



Wednesday, April 29, 2015

SURVEY REPORT

Re.: Survey of Block 76 of the Public School Land Surveys in Loving County, Texas.

Anadarko E & P Onshore LLP, fee interest owner of Section 10, Block 76, Public School Lands, Loving County, Texas, identified significant discrepancies arising from conflicts between a 2002 survey of Block 76 conducted by J.L. Newton, and existing senior surveys adjacent to, covering or within Block 76. I was asked to review all available data and provide an analysis regarding the appropriate construction of Block 76.

Resources

The following is a list of information and documents used to reconstruct Block 76 and develop my conclusion in no particular order.

1. Loving County Working Sketch Index GLO counter number 76625.
2. Loving County Sketch File 3 GLO counter number 30409
3. Loving County Sketch File 4 GLO counter number 12014
4. Loving County Sketch File 5 GLO counter number 30412
5. Loving County Sketch File 6 GLO counter number 41454
6. Loving County Sketch File 8-1 GLO counter number 76377
7. Reeves County Sketch File 12, Texas General Land Office
8. Winkler and Loving Counties Sketch "K" GLO counter number 89938
9. Loving County Rolled Sketch 6 GLO counter number 6637
10. Loving County Rolled Sketch 12 GLO counter number 76418
11. Loving County Working Sketch 13 GLO counter number 70646

File No. Sketch File 9

Loving County
Surveyor's Report accompanying Rolled Sketch
15- Sect. 10, Block 76, P.S.L.

Date Filed July 10, 2015

George P. Bush, Commissioner

By Douglas Howard

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- 1 12. Loving County Working Sketch 25 GLO counter number 70659
- 2 13. Loving County Working Sketch 26 GLO counter number 93681
- 3 14. Luchini 1975 Survey Plat
- 4 15. Cause No. 5050 of the District Court of Reeves County, 109th Judicial District
- 5 16. Cause No. 5109 of the District Court of Reeves County, 143rd Judicial District
- 6 17. Bexar District School File No. 151254, Loving County, Texas General Land Office
- 7 18. Watson 2014 Survey Report on Blocks 53-57, Townships 1-3, of the Texas & Pacific
- 8 Railway Company 16-Mile Reservation Surveys, and Block 76 of the Public School Lands
- 9 Surveys in Loving, Reeves, and Culberson Counties
- 10 19. Bexar District Scrap File No. 13984, Loving County, Texas General Land Office
- 11 20. Bexar District Scrap File No. 14020, Loving County, Texas General Land Office
- 12 21. Bexar District Scrap File No. 15269, Loving County, Texas General Land Office
- 13 22. Bexar District Scrap File No. 15342, Loving County, Texas General Land Office
- 14 23. Bexar District Scrap File No. 15463, Loving County, Texas General Land Office
- 15 24. Bexar District Scrap File No. 15466, Loving County, Texas General Land Office
- 16 25. Bexar District Scrap File No. 15470, Loving County, Texas General Land Office
- 17 26. Bexar District Scrap File No. 15471, Loving County, Texas General Land Office
- 18 27. Book 1, page 50, Survey Records, Loving County
- 19 28. Book 1, page 51, Survey Records, Loving County
- 20 29. Book 1, page 54, Survey Records, Loving County
- 21 30. Book 1, page 56, Survey Records, Loving County
- 22 31. U.S. Bureau of Land Management, Township 26 South, Range 33 East, Principle Meridian,
- 23 Lea County, New Mexico, Plat and Field Notes, September 10, 1915
- 24 32. U.S. Bureau of Land Management, Township 26 South, Range 33 East, Principle Meridian,
- 25 Lea County, New Mexico, Plat and Field Notes, September 26, 1914
- 26 33. Parole Evidence from the legal and survey departments of the Texas General Land Office,
- 27 April 2014
- 28 34. Parole Evidence from W.D. Watson, PhD, PE, RPLS 1989, and staff of Watson Professional
- 29 Group, Inc., April – August 2014

1 35. Corwin's field notes on Block 76, of the Public School Land, originally filed in the State
2 University Lands, filed January 12th, 1885.

3 36. Report of the Commissioner of the General Land Office, State of Texas. From August 31,
4 1900, to September 1, 1902. Charles Rogan, Commissioner.

5 37. Texas Acts 1883, 18th R.S., Ch. 72, General Laws of Texas.

6 38. Corresponding Texas Pacific Land Trust letters from the 1930s.

7 39. Bexar District Scrip File No. 23003, Loving County, Texas General Land Office.

8 40. Loving County Sketch File No. 5, Texas General Land Office.

9 41. Texas Act 1930, 41st 5th C.S., pg. 204, Ch. 59, General Laws of Texas.

10 42. State v. Flick et al., 180 S.W. 2d 371, 1943

11 43. Post et al. v. Embry, 205 S.W. 514, 1918

12 44. Bexar District Scrap File No. 12274, Hudspeth County, Texas General Land Office.

13
14 History

15 In April, 2014, I met with the surveying and legal departments of the Texas General Land
16 Office (33) to discuss the historical background relating to Block 76 and the available information
17 from the GLO surveying and archives divisions. Relevant historical data obtained from various
18 records as set out above is described below.

19 *Clark's Texas – New Mexico state boundary survey*

20 The boundary line between Texas and the New Mexico Territory was originally
21 established in 1859, to be the 32nd degree Parallel of Latitude and the 103rd degree Meridian of
22 longitude, with the southeast corner of the New Mexico territory being the intersection of these
23 two lines. US Surveyor John C. Clark was commissioned to establish and monument the boundary
24 on the ground. Mr. Clark's work began in the Guadalupe Mountains in 1859. According to his
25 field notes, he took five astronomical observations to establish the 32nd Parallel. There is nothing
26 in the field notes that indicates connection or relation between these points. Clark also recited
27 setting 32 monuments on the parallel, moving from west to east. Monument No. 1, was located
28 at the Rio Grande River. Monument No. 32, the last, was intended to monument the intersection

1 with the 103rd Meridian. Clark's field notes state that he and his survey crew constructed
2 monuments described as "wood post in earth mounds with rocks placed on the mound." These
3 monuments were randomly placed along the 32nd degree parallel at no particular distance
4 according to Mr. Clark's field notes. Many of Mr. Clark's monuments were lost over time. In the
5 area of block 76, Mr. Clark's called monuments are relevant because Clark's line was the then-
6 applicable Texas- New Mexico boundary line called for by surveyors working the area. Clark
7 Monument 26, which is located to the west of Block 76 near the northwest corner of Section 2,
8 Block 56, Township 1, has been repeatedly identified and located on the ground by multiple
9 surveyors over the years. Until Mr. Newton filed his field notes in 2002, no other monument
10 between Monument 26 and Monument 31 was identified or located on the ground in the 150
11 years that surveyors have been working the area. In fact, the loss of many of Mr. Clark's
12 monuments, coupled with concern about the completeness and accuracy of the Clark survey
13 itself caused the United States and State of Texas to conclude that the Texas -New Mexico
14 boundary required a resurvey and remarking, which was conducted in 1911, and is described
15 more fully below.

16 *Texas & Pacific Railway Company Reservation surveys*

17 As a way of repaying the debt that occurred through the revolutionary war between the
18 Republic of Texas and Mexico and encouraging not only population growth but also the growth
19 of the economy, the State of Texas allowed a railroad company, which would eventually be
20 known as the Texas & Pacific Railway Company, to establish a reservation of land at which area
21 would be laid the railroad tracks. This was done through Texas Legislation with the Act of May
22 2nd, 1873. Within the reservation the railroad company was responsible for surveying and
23 subdividing the reservation into Townships, Blocks, and Sections for the purpose of selling the
24 odd numbered sections to fund the building of the railroad. The even number sections were
25 intended to be sold by the State of Texas to fund the Public School Fund. Each block would
26 contain 48 sections, 1-mile square (or 640 acres), running 6 miles parallel and 8 miles
27 perpendicular with the future centerline of the railroad track. W. B. Champlin, J. L. Peck, and
28 Jacob Kuechler were the surveyors who worked on the ground setting out Blocks, Townships, and
29 sections for the railroad reservation in the subject area. Mr. Peck and Mr. Champlin were

1 responsible for the surveys of Block 54, Townships 1 and 2, and Block 53, Township 2, which lie
2 to the west and south of what is now Block 76. What is now Block 76 was initially a part of the
3 railroad reservation identified as Block 53 Township 1, but was returned to the School Lands
4 before it was surveyed. These surveyors returned field notes in 1876 that described setting four
5 pits and a mound at the section corners and two pits and a mound at the quarter section corners,
6 some containing locative calls. For example, the Bexar Scrip for Survey No. 1, Township 1, Block
7 No. 54 by W. B. Champlin, deputy surveyor for the Texas and Pacific Railway Company, which is
8 the section adjacent to the northwest corner of Block 76, and is representative of these surveys,
9 states:

10 Beginning at a stake and Earth mound, 4 pits the corner of Survey No. 1 Township No.
11 1, Block No. 54 in the South Boundary line of Territory of New Mexico, which is 36 Miles
12 west of the S. E. Cor of said Territory

13 Thence West, at 950 vrs St Earth Mound and 2 pits – on South line of Territory of New
14 Mexico, 1900 vrs to Cor St Earth Mound and 4 pits –

15 Thence South 1900 vrs to Cor St Earth Mound and 4 pits –

16 Thence East 1900 vrs to Cor St Earth Mound and 4 pits –

17 Thence North at 950 St Earth Mound and 2 pits – 1900 vrs to the place of beginning.

18 Surveyed Aug 1st 1876 (39)

19 Based on this survey work, the Texas General Land Office issued patents on all the odd sections
20 to the railroad company immediately upon completion of the files. These are the senior
21 determinative surveys in the area of Block 76. To date, many of the even sections remain
22 unpatented in the Reeves, Culberson, and Loving County areas.

23 *Corwin's survey of Block 76*

24 In 1883, the Texas Legislature instructed the Texas General Land Office to set aside
25 2,000,000 acres for the University and public school fund. Texas Act 1883, 18th R.S., Ch. 72,
26 General Laws of Texas, (37) The Act further provided that lands could be taken from
27 unappropriated portions of the Railroad Reservations. In August, 1883, the State Land Board

1 authorized Dennis Corwin to survey and classify one million acres of land for the University and
2 return field notes to the General Land Office. On January 12, 1885, Corwin submitted field notes
3 for 77 blocks of land in the reserve. The descriptions returned were for the Blocks only. No
4 individual descriptions for any sections were ever written. Blocks 52-77 were given to the PSL.
5 Corwin's field notes are limited. His notes begin by calling for the northwest corner of Block 53,
6 Township 2, of the Texas & Pacific Railway Company 16-Mile Reservation Surveys, which would
7 have been taken from the original field notes from Peck and Champlin's work for the Railroad.
8 From there, his description is as follows: North 8 miles to the [South] Boundary line of New
9 Mexico, thence East 6 miles, thence South 8 miles, thence West 6 miles. He then states the area
10 of this description of the school lands as being "48 sections of 640 acres, 30,720 acres of land".
11 (35) Stating the area in this manner, indicates the perimeter description contains a certain
12 amount of land and does not necessarily lay out the specific sections within the block. This has
13 been noted as "typical" of Corwin's notes. No monuments of Corwin's work on the ground have
14 ever been identified or reported.

15 *Twichell's work east of Block 76*

16 In 1902, W. D. Twichell, State Surveyor, surveyed the Public School Lands east of Block 53,
17 Township 2, and the surrendered Block 53, Township 1, of the Texas & Pacific Railway Company
18 16-Mile Reservation Surveys (Block 76). (8). On his plat (8), and many other subsequent plats
19 along the Texas – New Mexico state boundary, he makes specific ties to Clark's Monument 26
20 and in doing so he mentions a passing tie to a "Pine Post charred by prairie fire bears S.73 vs. -5"
21 dia. Post badly burned & rotted, Stn. Md. Around post – T mk?... added 2" iron pipe" along the
22 north line of Block 54, Township 1. This single reference is the basis for the 2002 construction of
23 Block 76. Correspondence in the GLO files relating to the resurveys conducted by the Texas and
24 Pacific in the 1930s indicate that Mr. Twichell himself stated that he did not accept the pine post
25 as Clark's monument. (See references in letters received May 31, 1938 from H. L. George to W.
26 J. Powell).

27 *1911 Commissioned Texas – New Mexico Boundary Survey*

1 The State of Texas and the United States determined that Clark's establishment of the
2 interstate boundary between Texas and New Mexico was incomplete and not accurate.
3 Therefore in 1911, the 32nd parallel was resurveyed. During this survey, monuments were set at
4 every mile and where they could be found, Clark's Monuments were tied down. In the area of
5 Block 76, Clark's Monuments 25, 26, and 31, were the only monuments found and tied down. In
6 the field notes of the 1911 survey, Clark's Monument 26 was described as follows: "An old mound
7 of stone 10 feet, base 15 ins. [inches] high with broken fragments of pine post in center." Within
8 the 52 years, since it had been set by Clark, Clark's Monument 26 withstood the elements
9 reasonably well and was easily discernable to not only the local residence but also the surveyors
10 following in Clark's footsteps. In contrast, until 2002, no other survey or reference to Clark's
11 monuments between 26 and 31 has ever identified them as located or found. This has been the
12 case in other areas of the Clark survey as well, and it appears that the durability of Clark's
13 monuments was not consistent. In 1911, the appointed Commission set about to ensure that the
14 Texas-New Mexico boundary would be identifiable and locatable. The 1911 line has been
15 adopted by the State of Texas and the United States Congress, as well as having been reviewed
16 and approved by the United States Supreme Court, and has remained the recognized boundary
17 line since that time.

18 In the 1930s, W. J. Powell along with Paul McCombs, conducted extensive survey work
19 on the Texas and Pacific Railway lands in Loving County and west of the Pecos River, with the
20 approval and oversight of the General Land Office. (40) Because of the importance of the
21 reconstruction of the Texas and Pacific Railway Company 16-Mile Reservation Surveys and it's
22 direct connection with the public lands owned by the State of Texas, legislation passed in Senate
23 Bill No. 39 (41) required the Commissioner of the General Land Office to procure, accept and file
24 in the General Land Office papers, maps, sketches, and reports drawn by the T & P surveyors in
25 making the original as well as the corrected surveys of such lands that were in the custody of said
26 railway company.

27 In H. L. George's February 11, 1938 letter to W. J. Powell about his survey findings he
28 states, "During the survey just completed I made a thorough search for the monument called for
29 in the field notes of Survey #4, Block 54, Township 1, but I was unable to find this corner. I noticed

1 also that the government resurvey of 1911 does not report this corner, and I presume that it
2 must have been obliterated before this time, and since this corner cannot be identified today, it
3 will have no controlling effect on the T and P Lands. This corner was Clark's Monument #27."
4 (38) W. J. Powell states in his May 25, 1938 letter to L. H. Moncrief and H.L. George that his study
5 of the survey work from Twichell revealed his rock mounds found "do not conform at all to the
6 lines as established by Champlin's field notes, and since Champlin does not call for any rock
7 mounds, I [Powell] think it would be very difficult to establish any bearing of those rock mounds
8 found by Twichell on the T. & P. Surveys.... After thorough study of this matter, I am unable to
9 believe that Twichell's field notes or any of the points located by him, except U.S. Boundary
10 Monument No. 26, can exercise any control of T. & P. Railway Blocks 54, 55 and 56. The original
11 purpose of the old pine post may have been any one of a number of things other than a boundary
12 monument or a survey corner, and I doubt that it could be proved to be either." (38)

13 H. L. George's letter to W. J. Powell dated May 31, 1938 goes on to state, "As a matter of
14 law, Twichell's connection from the southeast corner of New Mexico to Monument #26 will have
15 no legal bearing and cannot in any way establish the T and P Blocks. He was undoubtedly given
16 instructions to locate the School Blocks immediately east and adjoining the T and P Lands. Since
17 he marked the west lines of the School Blocks, that will be the boundary, and his status in law
18 would be that he was a junior surveyor surveying a junior block. There is no point better defined
19 in our laws than this one; that a surveyor locating a junior block cannot locate the senior block
20 by his survey. The calls and corner of the senior block along [sic] will locate that." (38)

21 *Stratton's construction of the Scrap Files and Block 76*

22 As exploration of oil in these blocks began in the early 20th century, it was discovered that
23 there were excess lands and possible vacancies within and adjacent to the Texas & Pacific Railway
24 Company 16-Mile Reservation Surveys from the south line of the Texas & Pacific Railway
25 Company 16-Mile Reservation Surveys to the Texas – New Mexico boundary as recognized and
26 accepted after the 1911 re-survey. In 1938, E. L. Stratton, Jr., Loving County Surveyor, began
27 surveying a strip approximately 225 varas wide along the 1911 Texas – New Mexico boundary,
28 in support of applications for these strips as vacancies (unsurveyed, unsold public lands). Many
29 of these surveys were filed in the survey records in Loving County. According to his report, his

1 construction began on the south line of the Texas & Pacific Railway Company 16-Mile Reservation
2 Surveys and ran out the call distance of 16 miles leaving this 225-vara strip between his
3 construction of these blocks and the south line of the 1911 Texas – New Mexico boundary line.
4 The GLO did not accept Stratton's survey filings for those lands that were located along the
5 northern tier of the Texas & Pacific Railway Company 16-Mile Reservation Survey blocks because
6 the sections within the blocks had been surveyed and patented to the state boundary line, and
7 as part of a system of surveys, any excess was required to be appropriated through the system
8 of surveys as per the outcome of the Gulf Oil Corporation et al. v. Outlaw et al. 150 S.W. 2d 777.
9 The General Land Office did accept Stratton's surveys for the lands located along both the
10 northern and the eastern boundary lines of Block 76, which did not, at that time, have any
11 sections in the northernmost tier patented. This was consistent with the Land Office's
12 acceptance of a similar 1920 vacancy application to the west in Hudspeth County (44), covering
13 the same gap between the Clark boundary line and the 1911 boundary line. Correspondence in
14 the General Land Office files discussed possible conflicts between the acknowledgement of the
15 vacancy and Corwin's northern line, but the lands were deemed vacant and patents were issued
16 July 21, 1980 (SF-13894 (19) and SF-14020 (20)). Approval of the vacancy along the northern
17 edge of Block 76 and our recognition of those boundary lines in this re-survey is supported by the
18 holdings in State v. Post and State v. Talkington, which provide that the General Land Office has
19 no power, by virtue of a resurvey, to include land not included in an original survey, as such act
20 would be giving away of public lands in violation of the provisions of the Texas Constitution. Since
21 Corwin could not have known that the Texas-New Mexico boundary line would be modified in
22 1885, he could not have intended to include the lands between his northern called line for Block
23 76 and the Boundary line established in 1911.

24 Our survey honors the General Land Office's recognition of both vacancies. During this
25 same time, Stratton surveyed the north half of Block 76 of the Public School Land Surveys (30).
26 His construction of the north half of Block 76 used the south line of his survey on SF-13894 (19)
27 and the west line of his survey on SF-14020 (20). Then using parallel construction, he set 2-inch
28 pipes in stone mounds at the section corners along the south and west and 1-inch pipes in stone
29 mounds at the quarter section corners along the same. This information was filed in the survey

1 records in Loving County (30), but not with the Texas General Land Office. This was the first
2 described construction of any section in Block 76. However after a thorough search for these
3 monuments in the field during the summer of 2014, none of them were found.

4 *Thee's construction of the Scrap Files*

5 In 1952, Nick M. Thee, Licensed State Land Surveyor, did an extensive and detailed survey
6 of the Texas & Pacific Railway Company 16-Mile Reservation Surveys blocks, the adjacent Public
7 School Land Surveys, the Townships in New Mexico, and the 1911 survey of the Texas – New
8 Mexico state boundary in conjunction with 3 vacancy applications in the subject area. List the
9 vacancies and where they are located. (22). Thee's work was relied on for many patents along
10 the east side of Block 53, Township 2, and portions of Block 76, including Clifford Cool, Licensed
11 State Land Surveyor, Byron Simpson, Licensed State Land Surveyor, and Herman Forbes,
12 draftsman for the Texas General Land Office through their references made directly.

13 *5050 District Court Decision*

14 In 1954, the Texas Land Trust filed applications for a series of vacancies along the south
15 line of Block 53 – 55, Township 2, of the Texas & Pacific Railway Company 16-Mile Reservation
16 Surveys. The existence of the vacancies was disputed in a law suit. The District Court concluded
17 that there were no vacancies, merely an excess, which was properly prorated across the system
18 of surveys, as required by law. The land owners recovered their disputed lands through
19 individual legal descriptions through metes and bounds descriptions set out in two court
20 judgments (15, 16). These judgments also set the south line of Block 53, Township 2 of the Texas
21 & Pacific Railway Company 16-Mile Reservation Surveys, from the southwest corner of Section
22 43, Block 55, to the northeast corner of Section 3, Block C27, Public School Lands, and reflected
23 the proration of the excess contained in the Texas & Pacific Railway Company 16-Mile
24 Reservation Surveys as shown in the corrected work done by McCombs and map he filed with
25 the General Land Office and the survey work of Byron Simpson. (15)

26 *Schumann's Reconstruction of the Blocks in the T&P*

27 In 1961, Max Schumann, Jr. LSLs, surveyed the south half of Section 14, Block 53,
28 Township 2, of the Texas & Pacific Railway Company 16-Mile Reservation Surveys, for patent

1 purposes. Although there is no survey report to accompany his work, it is presumed that his
2 construction was according to the known laws and rules of surveying practices at the time. In
3 preparing the supporting data for the patent, , Schumann began by establishing control from the
4 adjudicated south corners of Section 43, Block 55, Township 2, of the Texas & Pacific Railway
5 Company 16-Mile Reservation Surveys (15), to the west line of the Scrap File No. 15342 that was
6 filed along the eastern side of Block 53, Township 2, of the Texas & Pacific Railway Company 16-
7 Mile Reservation Surveys, and the eastern side of the Block 76 of the Public School Land Surveys,
8 then north to the Texas – New Mexico boundary, across to Clark’s Monument 26 His
9 reconstruction tracked the construction of the sections in the Railroad Surveys and prorated the
10 excess found within this perimeter throughout each section as would have been appropriate for
11 the Texas & Pacific Railway Company 16-Mile Reservation Surveys by law cited in Gulf Oil
12 Corporation et al. v. Outlaw et al., 150 S.W. 2d 777. Schumann’s work is useful because he
13 established and marked a baseline along the boundary lines between Block 53, TS 1 and 2, and
14 Block 53, TS 2, which, as senior surveys, form the western and southern boundaries of Block 76.
15 He started at the south common corner of Blocks 53 and 54, Township 2, and at every section
16 running along his reconstruction of the aforementioned blocks, continuing through the east line
17 of Block 54, Township 1, of the Texas & Pacific Railway Company 16-Mile Reservation Surveys,
18 and terminating at the northeast corner of Section 1, Block 54, Township 1, Schumann set 2-inch
19 pipes uniquely stamped with a letter alphabetically from north to south. Our construction of
20 Block 76 relies on a number of Mr. Schuman’s monuments found during the summer of 2014 in
21 connection with this survey.

22 *Armstrong’s Construction of Block 76*

23 Sometime in the early 1960s, Armstrong was hired to survey Sections 35 & 36, Block 76,
24 of the Public School Land Surveys. A survey was conducted and field notes were filed with the
25 GLO. On June 13, 1963, Commissioner Sadler wrote to Mr. Armstrong and stated that after
26 reviewing the proposed notes in conjunction with the survey data for SF 13984 along the
27 northern line of Block 76 and the T & P surveys “as constructed with the Court decision on the JB
28 Walling application [Cause No. 5050, supra]” the GLO required Mr. Armstrong to resubmit his
29 field notes consistent with certain instruction laid out in the letter:

1 "Mr. Max Schumann, Jr. filed a sketch in 1961 revealing the construction of the T&P Ry.
2 Co. Blocks using the excess prorated from the SW corner of Section 43, Block 55, and Tsp.
3 2. A copy of this sketch is enclosed.

4 Our legal department advises that the proper construction for P.S.L. Block 76 is to prorate
5 the distance from the North line of T&P Block 55, Tsp. 2, *as located on the excess distance*,
6 and the South line of SF-13984." (Emphasis supplied)

7 The plat and field notes accepted by the GLO reflect the fact that Armstrong honored the
8 boundary lines identified in the approved patents for the lands in Scrap Files 13984, 14020, and
9 15342 along the north and east lines of Block 76, the north line of Block 53, Township 2, of the
10 Texas & Pacific Railway Company 16-Mile Reservation Surveys as required by the judgments in
11 Cause No. 5050, and the portion of Schumann's reconstruction of the east line of Block 54,
12 Township 1, of the Texas & Pacific Railway Company 16-Mile Reservation Surveys, that ran from
13 the northwest corner of Block 53, Township 2 to the southwest corner of SF-13894 as constructed
14 by Stratton. Although Corwin is the appropriate starting point, in our view, Armstrong's work,
15 constructed as directed by Commission Sadler, honors the valid senior surveys and boundaries,
16 including the 1911 Texas-New Mexico boundary, and the effects of all judgments and calls on the
17 perimeter of what is identified as Block 76 today. It is worth noting that Mr. Armstrong's initial
18 tie in to the boundary of SF 13984, for the north line of Block 76, was never in dispute. The
19 instruction set out by Mr. Sadler were intended to ensure that the remaining lines were
20 constructed consistently with the GLO's data and the applicable legal requirements.

21 *Newton's Construction of Block 76*

22 In 2002, J. N. Newton, Licensed State Land Surveyor, submitted a survey in support of
23 patent applications covering portions of Block 76. In his survey report (6), he concluded that
24 Twichell's notation of a double circle along the north line of Block 54, Township 1, of the Texas &
25 Pacific Railway Company 16-Mile Reservation Surveys, indicated that Twichell found Clark's
26 Monument 27 (8). Twichell made no such statement, merely giving a tie to this object as he
27 described to be "Pine Post charred by prairie fire bears S.73 vs. -5" dia. Post badly burned &
28 rotted, Stn. Md. Around post - T mk?... added 2" iron pipe", Newton used the recovered position

1 of Twichell's pipe, called as the "original" Clark 27 Monument in Mr. Newton's notes, to establish
2 the north line of Block 76. Newton then established the east line of Block 76 through a
3 protraction from the adjudicated northeast corner of Twichell's monument in the north line of
4 Section 1, Block C27, Public School Land Surveys with reference to the W. D. Johnson, et al, v. J.
5 B. Walling, et al (No. 306, District Court of Loving County, Texas, 109th Judicial District, Cause 5050
6 (15)) case. From here to his calculated northeast corner of Block 76, Newton calculated the
7 southeast corner of Block 76, northeast corner of Block 53, Township 2, of the Texas & Pacific
8 Railway Company 16-Mile Reservation Surveys, mid-way. Using the adjudicated descriptions in
9 Judgment Cause 5109 (16), Newton calculated the southwest corner of Section 43, Block 53,
10 Township 2, of the Texas & Pacific Railway Company 16-Mile Reservation Surveys by prorating
11 the respective distance between the above described calculated southeast corner of Section 48,
12 Block 53, Township 2, and the southeast corner of Section 43, Block 55, Township 2, of the Texas
13 & Pacific Railway Company 16-Mile Reservation Surveys. Newton then calculated the southwest
14 corner of Block 76, (which is also the northwest corner of Block 53, Township 2, the northeast
15 corner of Block 54, Township 2, and the southwest corner of Block 54, Township 1, of the Texas
16 & Pacific Railway Company 16-Mile Reservation Surveys,) by dividing this distance between his
17 calculated southwest corner of Block 53 and his calculated northwest corner of Block 76 in half.
18 Newton's construction of the sections within Block 76 was done as he described, "by intersecting
19 lines (North - South) with the arc East-West from respective prorated corners along the
20 boundaries of Block 76" (6).

21 Newton's construction of Block 76 places it in conflict with every single senior survey in
22 the area. This construction hinges on the "found" Clark Monument 27 and would require that all
23 other surveys be ignored. This construction would require that the location of the Blocks of the
24 Texas & Pacific Railway Company 16-Mile Reservation Surveys to the west be shifted to
25 accommodate this new interpretation of boundaries, placing them in conflict with many
26 patented locations based on Champlin, Peck, Kuechler, McCombs, Schumann, and Armstrong's
27 long recognized constructions of senior surveys, by prorating 61 varas per section excess from
28 the southeast corner of Section 43, Block 55, to his calculated southeast corner of Section 48,
29 Block 53, Township 2, of the Texas & Pacific Railway Company 16-Mile Reservation Surveys. (3)).

1 Problem to Resolve

2 New development in the area of Block 76, especially of recently discovered potential for
3 significant oil and gas activity has caused the potential conflict arising from the 2002 survey to
4 require resolution. For this reason, Anadarko has agreed to surrender its patent on Section 10
5 for a corrected description, initiating the process of resolving the issue with the submission of a
6 corrected reconstruction of Block 76.

7

8 Construction of Block 76

9 In the spring of 2014, I met with W. D. Watson, R.P.L.S., in Midland to perform the initial
10 field work for this project. I spent a couple of days in the field with his surveying field crew. We
11 reviewed the work that has transpired throughout the years within and surrounding Block 76.
12 Over the next couple of weeks, the field crew was able to identify and locate the work of Stratton,
13 Thee, Schumann, Armstrong, and many others, along with Newton's monuments to formulate
14 an overall view of Block 76 and the surrounding senior surveys. This included the adjudicated
15 monuments of Section 43, Block 55, Township 2, of the Texas & Pacific Railway Company 16-Mile
16 Reservation Surveys, sections in the township in New Mexico, the 1911 Texas – New Mexico mile
17 markers, and Clark's Monument 26. A position for Clark's Monument 27 was calculated from
18 supporting evidence and an extensive thorough search of this area found no evidence supporting
19 the existence of Clark's Monument 27.

20 In preparing to construct Block 76, consideration of the previous work done in and around
21 this area was analyzed in great detail. From the data collected in the field, application of the
22 information gained through research of a multitude of documents, acts and court decisions,
23 construction of Block 76, describes the perimeter of the area formed by the east line of Block 54,
24 Township 1, and the north line of Block 53, Township 2, of the Texas & Pacific Railway Company
25 16-Mile Reservation Surveys, the south line of SF-13984, and the west lines of SF-14020, SF-
26 15342, and SF-15467, which are the limits left from senior surveys.

27 Although we were unable to find the monument set by Schumann marking the northwest
28 corner of Block 53, Township 2, of the Texas & Pacific Railway Company 16-Mile Reservation

1 Surveys, (described as a 2-inch pipe stamped with an "H"), Schumann's monument "G" was
2 located to the north and monument "I" was located to the south. A point was calculated along
3 the line between these two found monuments at midpoint for the northwest corner of Block 53,
4 Township 2, of the Texas & Pacific Railway Company 16-Mile Reservation Surveys, for the
5 constructed southwest corner of Block 76, of the Public School Land Surveys. We then ran east,
6 to the position calculated for the northeast corner of Block 53, near the southwest corner of SF-
7 15467, and found a 5/8-inch iron stake with an aluminum cap in a stone mound for the
8 constructed southeast corner of Block 76. This location is within 0.83 varas from the documented
9 distance from Schumann's survey (3). We identified and located additional Schumann
10 monuments along the east line of Block 54, Township 1, of the Texas & Pacific Railway Company
11 16-Mile Reservation Surveys from the aforementioned monument "G" to monument "A", which
12 was found on the Texas – New Mexico state line, for the northeast corner of Section 1, Block 54,
13 Township 1, of the Texas & Pacific Railway Company 16-Mile Reservation Surveys. As depicted
14 in Schumann's plat (3) and stated in Commissioner's Sadler's letter (5), these marked monuments
15 establish the east line of Block 54, Township 1 and Township 2, of the Texas & Pacific Railway
16 Company 16-Mile Reservation Surveys. Therefore, these monuments also establish the
17 construction of the west line of Block 76 with a slight deflections of a few seconds from each
18 monument. Stratton's south line of SF-13984 was found as 2-inch pipes in stone mounds and
19 was used as the constructed north line of Block 76, holding the southeast corner of said SF-13984
20 as the constructed northeast corner of Block 76. The southwest corner of SF-13984 was located
21 approximately 101.2 varas west of the found east line of Section 1, Block 54, Township 1, of the
22 Texas & Pacific Railway Company 16-Mile Reservation Surveys. The constructed northwest
23 corner of Block 76 is the calculation from the intersection of the south line of SF-13984 and the
24 east line of Section 1, Block 54, Township 1, of the Texas & Pacific Railway Company 16-Mile
25 Reservation Surveys, as located on the ground. The east line of Block 76 is defined from the
26 found controlling monuments along the west lines of SF-14020, SF-15342, and SF-15467, which
27 were also located and identified on the ground. We prorated any excess and deficiencies along
28 the block boundaries through the sections, respectively, and the protraction of the lines across
29 established the section within Block 76, were consistent with good survey practices, past surveys

1 and the instructions from Commissioner Sadler (5). Following this methodology, Block 76, as
2 constructed by us, resulted in an area of 30,641 acres. Corwin's original assignment of acreage
3 to Block 76, based on the simple mathematical calculation of an 8 mile by 6 mile rectangle, was
4 30,720, making our calculation differ by less than 0.26% from Corwin's

5 Twenty-two monuments within Block 76 and fifty monuments in the surrounding Texas
6 & Pacific Railway Company 16-Mile Reservation Surveys blocks fit within a few varas from our
7 described construction. Further verification of the locations of found original monuments as
8 described in the legal descriptions contained in the documents listed are consistent.

9 We found some small variation with Armstrong's construction of Sections 35 and 36,
10 Block 76, which were located in the field and slightly off north and west from our described
11 reconstruction. It is believed that Armstrong's construction went directly from Schumann's
12 monument "H" to Stratton's southwest corner of SF-13984, ignoring the remaining monuments
13 of Schumann's construction of the east line of Block 54, Township 1, of the Texas & Pacific Railway
14 Company 16-Mile Reservation Surveys (3)(5). If accepted, we propose to establish the northwest
15 and southwest corners with a substantial, identifiable, permanent monument to be constructed
16 as an aluminum cap on top of a concrete cylinder with the stamp as reads, "PUBLIC SCHOOL
17 LANDS BLOCK 76 LSL5/RPLS 5627". The northeast corner will be as found, a 2-inch pipe in a stone
18 mound, and the southeast corner will be as found, a 5/8-inch iron stake with an aluminum cap in
19 a stone mound.

20

21 Conclusion

22 In conclusion, a close study of the records relating to the surveying of Block 76 and
23 adjacent areas established that the 2002 survey of Block 76 relied on circumstantial evidence of
24 a locative call to a monument that was not, in fact, conclusive. The 2002 construction presumes
25 that Twichell's found monument was a perpetuation of the lost Clark's Monument 27 despite the
26 fact that the original Twichell field notes make no such claim, and that no other party has
27 identified Clark' Monument 27 as located on the ground in any written reference. By relying
28 solely on Clark's found Monument 27, Mr. Newton ignores all the subsequent boundary lines

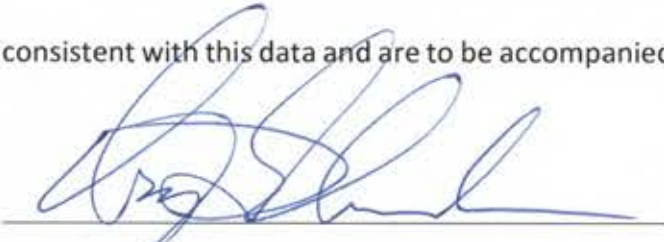
1 that form the survey systems and surveys senior to and definitive of Block 76. Mr. Newton's
2 report goes on to establish the east line improperly, constructing the southeast corner of Section
3 48, Block 53, Township 2, of the Texas & Pacific Railway Company 16-Mile Reservation Surveys,
4 by extending the distance from an adjudicated corner along the north line of Block C27, of the
5 Public School Lands, found in the Judgment of Cause 5050 (15). There is no direct tie to this
6 corner that would relate from the referenced judgment. In addition, Newton's proration of 61
7 varas per section between the adjudicated southeast corner of Section 43, Block 55, to his
8 calculated southeast corner of Section 48, Block 53, Township 2, of the Texas & Pacific Railway
9 Company 16-Mile Reservation Surveys, placed the construction of over 288 square miles of
10 sections in a different position from their recognized, and some cases, patented locations.

11 Corwin's construction of Block 76 in 1885 would have assumed the proper location of the
12 north line of Block 53, Township 2, of the Texas & Pacific Railway Company 16-Mile Reservation
13 Surveys to be exactly eight (8) miles north of its south line. Later, Schuman's work showed that
14 the Texas & Pacific Railway Company 16-Mile Reservation Surveys to be in excess, placing
15 Corwin's assumed beginning point of Block 76 further south into Block 53. Corwin's north and
16 east lines would place it at, or near, the south line of Stratton's Scrap File No. 13984 and the west
17 line of Stratton's Scrap File No. 14020, Forbes' Scrap File No. 15342, and Cool's Scrap File No.
18 15467, respectively. Mr. Newton's report does not consider any of this information. A correct
19 construction of Block 76 requires a surveyor to honor the following data:

- 20 1. The seniority of the Texas & Pacific Railway Company 16-Mile Reservation Surveys
21 and the fact that they are a system of surveys.
- 22 2. The surrender of Block 53, Township 1, of the Texas & Pacific Railway Company
23 16-Mile Reservation Surveys,
- 24 3. The 1911 re-survey of the Texas New Mexico boundary, reflecting the fact that
25 Clark's monuments were not locatable in many cases.
- 26 4. The location of the north line of Block 53, Township 2, of the Texas & Pacific
27 Railway Company 16-Mile Reservation Surveys, as required by the judgment in
28 Cause No. 5050,

- 1 5. The issuance of patents for vacancies along the north and east lines of this block
2 in an area designated as Public School Land and identifying boundary lines with
3 seniority (Post et al. v. Embry (43)),
4 6. The 1961 establishment of the east line of Block 54 of Township 1, of the Texas &
5 Pacific Railway Company 16-Mile Reservation Surveys, by Schumann, to the 1911
6 line and the proration of the excess and
7 7. Commissioner Sadler's instruction for construction of Block 76 in 1963 to
8 Armstrong which emphasized that the construction of Block 76 was based on
9 describing a perimeter that was essentially already made by the senior surveys
10 that surrounded it.

11 The construction reflected in the documents submitted and described in this report are
12 consistent with this data and are to be accompanied with plat and field notes done on same date.

13
14 

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16 Texas Registered Professional Land Surveyor No. 5627
17 Texas Licensed State Land Surveyor
18 Oklahoma Licensed Professional Land Surveyor No. 1612
19 U.S. Certified Federal Surveyor No. 1038
20 Geospatial Information Systems Professional No. 7080
21
22 See accompanying rolled sketch no. 15

