

Report of Progress  
in a resurvey of certain Blocks  
of Land in Upton and Crockett Co.s Texas

Object of resurvey.

To locate certain sections of land lying between Blocks 4, 5, 13, and Blocks 14 & 15 of the State University Lands, in Upton and Crockett Co.s

Authority for the resurvey.

A letter of Instructions from the Commissioner of the General Land Office dated May 28 1919 issued at the request of messrs Noelke & Murphy of Rankin Texas, and a letter of further instructions dated June 7 1919, also issued to me as State Surveyor, authorizing the resurvey.

Data for the Resurvey.

Copy of the Official County Map of Upton Co. with part of Reagan & Crockett Co.

A working sketch furnished by the General Land Office, covering Blocks A, B2, G, and Blocks 4, 5, 13, 14, 15 State University Lands.

Sketch from the General Land Office showing a connecting line run by ~~Stutz~~ Mr. Friend from the old Pontoon crossing of the Pecos River to survey 6 Blk 13 U.L.

Connecting line run by Mr Neyland from the Pontoon to the S.E. cor sur 4 Blk 1 M.K. & T.E. Ry. Co.

Connection made by me as State Surveyor from S.E. 3 M.K. & T.E. Blk 1 to S.W. cor sur 24 Blk A.

Connection made by J.W. Armstrong from Pontoon to Grierson Spring.

Field notes of certain surveys from the County Surveyors records of Upton Co.

Field notes of a line from Grierson Spring through Blocks 1, 4, & 5, to Blk 13 U.L. by Mr. L.L. Farr of San Angelo in 1911, kindly furnished by Mr. Farr.

Preliminary examination of data.

On looking over the field notes of Blk A we note that the E.L. & R.R. and G.C. & S.F. surveys were located by Mr C.D. Foote in 1880, and the M.K. & T.E. surveys located by H.C. Barton in /81, and that the Foote surveys call to connect with the west line of Blks 4 & 5 U.L. but also that they call for marked corners of their own. The M.K. & T.E. surveys call for Blk 14 U.L.

The field notes of Blk B, B2 & G, were surveyed in 1881 by Mr. Barton and call for corners and connections with the west line of Blks 4 & 5 U.L. but have no calls for marked corners with bearings. They run in a chain of surveys beginning on the U.L. Blocks.

We note that sur 51 & 52 have corrected field notes of a survey made by H.B. Tarver, but call for no marked corners or bearings.

Survey 3 H. Jordan and sur 1 & 2 H. & G. N. also have recorded field notes of a corrected survey made by Mr. Tarver and that the field notes call for marked corners and three of these corners call for bearings.

In order to establish the true position of these surveys on the ground, it is necessary to locate the west line of Blocks 4 & 5 U.L. and the East line of Block 14 & 15 and north line of Block 13 U.L.

The field notes of these Blocks of State University Land show that they were surveyed in 1879 by R.M. Thomson.

The field notes of surveys in these Blocks call for some rock mounds and earth mounds and stakes at the corners, but I find only two corners definitely described by bearings capable of independent identification. These are the N.W. corner of sur 1 Blk 4, and the N.W. corner of survey 6 Block 5.

The surface of this country is a rolling mesa cut by canyons and small draws, locally known as "headers", these canyons widen out, in places, to valleys 1/2 mile to a mile or more wide. The canyons and draws are from 150' to 200' below the mesa. The sides of the canyons are generally steep and rocky. The Mesa is in places covered with rock and gravel, in others places a brushy flat with few or no rock on the surface. There is no timber except along the drainage of the draws, where small mesquite and hackberry and china trees appear. On the mesa there are a few small scattered mesquite bushes and a few small Palms.

Hence it is easy to make rock mounds at many of the section corners, but very difficult to find any natural object distinct enough for a witness mark or bearing.

The soil in general is loose and friable, so that an earth mound would not stand through one heavy wind storm, or a flooding rain, it would go to pieces at once.

There are prominent high rim rock points along the river

and mountain points to the north and west, but in the country passed over on this survey you can travel for miles with a mesa horizon unbroken by anything but the indefinite slopes of the canyons.

This description is given to explain why the original surveyors could not give bearings on timber, Palms, Mountain peaks or rim rock points.

We found it exceedingly difficult to make definite calls at the old corners found and at the mounds we put up to mark the lines we ran.

As the connecting lines run between Pontoon and Grierson seemed to show serious conflict with field note calls and connections, and as many of the corners called simply for rock mounds with nothing to distinguish one from the other or to show that the rock mound was the original and had not been moved, we decided on making our run from Grierson Spring to locate the west line of Blocks 4 & 5 U.L.

On looking over the field notes of surveys in Blk 1 U.L. we find a row of marked corners called for beginning at the N.W. corner of survey 1 Georgetown Ry. and running west to two rocks 8' high on the slope of a hill.

The field notes of Nol G. Ry. state that it was surveyed in 1879 by C.D. Foote the same surveyor who put in the E.L. & R.R. and G.C. & S.F. surveys in Blk A.

The field notes also state that the survey covers Grierson Spring, which is said to be 380 varas south and 950 west of the N.E. cor of the survey, and at the N.W. cor of the survey it calls for an earth mound with large rock on top. History of the survey.

We went to the point shown us as Grierson Spring and found it in the head of a small draw, with rock walls and rock bottom, opening out to the south west, where, in the little valley we could see the foundation and part of the walls of the old post or fort. Tradition runs that the soldiers could not keep up with the raiding bands of Indians because the soldiers could not find water for their horses, but the Indians kept right on. Careful search discovered the spring and a post was built some 500 yrs below in the draw the ruins of which identify the spring which was named Grierson after the officer discovering it.

At the head of the draw we found two openings or wells surrounded by a curb or wall of rock and cement some 3' high. The more northerly covered a crack in a flat rock some 8" wide, water showed beneath this but could not be draw out except by a pipe. S 28°W 16 yrs stood a similar wall, but on look-down inside this wall there was a circular well some 2 1/2' in dia. from which water could be draw. It was stated that the water had been piped to the Post.

Starting at this lower well as the more prominent, we ran north 402 varas reaching a point 3 varas east of an old flat rock mound which is 386 varas north and 17 varas west of the upper spring.

Turning west we ran 958 varas and reached a point 9 varas north of a large rock, with a few small rocks round it, one of which was marked "H E D" recently.

This corner is described in the field notes of sur 1 Blk 1 U.L. as an earth mound 6' base, 3' high. No sign of an earth mound was found. White point of hill bears S50°W on West at 1877 varas pass rock mound N. 10.3 varas. Field notes call for rock mound.

On west 1903 varas pass a small rock mound N 2.5 varas, did not look very old. Field notes call for an earth mound. We noted a windmill bearing S 1°W.

On west at 1900 varas reach a point in a wide mesquite flat, found 3 rocks piled together about 150 varas west, a windmill stands N 14°W. Field notes call for an earth mound.

On west 1901 varas to a point 10 varas south of an old rock mound standing on west slope of ridge near rim of canyon. Field notes call for a rock mound on ~~slope~~ side of a hill.

On west at 1901 varas pass 9.5 varas south of a rock set in the ground, mkd X another flat rock lying by it. Field notes call for rock mound at S.W. 5.

On west at 1883 varas pass corner of fence, on 17 varas to a point 11382 varas west and 9 varas south of the pile of stone found at N.W. 1 Georgetown Ry. Co. or 12353 west and 377 north of the upper Grierson well.

The field notes of sur 6 Blk. 1 call for two large rocks 8' high at the S.W. corner. The point we reached by course and distance from Grierson spring is in a wide draw. Along the fence drift was seen showing a probable depth of 2' of flood water, the earth and sand was washed in ridges, no rock except two flat rock near fence line, one set in the ground, the other lying some 20 steps north. But a mile west across the draw two large rocks could be seen half way up the slope, and close to our line.

On west, at 1900 varas we reached these two rocks, the crack between them being some 9 varas north of our line. The rocks had been a large lime boulder which had been broken through near the middle, they were about N 7' high and each about 6' wide. These are the only rocks of that size anywhere in the neighborhood and fit the description of the corner rocks at S.W. 6 Blk 1 in

Thomson's field notes. They are firmly imbedded in the soil and could not be moved except by some convulsion of nature similar to the forces that placed them where they are, but they are 7 miles from the Grierson Spring survey, not six miles as called for.

There can be no mistake as to Grierson Spring, its identification is complete, and the two rocks are unmistakable. Consequently we must accept the conclusion that Mr. Thomson made an error of one mile in westing in his field notes, and it would seem likely that he dropped the corner where the X rock is set in the ground, as it is not mentioned in his notes, yet its position relative to the other marked corners and its appearance would seem to show that it was set at the same time and by the same surveyor who placed the balance of the corners on this line.

This would place the two 8' rocks at the S.W. cor sur 31 Blk 4. From this point, the two rocks, we ran west 1900 varas and set a stake and mound of a few small rock for S.W. 32, from which a small apparently old rock mound bears N 38° 30' E 15 vrs. White point of hill bears S 3° W. The original field notes call for a rock mound one mile west of the big rocks.

On west 1900 varas set stake and mound for S.W. 33, but found no rock mound as called for. In fact this point is in a flat where there are very few rocks, they would have to be carried a long distance to the corner.

Here we turned north to connect with the N.W. cor sur 1 Blk 4 where the description of the corner, a "6'x3' rock mnd with a rock monument 3' high standing S 75° W about 300 vrs" lead us to believe it would be possible to locate the corner.

Ran North 1900 vrs and set rock in the ground for N.E. 34, On north 1900 varas set rock mound on north edge of draw for N.E. 27, From this point ran east 1900 varas and set a rock mound on ledge of low hill for N.E. 28, from which an X cut on flat rock in ledge bears N 6° 35' W 22.5 vrs. Rocky point of hill bears N 35° 05' E.

Returning to rock mound set for N.E. 27, we ran west 1900 vrs and set stake and few rocks for N.E. 26,

On west 1900 varas set a rock mnd 11 varas north of a fence for N.E. 25

On west 1900 varas set a rock mnd in a brushy flat for the N.W. 24, from which a large rock and two small rocks bears S 89° W 35.5 vrs.

Thence north 1900 varas set rock mnd at foot of slope on north side of a Hackberry draw for S.W. 13, Field notes of 13 call for a stake.

On north 1900 varas set stake for N.W. 13 in a brushy flat. Field notes call for an earth mnd, not found.

On north 1900 varas to the S.W. cor sur 1, set stake for corner, On north 1900 varas to the west edge of a low rocky point on east side of mesquite flat or draw, made a small rock mound for the N.W. cor sur 1 Blk 4, by course and distance from N.W. 1, Georgetown Ry. Co. at Grierson Spring, from wh. a natural mound of large rocks bears N 81° 45' E 45 vrs. and a tall rock set in the ground with other rocks around it (recent) bears S 86° W 585 varas, from which tall rock a rock mound 3' high (old) bears S 74° W 374 vrs.

The N.W. cor sur 1 Blk 4 U.L. is described in Mr. Thomson's field notes as being "12 miles west and 6 miles north of the N.W. cor sur 1 G. Ry. Co. covering Grierson Spring", Our mnd for N.W. 1 is set 12 miles west and six miles north of N.W. 1 G. Ry. Co. at a variation of 10° 40' E, which was adopted as fitting old work elsewhere in this part of the country, and as a fair average for the line of old Thomson corners found running west from Grierson Spring.

The original N.W. cor sur 1 is further described as "a rock mound 6' base and 3' high, from which a rock monument 3' high bears S 75° W about 300 vrs" and "a dagger 8' high bearing S 62° W 28 vrs"

We searched the country carefully for some distance round our N.W. 1 but found no large rock mounds or monuments or tall daggers, except the standing rock mentioned above.

We went to this rock and examined it but the mound did not seem old enough for the original corner nor did it fit the description, 6' base and 3' high. It stood on a bare earth terrace across the mesquite draw from our corner and there were no daggers or roots near it. We then went to the mound on the rocky ledge 374 vrs S 74° W, it was old enough for an original mark of a survey made in 1881. We measured back N 75° E 300 varas which brought us to a point on the bare dirt terrace where there was no rock mound, no rocks, and very few pebbles and no dagger or root in place. If a corner as described in the field notes was ever built here it must have been carried a long way off when it was destroyed, as there is no trace left.

We then went to the monument to test it for the corner and ran S 75° W 300 varas from it. This brought us to a point on the same rocky ledge on which the monument is built, but we could find no trace of the monument which

should have been there if the 3' mound was Thomsons corner.

There are a few small daggers on the ledge where the monument stands and on the rocky point at our corner but nothing that fits the description in the field notes.

From our corner we ran east one mile and found a rock mound in a flat near an old road, but nothing to identify it as original.

From the standing rock we ran west one mile and found a rock mound which corresponds to the calls in Mr Footes field notes for N.W.1 E.L. & R.R. Ry. Co.

We searched around this point and back east 583 varas for the corner described by Mr. Thomson, thinking he might have continued his error of a mile in westing to the two big rocks, but found no trace of his corner.

Dr. Cushman the County Sur. of Upton Co. kindly came to us at the standing rock corner and said it was what he had recognized as the N.W. cor sur 1, locally known as the "dagger corner", (lucus a non lucendo) and that Mr. Tarver had made the standing rock corner as a witness monument to the corner, but that there had never been any rock mound that he had seen at the corner.

He stated that he and Mr. Purcell the Orient town-site surveyor had measured twice from this point to Mr. Footes N.W.5 & S.W.24 to the original Foote corner, the S.W. corner of the town of Rankin.

I had previously examined and tested the point set by Dr. Cushman for the S.W. cor sur 24 and found that it fit all three mountain bearings as given by Mr. Foote at this point, and that it was impossible to get these calls if one moved over ten varas from the corner he set. This corner is 207 varas south of the Orient track.

Mr. Estes of Midland also located a corner for S.W.24 at a point on the north side of the track, from which it is impossible to get the Foote bearings, but Mr. Estes I am told made his run from the west, and as will be shown later the Foote corners west are north of his N.W.1 E.L. & R.R. and S.W.24.

Mr. Estes of course does not recognize the "dagger corner" and stated to me it was not the true corner.

A working sketch furnished by your Office shows a line run by Jesse Gross from N.W.1 Blk 4, N 45° W two miles, then along a line of old corners to the East line of M.K. & T.E. Blk 1. but I do not place any reliance on his work.

The object of the above is to show that the "dagger corner" has never been satisfactorily identified by surveyors working at this point, even the point accepted by Dr. Cushman was never definitely marked as the corner.

Hoping to get some further evidence as to the true location of N.W.1 Blk 4, we examined the record of Mr. H.B. Tarvers work.

The record shows corrected field notes for surveys 51 & 52 G.C. & S.F. by Mr. Tarver but he does not give any bearings at the corners of these surveys, but ties 52 to S.W.2 E.L. & R.R. with Footes bearings.

Sur. 3 H. Jordan was also resurveyed by Mr. Tarver and his field notes call to begin at a stone mound for N.W. cor sur 1 H. & G.N. and run north 1900 to a rock mound from which a mes 3" in dia. brs N 12° W 200 varas.

We went to our S.W.24 Blk.4 where we had found one large rock and two small ones S 89° W 35.5, and ran west 1900 varas reaching a point on west side of a deep draw nearly under the rim, and searched for Tarvers corner and bearing but found nothing, on west 583 varas and 41 vrs south to bring us to a point 3 miles south and one mile west of the standing rock corner, This brought us into a deep draw and searched over considerable distance round this point for Tarvers corner or bearing. There were two small mesquites in the draw some 200 varas north but we could find no old stump nor marked tree nor rock mound.

We then went back to our N.W.25 and ran south 1900 varas and set a mound 10 varas north of this point. From this point a rock mound marked "N.W.36 Blk 1" set by Mr. L.L. Farr of San Angelo on a survey made by him in 1911 to which reference is made further on, bore S 55° E 13.5.

And 20 steps south and a little west of our point we found a few rocks piled together as if for a corner.

From this N.W.36 we ran west 583 varas to a point 5 miles south of the standing rock corner and searched carefully for Mr. Tarvers N.E.1 H. & G.N.

The records show that Mr. Tarver resurveyed sections 1 & 2 H. & G.N. Ry. Co. and calls ~~for the corner~~ the N.W. cor sur 36 Blk 4, a rock mound fr wh a mes. brs South 14 varas, thence west 1900 varas to a rock mound fr wh a point of high Mt. bears N 20° W, a mes quite bears S 30° W 200 vrs.

This point 5 miles south of the standing rock corner was on the mesa and about 50 steps north of the edge of a mesquite draw running nearly east.

we searched the mesa and the draw for a rock mound and marked mesquite or stump but found nothing to correspond with Tarvers calls.

We then ran on west and at 1800 varas west and 2 varas north we found a recent rock mound evidently intended for a corner

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a recent rock mound evidently intended for a land corner, this was in the head of a small draw, at 1900 there was no possibility of seeing a mountain peak N.W. ran on the 583 varas to a point on the mesa 5 miles south and one mile west of the Standing rock. Here we were on the mesa but the horizon to the north was an unbroken line of the divide and no mountain visible. We searched for the Tarver corner and rode to the north and west five or six hundred varas but found nothing and no mountain visible, nothing but level mesa. To get Mr. Tarvers call for a mountain we would have to go at least a mile north.

We failed to find any trace of Mr. Tarvers work as described in the recorded field notes for these surveys, testing it from our Grierson Spring line, from the standing rock corner and from Mr Footes work.

On looking carefully over the field notes of the U.L. Blocks it is difficult to find any line from the two big rocks to the N.W. cor 1 which the calls would show to have been actually run and marked on the ground.

For instance the row of rock mounds extending west from these rocks on the Block line could not be found and at the first and second corner rock was hard to find, at the second corner we were in a brushy flat where one would expect a call for stake or earth mound and not rock.

Again at the N.W. cor sur 6 Blk 4 the call is for an earth mound, but there is rock close at hand and one would expect a call for a rock mound.

Again if we bear in mind the error of a mile in Thomsons distance west to his two big rocks, we would expect to find the N.W. cor sur 1 one mile west of our point for this corner and this is not the case, as we looked for signs of this corner at that point and found nothing.

Again Mr. Foote put in the Georgetown Ry section in 1879 before Thompson put in the corners for the U.L. Blocks, and Foote put in his work in Block A after Thompson had done his work. It is to be presumed that Foote would have known where the Block corner had been put in if Thomson had actually made it, and would have connected his work on E.L. & R.R. Nol with the Thomson corner. This would favor the Cushman "dagger corner" as the Thomson corner, but although I can not explain the 3' rock mound, yet the entire absence of any rock mound at the corner is to me a strong argument against it, especially when we do find Thomsons two big rocks, his rock mound on side of hill and his other rock mound on his south line of Blk 1 do correspond exactly with his description of these corners. In other words, where Thomson did the work his description of his work enables you to identify it on the ground, but where he drew on his imagination you can not find his footsteps.

In view of these facts I was unable to accept the "dagger corner" and placed the N.W. corner sur 1 Blk 4 at the point we reached by course and distance from Grierson Spring, as instructed in your favor of the 7th June.

It seems highly improbable to me that Thomson should have run a line from his Boulder corner to his N.W. 1 without marking it so that it could be as easily retraced as his line from Grierson Spring to the boulders.

Reference was made above to a corner set by Mr. L.L. Farr at N.W. 36 Blk. 4 near the point reached by our survey. In explanation of this reference I would say that in June 1911 Mr. Farr made an extended and careful survey from Grierson Spring west and south through the U.L. Blocks and he very kindly loaned me his field notes of this survey.

I find that he started at the spring and ran as we did, finding the same corners and that his measurements correspond very closely with ours, and he notes the same error of a mile in westing at the boulder corner. Mr. Farr used a variation of  $10^{\circ}E$  while we used  $10^{\circ}40'E$  which throws him a little to the right of our line. He ran from the boulder cor west to the N.E. cor sur 4 and then ran a traverse locating the pasture fences which had not been built on section lines. From a point on this traverse he located the S.W. cor of 36 set a mes stake from which a small rock mound bore S  $62^{\circ}W$  18.5 varas, ran north a mile and set the rock mound for N.W. 36 above described near our corner.

On running south 1900 varas from our point for N.W. 36 we found Mr. Farrs peeled mesquite stake broken off and lying on the ground and located his point for S.W. 36 from the small rock mound which he found S  $62^{\circ}W$  28.5 vrs.

We set a large mes stake for our S.W. 36 from which the small rock mound bore S  $45^{\circ}W$  21.5 vrs and marked a mes 6" X S  $16^{\circ}30'W$  167, a flag on top of lone round topped hill bears S  $25^{\circ}30'W$ , Point of hill west of ranch house bears S  $67^{\circ}E$ .

On south 1900 varas to S.W. 1 Blk 5, made rock mound from which flag on hill bears N  $53^{\circ}40'W$ , East point of a hill bears S  $0^{\circ}05'W$ ,

On south set stake and rock mound for S.W. 12 from which Mes 3" X bears N  $81^{\circ}20'W$  12.5 vrs.

On south at about 40 varas noted a flat circular rock mound. This mound, the one found at S.W. 36, the rocks piled together 20 steps south of N.W. 36

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and perhaps the large rock west of our S.W.24 Blk 4, would appear to have been set by some one to mark the corners of adjacent surveys, the line running at a little greater variation than we were using. They are not old enough for the Thomson work, though they have been set for some years, but I did not find out who had placed them. We noticed no others in the same line.

Running on south 1900 varas from our S.W.12, we set a large rock mound on the north slope of a hill for the S.W.cor 13, from which flag on hill bears N 25° 18' W (This flag is set in a topographic monument on the hill) Windmill at Ranch bears N 20° 02' E.

On south 1900 varas set mound for S.W.24,

On south ~~xxx~~ 1900 varas set mound for N.W.36, about 150 varas north of a drain.

On south 1900 varas set stake and rock mound for the S.W.cor sur 36 Blk 5 from which a windmill bears S 38° 25' W, a bunch of brush near point of hill bears N 1° 30' E, an old rock mound on east side of road bears S 56° 35' W 805 var or 542 varas west and 357 varas south.

Mr. Farr states in his field notes of his run from Grierson Spring that ran a traverse from the S.E.cor sur 4 Blk 5 to the S.E.cor sur 35 found no corner, on west 1900 varas to S.E.35 found no corner, on west 1900 varas to S.W.36 Blk 5 ~~found~~ no corner, on west 1900 varas to a point for S.W.36 Blk 5 ~~found~~ no corner. "Thence S 54° 15' W 681 varas to stone mound beside road, from which mound 25' windmill bears S 27° 15' W. This places Mr. Farrs S.W.36 397 varas north and 552 varas east of the old mound. A difference of 40 varas in northing from our S.W.36, partly accounted for in the difference in var. used in running west. And 10 varas east of our S.W.36, apparently a difference in measurement, due perhaps to Mr. Farrs having run a traverse from the Boulder corner or rather S.E.4 Blk 5, while we ran the straight west and south.

This old rock mound would seem to fit in its location the rock mound which was found and identified by Mr. Friend on his run from Pontoon Bridge to the N.E.cor sur 6 Blk 13, in October 1907, a plat of which I had with me. For further identification we ran south from this rock mound on east side of road, and at 1700 varas crossed an old road plainly marked by the old ruts and wheel marks on the rocky slope it crossed, on south at 1921 varas reached a point 8 varas west of an old rock mound near the top of a low rocky ridge. From this point the Windmill bears N 24° W, and a round cedar covered knoll bears N 82° W.

This satisfied me that these were the mounds found and identified by Friend in 1907.

Mr. Farr states that he also ran south from the corner beside the road and at 1900 varas ~~xxx~~ found a rock mound S 24° E 40.5 varas from which the 25' Mill bore N 24° W and the cedar Knoll N 82° 15' W.

He also ran 1919 varas north from the old ~~md~~ mound beside the road and found a rock mound 18.5 west.

Mr. Friend states that he ran north 1900 varas from the S.W.cor 6 and found an old rock mound which he identifies as the N.E.cor sur 1 Blk 13.

We did not make this run north as it did not seem necessary to the identification of these mounds as the Friend corners and what we wanted was the connection between Grierson Spring and Pontoon.

In a report on a former survey made by me as State Surveyor from Pontoon to S.E.4 Blk 1 M.K. & T.E. following a line of connection run by State Surveyor Neyland for the H. & T.C. it is stated that we connected with Mr. Friend's run at an old chimney called for from two points on his line of survey and found it agreed with our course and distance to the same point.

Mr. Friend states that he began at the anchors at the east end of the old Pontoon bridge, which we found in place, but we began at what is known as the Pontoon corner located from the corner of the old corral near the stage stand by field notes furnished by your Office. This corner is 71 varas east and 88 varas north of the anchor from which Friend started.

On our run we found a large gravel and earth mound 68 varas west and 3 south of the point reached by C & D from the Pontoon corner for the S.W.cor Blk 14 U.L. but on close examination this mound seemed entirely too recent for the original corner called for by Mr. Thomson in 1879, and too far west for C & D from the N.E.cor sur 1 same Blk as found and identified by Friend.

We ran our connection from Pontoon to M.K. & T.E.S.E.4 at a var. of 11' finding it 21641 varas north and 4419 west of Pontoon corner.

Later on we connected the S.E.cor sur 3 M.K. & T.E. Blk 1 with the station 911 & 58 on Orient tan. 767 varas south of the track.

We located the S.W.cor sur 11 by its three bearings and found it 207 varas south of sta 662 & 61.

Through my error in misreading the field notes on my working sketch I

I had identified this corner as a corner of sur 13 blk 15 U.L. but Mr. von Rosenberg called my attention to the fact that sur 13 called for no bearings but the S.W. cor of sur 11 called for the bearings I had found.

We also located the S.W. cor sur 24 by its three bearings and found it 313 varas south of sta 468 & 92 on Orient tan. The angle between land line and tangent is  $33^\circ$  giving the tan a course of  $N 57^\circ E$  at  $10^\circ 40' E$  var.

This gives a northing of 9141 and easting of 13360 varas between the S.E. cor 3 Blk 1 and S.W. cor 24 blk A.

Taking the distance as given by Foote and checked by Cusman and Purcell from N.W. 5 or S.W. 24 to N.E. 1 E.L. & R.R., as 5700 and add the 41 varas northing to reach our N.W. 1 Blk 4 and in easting our measurement from Grierson Spring cor to Footes N.E. 1 E.L. & R.R. we get the distance between Grierson Spring corner and the M.K. & T.E. Blk 21 east line and deducting distance from Pontoon west to M.K. & T.E. and diff in var between  $10^\circ 40'$  and  $11^\circ$  we get the distance from Grierson Sp. cor to Pontoon cor. on the north.

Taking Mr. Friends distance from Pontoon east to N.E. 6 Blk 13 and correcting for difference between his start and ours at Pontoon, and adding our measurement from Grierson Sp. cor to old rock mnd beside the road, Friends N.E. 6 we get the distance measured on the south line. Comparing the two we find an error of 105 varas in easting.

Taking the measurements made on the west line from Pontoon to M.K. & T.E. and along Orient tan. and the 41 north to reach our N.W. 1 Blk 4 we have a northing from Pontoon to N.W. 1 of 29011 varas.

Taking Mr. Friends measurement north from Pontoon to N.E. 6 Blk 13 and our run from N.W. 1 Blk 4 to N.E. 6 we have a northing of 29209 varas, but we used  $10^\circ 40'$  and I presume Mr. Friend used  $10^\circ$  which in his run east would amount to 190 varas in northing add this to our northing on the west line and we have 29201 varas, showing an error in northing of 8 varas.

These measurements have been placed on the map attached to this report in order to show that no serious error was made in this survey.

There seems to have been somuch contradiction and uncertainty as to the relative position of the original corners of the sections and Blocks included in this resurvey, that we tried to every precaution to prevent error.

In comparing our run with Thomsons from Grierson Spring west we find an error of one mile in westing.

On comparing the results obtained by combining our measurements with those of Mr. Friend from Pontoon and comparing the result with Armstrongs line we find that he is 809 varas west and 511 varas south of where we find Grierson Spring.

On comparing our run with Mr. McDonalds report we find that he is 1040 varas west and 1488 varas north of where we find Grierson Spring from Pontoon.

If we are correct in our location of the west line of Blks 4 & 5 U.L. then the corners which we marked along this line will be the initial points for resurvey of sections in Blks G, B, & B2.

If our corner for N.W. 1 Blk 4 is properly located then Sur 1 Blk 58 will begin at that corner, but the E.L. & R.R. surveys by Foote should be controlled by their own corners on the ground, and there will be an excess of 583 varas of unoccupied land between Sur 1 Blk 58 and sur 1 Blk A. All sections in Blk A, 51, 52, & surveyed by Mr. Foote, will follow his corners on the ground and disregard the calls for the U.L. open corners. This will place an excess between the east lines of 51 & 52 and the west lines of 12 in Blk 4 and 2 G.C. & S.F. by Barton. And a conflict of 41 varas on north line of these surs.

The Barton work has no marked corners called for and will follow their calls to begin or tie to the U.L. Block corners and continue in an unbroken chain of surveys through Blk B, B2, & G, leaving an unsurveyed strip between their west lines and east line Blk A M.K. & T.E. which calls to begin on Blk 14 which is located from Pontoon and its own corners as identified by Friend

Block 13 U.L. will begin on its own original corners as identified by Mr. Friend and disregard the contradictory call for N.W. 36 Blk 5.

The corners found in Blk 1, 4, & 5, U.L. will hold their surveys and the balance of the surveys in these Blks will be run by course and distance from these original corners.

The surveys shown on the attached map are platted according to this construction, and it will leave a further tract of unoccupied land between the Tigert survey and the M.K. & T.E. Block, and sur 1 Blk 14.

Also a tract of unoccupied land between surveys 1 & 2 Blk B2 and n.b.l. Blk P.P.G.C. & S.F. by Bennell, which latter has no corners of its own but ties to Blk 14 U.L.

If Blk 5 U.L. is held to course and distance from the Boulder corner, then there will be an unoccupied strip between the north line of Blk 13 and the T.W.N.G. Blk G, and also between the east line of Blk 13 and the west line of Blk 5.

Before proceeding further with the work on the ground I thought it best to report these facts for your consideration so that you might decide on the proper method of construction for these Blocks and surveys under the facts reported and instruct me as to their location under such decision.

We did not run out the connecting lines between corners of the Foots survey as it did not seem necessary for the decision of the points at issue in this survey, or deciding on the construction proper to the Blks in question, but a line should be run connecting S.W. 11 with N.W. 5 and N.E. 1 E.L. & R.R. and south to N.E. 53.

The apparent position of original S.W. 11 and its connection with N.E. 14 is shown on the map in broken lines, and this fits the difference between the Cushman connection from the east and the Estes connection from the west.

We did not rerun Mr. Friends line from Pontoon as we had already checked on part of it near Pontoon and our resultants from combining this survey with our work checked out so closely as shown on border of map.

I am much puzzled by the errors found in the runs by other surveyors, as there is no question as to the identification of Pontoon or Grierson Spring, and the country is not very rough over which the survey between them would pass. The report by Mr. Armstrong shows up somewhat like the report he made on line between the H. & T.C. block and T. & P. reservation in the west part of the Davis mountains, where serious errors of both course and distance were reported by a corrected survey of the line by Mc Combs. I presume it was the same man

I do not know anything of Mr McDonalds work, but can not understand how he could make an error of nearly a mile in both easting and northing. The westing to the Big rock or boulder corner might account for part of this if he accepted it without actually running the distance, otherwise it is incomprehensible. Under these conditions I felt under great obligations to Mr. Farr for his report on the survey he made which so closely corroborates our measurement by an entirely independent survey made some years ago, and have included some of the facts shown by his survey as evidence corroborating the facts found and reported on this survey.

All which is respectfully submitted for your consideration and further instruction as to the completion of the survey under the premises.

*R. D. Dod*

State Surveyor

Alpine, Texas June 22 1919

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Capt R S Dod's Report,  
Dated June 22, 1919.

dated June 22, 1919.

See letter to  
Capt R. S. Dod -  
5-15-20

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Letter Book 1354  
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