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SURVEYOR'S DISCOURSE CONCERNING SKETCH NO. 11,

CROCKETT AND VAL VERDE COUNTIES

REFERRED TO MAP

Sketch No. 11 shows the four eastern tiers of Block O, G. H. & S. A. R.R. Co. Land, Crockett and Val Verde Counties, originally surveyed by \_\_\_\_\_ in the year \_\_\_\_\_, but resurveyed by State Surveyor, G. M. Williams in the year 1889. Comparing this sketch with Sketch No. 10, filed in the General Land Office about September 30, 1937: The courses by G. M. Williams, as marked by him on the ground, are more nearly true than either Cassin's or Kuechler's. For instance, the East line of Block O, as marked by G. M. Williams, which he calls North and South, is actually  $N 0^{\circ} 01' 15'' E$ , as will be evidenced by the graph along the South boundary of the map shown on Sketch No. 11. It is logical and consistent to presume that this East line was the first one that Williams ran, and that he started off from the SE corner of Survey No. 1, where he had previously established by observation on polaris, or otherwise, a true meridian.

Map North on Sketch No. 11 was established in the following manner: A perpendicular erected in the middle of an imaginary straight line joining the NE corner of Survey No. 161 and the NW corner of Survey No. 180 was called Williams' North. This certainly should be his average North. Therefore, Williams' East line of Block O, as marked upon the ground, is  $7' 25''$  to the right of the above mentioned perpendicular.

Let us compare the graph of meridian changes of Sketch No. 10 with that of Sketch No. 11. The outstanding difference is that in Sketch No. 10 true North, or the dotted arrow, is to the left of the survey line North, while in Sketch No. 11, true North,

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OR THE dotted arrow, is to the right of the Survey line North; and that instead of the values of the difference between true North and Survey North increasing as you go East on Sketch No. 10, these values on Sketch No. 11 increase as you go West.

Test the North line of Survey No. 161 on both sketches. From the NE corner of Survey No. 161 on Sketch No. 10, the course as shown is S 89° 41' 40" W. The longitude of the NE corner of Survey No. 161 strikes the graph at about 0° 23' 10", therefore, true North is S 89° 41' 40" W is 23' 10" to the left of the line on the ground as marked by Williams. Consequently, the true course would be 89° 41' 40" plus 23' 10", which is 90° 04' 50". Then, S 90° 04' 50" W is just another way of saying, by subtracting this number from 180°, N 89° 55' 10" W, the true course of the North line of Survey No. 161,

Now, compare Sketch No. 11: Here the North line of Survey No. 161 is shown to be N 89° 49' 00" W. The longitude of the NE corner cuts our graph at about 6' 10", and true North now is to the right. Consequently, the map line course is to the left of true. By adding, we get N 89° 55' 10" W as in Sketch No. 10.

Frank F. Friend,  
Licensed Land Surveyor  
November 3, 1937.

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Sketch File No. 79A

CROCKETT

Sur. Report.

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WM. H. McDONALD, Com.

Leslie

File

Descriptive:

Block O

Val Verde and

CROCKETT Co. E Side  
Block

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