W. J. WILLIAMS LICENSED LAND SURVEYOR REGISTERED PROFESSIONAL ENGINEER P. O. Box 1272 PLAINVIEW, TEXAS

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MAY 31 1940

REFERRED TO MAP

Plainview, Texas, May 27, 1940.

Hon. Bascom Giles, Comr. Gen. Lamd Office, Austin, Texas.

Dear Sir:

As I promised several dx months ago, I am handing you a report on what I have found in Block Z, Cochran County.

In August 1918, I was on the ground to find the lines of Sections 15, 17 and 27, Block W. At that time I set a plunger coupling in what I had identified some years ago, as the southwest corner of Section No. 15 and connected with original corners along the North line of Sections 4 and 5, Block z. At that time I had copies of the fieldnotes of Block z and Block W with me. At the northwest corner of Section No. 4, Block Z, I found a triangular trench with the bearings plain, and set an iron stake in it, (This is now in a field), 586.2 varas east of this I found a square trench with the bearings plain and set a plunger coupling for the southwest sormer of Section No. 26, Block W, (this is now in field), at 1911 and for the northeast corner of Section No. 4, Block Z I found a circular trench with bearings plain, and set a plunger coupling in the center. This plunger coupling is now gone but fence corner post hole with anchor wires is at the point and I have set a one-half inch pipe where the corner post stood.

I then ran east 585.5 varas and found a square trench with south and west bearings plain and set a plunger coupling in it, the southeast corner of Section No. 26, Block W. This marker is still standing at corner of fence. At 1911 varas I found no marker for the northeast corner of Section No. 5, Block Z, but I set a plunger coupling for corner, which is still standing and by which I have recently set a one-half inch pipe.

On April 25, 1919, I went on the ground to locate the south line of the Harrison & Brown Block and to get information as to the location of the Public School Lands adjoining it, in Southern Cochran County.

I had been Mr. W.D.Twichell's instrument man when he surveyed the County School Leagues in this vicinity a few years before and was familiar with his corners.

I began at Twichell's southwest corner of League No. 89, Lipscomb County School Land, projected its west line southward 249 varas, then turned 90° to the right, projecting a tangent perpendicular to the west line of Leagues 89, 90 and 91 to the vicinity of the southwest corner of the Harrison & Brown tract.

From the point 249 varas south of the southwest corner of League No. 89 and west 51.8 varas I fell 2.4 waras north of a cedar stake with bearings fitting calls and a 2½ inch pipe was lying on the ground 249 varas north of this stake. I took this to be

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Giles 2.

Ragsdale's bearing corner 100 varas north of the re-emtrant corner of Section No. 3, Block Q.

I then continued west with tangent and at 5783.8 varas fell 27 varas south of sucker rod and square trench from which Ragsdale's bearings fit, this being his monument 100 varas north of the northeast corner of Section No. **XX** 7, Block L, at 21053.0 (20053.0) varas a point in the east line of Block Z and 704.3 varas from mound and circular thench under fence, Ragsdale's monument 100 varas north of the S.E. corner of Section No. 15, Block Z.

From this mound, Bull Bat windmill bears N.32°30'E., (true course) 1699.6 varas.

I then ran from this mound northward to the northeast corner of Section No. 5, Block Z, which I had located the year before and got a distance of 5638.2 varas, the measurement being approxommately correct.

mately correct. I have now been called upon to furnish fieldnotes to patent Section No. 5, Block Z.

While on the ground last January, I found several $2\frac{1}{2}$ inch pipes recently set for corners in Block Z, two of them for the north corners of Section No. 6, this Block and in conflict with Section No. 5 as I surveyed it. I investigated further and found several more such pipes along and about 70% varas north of where the south line of this block is.

I have since. put in several days to determineexactly where and how well the south line of Block Z can be located, as the south line of Section No. 5, Block Z depends on the distance between the north and south lines of the block and how it is distributed.

In reading Ragsdale's fieldnotes, it is noted that he says "magnetic readings", but he gives two kinds of readings, one to the closest quarter of a degree whichhe used to give the direction of his bearing pits. These readings to quarter degrees is are known as "Compass Bearings".

The bearings he gives on windmills are to single minutes, which cannot be done on a compass and which shows that they were read on transit plates. These might be termed "Magnetic Readings" if the instrumented were oriented by the compass then the bearings read from the transit plates.

In this case, the angles between objects observed on will be coprect, whether the direction given is true or not.

When bearings are taken on three objects to the closest single minute, and the objects can still be found, the point where the instrument stood to give the readings can be found by setting the transit in the vicinity then moving and observing until a place is found where the angles between the objects is that shown by the record. The only place where three permanent objects are called for is from the square trench 100 varas north of the S.E. corner of Section No. 13, Block Z.

At this place Bull Bat Mill and the Mill called S.65°56'E are still standing but the "Beal Malls" have been moved and the wells lost for about 35 years. The fieldnotes for sections 2, 9 and 12, Block Z, indicate that the west line of Section No. 12 passes between the wells. The bearings from the northwest corner of Section

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Giles 3,

No. 2, together with those from the northeast corner of Section No.4, indicate that the wells are about 38 varas apart and in line toward the square trench 100 varas north of the S.E. corner of Section No. 13, this block.

Beal Mills was an old cattle watering place and the ruin of the earthen tank, used for storage is still vary plain but I was unable to readily find the wellsswhich were about 6 inches in diameter and filled up when the windmills were removed.

After several visits and considerable search, I noticed that what appeared to be a badger hole was actually the west one of these wells. The hole seems to be from 50 to 75 feet deep now. From this well I measured S.74°20'E. 38 varas and after digging down about 2 feet I found the other well. I then erected a high flag over the west well and began observing for a place where Beal Wells, Bull Bat Welland the S.65°56'E. Well would harmonize with the fieldnotes. This "Gutand try" method is Quicker than computing which requires \pm that the distance to the objects be known.

After I found a place where the wells would fit each other, I found that the instrument stood about 3 varas southwest of corner of fence among old trails but there were distinct traces of the south and **Ma**st sides of the square trench still apparent.

After the instrument is oriented to fit the three bearings, it should indicate the direction of the line being run. I ran eastward in the direction indicated and at 3818 varas I fell 4.7 varas south of 1 inch pipe which I had placed in center of old circular mound and trench which I had found in 1919, being Ragsdale's monument 100 varas north of the S.E. corner of Section No. 15, Block Z.

I called a line parallel with the line joining these monuments and 100% varas south, the south line of Sections 12, 13, 14 and 15, Block Z. I projected the line through the monuments along the north line of Sections 3, 4 and 5, which are in a straight line, westward to where the Beal Wells had the called bearing, then turned 90° from this line southward. The fieldnotes indicate that the west line of Section No. 12, passes between the wells. The bearings giveb from the northwest corner of Section No. 12, harmonize with those given at the nothinwest corner of Section No. 2.

I projected the line perpendicular to the north line of the block, passing 25.1 varas east of the west Beal Well and on to intersect the line passing through the above described monuments as bearings 100 varas north of the corners and found the distance 5633.3 varas and since this line is 100 varas north of the Block χ line, I extended it 100 varas further for the southwest corner of section No. 12. The total distance is 5733.3 varas. I apportioned this to the three tiers of Sections, making each 1911.1 varas and ran the north line of the tiers parallel with the north line of the block.

The notes which I have for the southwest corner of Section No. 12, give bearings on Beal Wells, which are 38 varas apart, that would require that the instrument be about 2500 varas south of the wells and I have not been able to harmonize them.

I then surveyed Section No. 5, Block Z to harmonize with this construction and am handing you sketch to illustrate what I have

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Giles 4.

tried to explain.

Please examine this sketch and advise me of your conclusions, then I will write fieldnotes to the subdivisions of Section No. 5. I have connected corners with the Geodetic stations in the wi-

cinity as indicated on the sketch.

The geographic positions of stations connected with are given

in the U.S. Coast & Geodetic Preliminary report Texas Vol IV. Tex-Mex on page 31, Boundary Monument Ecc 99, on page 79 and Boundary Monument No. 99 on page 80.

Yours respectfully,

Williams

J.Williams, Licensed Land Surveyor.

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File No. Sk. Fl. Nº Z Cochran County Block Z (See Roll. Sk 2) Filed _____ 5/31/, 19 40 ar. BASCOM GILES, Com'r French File Clerk Counter 1955