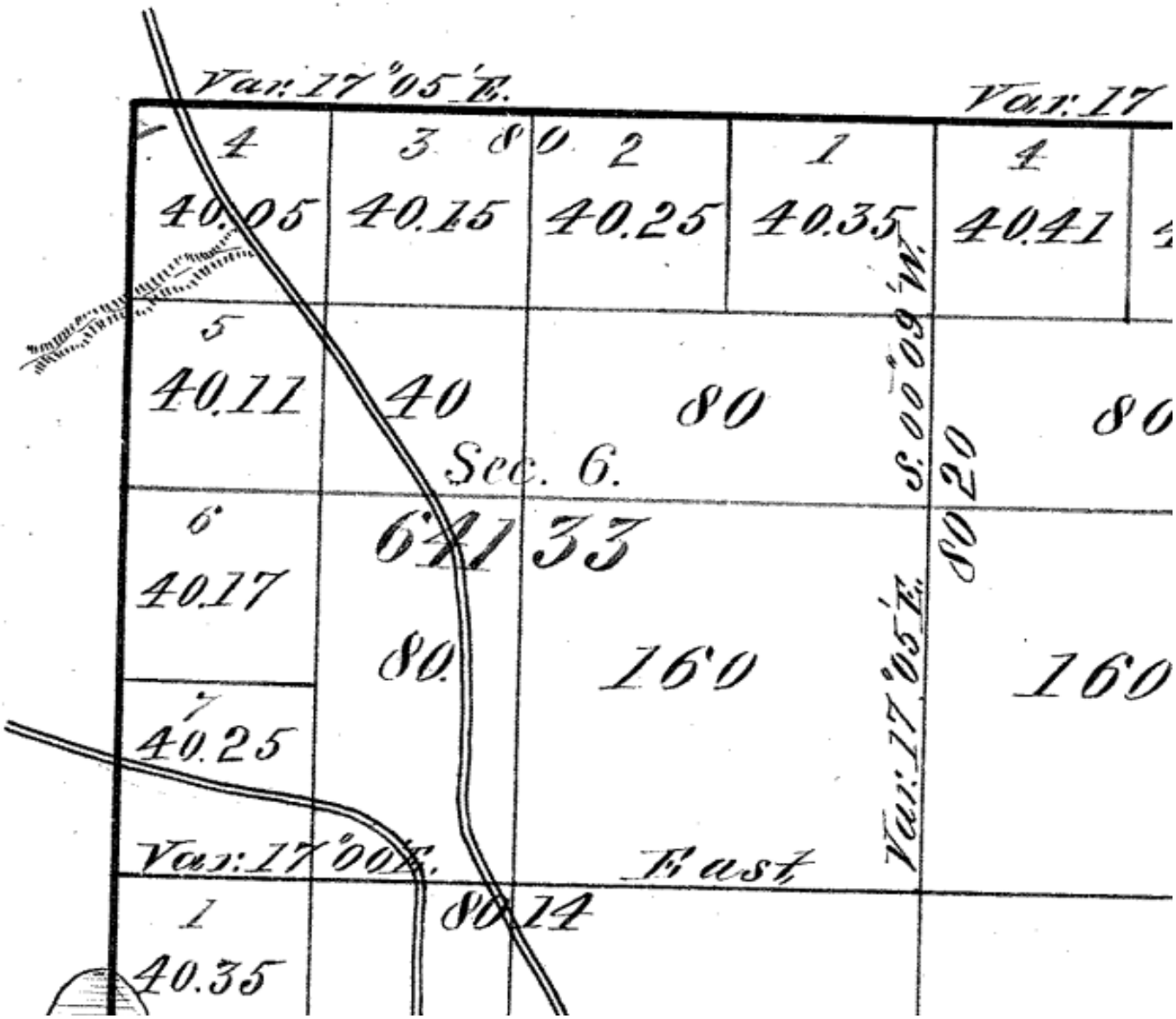
PROTRACTED SW 1/4

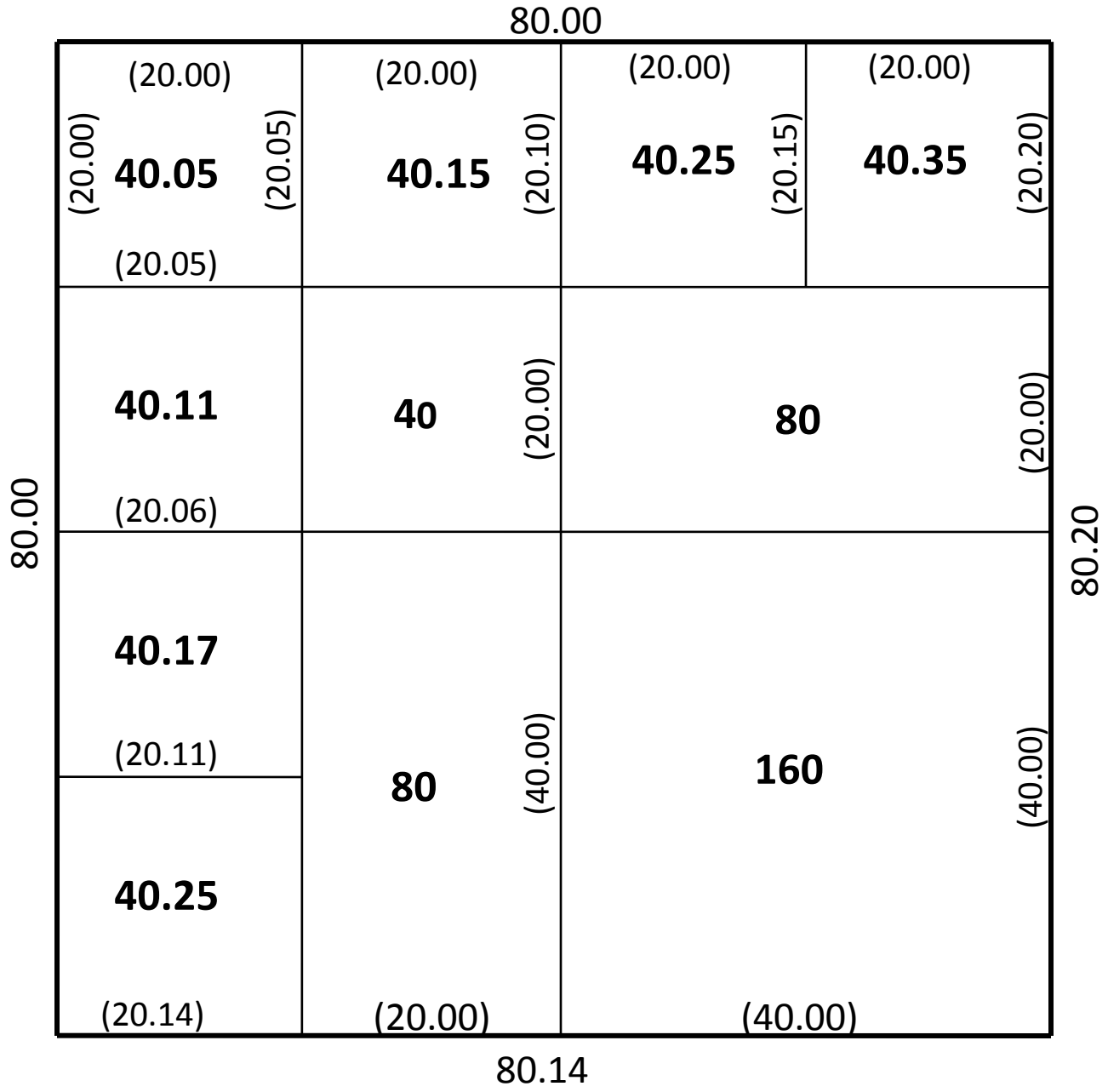


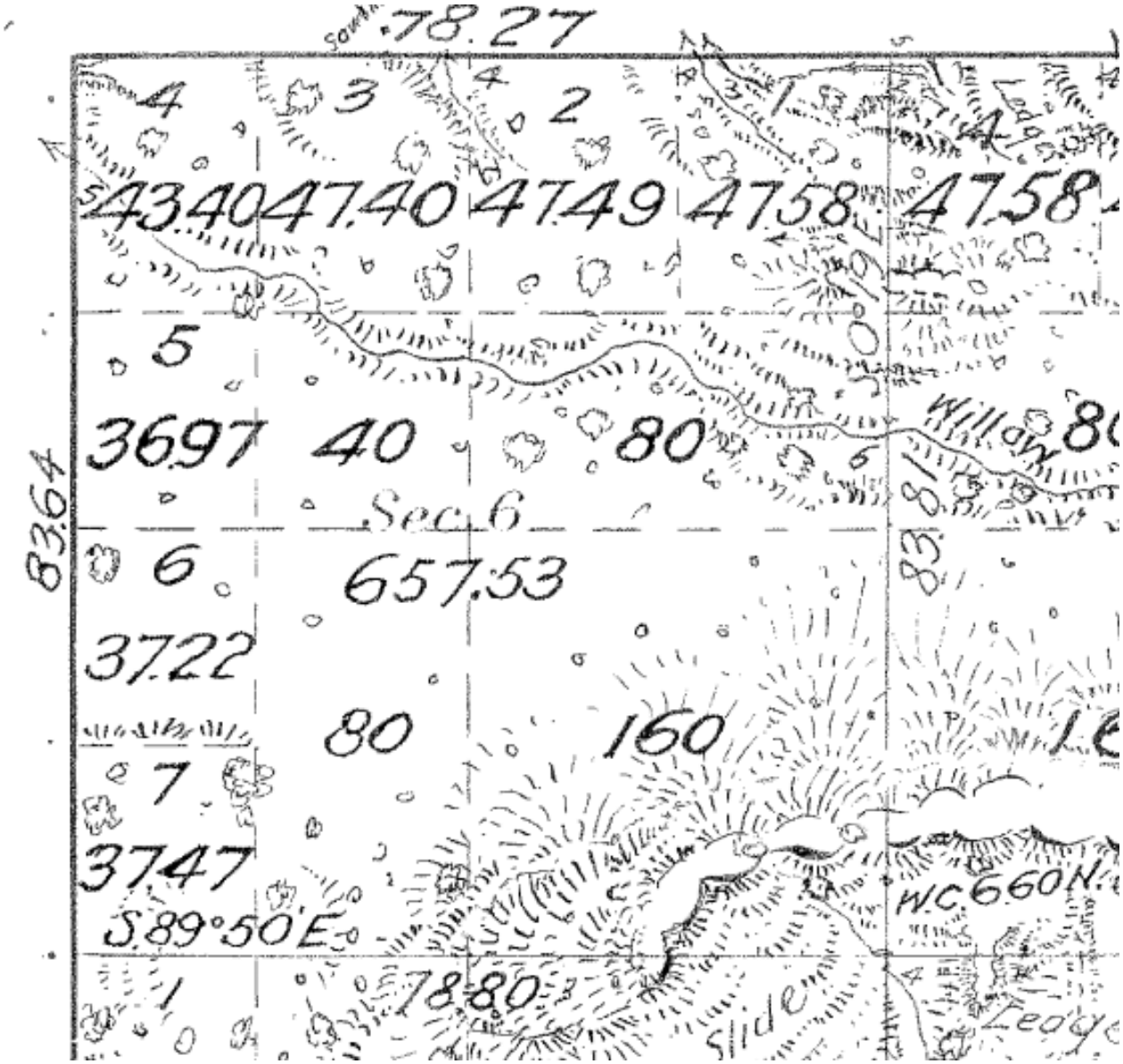
COMPLETION SURVEY 1899

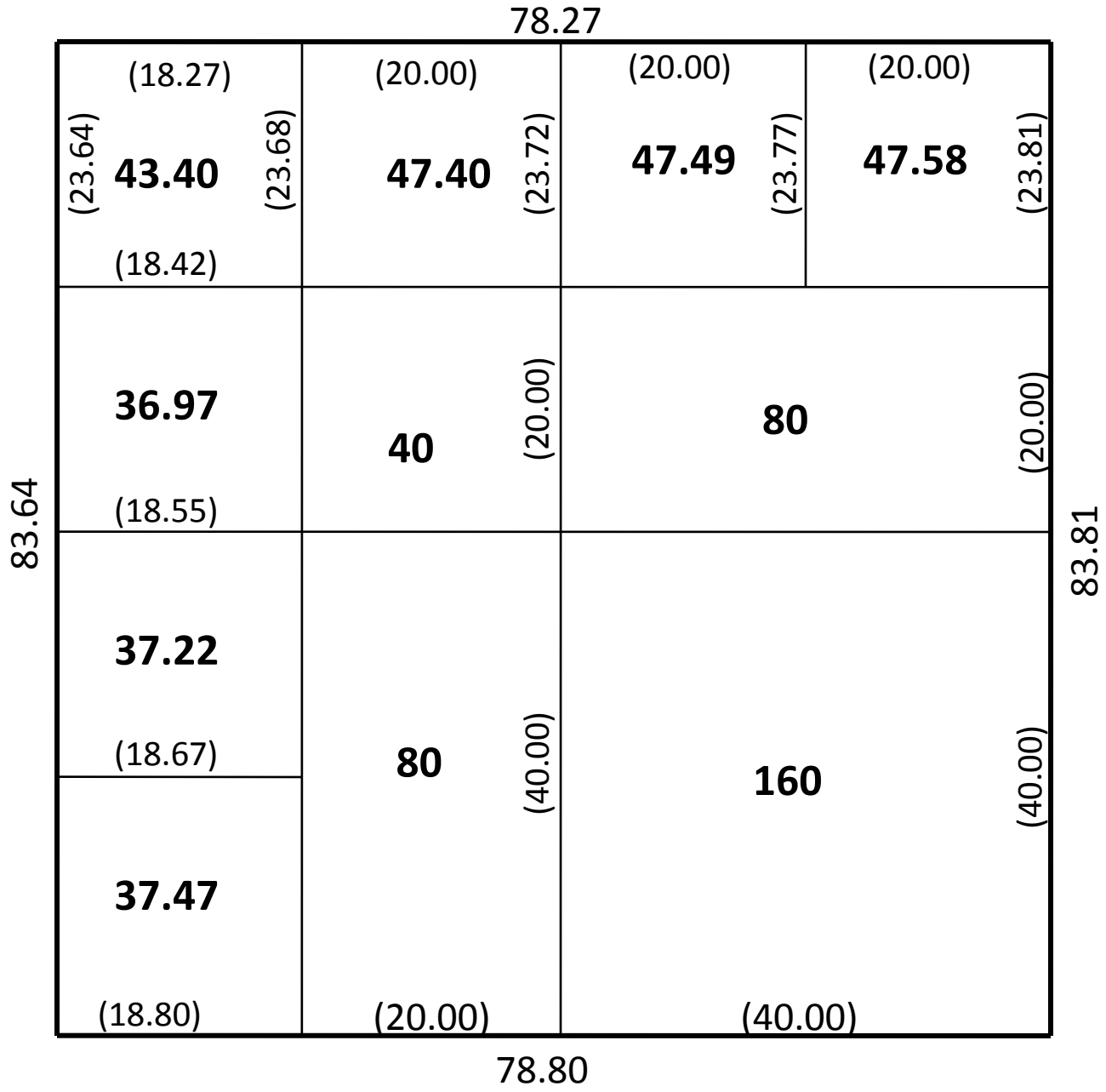



5.95
WEST
84.30
(4.30)
(20.00)
(20.00)
(40.00)
81.22
40 AC.
40 AC.
(20.00)
160 AC.
(40.00)
80.00
PARALLEL WITH So. BDY.
(20.00)
(40.00)
N.1°20'E.
PARALLEL WITH WEST BDY.
(20.00)
80 AC.
(20.00)
(40.61)
(40.00)
N.0°01'E.
(20.00)
S. 88°20'W.
80.63
5.47

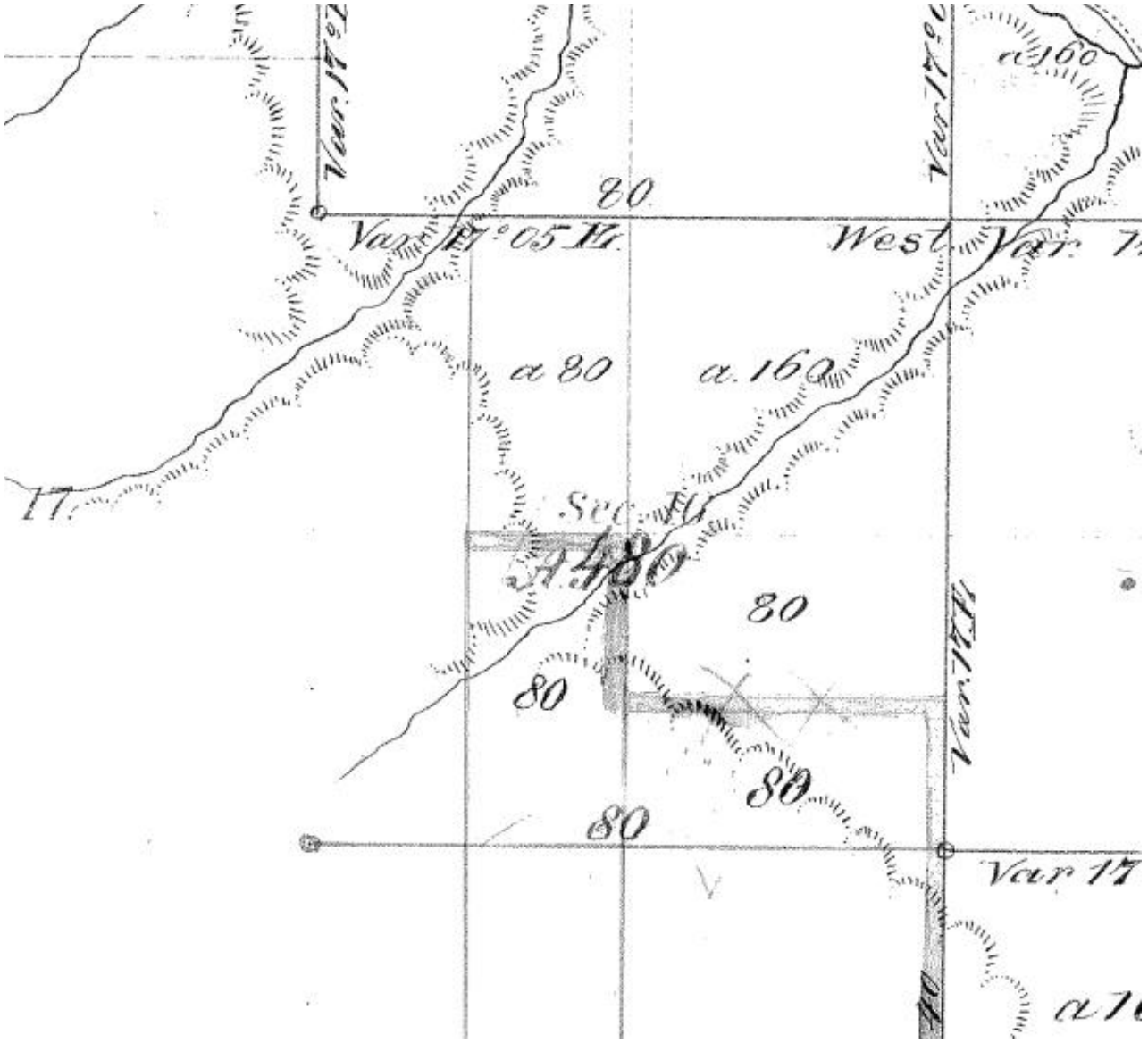

Var: 17° 05' E.
Var: 17
4
40.05
3
40.15
2
40.25
1
40.35
4
40.41
5
40.11
40
80
Sec. 6.
S. 00° 09' W.
20
80
6
40.17
641 33
80
160
160
7
40.25
Var: 17° 00' E.
East
Var: 17° 05' E.
1
40.35
80.14

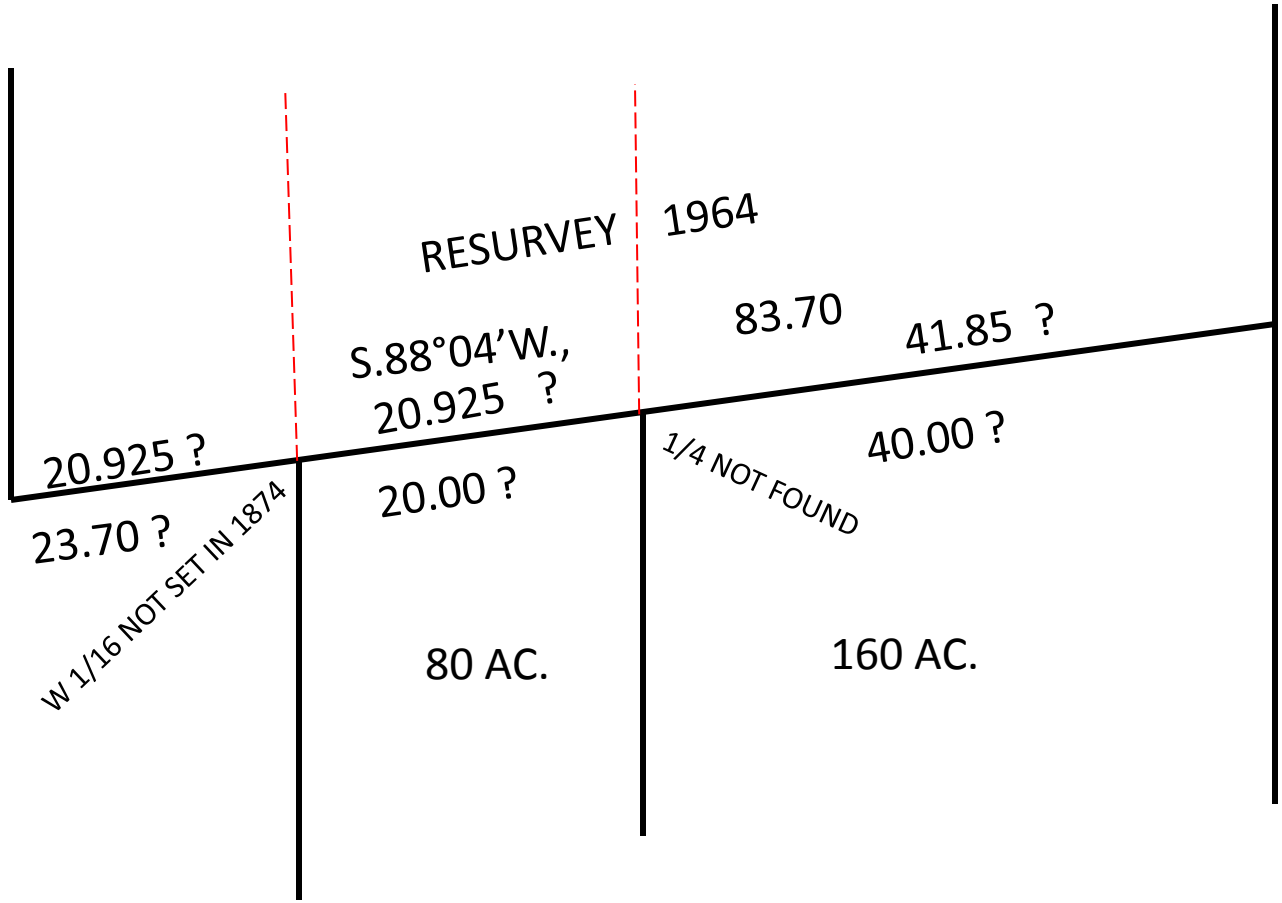

80.00
(20.00)
(20.00)
(20.00)
(20.00)
(20.00)
40.05
(20.05)
(20.05)
40.15
(20.10)
40.25
(20.15)
40.35
(20.20)
(20.05)
40.11
(20.06)
40
(20.00)
80
(20.00)
(20.06)
40.17
(20.11)
80
(40.00)
160
(40.00)
(20.11)
40.25
(20.14)
(20.00)
(40.00)
80.00
80.20
80.14


78.27
4
3
2
1
43.40
47.40
47.49
47.58
47.58
5
36.97
40
80
Willow
Sec. 6
83.64
6
657.53
37.22
80
160
7
37.47
S.89°50'E
W.C.6.60N.
78.80
Slide
Ledge

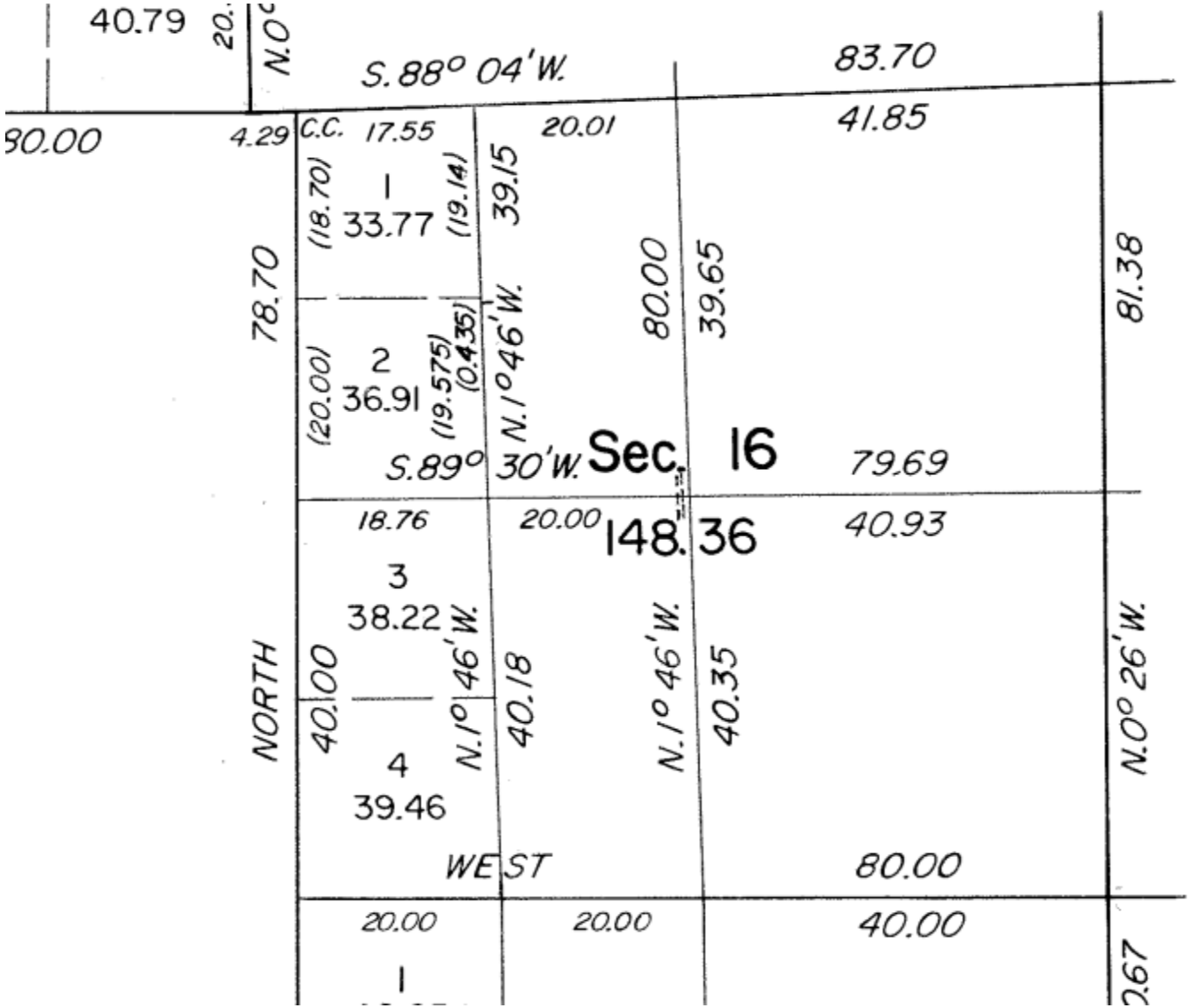

78.27
(18.27)
(20.00)
(20.00)
(20.00)
(23.64)
43.40
(23.68)
47.40
(23.72)
47.49
(23.77)
47.58
(23.81)
(18.42)
36.97
(18.55)
40
(20.00)
80
(20.00)
83.64
37.22
(18.67)
80
(40.00)
160
(40.00)
83.81
37.47
(18.80)
(20.00)
(40.00)
78.80

1874 SURVEY

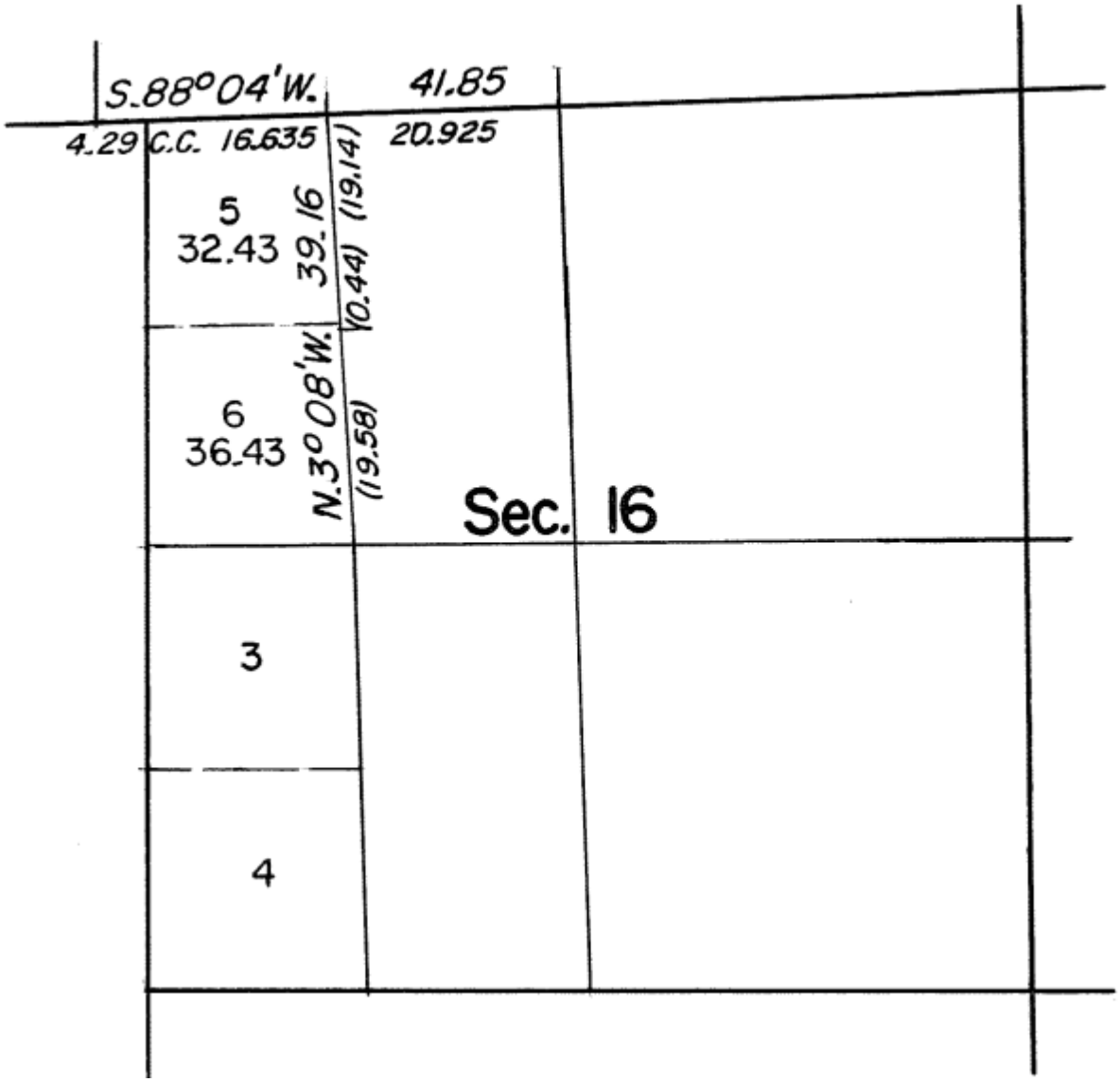



RESURVEY
1964
S.88°04'W.,
20.925 ?
83.70
41.85 ?
20.925 ?
20.00 ?
40.00 ?
23.70 ?
W 1/16 NOT SET IN 1874
1/4 NOT FOUND
80 AC.
160 AC.

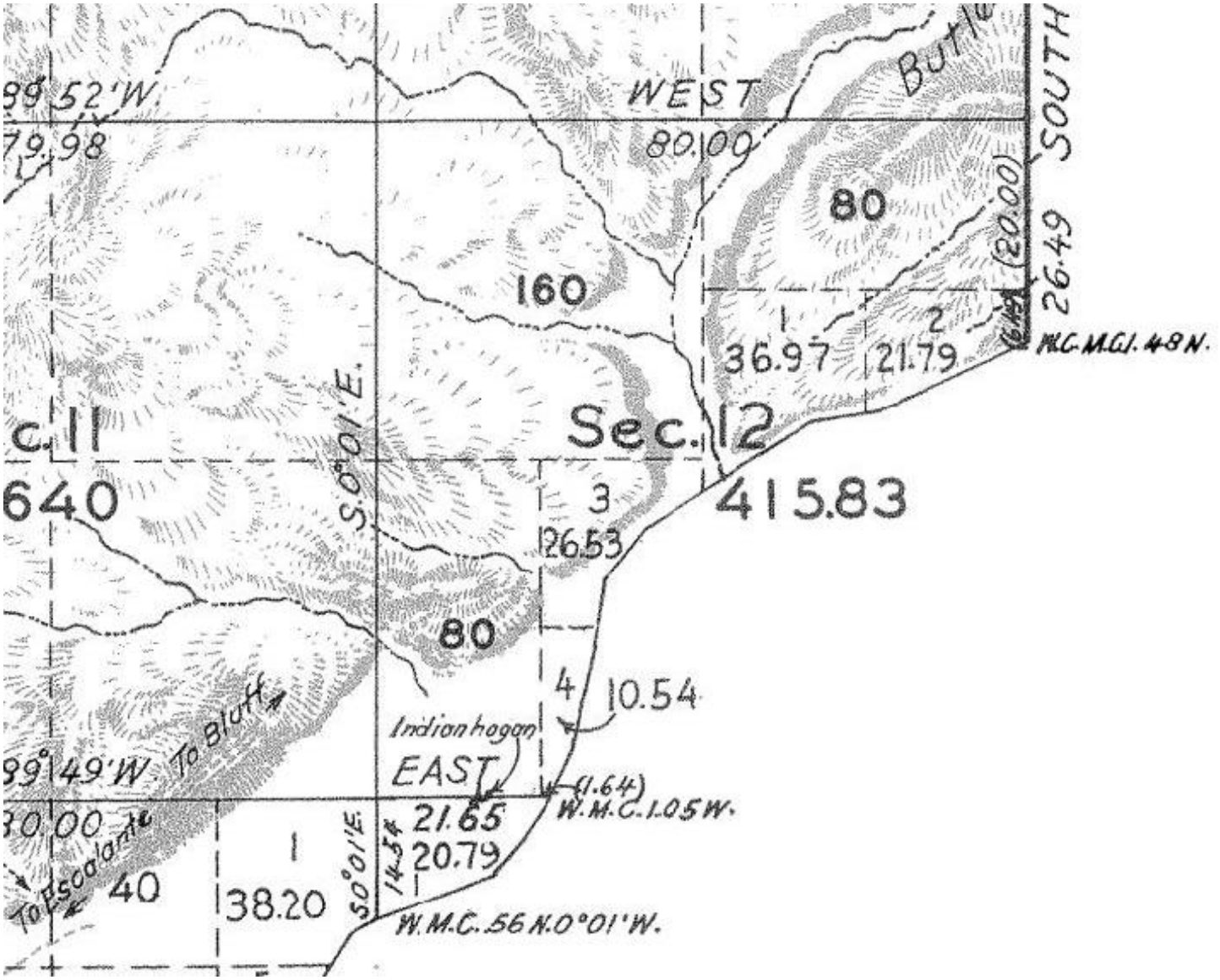
1984 COMPLETION SURVEY



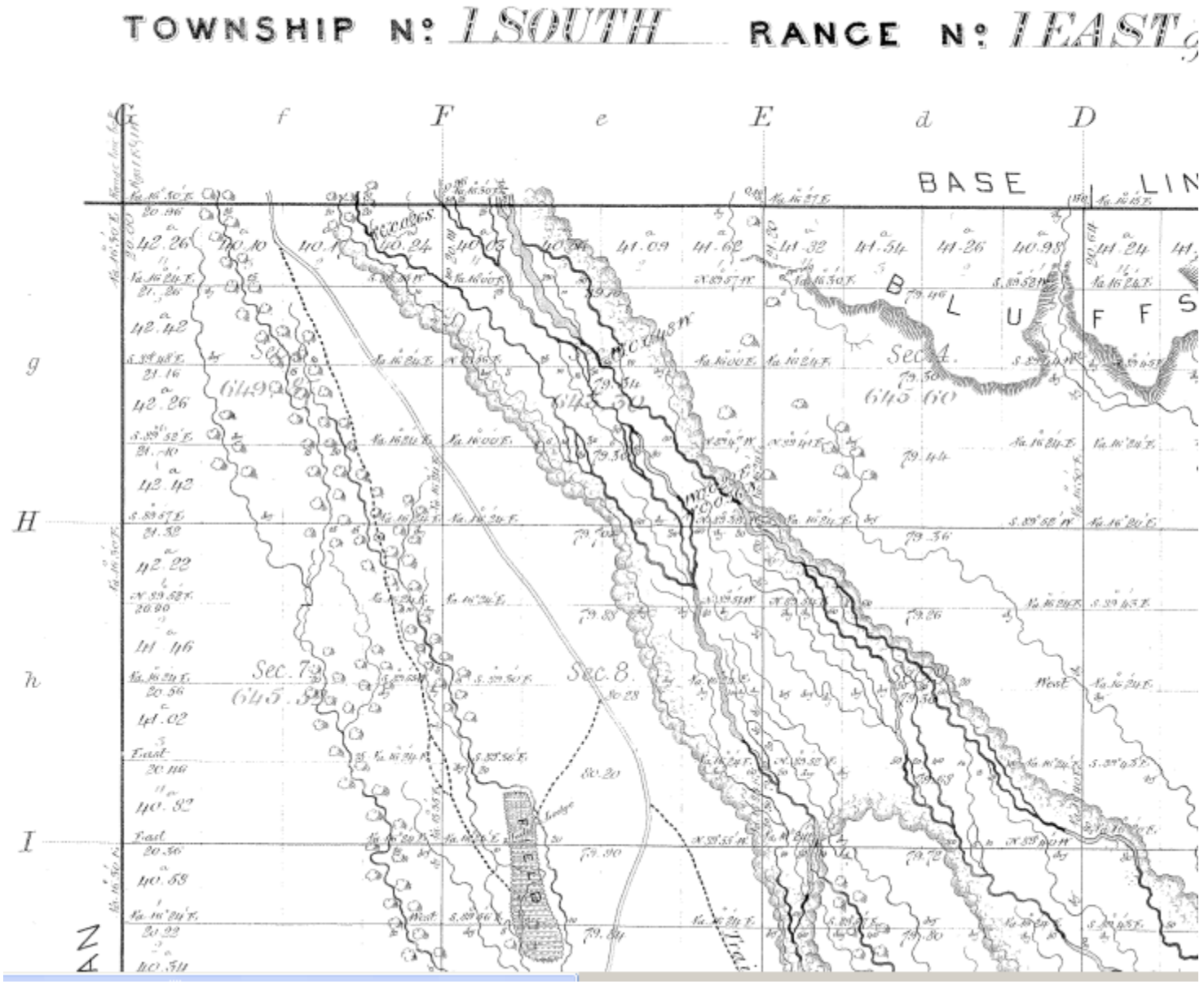
1995 CORRECTIVE RESURVEY



NORTH-SOUTH AND EAST-WEST CENTERLINES;
WEIGHTED MEAN BEARING



3 MILE METHOD



3 MILE METHOD

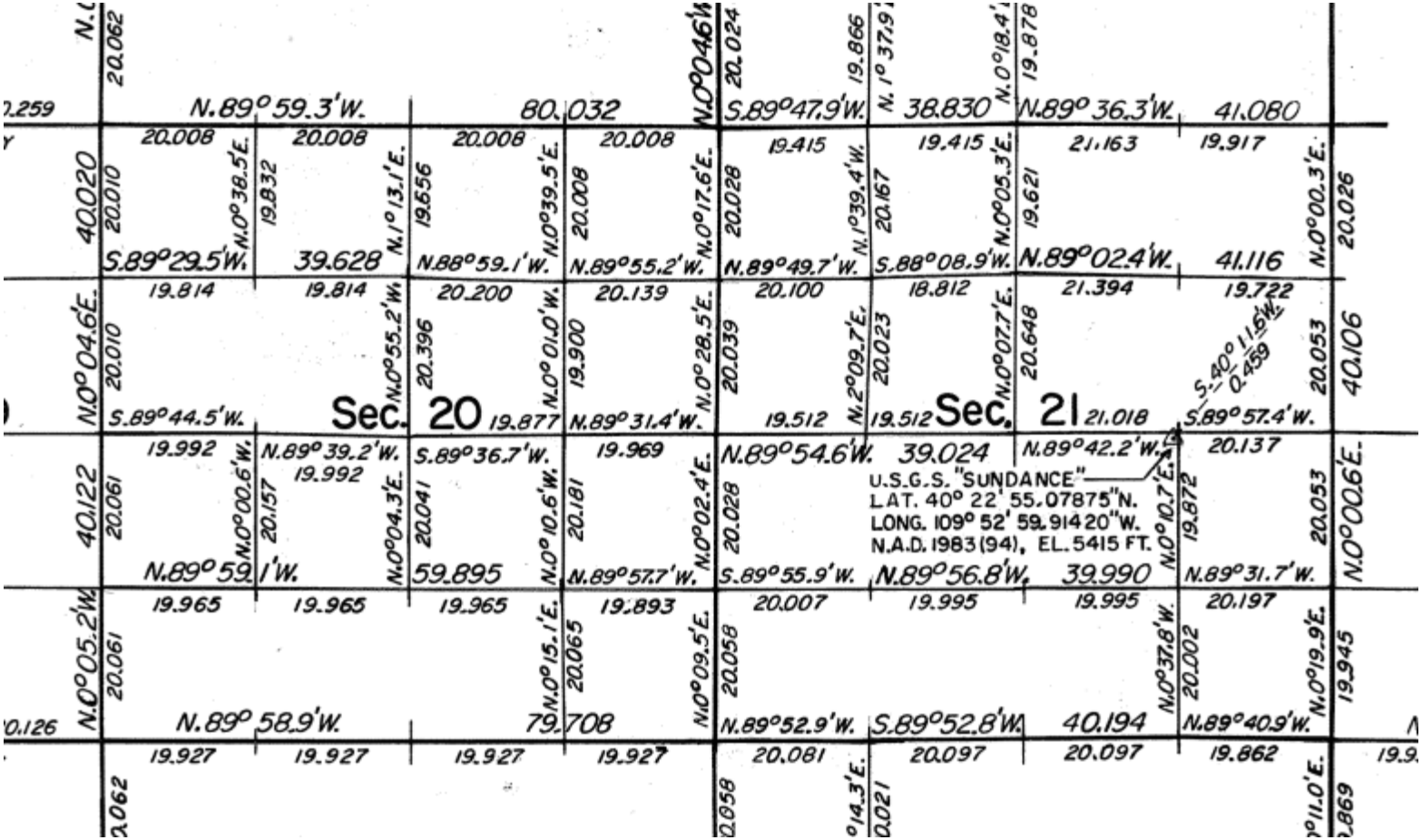
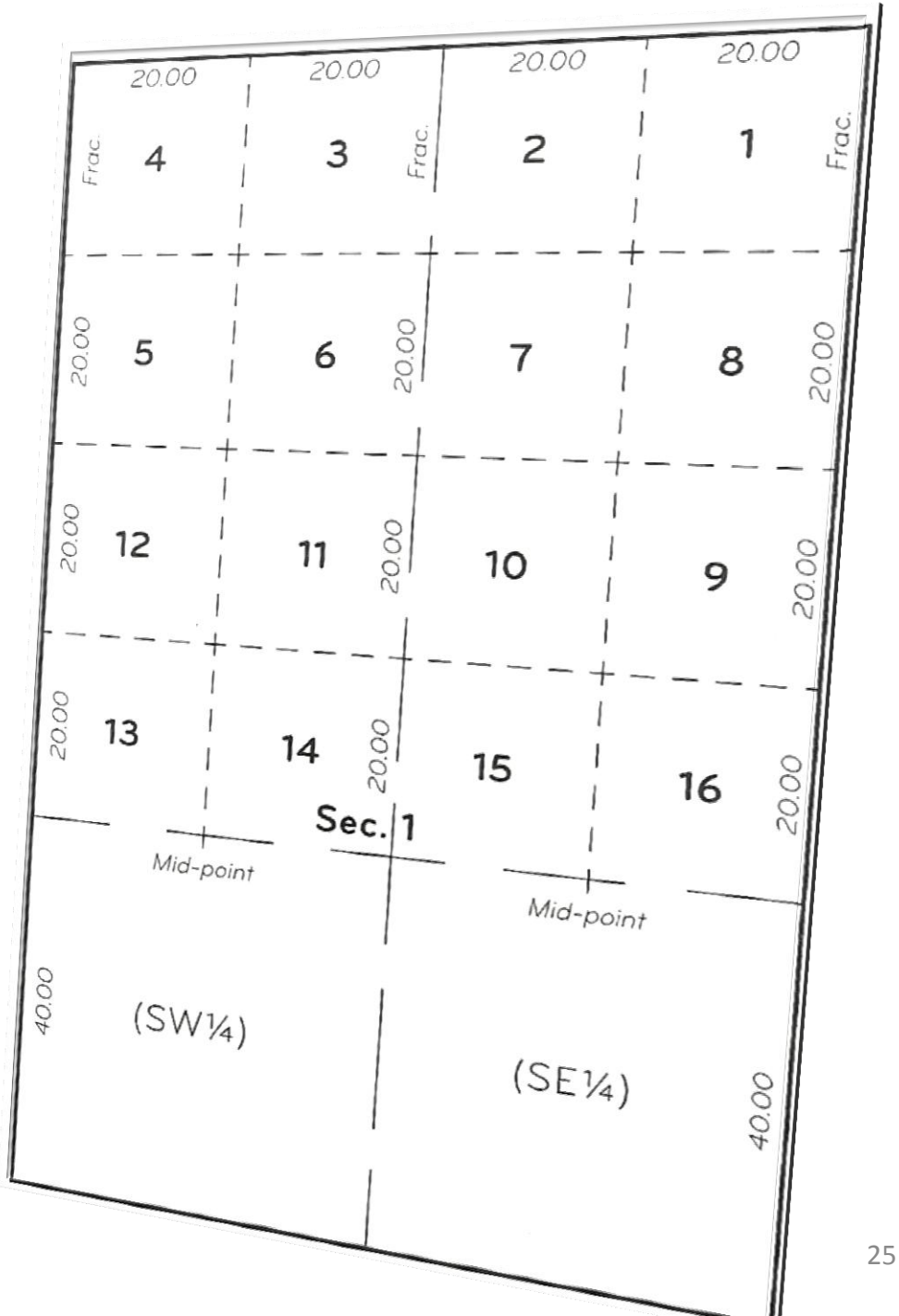


Fig 3-42

Extension of lotting in an elongated section.

•On an actual plat an area will be returned for each lot and the section.