

THE TAMING OF THE RANCH

vague and confusing words in this description proved one of the more challenging analytical problems of the project, as surveyors spent several days just trying to decipher positions by these words. In fact, this particular portion of the survey comprised about 10 percent of the whole job.

From Valle Vidal, the surveyors headed northeast to the common boundary line between the National Rifle Association property and the ranch, near Raton. The survey turned south to the plains area of the ranch property, called the Boot, which butts up against the communities of Cimarron, Maxwell and Springer. The Boot has about 75,000 acres and was last surveyed in the late 1800s or early 1900s.

The next, and final, part of the survey remains an unsolved mystery.

There is a 4,000-acre tract of land completely surrounded by the Vermejo Ranch, yet owned by a separate party. The survey was tied to Maxwell Land Grant corners originating in the 1800s that no longer exist and had been set by transit stadia. Unfortunately, all the section corners were set by the Maxwell Grant Company surveyors (for more background, see sidebar on p. 26) more than a hundred years ago. The fences ran from tree to tree and were not even close to the property line.

Other than a handful of original field books, little or no



A crew member uses GPS surrounded by the lush vegetation of the ranch.

information about individual tracts within the region exist today. Often one book might contain about 50 percent of the original survey data, just enough to let you know something was done, but not enough clues to know what to look for. The same is true for the old township plats. If the Maxwell Grant Company had a buyer for five sections of land in one township, then in most cases that is all that was surveyed. No plat was ever made, only a description.

We needed one particular section corner to determine where to begin the survey. After finding as much information as we could, we calculated a best guess for two section corner locations. One crew went into the field in search of these two calculated locations. We didn't have much hope, but knew that we could fall back on the calculated points and still be reasonably accurate if all else failed.

While two of the crew members returned to the office around dusk, the remaining surveyor stayed in the field determined to find the missing section corner. He returned just after 9 p.m. that evening, and excitedly explained that he had found the section at the third location. And even

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more surprisingly, had found it within 100' of the coordinates that he had been given.

We had no records of ever calculating a third possible section corner position. The surveyor vowed we were wrong and that he had the note with the section corner position written on it. He looked all through his notes, truck and clothes but could not find anything that mentioned these coordinates. To this day, the origination of those coordinates is a mystery. But we do know that it is that section corner that allowed us to survey the 4,000-acre tract with reasonable accuracy. If we had used our calculated points, we would have been several hundred feet off.

Project Closure

After five months of rigorous surveying, data reduction and mapping, the Vermejo Park Ranch project drew to an end. In all, the surveying teams from Shields and its subcontractors set more than 1,100 points. The final outside ranch boundary exceeded 250 miles with deeded property of 580,000 acres. Field crews had to survey some 630,000 acres to complete the parcel boundary lines.

Because of the size and shape of the ranch, the final drawings included four 36" x 42" sheets at a scale of 1:4,000 that showed just boundary lines. We also superimposed these boundary lines onto USGS quad sheets at a scale of 1:2,000 to show elevations, creeks, ponds and other more descriptive features.

This information was delivered to the Pennzoil and Turner attorneys. The survey is complete, the deed is signed, and the new owner is well into plans to turn the 580,000 acre Vermejo Park Ranch into a home for 4,000 bison and other wildlife. And yet, for surveyors from Shields Survey Ltd. Company, memories of the survey, the wildlife and especially the weather remain vivid. ▲

Lee Shields, PLS, is the owner of Shields Survey Ltd. Co. with offices in Clayton and Raton, N.M. Special thanks to Terry Surveying of Trinidad, Colo., and Sherrill Surveying of Albuquerque, N.M., for their commitment to getting this project done.