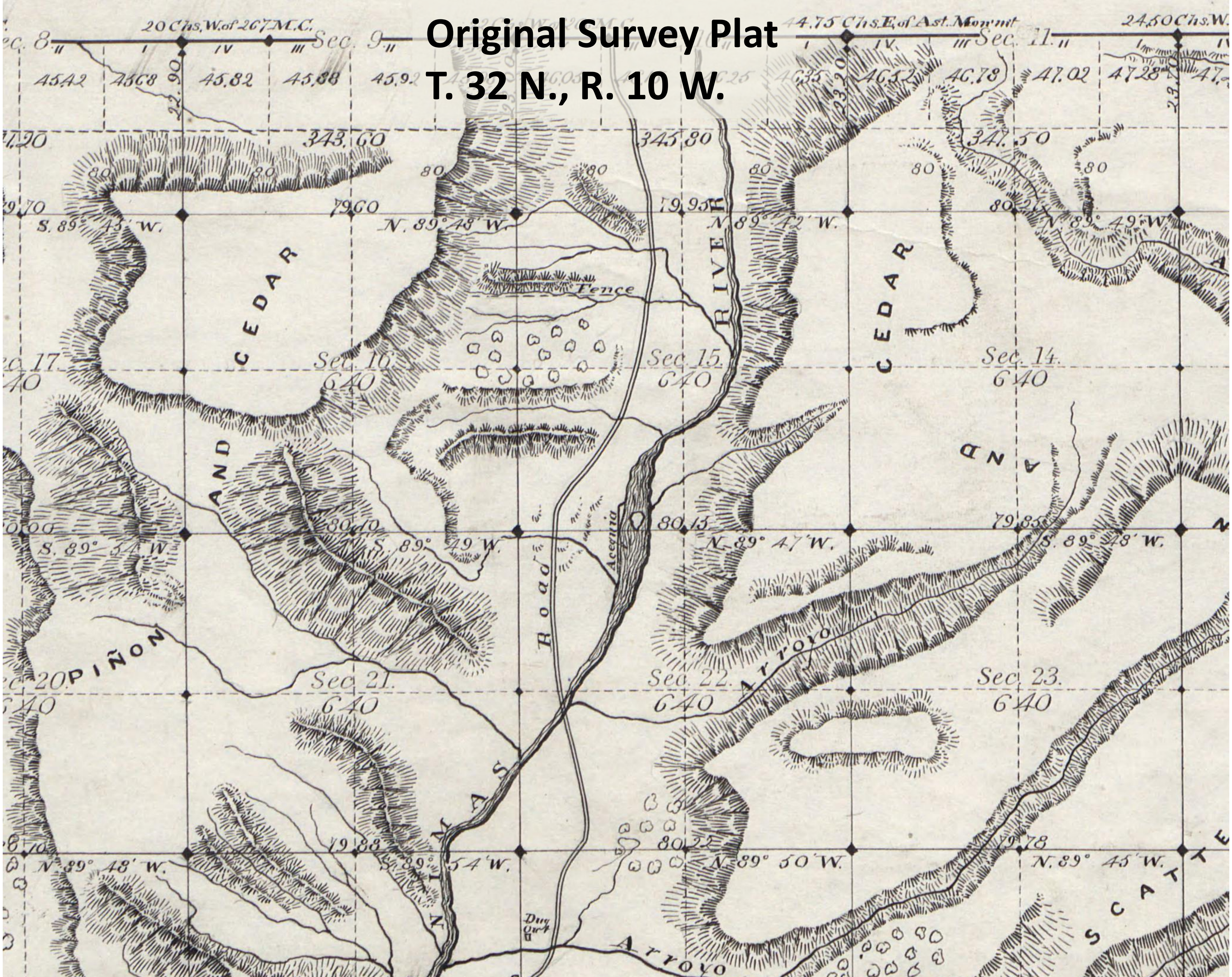
Linn and Treciafaye Blancett
178 IBLA 272

This case centers on the ¼ section corner of section 15 and 22 reestablished by proportionate measurement by BLM in 1969. Appellants' built their house in 1971 without first ascertaining the boundary between their land and the public lands. The BLM survey placed appellants' bunkhouse, certain ranch improvements, roads, crop and farm land, and a portion of their house on public land. The survey was not protested until June of 2006.

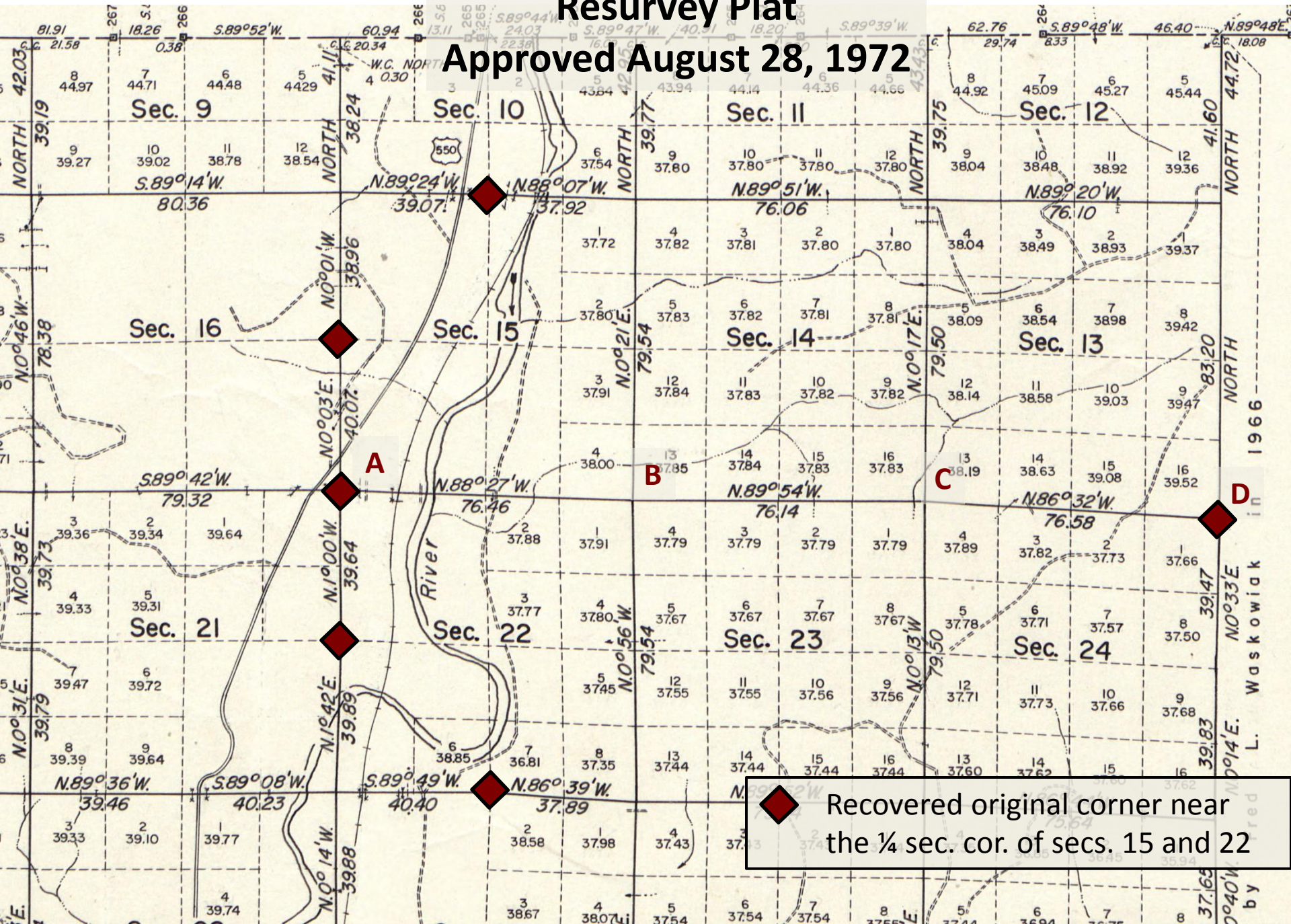
Citing various provisions of the *1947 Manual*, appellants contend that BLM's 1969 resurvey ignored original topographical call to "Ascend high mesa & leave Animas Valley & Enter piñon & cedar," ignored the evidence of improvements, and failed to diligently seek out evidence of the placement of the original corner that could have been provided by witnesses in 1969.

The dissenting opinion by Administrative Judge Jackson provides insight into how missing documentation in the survey record leaves BLM open to speculation about field procedures, evidence gathered and considered, and the decision making process.

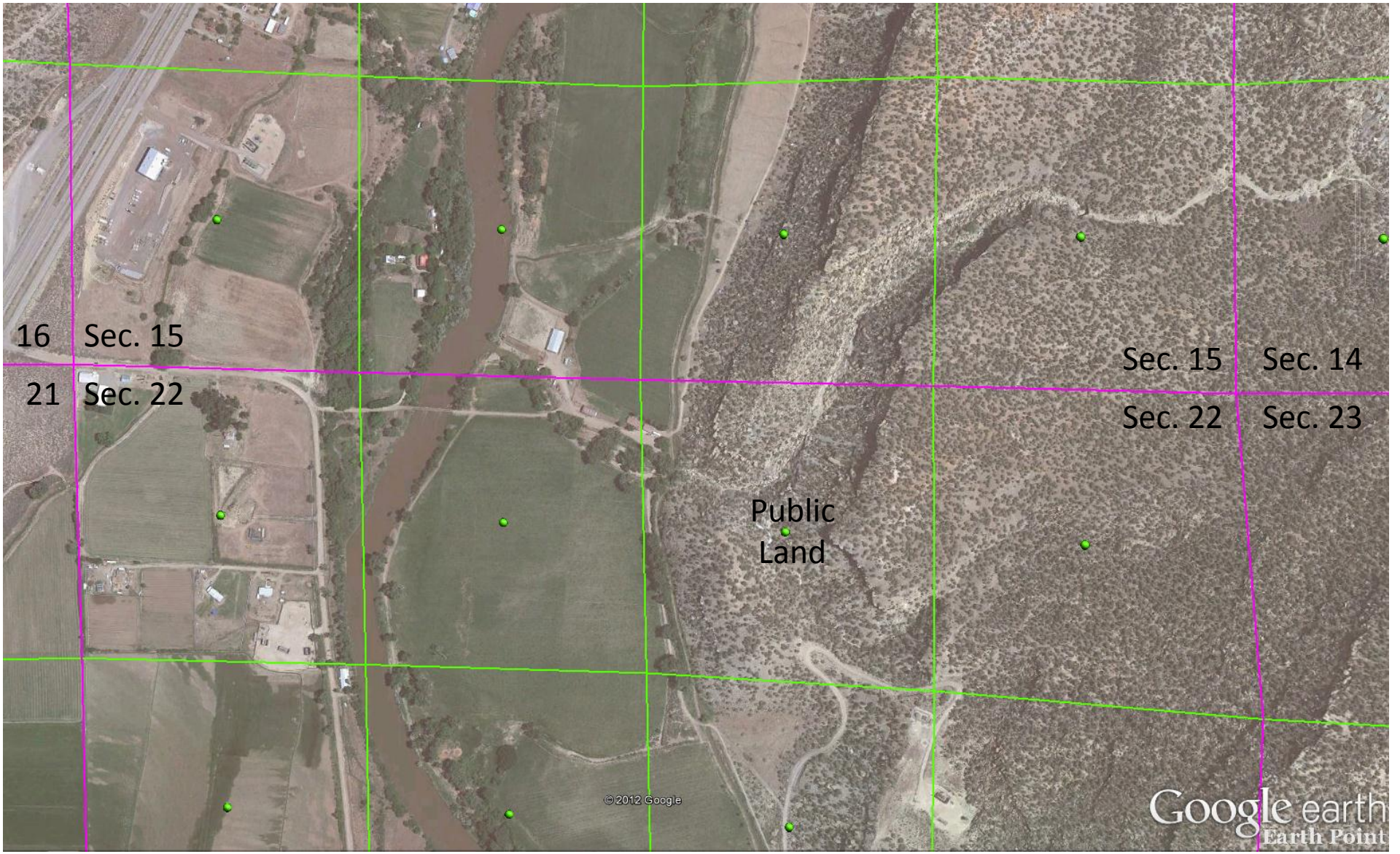
Original Survey Plat
T. 32 N., R. 10 W.



Resurvey Plat
Approved August 28, 1972



T. 32 N., R. 10 W., New Mexico Principle Merdian



LINN AND TRECIAFAYE BLANCETT

178 IBLA 272 Decided December 29, 2009

Editor's Note: appeal filed Civ No. 1:10-cv-00254-RLP (D. NM March 19, 2010)

United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Land Appeals
801 N. Quincy St., Suite 300
Arlington, VA 22203

LINN AND TRECIAFAYE BLANCETT

IBLA 2006-283 Decided December 29, 2009

Appeal from a decision of the New Mexico State Office, Bureau of Land Management, rejecting an objection to a dependent resurvey. NM 101819.

Affirmed.

1. Surveys of Public Lands: Generally--Surveys of Public Lands: Dependent Resurveys

   A party who objects to a resurvey after the filing of the official survey plat is required to establish, by a preponderance of the evidence, that the resurvey was grossly erroneous or fraudulent. A failure to conform the resurvey to the requirements of the *Survey Manual* constitutes gross error.

2. Surveys of Public Lands: Generally--Surveys of Public Lands: Dependent Resurveys

   The term *resurvey* is applied to the reestablishment or reconstruction of the land boundaries and subdivisions by the rerunning and remarking of the lines that were represented in the field-note record and on the plat of a previous official survey. When a dependent resurvey is performed decades or more after the original survey, the location of original corners must be based on the best available evidence of the positions of the original corners at the time of the resurvey. No resurvey is to be executed so as to impair the bona fide rights or claims of persons affected by such resurvey.

3. Surveys of Public Lands: Generally--Surveys of Public Lands: Dependent Resurveys

An *existent* or *found* corner can be recovered by finding evidence of the monument and/or its accessories by reference to the field notes, an acceptable supplemental survey record, some physical evidence, or testimony. An *obliterated* corner, where there are no remaining traces of the monument or its accessories, can be recovered when the corner's location has been perpetuated or when other acceptable evidence establishes its location. A *lost* corner is one that cannot be determined either from traces of the original marks or from acceptable evidence or testimony that bears upon the original position, and whose location can be restored only by reference to one or more interdependent corners.

4. Surveys of Public Lands: Generally--Surveys of Public Lands: Challenges--Surveys of Public Lands: Dependent Resurveys

Existing original corners cannot be disturbed; consequently, discrepancies between the new and record measurements cannot affect the measurements beyond the identified existing original corners, but the differences are to be distributed proportionately within the several intervals along the line between those corners.

5. Surveys of Public Lands: Generally--Surveys of Public Lands: Challenges--Surveys of Public Lands: Dependent Resurveys

A corner position that depends upon the use of collateral evidence can be accepted as duly supported, generally only through proper relation to known corners, and agreement with the field notes regarding distances to natural objects, stream crossings, line trees, and off-line trees, etc., or unquestionable testimony.

6. Surveys of Public Lands: Generally

A landowner's bona fide *belief* concerning the boundary between his land and public land is not the same as a

> bona fide *right* that must be protected in a resurvey under 43 U.S.C. § 772 (2006). Although a person may have a bona fide belief based on an understanding of where a boundary lies, a bona fide right within the meaning of the statute must be based on good faith reliance on evidence of the original survey.

APPEARANCES: Karen Budd-Falen, Esq., Cheyenne, Wyoming, for appellants; Frank Lupo, Esq., Office of the Solicitor, U.S. Department of the Interior, Albuquerque, New Mexico, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE PRICE

Linn and Treciafaye Blancett have appealed the August 18, 2006, decision of the New Mexico State Office, Bureau of Land management (BLM), rejecting their June 2, 2006, objection to the dependent resurvey of T. 32 N., R. 10 W., New Mexico Principal Meridian (NMPM), executed in 1969 by Duane E. Olsen, a Supervisory Cadastral Surveyor, under Special Instructions for Group 680 NM. In particular, they dispute BLM's placement of the quarter-section corner on the section line between sections 15 and 22, asserting that the corner should be placed at a distance of 40.07 chains east of the corner common to sections 15, 16, 21, and 22, as stated in the Field Notes of the original 1880 public land survey by R.L. Powel, of Taylor and Powel. This would place the corner at a point 1.84 chains (approximately 121 feet) east of where BLM placed it, affecting approximately 9 acres on which, according to BLM, appellants' bunkhouse, certain ranch improvements, roads, crop and farm land, and a portion of their house encroach. The Blancetts built their house in 1971 without first ascertaining the boundary between their land and the public lands.

This dispute began when in a letter to the Blancetts dated January 10, 2000, BLM notified them that it intended to fence the boundaries of public lands it manages under the southwestern Willow Flycatcher Habitat Management Plan (HMP). The HMP includes public lands that adjoin appellants' land in the SE¼SW¼ sec. 15 and the E½NW¼ and NE¼SW¼ sec. 22, T. 32 N., R. 10 W., NMPM. A dependent resurvey retracing Olsen's 1969 resurvey had been performed in 1999, and accordingly, the January 10, 2000, letter advised the Blancetts that the survey work for the public land adjacent to their land was complete and the survey plat had been approved, informed them where the plat was available for their review and inspection, and further informed them of their right to protest the survey. In a letter dated January 12, 2000, the Blancetts responded: "We have no concerns with the accuracy of the survey. We will not protest the survey. . . . We are aware that we are in an unwillful trespass situation. . . . We support the fencing adjacent to our private and lease land." Appellants offered to provide equipment to install the fence.

Answer, Attachment E. Two years later, they retained Scott Andrae of Intermountain Mapping Services to survey the disputed area (Andrae Survey).

On June 2, 2005, BLM issued a Notice of Trespass to appellants for unauthorized occupancy of Federal land in NE¼ sec. 22, T. 32 N., R. 10 W., NMPM.[1] The Blancetts and BLM engaged in discussions designed to resolve the asserted trespass, initially pursuing a purchase of public land to resolve the issue. By letter dated May 22, 2006, BLM again notified appellants of its intent to erect the fence. On June 6, 2006, appellants protested the 1969 resurvey, and BLM denied their protest in the August 18, 2006, decision under appeal. With BLM's consent, the Board stayed the decision by order dated October 31, 2006, and directed the parties to attempt to settle the dispute. In 2007, appellants supplemented their original SOR on three occasions. The efforts to settle the case failed, and on December 18, 2007, BLM filed its Answer to appellants' supplemented SOR.[2]

[1] There are two aspects to the Blancetts' situation. One involves the unauthorized occupancy resulting from the encroachment of their residence, outbuildings and improvements onto the public lands, serialized as NM 101819. The other involves an agricultural trespass, serialized as NM 109479. BLM submitted both administrative records. The Board's Docket Attorney confirmed that although BLM had issued the June 2, 2005, trespass notice in NM 101819, it had taken no further action pending the outcome of this appeal of BLM's denial of the Blancetts' protest of the 1969 dependent resurvey. It appears that no similar notice of trespass has been issued with respect to NM 109479.

In addition to the clipped administrative records for NM 101819 and NM 109479, a large accordion-style folder was submitted with an index identifying documents associated with each lettered pocket, a handful of which were numbered exhibits that apparently were submitted with the Blancetts' protest. The remaining documents in the accordion file are not labeled. We assume that one of two copies of Exs. 14 and 15 to appellants' Statement of Reasons (SOR), the survey plat and detail prepared by Andrae, belongs in pocket N, described on the accompanying index as "Blancett Survey by Scott Andrae." We further assume that an aerial photograph with penciled lines drawn around a house, labeled only "1960 HWY. DEPT." belongs in pocket O, described on the accordion file index as "State Highway Surveys."

[2] On Dec. 18, 2007, BLM also moved to dismiss that part of the appeal that relates to the decision to erect the fence, arguing that appellants had offered no evidence or argument challenging that portion of the decision, in the absence of which "there exists no material issue of fact." Motion to Dismiss at 1. Appellants opposed the motion, acknowledging that although they have no quarrel with the procedures BLM followed in deciding to fence Federal lands, they do challenge the correctness of the surveyed fence line. Because we affirm BLM's decision, we deny the Motion to

(continued...)

As will be shown below, Powel placed the disputed quarter-section corner 2.93 chains west of the foot of a mesa, whereas Olsen's resurvey placed the disputed corner 2.83 chains west of the foot of that same mesa, a difference of less than 7 feet, both surveyors describing almost 3 chains of relatively level land between the foot of the mesa and the disputed quarter-section corner that was not included in the description of the lands patented to appellants' predecessors-in-interest. That land amounts to 9 acres, and this appeal concerns title to that 9-acre strip of level land.

Arguments of the Parties

Appellants argue that BLM's decision is arbitrary and capricious because the 1969 resurvey did not comply with the *1947 Manual of Surveying Instructions* (*1947 Manual*),[3] and therefore the decision is not supported by a rational basis. SOR at 4. Citing various provisions of the *1947 Manual*, appellants contend that Olsen's 1969 resurvey ignored Powel's topographical call to "Ascend high mesa & leave Animas Valley & Enter piñon & cedar," ignored the evidence of improvements, and failed to diligently seek out evidence of the placement of the original corner that could have been provided by witnesses in 1969. SOR at 6-7. The Blancetts challenge Olsen's reliance on proportionate measurement to place the quarter-section corner, contending that Olsen based this method on his erroneous finding that the original corner was lost. Appellants further argue that where there is a conflict between a "senior survey (the 1880 survey) and the junior survey (the 1969 survey)," the senior survey "governs and requires that the land between the two survey lines belongs to the Blancett's [sic] as set by the 1880 survey." *Id.* at 9-10. Appellants argue that the 1880 survey controls the lands patented to their predecessors, that those predecessors homesteaded the 9 acres at issue, and that BLM's decision injures their property rights. *Id.* at 11-12.

In their three supplements to the SOR, appellants provide additional detail and argument about the lands acquired by their predecessors and others[4] to support their view regarding the true quarter-section corner position by reference to the East Side Ditch, an improvement that was constructed in 1903 or 1904, and reiterate their basic position that the 1969 resurvey failed to follow the *1947 Manual* in its execution.

BLM responds that the 1969 resurvey was accurately executed and complied with the *1947 Manual*, that the quarter-section corner was properly declared a lost

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[2] (...continued)
Dismiss as moot.

[3] The *1947 Manual* was in effect when Olsen performed the resurvey in 1969.

[4] Appellants cite Exs. 16-19 and 31-33.

corner, and that appellants have not demonstrated that the 1969 resurvey was grossly erroneous or fraudulent. BLM acknowledges that the 1969 resurvey confirmed a "large amount of distortion within the township as surveyed in 1880," which in general casts doubt on the reliability of the topographic calls, and contends that the Blancetts' reliance on the topographic call described above is misplaced because the call is not properly related to known corners and is inherently ambiguous. Answer at 11-12.

BLM notes that the Andrae Survey "almost completely" agrees with BLM's 1969 and 1999 dependent resurveys; that Andrae accepted the position of the disputed quarter-section corner, the 1/16 section corner between sections 15 and 22, and other BLM monuments; and that he did not even depict the subject topographical call or "indicate the point of ascent by a tie with bearing and distance," an indication that Andrae "dismissed the ambiguous topographic call." *Id.* at 14. BLM rejects the accuracy or significance of depicting survey lines on aerial photographs of sections 15 and 22 provided by Andrae, stating that the uniform 40-acre grid he used for the depiction is inconsistent with, and not representative of, the original survey, in which lines are distorted and varied in length. *Id.* at 14-15.

Additionally, BLM argues that the Bona Fide Rights Act, 43 U.S.C. § 772 (2006), on which appellants rely, is not a basis for challenging the United States' title to the property identified in the 1969 resurvey, that any such action must be brought pursuant to the Quiet Title Act, 28 U.S.C. § 2409a (2006), and that if appellants have any bona fide rights in the disputed acreage, they were protected by proportioning the disputed quarter-section corner. Answer at 21-22.

Appellants submitted a Reply in which, in addition to reiterating the arguments made in their supplemented SOR, they explain that the subject of their January 12, 2000, letter to BLM, quoted above, was the fencing of riparian areas in Areas of Environmental Critical Concern (ACEC) #1 and #2.[5]

For the reasons explained below, we find that BLM properly declared the disputed quarter-section corner lost and, in accordance with the *1947 Manual*, restored the corner by proportionate measurement.

[5] Appellants explain that "[a]t the time the letter was drafted, ACEC #2 was part of the lands to be fenced. [Citation omitted.] It was only later that Appellants learned of the decision to fence ACEC #2 and that this fence would go through the center of Appellants' home. Thus the letter in 2000 was not meant to apply to the current boundary dispute that arose as part of a decision dated August 18, 2006. Therefore, the BLM is incorrect in citing to such letter and using it in this appeal." Reply at 4.

We begin by first setting forth the general principles that govern this appeal.

Analysis

[1] As the parties objecting to the resurvey after the filing of the official survey plat, appellants must establish, by a preponderance of the evidence, that the resurvey was grossly erroneous or fraudulent. *E.g., Paco Production Co.*, 145 IBLA 327, 330 (1998); *William D. Brown*, 137 IBLA 27, 28 (1996), and cases cited; *Peter Paul Groth*, 99 IBLA 104, 111 (1987). A failure to conform the resurvey to the requirements of the *Survey Manual* constitutes gross error. *See Quinton Douglas*, 166 IBLA 257, 269 (2005); *Peter Paul Groth*, 99 IBLA at 119; *Domenico A. Tussio*, 37 IBLA 132, 133 (1978).

Original Surveys and Dependent Resurveys

As the Tenth Circuit explained in *United States v. Doyle*, 468 F.2d 633, 636 (10th Cir. 1972):

> The original survey as it was actually run on the ground controls. *United States v. State Investment Co.*, 264 U.S. 206, 212 (1924). . . . Even if the boundary was incorrect as originally established, a precisely accurate resurvey cannot defeat ownership rights flowing from the original grant and the boundaries originally marked off. *United States v. Lane*, 260 U.S. 662, 665, 666 (1923). . . . The conclusiveness of an inaccurate original survey is not affected by the fact that it will set awry the shapes of sections and subdivisions.

[2] "The term 'resurvey' is applied to the reestablishment or reconstruction of the land boundaries and subdivisions by the rerunning and remarking of the lines that were represented in the field-note record and on the plat of a previous official survey." *1947 Manual* § 387 at 309. It begins with a "retracement" of the lines to determine and document in field notes the condition of the previous survey, including the condition and status of monuments set during the original survey. *1947 Manual* § 387 at 310.[6] When a dependent resurvey is performed decades or more after the original survey, the location of original corners must be based on the "best evidence available of the positions of the original corners" at the time of the resurvey. *See J.M. Beard (On Rehearing)*, 52 I.D. 451, 453 (1928). No resurvey is to

[6] A retracement is made "for the purpose of verifying the direction and length of lines, and to identify the monuments and other marks of an established prior survey . . . and whether the retracement is corroborative of the former record field notes and plat, or not so in any particular." *1947 Manual* § 387 at 310.

be executed so as to impair the bona fide rights or claims of persons affected by such resurvey. 43 U.S.C. § 772 (2006); *1947 Manual* § 392 at 312.

[3] Original lines are reestablished under a dependent resurvey by recovering or restoring the original *corners* [7] by one of three methods. A corner is categorized as *existent, obliterated*, or *lost*. *John W. Yeargan*, 126 IBLA at 363; *Elmer A. Swan*, 77 IBLA 99, 103-04 (1983). An *existent* or *found* corner can be recovered by finding evidence of the monument and/or its accessories by reference to the field notes, an acceptable supplemental survey record, some physical evidence, or testimony. *1947 Manual* § 350 at 283.

An *obliterated* corner, where there are no remaining traces of the monument or its accessories, can be recovered when the corner's location has been perpetuated or when other acceptable evidence establishes its location. *Id.* § 355 at 285.

Where a corner cannot be considered existent or obliterated based on substantial evidence regarding its location, it will be regarded as a *lost* corner. A lost corner is one that cannot be determined "*either from traces of the original marks or from acceptable evidence or testimony that bears upon the original position, and whose location can be restored only by reference to one or more interdependent corners.*" *1947 Manual* § 360 at 289; *James O. Steambarge*, 116 IBLA 185, 191 (1990). However, a corner will not be regarded as lost "if its position can be recovered satisfactorily by means of the testimony and acts of witnesses having *positive knowledge of the precise location of the original monument.*" *1947 Manual* § 355 at 285 (emphasis added). Thus, "[i]f there is some acceptable evidence of the original location[,] that position will be employed in preference to the rule that would be applied to a lost corner." *Id.* § 360 at 289.

[4] Existing corners of the original survey cannot be disturbed. As a consequence, the *1947 Manual* provides that, "discrepancies between the new and those of the record measurements will not in any manner affect the measurements beyond the identified existing original corners, but the differences are to be distributed proportionately within the several intervals along the line between the corners." *1947 Manual* § 363 at 290 (original emphasis omitted). Specifically, the

[7] "The 'corners' of the public land surveys are those that determine the boundaries of the various subdivisions which are represented on the official plat, i.e. — the township corner, the section corner, the quarter-section corner, the meander corner." *1947 Manual* § 349 at 282. The terms *corner* and *monument* are often used interchangeably. However, the *corner* denotes a point or position determined during the survey, whereas the *monument* refers to the "physical structure erected for the purpose of marking the corner point upon the earth's surface." *Id.*

surveyor is to distribute the excess or deficiency "between two existent corners in such a manner that the amount given to each interval shall bear the same proportion to the whole difference as the record length of the interval bears to the whole record distance." After having applied the proportionate difference to the record length of each interval the sum of the several parts will equal the new measurement of the whole distance. *Id.* § 364 at 290-91; *see Volney Bursell*, 130 IBLA 55, 57 (1994), and cases cited. Proportionate measurement equitably distributes differences arising from errors in record calls and distances when placing lost corners between found control points. *Id.* § 364 at 290-91.

[5] The issue in this case is whether Olsen properly concluded that the disputed quarter corner was "lost" and to be re-established by proportionate measurement, or the disputed corner was "obliterated" and was perpetuated at a place approximately 120 feet east of where Olsen placed it. Appellants contend they have submitted acceptable evidence of the original location of the disputed quarter-section corner that was available to Olsen and should have been relied upon to restore the corner, instead of proportionate measurement.

The *1947 Manual* specifies the quality of the collateral evidence needed to support a finding that a corner is obliterated:

> An obliterated corner is one at whose point there are no remaining traces of the monument or its accessories, but whose location has been perpetuated, or the point for which may be recovered beyond reasonable doubt, by the acts and testimony of the interested landowners, competent surveyors, or other qualified local authorities, or witnesses, or by some acceptable record evidence.
>
> A position that depends upon the use of collateral evidence can be accepted only as duly supported, generally *through proper relation to known corners, and agreement with the field notes* regarding distances to natural objects, stream crossings, line trees, and off-line tree blazes, etc., or unquestionable testimony.

1947 Manual § 355 at 285 (original emphasis omitted in part). Accordingly, before we examine appellants' collateral evidence in detail to determine whether it establishes the location of the corner, we examine how the position of the corner they support relates to the measurements recorded in the field notes.

The 1880 Original Survey and the 1969 Dependent Resurvey

In general, the western two-thirds of the township is comparatively flat and treeless. The eastern one-third of the township embraces a high mesa and public

lands. In 1880, Powel surveyed the east, south, and west boundaries and subdivision lines of the township. The plat of survey was approved in 1881. The west township boundary was dependently resurveyed by D.E. Harding in 1953; the east boundary was dependently resurveyed by F.L. Waskowiak in 1966; and Olsen dependently resurveyed the south boundary of the township in 1968. In 1969, Olsen retraced a portion of the Colorado-New Mexico boundary to restore the north boundary of the township and performed a dependent resurvey of the subdivisional lines of the township. Olsen's plat was approved on August 28, 1972.[8] In 1998-99, Randall A. Bloom and Donald Brewer resurveyed boundary lines that would be affected by the fencing of the adjoining public lands, which included the disputed acreage.

After listing the prior surveys of the township, Olsen's Field Notes state:

> Prior to the restoration of any corners, all lines of the original survey were traced and a diligent search made for any evidence of the original monuments and other calls of the official record. Identified corners were remonumented in their original positions. Lost corners were established at proportionate distance[,] but not until exhausting every reasonable possibility of finding evidence of the control of each corner.

Olsen Field Notes at 1.

As noted, the disputed quarter-section corner lies on the section line between sections 15 and 22. Powel's plat shows the Animas River flowing in a generally north to south direction through the western half of those sections. The eastern half of the two sections consists of a mesa intercut with arroyos that trend northeast-southwest. The rim of the mesa runs generally north-south. The mesa rises roughly 200 feet above its base. Powel's and Olsen's surveys both show that the disputed quarter-section corner lies just to the west of the foot of the mesa.

Olsen found no evidence of the disputed quarter-section corner. Olsen Field Notes at 27. Indeed, many corners were lost according to Olsen's resurvey, particularly in the eastern part of the township. Although Olson found a monument

[8] In accordance with the records retention policy then in effect, all but Olsen's official Field Notes and survey plat was destroyed after his plat was approved. *See* Answer at 19. There is therefore nothing in the record that documents whether BLM notified the Blancetts and other area landowners of the dependent resurvey. For the same reason, there is now no record of those to whom Olsen spoke in performing the resurvey. However, his Field Notes clearly refer to contacts with knowledgeable persons, which he relied upon to perpetuate corners. *See, e.g.,* Olsen Field Notes at 24, 25, 26, 30.

for the corner common to sections 15, 16, 21, and 22 (Corner A), he found no original corners between Corner A and the eastern boundary of the township. There was no existing evidence for the section corner common to sections 14, 15, 22, and 23 (Corner B), or the section corner common to sections 13, 14, 23, and 24 (Corner C). On the township boundary, he found the monument for the corner common to sections 13, 18, 19, and 24 (Corner D). *Id.* at 11.[9] Appellants challenge none of these findings. Olsen then determined the points for Corners B and C by proportionate distance, *id.* at 10, 19, as he did for the disputed quarter-section corner between Corners A and B. *Id.* at 27.

We compare Powel's measurement of the distance between Corners A and D to Olsen's measurement of the same distance. Powel measured 80.15 chains from Corner A to Corner B (Powel Field Notes at 42-43), 79.85 chains from Corner B to Corner C (*id.* at 27-28), and 80.16 chains from Corner C to Corner D, for a total distance of 240.16 chains. Olsen measured 76.46 chains from Corner A to Corner B (Olsen Field Notes at 27-28), 75.14 chains from Corner B to Corner C (*id.* at 19-20), and 76.58 chains from Corner C to Corner D (*id.* at 11-12), for a total distance of 228.18 chains, showing that Powel's survey overstates the distance between established Corners A and D by almost 12 chains (or 792 feet). If Olsen had replaced the lost corners between these points by measuring them from Corner A at Powel's record distances as advocated by appellants, he would have encountered the existing original Corner D at only 68.16 chains from Corner C, instead of at 80.16 chains as recorded by Powel. Powel's survey shows that he set section corners at roughly equal intervals of 80 chains and that he set the quarter-section corners at the midpoint of the line between those corners. Proportionate measurement therefore provided the likeliest means of re-establishing the corners where Powel set them. The *1947 Manual* requires use of proportionate measurement in re-establishing lost corners:

> A proportionate measurement is one that gives concordant relation between all parts of the line, *i.e.*—the new values given to the several parts, as determined by the remeasurement, shall bear the same relation to the record lengths as the new measurement of the whole line bears to that record.

1947 Manual § 364 at 291 (original emphasis omitted in large part).

Powel's Field Notes show that he headed east from Corner A. At 8.75 chains he encountered the Animas Road bearing north and south. At 17 chains, he entered

[9] Of the corners immediately surrounding the disputed quarter-section corner, Olsen found the original monuments for the section corner common to sections 9, 10, 15, and 16, and the quarter-section corners between sections 10 and 15, between sections 15 and 16, between sections 21 and 22, and between sections 22 and 27.

the "low bottom," at 25 chains he reached the head of an acequia (ditch), and at 25.60 chains came to the "Edge of Animas." At 30 chains he proceeded "Across W channel to S point of small island," and at 32.75 chains, proceeded "Across River to East bank 2 ft. deep stony course S." At 33 chains, Powel marked a cottonwood tree 8" in diameter and "20 chs N of line." At 40 chains he set a temporary quarter-section corner, and at 43 chains, first crossing relatively level ground, he proceeded to "Ascend high mesa & leave Animas Valley & Enter piñon & cedar," 3 chains east of the temporary quarter-section corner. He reached the top of the mesa at 57.50 chains. At 63.89 chains he found a tree, and at 80.15 chains, he reached the section line 31 links north of Corner B, which had already been set. From that corner, he went 40.07 chains west, where he set the quarter-section corner that is now in dispute.

When Olsen resurveyed this line, he started from Corner B and moved west.[10] According to his Field Notes, he traveled across the mesa top, through dense piñon and cedar, reaching the rim at 21.30 chains, where he began his descent to the valley floor. He encountered a south-draining wash at 25.60 chains and a "spur" at 28.90 chains, from which he continued the descent. At 35.40 chains he encountered a graded road "at foot of slope" bearing north and south as he continued across the Animas Valley. At 36.20 chains, he found a south-draining, unnamed irrigation ditch and crossed cultivated land. At 38.23 chains he set the quarter-section corner "at proportionate distance, [as] no evidence of the original corner could be found."[11] At 51.70 chains, Olsen reached the "Center of Animas River, 380 lks. [links] wide, 3 ft. deep, drains S." In other words, he reached the east bank at 49.80 chains and the west bank at 53.60 chains. He next recorded a graded road at 55 chains, a railroad track at 60.80 chains, a fence line at 62.50 chains, a power line at 69.20 chains, another graded road at 69.70 chains, and an irrigation ditch at 71.30 chains, coming to Corner A at 76.46 chains.

Because a dependent resurvey is designed to retrace and reestablish the lines of the original survey, questions raised in an appeal may often be resolved by

[10] *See 1947 Manual* § 412 at 320-21 ("It is not usually possible to follow the method and order of procedure shown in the record of the original survey (owing to missing corners), but the complete system of lines will be run out by preliminary retracement, usually beginning with the meridional lines between known corners, followed by the latitudinal lines between known corners, noting the intersections with the meridional lines."). Olsen properly performed a retracement of the lines of the original survey before restoring any corners.

[11] The 1999 dependent resurvey by Bloom measured 38.14 chains from the disputed quarter-section corner to Corner B, compared to 38.23 measured by Olsen.

comparing the plat and field notes of the resurvey with those of the original survey. *E.g.*, *R. A. Mikelson*, 26 IBLA 1, 5 (1976); *see also Domenico A. Tussio*, 37 IBLA 132, 148-50 (1978). However, discrepancies in the measurements of lines and certain topographic calls are common between old and more recent surveys. *1947 Manual* § 363 at 290; *see State of Oregon*, 78 IBLA 13, 20 (1983), citing *Alfred Steinhauer*, 1 IBLA 167, 172-73 (1970)). This is because it was difficult to keep the chains used to measure distances at the time of the original survey at standard length, and inaccuracies often arose in measuring steep slopes with them. *1947 Manual* § 363 at 290; *see, e.g.*, *Volney Bursell*, 130 IBLA at 56-57. Thus, it is not uncommon that a distance that was measured as 80 chains in the original survey will be measured in a resurvey as something less than 80 chains. *Id.*

In this case, the section line between sections 15 and 22 runs from Corner A on the west to Corner B on the east. Powel's original survey measured the distance between these corners as approximately 80.15 chains; Olsen's dependent resurvey measured that distance as 76.46 chains. The question of what to do with such a discrepancy is addressed by the *1947 Manual* §§ 363 to 365 at 290-91. A similar situation was considered in *Bursell*.

In that case, the section line at issue similarly had been measured as 80 chains in the original survey, but only 78.225 chains in the dependent resurvey. In *Bursell*, the disputed section corner was between two other section corners at a distance that the original survey stated as 80 chains in each direction. Although Bursell had argued that the disputed section corner should be measured at 80 chains from one of those section corners, the Board pointed out that such a modification would reduce the distance to the other section corner to 77 chains, even though the original survey showed that distance to also be 80 chains. 130 IBLA at 57. In this appeal, if the quarter-section corner was moved 40.07 chains from Corner A, contrary to the requirements of the *1947 Manual*, it would be only 36.46 chains from Corner B, instead of at or near the mid-point between the two original corners.

This brings us to the relationship between the quarter-section corner set by Powel and the distances he recorded for topographic features. Although Powel measured the section line by proceeding from west to east and Olsen moved from east to west, both purported to place the disputed quarter-section corner between Corners A and B at the center of that line. Powel began his ascent of the mesa only 3 chains from where he had set his temporary quarter-section corner [12] and only 2.93 chains from his established corner.[13] Instead of ascending the mesa, Olsen descended from the mesa rim and reached a road at the bottom of the mesa at a distance of 2.83

[12] 43.00 chains minus 40.00 chains equals 3 chains.
[13] 43.00 chains minus 40.07 chains equals 2.93 chains.

chains [14] from the quarter-section corner he would set by proportionate measurement. In other words, Olsen's Field Notes show a difference of only 0.10 chains (6.6 feet)[15] in the distance from the foot of the mesa to the quarter-section corner as he and Powel had measured it.

Looking westward from the quarter-section corner, it should be further noted that the Animas River was much wider in 1880 than it was in 1969, measuring 7.15 chains across (with an island) in 1880, but only 3.8 chains in 1969 (with no mention of an island in the resurvey record).[16] The center of the river as measured by Powel was only 10.88 chains from the quarter-section corner he set, while the center of the river as measured by Olsen was 13.47 chains from the quarter-section corner he set. Nevertheless, both surveyors measured the west bank of that river at about 15 chains from the quarter-section corner each set. Powel measured that distance as 15.07 chains, and Olsen measured 15.17 chains.

Both surveyors identified a road a little more than 31 chains from the quarter-section corner each set. Powel found the Animas Road 31.32 chains west of the quarter-section corner he set, and Olsen found a graded road 31.27 chains west of the quarter-quarter corner he set.

The Foot of the Mesa

The Blancetts question whether Olsen correctly interpreted Powel's topographical call to "Ascend high mesa & leave Animas Valley & Enter piñon & cedar."[17] Olsen's topographical call from the quarter-section corner across the Animas Valley floor to the bottom or foot of the mesa, where a rapid ascent though old-growth piñon and cedar trees begins, is 2.83 chains (or 186.78 feet), measured moving east to west. In contrast, appellants place the beginning of the ascent approximately 200 feet to the east of where Olsen placed it, at the base of a small rock bluff (12-15 feet high) that is 6 chains (396 feet) east of Olsen's quarter-section

[14] 41.06 chains minus 38.23 chains equals 2.83 chains.

[15] One chain equals 66 feet; 1 link equals 7.92 inches.

[16] We note that the 1969 survey was conducted from April through July when annual flows normally reach their peak, while the 1880 survey was conducted in December, when flows may be lower or at their lowest.

[17] Discrepancies in topographical calls are expected, and allowances are to be made for such discrepancies. *1947 Manual* § 358 at 288-89. *See also Howard Vagneur*, 159 IBLA 272, 284 (2003) ("[T]opographical calls such as a dry gulch are not utilized to provide precision, but instead merely to provide general descriptions of the area in which corners are found.")

corner. As their respective field notes show, that small rock bluff was not identified or relied upon by Powel or by Olsen.

BLM suggests that this topographic call is too uncertain to base a finding as to the location of the disputed corner. We do not agree. The change in the degree of slope from level land to the beginning of the ascent to the mesa is not so imperceptible that it cannot be identified. Appellants have provided a Section Line Profile, a graph showing the changes in elevation along the section line between Corners A and B. It shows a marked change in the slope that renders the point of ascent at the foot of the mesa unambiguous. SOR Ex. 6.

Appellants' graph measures distances in meters rather than chains and shows a distance of approximately 1,520 meters between Corners A and B, a distance approximately equal to 76 chains, just as indicated in the 1969 resurvey.[18] According to Ex. 6, between 800 and 900 meters from Corner A, the point of ascent at the foot of the mesa begins at an elevation of 1,810 meters or 5,938.30 feet above sea level. Olsen's survey measures this distance as 41.06 chains or 825.997 meters. Appellants place the beginning of Powel's ascent at 43 chains (865.024 meters) from Corner A, but their graph shows that at 43 chains, Powel would have already ascended the mesa from an elevation of 1,810 meters to 1,820 meters, or from 5,938 to 5,971 feet. In other words, appellants' contention places the point where the ascent began more than 30 feet above the level land, at a small bluff that was not mentioned in the original survey record.

BLM points out that the 1969 resurvey placed the point of ascent immediately to the east of the road, where the land begins to ascend at a much more rapid rate and enters piñon and cedar, just as Powel described the point of ascent he measured at 43 chains. Answer at 12. Thus, appellants' placement of the point of ascent 200 feet east of where Olsen placed it cannot be reconciled with the fact that such a position is well above the field on level ground and 3 or more chains into an old growth stand of piñon and cedar.

[18] The changes in topography are more gradual than indicated on appellants' graph of the section line profile because the horizontal axis for distance is stated in 100-meter units, whereas the vertical axis for elevation is stated in 10-meter units. This is more easily discernible from the copy of the profile submitted as Ex. 9 to appellants' protest, which was submitted to the Board in the accordion file described in n.1. The unit measures are not legible on the copy submitted with the appeal as Ex. 6.

The points of congruity discussed above demonstrate that Olsen complied with the requirements of the *1947 Manual* before declaring the disputed corner lost.[19] We now address appellants' submissions and the question of whether they constitute acceptable evidence that the disputed quarter-section corner was not lost, but merely obliterated.

Appellants' Collateral Evidence

Olsen restored the position of the disputed quarter-section corner by *single proportionate measurement*, by which the positions of two identified corners control the direction of that line. He did so because he concluded that the quarter-section corner was lost. Single proportionate measurement is specifically applicable to the restoration of a quarter-section corner on the line between two section corners. *1947 Manual* §§ 363 to 365 at 290-91. Appellants challenge this conclusion, alleging that the corner was obliterated and that Olsen ignored substantial evidence by which the true position of the quarter-section corner could have been recovered. They conclude that it therefore was error to employ proportionate measurement to re-establish the corner, and that Olsen's resurvey therefore did not comply with the *1947 Manual*, which constitutes gross error. Reply to BLM's Answer at 5.

We return to the *1947 Manual*, which provides as follows:

> The restoration of a lost or obliterated corner has to do with the replacing of a monument that has disappeared so far as this relates to physical evidence, or other means of identification short of a remeasurement of the lines that were surveyed in the establishment of this and the nearest existent corners of that survey in the two or four directions. If there should be acceptable collateral evidence by which the original position may be accurately located, the monument may be

[19] The *1947 Manual* § 358 at 288-89 provides as follows:

> A certain measure of allowance should be made for ordinary discrepancies in the calls relating to items of topography. Such evidences should be considered more particularly in the aggregate, and when they are found to be corroborative an average may be secured to control the final adjustment, which will be governed largely by the evidences nearest the particular corner in question, giving the greatest weight to those features which agree most harmoniously with the record, and to such items as afford definite connection. A careful analysis will generally reveal the merits of authentic evidences as opposed to unreliable features bearing resemblance to the calls of the field notes, and in this matter the engineer will find an opportunity to exercise his skill to the fullest capacity.

> regarded as obliterated, but not lost; the point is then referred to as an "obliterated corner."
>
> . . . In either case, however, the question is not where the running of new lines would place the corner, but *where* or in what particular position was the corner established in the beginning, in the approved survey. *The evidence*, to be acceptable, or to be given value, must be such as to have a bearing upon the *latter fact*.

1947 Manual § 349 at 283 (original emphasis). The *1947 Manual* further provides:

> The rules for the restoration of lost corners are not to be applied until after the development of all evidence, both original and collateral, that may be found acceptable, though the methods of proportionate measurement will aid materially in the recovery of the evidence, and will indicate what the resulting locations may be as based upon known control.
>
> *An existent corner is one whose position can be identified by verifying the evidence of the monument, or its accessories, by reference to the description that is contained in the field notes, or where the point can be located by an acceptable supplemental survey record, some physical evidence or testimony.*
>
> *Even though its physical evidence may have entirely disappeared, a corner will not be regarded as lost if its position can be recovered through the testimony of one or more witnesses who have a dependable knowledge of the original location.*

Id. § 350 at 283 (original emphasis).

As previously stated, collateral evidence can be accepted only if it is supported through proper relation to known corners and agreement with the field notes, or unquestionable testimony. *Id.* § 355 at 285. Accordingly, when historic evidence is offered in connection with a dependent resurvey, it must be related to or connected to the original corner. Absent evidence that demonstrates positive knowledge of the precise location of the original monument, evidence of historic use may be nothing more than evidence of a longstanding encroachment. *Id.* Thus, to prevail, appellants' evidence must be evidence of the original position of the corner, not evidence of an encroachment.

Appellants contend "there was evidence of improvements to aid in the location of the Quarter corner of Sections 15 and 22." SOR at 6. They cite their SOR Ex. 3,

which is a magnified copy of sections 15 and 22 from what appears to be Powel's plat, on which the quarter-section corner on the line between sections 15 and 22 has been manually enlarged so that the 80.15 chains Powel recorded for the length of that line is obscured. The plat depicts arroyos, the Animas River, a portion of a road to the west of the river, and other physical features, but does not show any improvements.

SOR Ex. 4 is a copy of a 1938 State Hydrographic Survey map that depicts parcels of land along the Animas River and what we assume to be the names of the owners of those parcels. Appellants state that the Hydrographic Survey "clearly shows the land under cultivation at the time." SOR at 3. BLM explains that this map portrays deeded acreage and is used to allocate water rights; it is not a land survey and "does not accurately detail the location of original survey lines, perhaps because the allocation of water rights depends on the size of the parcel to be beneficially used rather than the precise location of property boundaries." Answer at 16. While it may confirm agricultural occupancy or encroachment, nothing on the face of Ex. 4 provides a basis for concluding that it accurately portrays property boundaries, property acreage, original survey lines, or any corners thereof. It shows that the land was cultivated; it does not constitute proof of the true position of the original corner or that Olsen re-established the disputed quarter-corner in a manner that does not comply with the *1947 Manual*.

SOR Exs. 5-7, 14, and 15 relate to Andrae's independent resurvey on appellants' behalf. In particular, Andrae superimposed or added survey lines on an aerial map of the Blancett property. Ex. 5. We agree that the photograph and superimposition, without connecting the lines to the survey record, cannot be accepted as evidence of the actual position of the lines of the original survey as they were actually run on the ground. Similarly, while we accept Ex. 7 as a depiction that generally illustrates the acreage at issue in relation to the Blancett's home, we cannot accept it as evidence bearing upon the original position of the disputed quarter-section corner.

In SOR Ex. 10, appellants offer the 1900 map of the East Side or Odenkirk Ditch (SOR Ex. 9), testimony given on Aug. 1, 1938, in *The Echo Ditch Co. v. The McDermott Ditch Co.*, No. 01690, before the First Judicial District Court of New Mexico in San Juan County, and what appears to be a magnified portion of the 1938 Hydrographic Survey Map submitted as SOR Ex. 4 as additional evidence of the original position of the disputed quarter-section corner.

Exs. 9 and 19 are duplicates of O.H. Weaver's calls for a survey of the East Side Ditch, as shown "in the annexed plat." Although Weaver's notes state that the "Scale of Plat 4" = 1 mile," it seems clear that the sketch of the ditch was intended only to convey an overall sense of where the ditch lies, because the annexed map

depicts uniform 40-acre squares, which clearly is not consistent with the survey record to date, as BLM notes. Answer at 17. The exhibits show the ditch as lying east of the corner common to sections 21, 22, 27, and 28, and west of the mid-point of the section line between sections 22 and 27. Nothing in the survey notes is related to the original survey or any corner it established.

The testimony regarding the East Side Ditch submitted as SOR Ex. 10 is likewise unavailing as evidence corroborating the true original position of the disputed corner. In that proceeding to determine (or recognize) water rights, landowners testified regarding the interests in the East Side Ditch they owned, when irrigation from the Animas River first was initiated and by whom, and irrigation of lands with water delivered through the East Side Ditch. None of the testimony pertained to the actual position of the lines of the original survey as they were actually run on the ground or the true original position of any corner. To the contrary, the testimony confirmed only that lands in the area had been irrigated by water wheels as early as 1886, SOR Ex. 10 at 268, and that land had been irrigated by the East Side Ditch since 1903 or 1904, SOR Ex. 10 at 255, 257. The history of water rights in the area does not establish the position of the disputed corner.

Appellants rely upon the September 24, 2005, notarized statement of Henry H. Knowles, in which he averred that "[t]he river, bluffs, and sand rock ledges ha[ve] kept this parcel of land basically unchanged for the last 125 years." SOR Ex. 12. On the question of the position of the disputed quarter-section corner, he states that he

> can assure anyone that the property corner was never in the field where it is located today. This ¼ corner section was above the ditch on the east side next to the road. After a flood I helped Linn and Tweeti rebuild their home on higher ground. I would never have let them build on Federal Land as your survey shows today.

Id. These statements do not rise to the level of "positive knowledge of the precise location of the original monument" that the *1947 Manual* requires.[20]

[20] The *1947 Manual* states that the standard monument for section corners and quarter-section corners is a 30" zinc-coated iron post with an inside diameter of 2", which is to be used "unless exceptional circumstances warrant the use of other material." *1947 Manual* § 242 at 247. Witness corners or reference monuments are to be used when a corner is not monumented in the standard manner. *Id.* § 240 at 246-47. Olsen's Field Notes at 27 show that he located the quarter-section corner after he had begun to cross cultivated land, moving from east to west. Instead of a 2" inside diameter iron post, he monumented the disputed quarter-section corner with a (continued...)

Appellants have submitted documents relating to the Desert Land Entries (DLEs) of their predecessors-in-interest, Charles and Samuel Hanger, including copies of patents, a map, the East Side Ditch survey, and a relinquished DLE. *See* Exs. 16-20, 31-34. Appellants argue that their documentation shows that

> on the same day the DLE #613399 was applied for [December 19, 1910], the Hangers relinquished the HE [Homestead Entry] #03671. Had the Hangers not owned the land below the [East Side] ditch in Section 22, they would have included that land in the DLE application [for] the W½ of the NE¼ of Section 22. This conclusion is supported by the 1900 Eastside ditch Survey Map and the large hand drawn map of Charles P. Hanger in the DLE #613399 documents.

Second Suppl. to SOR at unpaginated 3. Appellants assert that this evidence was "ignored" in 1969, though it was available to the resurvey team. This evidence and the inference the Blancetts draw from it is not positive knowledge of the original position of the disputed quarter-section corner, nor is it sufficient to demonstrate that Olsen's dependent resurvey constitutes gross error or fraud. Whatever the Hangers may have believed about the title to the 9-acre strip of land, it is certain that it was never patented. Such evidence only tends to confirm an encroachment on Federal land that began more than a 100 years ago.

We cannot agree that the Blancetts have provided acceptable collateral evidence to preponderate on the question of whether the corner was obliterated rather than lost, because the evidence to support the position they advocate cannot be reconciled with the measurements in Powel's Field Notes as required by § 355 of

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[20] (...continued)
copper-coated steel stake, 30" long and ½" inside diameter with a brass cap, set 18" below the ground surface. He set two iron posts 30" long and 2½" inside diameter as reference monuments with arrows pointing to the quarter-section corner. One monument was 264 feet to the south. The other reference monument was 147 feet east of the quarter-section corner, which falls between the ditch and the road, where Knowlton believed the quarter-section corner was. This reference monument was marked "RM S15 147 FT 1969," with an arrow pointing to the quarter-section corner. Thus, there was a standard survey monument between the ditch and the road in 1971 when Knowlton helped the Blancetts rebuild, but it was the reference monument, not the quarter section monument.

When Bloom resurveyed the line in 1999, he recovered the quarter-section corner monument, and the reference monument between the ditch and the road, but not the reference monument to the south. However, the brass cap on the post to the east that identified it as a reference monument was missing. Bloom Field Notes at 10.

the *1947 Manual*. None of the proffered evidence is related to the original survey record as a whole; none of it constitutes positive knowledge of the precise location of the original quarter-section corner; none of it acknowledges the discrepancy between the position appellants urge and Powel's record measurement of the length of the line between Corners A and B; and none of it can be squared with *1947 Manual* requirements for re-establishing quarter-section corners between original existing corners, even though appellants do not challenge any of the found original monuments or the control they necessarily exert on the position monumented by Olsen. Having failed to properly relate their evidence to the specifics of the survey record before us, *see 1947 Manual* § 355 at 285, appellants' collateral evidence tends only to confirm a long-standing encroachment on Federal land.

Appellants nonetheless place particular reliance on our decision in *Domenico Tussio*, 37 IBLA 132, which involved another dependent resurvey by Olsen in which he declared a disputed corner lost and determined its location by proportionate measurement. The Board in that case reversed BLM's decision and ordered a new survey. Appellants offer arguments similar to those raised in that case. In *Tussio*, the original survey placed the corner in a lava bed to the west of a road. The dependent resurvey found the corner to be lost and used proportionate measurement that resulted in placement of that corner to the east of the road and outside the lava bed, a topographic feature that could not be subject to ambiguity because it had not perceptibly changed over time. *See* 37 IBLA at 144.

The Board found that Olsen erred in declaring the corner to be lost, concluding that the evidence showed that the corner was obliterated. *Id.* at 145. We held that although the surveyor declared the corner lost, acceptable evidence of its original location was available, and BLM was required to employ that position in preference to using proportionate measurement. *Id.* at 145-46, citing *1947 Manual* § 360 at 289. The Board further found that a blunder in the original survey had been made and that Olsen had erred in failing to place that blunder in the original survey measurements up and down the cliff where it belonged before applying proportionate measurement. As a result, he had moved the quarter-section corner more than 400 feet to the east of its true location within the lava bed, a feature that would not have changed noticeably between the date of the original survey and the resurvey. *Id.* at 146-47.

In this case, appellants similarly argue that Powel (and later, Olsen) may have blundered in his measurement as he ascended the mesa and that BLM should have confined the blunder to that area rather than distribute it equally along the line through proportionate measurement. This argument is based on § 363 of the *1947 Manual*, which provides in part as follows:

> All discrepancies in measurement should be carefully verified, if possible, with the object of placing each difference where it properly belongs. This is exceedingly important at times, because if disregarded, the effect will be to give weight to a position where it is obviously not justified.
>
> Accordingly, wherever it is possible to do so, the manifest errors in measurement will be removed from the general average difference, and will be placed where the blunder was made. The accumulated surplus or deficiency that then remains is the quantity that is to be uniformly distributed by the methods of proportional measurement.

Appellants' argument is unavailing. When one compares other distances measured by Powel and Olsen from their respective quarter-section corners to their topographic calls, Olsen's placement of the quarter-section corner is far more congruent with Powel's measurements than the Blancetts' position is.

As a comparison of the distances that the two surveyors recorded from their respective quarter-section positions shows, Powel reached the top of the mesa at a distance of 17.43 chains from his quarter-section corner. Olsen descended from the top of the mesa at a distance of 17.93 chains from the quarter-section corner he set. Although the Blancetts suggest that Powel may have blundered in measuring his ascent of the mesa, his measurement differs from Olsen's by only half a chain, or 33 feet. This is far less than the disparity that would result from placing the corner in the position supported by the Blancetts.

Bona Fide Right

[6] The Blancetts refer to the requirement that no resurvey is to be executed so as to impair the bona fide rights or claims of persons affected by such resurvey. 43 U.S.C. § 772 (2006); *1947 Manual* § 392 at 312.

> [B]ona fide rights are those acquired in good faith under the law. Rights of this character can be affected by a resurvey only in the matter of *position or location* on the earth's surface, and the engineer will be concerned only with the question as to whether lands covered by such rights have been actually *located* in good faith. Other questions of good faith, such as priority of occupation, possession, continuous residence, value of improvements, and cultivation, when considered apart form the question of the position of the original survey, do not in any manner affect the problem of resurvey.

1947 Manual § 393 at 312-13 (original emphasis).

Appellants' bona fide *belief* that their property includes the land at issue is not the same as a bona fide *right*. *Tracy Rylee*, 174 IBLA 239, 251-52 (2008); *see Robert W. Delzell*, 158 IBLA 238, 258-59 (2003). Although a person may have a bona fide belief based on an understanding with a predecessor-in-interest as to the boundary of his land, a bona fide right within the meaning of 43 U.S.C. § 772 (2006) is based on *good faith reliance on evidence of the original survey*. *Tracy Rylee*, 174 IBLA at 251; *Longview Fibre Co.*, 135 IBLA 170, 184 (1996); *see United States v. Reimann*, 504 F.2d 135, 139-40 (10th Cir. 1974). Indeed, many landowners have committed unintentional trespasses on Federal land as the result of bona fide but mistaken beliefs about the boundaries of the parcels they own. *E.g., Kenneth Snow*, 153 IBLA 371 (2000); *Fred Wolske*, 137 IBLA 211 (1996); *Michael and Karen Rodgers*, 137 IBLA 131 (1996); *Longview Fibre Co.*, 135 IBLA 170; *T.E. Markham*, 24 IBLA 25 (1976); *Orion L. Fenton*, 1 IBLA 203, 78 I.D. 1 (1971). For example, in *Clive Kincaid*, 111 IBLA 224 (1989), the purchaser of a 20-acre parcel of private land built a house that was found to be partly on Federal land after a cadastral survey. He had mistakenly identified the eastern boundary of his parcel on the basis of an existing fence, a stone monument, and a BLM sign which read "Leaving Public Lands." Kincaid's bona fide belief did not invalidate BLM's survey; it merely established that his trespass was unintentional rather than willful.

Here, appellants rest their case on a single topographical call to the exclusion of the survey record as a whole, and made no attempt to ascertain the boundary between their land and the public lands before erecting their improvements. Under the circumstances, appellants' claim that the 1969 dependent resurvey was executed in a manner that impaired their bona fide rights cannot be sustained.

Conclusion

We find that Olsen properly determined the disputed quarter-section corner was lost and restored it by proportionate measurement. The collateral evidence upon which the Blancetts rely for their assertion that the quarter-section corner was obliterated and was perpetuated in a different position does not constitute positive knowledge of the location of the original quarter-section corner and is not in any way related to controlling Corners A and B or to any other aspect of the original survey. Consequently, they have not demonstrated that Olsen's dependent resurvey failed to comply with the *1947 Manual* in a manner that constitutes gross error or fraud justifying the invalidation of a long-accepted survey, and they have not shown that the resurvey was executed in a manner that impaired their bona fide right. BLM properly denied the protest.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 C.F.R. § 4.1, the decision appealed from is affirmed, and the Motion to Dismiss is denied as moot.

/s/
T. Britt Price
Administrative Judge

I concur:

/s/
Geoffrey Heath
Administrative Judge

ADMINISTRATIVE JUDGE JACKSON DISSENTING

The Blancetts contend that Duane E. Olsen, Supervisory Cadastral Surveyor, did not follow and properly apply the *1947 Manual of Surveying Instructions* (*Manual of Survey* or *Manual*) when he determined the north quarter-corner of sec. 22 (the disputed corner) was lost and reestablished it without considering available collateral evidence to protect their bona fide rights. Statement of Reasons (SOR) at 4-9. In addition, they claim he misapplied the rule of proportionate measurement to restore this corner by failing to place the original measurement blunder where it occurred (*i.e.*, when chaining up a high mesa in 1880). SOR Supplement at 3-4. Based on the Blancetts' evidence and BLM's record,[1] I find they met their burden to show that Olsen did not comply with applicable *Manual of Survey* requirements. I must therefore respectfully dissent.

BACKGROUND AND FACTS PRESENTED

The lands at issue were originally surveyed by R.L. Powel (Taylor & Powel) in 1880.[2] Ex. 23; *see* Powel Field Notes, Ex. 3. After setting the corner for secs. 15, 16, 21, 22 (which the majority identifies as "Corner A"), he proceeded through the Animas Valley to the east, crossing the Animas River and setting a temporary stake at 40.00 chains. Continuing east, he ascended a high mesa, intersected his north-south section line at 80.15 chains, and returned to the valley to monument the disputed corner at 40.07 chains (less than five feet from his temporary stake). Powel Field Notes at 42-43. Powel proceeded similarly in monumenting quarter-corners immediately to the north and south.[3]

The Blancetts' predecessors-in-title homesteaded the SE¼SW¼ sec. 15, E½NW¼ sec. 22, and NE¼SW¼ sec. 22 in the 1880s, which have adjudicated water rights and a

[1] Exhibits (Exs.) were provided by the Blancetts; the Administrative Record (AR) was furnished by BLM.

[2] As described below, these lands are in secs. 15 and 22, T. 32 N., R. 10 W., New Mexico Principal Meridian.

[3] He went east through the Animas Valley and set a temporary stake for the quarter-corner between secs. 10 and 15 at 40.00 chains, ascended the high mesa, and later monumented that quarter-corner at 39.93 chains, Powel Field Notes at 46-47; also proceeding east through the valley, he set at temporary stake for the quarter-corner between secs. 22 and 27, ascended the high mesa, and then monumented that corner at 40.11 chains, *id.* at 38-39.

diversion priority based on the 1886 construction of an irrigation ditch on the east side of the Animas Valley (Eastside Ditch) by J.D. Odenkirk in 1886.[4] Ex. 10 at 268-69; Ex. 9; *see* Ex. 29 at 202. Patent to these lands issued on April 4, 1888. Exs. 13, 23, 24. The Eastside Ditch has been used to irrigate and cultivate the lands at issue for well over 100 years. T. Blancett Affidavit; Ex. 29 at 202-03.

O.R. Weaver surveyed the Eastside Ditch for Odenkirk and filed a plat of survey on February 23, 1900, which was tied to Powel's original survey. Ex. 19. Weaver had the benefit of Powel's corner monuments, and his 1900 plat depicts the Eastside Ditch as passing just west of the disputed corner, which Powel monumented with a sandstone in 1880). *Id.*[5]

Charles Hanger acquired the above-described homestead, and his son, Samuel Hanger, applied for homestead entry in 1904 on adjacent lands to the east: the W½NE¼ sec. 22; and W½ SE¼ sec. 15. Ex. 33. He relinquished that entry and simultaneously applied for Desert Land Entry to W½ SE¼ sec. 15, but not W½NE¼ sec. 22. *Id.*; Ex. 34. Appended to his application was a map showing the Eastside Ditch in relation to the quarter-corner between secs. 15 and 22, the lands patented to his father in those sections, and adjacent lands he intended to enter in sec. 15. Ex. 35. When making final proof in 1916, Hanger submitted a second map which showed the lands he cultivated on entry in relation to the Eastside Ditch, again locating the disputed corner in or adjacent to the Eastside Ditch. Ex. 36. Patent to these lands issued on January 7, 1918. Ex. 17.

A hydrographic survey was performed and mapped by the New Mexico State Engineer in 1938 (State map), which shows irrigation ditches, foot bridges, fences, residences, and other structures in the Animas Valley. Ex. 4. Like Weaver's 1900 plat

[4] The Eastside Ditch removes water for irrigation at its head in Colorado, sending it to its tail in New Mexico where any remaining water is returned to the Animas River. *See* Exs. 4, 19, 29 at 56-57, 202-03. Most lands below that ditch took water before it was widened and enlarged in the early 1900s, *see* Ex. 29 at 56-57, 202; others did not, *see* Ex. 10 at 255 (Mary Frazier began using water from the ditch in 1904, the "[f]irst year we applied water from the enlargement").

[5] This plat also shows the Eastside Ditch entering sec. 15 east of its north quarter-corner and sec. 27 between its north-quarter and section corners. Olsen similarly located the ditch in relation to those corners. The 1900 plat shows the ditch entering sec. 27 approximately 25 chains from the north-quarter corner and 15 chains from its section corner; Olsen measured these respective distances as 24.1 and 15.7 chains. *See* Olsen Field Notes, Ex. 26 at 26.

and Hanger's 1910 and 1916 maps, the State Engineer located the disputed corner just east of the Eastside Ditch, placing nearly all lands below that ditch on lands owned by the Blancetts' predecessor-in-title.[6] After a road was constructed along and above the Eastside Ditch, the disputed corner was apparently perpetuated by a post "above the ditch on the east side next to the road." Ex. 12.

Olsen executed a dependent resurvey in 1969, but instead of proceeding east along the section line as had Powel, he went west from the township boundary on a high mesa above the Animas Valley. Finding no evidence of original corners on the mesa, he reestablished them by proportionate measurement. Going westerly, Olsen descended the mesa, encountered a spur during his descent, and continued along the slope at the mesa base until calling the foot of that slope at 41.06 chains ("Graded road at foot of slope").[7] Olsen Field Notes at 27. After crossing the road and its adjacent Eastside Ditch, he reestablished the disputed corner at 38.23 chains (*i.e.*, at "proportionate distance" to the township boundary), without any apparent consideration of the 1900 plat, the 1910, 1916, and 1938 maps, or discussions with any adjacent landowners. Another resurvey was performed in 1999, which also resulted in a subdivision line passing through the Blancetts' home and fields. *See* Answer at 5; BLM Att. D (Bloom Field Notes). Despite their direct and obvious effects on the Blancetts' home and cultivated fields, the record does not show and BLM does not here claim it gave them notice of the 1969 and 1999 resurveys or its proposed approval of their survey plats. *See Peter Paul Groth*, 99 IBLA 104, 109 (1987); AR 150.

BLM provided the 1938 State map to the Blancetts and issued a notice of trespass while awaiting an appraisal for their purchase of the lands at issue. AR 19, 51. The Blancetts were nonplused by BLM's actions:

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[6] This map shows the Eastside Ditch exiting the Blancetts' patented lands roughly 1200 feet south of the disputed quarter-corner, with a sliver (roughly 7 acres) of their land as public lands. *See* Ex. 11. This same sliver is also shown on Hanger's 1910 map and Weaver's 1900 plat. *See* Exs. 19, 35.

[7] Olsen proceeded similarly along adjacent section lines and found quarter-corners immediately to the north and south 39.07 and 40.40 chains east of their found section corners (distances Powel called at 39.93 and 40.11 chains). The disputed corner was reestablished at 38.23 chains (Powel established the original corner at 40.07 chains). *Compare* Olsen Field Notes at 25-26, 27-28, 30-31 *with* Powel Field Notes at 38-39, 42-43, 46-47. For consistency and ease of reference, Powel's and Olsen's calls are from known section corners in the Animas Valley.

> BLM knew of the hydrographic survey, and knew also that it refuted the later survey that the BLM claims showed us to be in trespass. Had the appropriate parties in the agency reviewed all the available survey evidence, we wouldn't be having this discussion today.

AR 19. The Blancetts protested the 1969 resurvey, but since BLM had destroyed Olsen's field file, the only evidence of that resurvey were his official Field Notes. Answer at 19. The State Director denied their protest, finding the record did not show Olsen failed to follow the *Manual of Survey* and that the Blancetts' evidence "does not constitute clear and convincing evidence[[8]] that the resurvey is not an accurate retracement and reestablishment of the original lines of the Township." AR 6, 8. This appeal followed.

DISCUSSION

An approved survey will be set aside for gross error[9] if it did not follow or is inconsistent with the *Manual of Survey*. *Quinton Douglas*, 166 IBLA 257, 269 (2005), *citing Domenico A. Tussio*, 37 IBLA 132, 133 (1978) ("a dependent resurvey that is not consistent with the Manual of Survey 'constitutes gross error and must be cancelled'"); *see First American Title Ins. Co. v. BLM*, 9 OHA 17, 33-34, 98 I.D. 164, 173 (1991) (departing from a method preferred by the Manual of Survey constitutes gross error absent an adequate justification). Thus, an appellant challenging an approved survey must demonstrate that the *Manual of Survey* was either not followed or improperly applied. *Peter Groth*, 99 IBLA at 111; *see Mark Einsele*, 147 IBLA 1, 12 (1998) (an appellant must establish "there was error in the methodology used or the results obtained, or show that the resurvey was carried out in a manner that did not conform to the Manual"); *accord Robert W. Delzel*, 156 IBLA 238, 245-46 (2003).

The Blancetts contend collateral evidence available to Olsen should have been used to recover or restore the disputed corner (*e.g.*, Weaver's 1900 plat, Hanger's 1910 and 1916 maps on entry and for patent, the 1938 State map, and the testimony of an

[8] The "clear and convincing" standard has not been required for over 20 years. *See Stoddard Jacobsen v. BLM (On Reconsideration),* 103 IBLA 83, 84-88 (1988).

[9] Had the Blancetts timely protested that resurvey (*e.g.*, after notice BLM's plat would be approved), their burden would be to show it is "not an accurate retracement and reestablishment of the lines of original survey." *Howard Vagneur*, 159 IBLA 272, 278 (2003); *John W. Yeargan*, 126 IBLA 361, 363 (1993). Since such notice was not given by BLM and no protest then made, the Blancetts must here meet the more stringent "gross error" standard.

adjacent landowner). They claim this evidence shows this corner was obliterated, but if not, that their evidence was "acceptable" and, as such, must be used to restore this lost corner rather the rule of proportionate measurement, citing *Manual of Survey* § 360. *See* SOR 4-9, 10-12; Supplemental SOR at 2-4; Second Supplemental SOR. Assuming this corner is lost and that rule applied, the Blancetts contend it was misapplied because Olsen failed to isolate Powel's original measurement blunder in chaining up the high mesa, citing *Manual of Survey* § 363. Supplemental SOR at 3-4; *see* Ex. 28 (Report by Scott Andrae, professional surveyor).

BLM counters that the Blancetts cannot show a failure to follow the *Manual* because its resurvey is entitled to a presumption of regularity and any evidence of noncompliance by Olsen was lost when it destroyed his field file. Answer at 19. I would not so insulate this resurvey or give any weight to Olsen's conclusory representations of compliance with the *Manual of Survey*.[10] *See, e.g.*, Field Notes at 1. So considered, I find no justification in the record for Olsen to disregard available evidence, conclude it was not "acceptable evidence" for restoring this corner and protecting bona fide rights under the *Manual of Survey*, and then apply the rule of proportionate measurement to restore this missing (lost) corner. But even if that rule applied, I find it was misapplied because Olsen failed to isolate Powel's original measurement blunder where it occurred (*i.e.*, in chaining up the high mesa), as required by the *Manual*, recognized in *Tussio*, and supported by the expert report of the Blancetts' surveyor.[11]

[10] Under these circumstances, it would appear more appropriate for the Blancetts to show only that this resurvey was inaccurate. Since their evidence clearly satisfies that burden, I would set aside Olsen's resurvey on that basis. But even under the more stringent "gross error" standard, I reach the same result.

[11] BLM contends Powel's survey was grossly inaccurate. Answer at 11-12. While less than accurate on the high mesa (no original corners were found by Olsen), such a claim is misplaced in the Animas Valley where nearly all original corners were found/accepted. *See* Olsen Field Notes. But even if BLM's contention was true, it would suggest Olsen should have performed a corrective, not a dependent, resurvey.

I. Olsen Failed to Retrace the Lines of Original Survey or Consider and Use the Best Evidence Available to Locate this Missing Corner.

A. Olsen erred in retracing Powel's section line, failed to identify probable locations for the disputed corner, and disregarded available evidence showing this missing corner was obliterated or could be restored based on "acceptable evidence."

The *Manual* establishes a sequential process for identifying, relocating, and restoring original corners on dependent resurvey:

> In both theory and practice the dependent resurvey is begun by making a retracement of the township exterior and subdivisional lines of the established prior survey within the unit of the assigned work. This is done, first, for the identification of all marks and monuments that are called for in the record-field notes; second, for the study and use of the available supplemental survey records, and testimony of witnesses, to ascertain if this evidence is sufficiently well-qualified for the replacement of corners that may be treated as *obliterated, but not lost*; third, for the careful consideration of all additional collateral evidence . . . . The first two steps give the basic control for the resurvey, against which may be weighed the less certain collateral evidence, by comparison with the proportionate positions derived from the basic control.[[12]]

Manual of Survey § 410 at 319. A retracement is made between known corners and "run in accord with the plan of the original survey," with temporary stakes set at distances measured in the original survey. *Id.* §§ 354, 412 at 285, 320-21. A more exhaustive search is then made "within the zone of the probable location of each missing corner," utilizing "every possible means of identifying the existent corners." *Id.* § 413 at 321.

Powel proceeded east along the section line from its corner in the Animas Valley, set a temporary quarter-corner stake at 40.00 chains, ascended the high mesa, and later monumented the disputed quarter-corner at 40.07 chains (less than 5 feet from his temporary stake). Olsen found the original section corner in the Animas Valley but retraced the section line by going in the opposite direction from Powel's plan on original

[12] Once theoretical points have been determined by proportionate measurement, "the original survey and the record thereof have served their primary purpose. Then, and not until that time, is the engineer prepared to consider the weight of such collateral evidence as may be available." *Manual of Survey* § 413 at 321.

survey. This departure from the *Manual of Survey* is not explained in the record, which is inexplicable given the obvious dominance of the high mesa and the absence of any original corners on that mesa. The record does not show that Olsen set a temporary stake at 40.07 chains (*i.e.*, in or near the Eastside Ditch) or exhaustively searched that probable location. Nor does it show he discussed this corner with adjacent landowners or considered any other evidence for restoring this missing corner.[13] Since the record is silent and the Blancetts' evidence is substantial, *see Stoddard Jacobsen*, 103 IBLA at 86 n.6 (substantial evidence is "more than scintilla" which a "reasonable mind might accept as adequate"), I find they preponderated in showing Olsen failed to follow the *Manual of Survey* and that his resurvey should be set aside for gross error.

B. Olsen failed to use the best evidence available to recover and restore the original (missing) corner and to protect bona fide rights.

An exhaustive search on dependent resurvey includes discussions with landowners and others who may have "knowledge of the original monument or the accessories, prior to their destruction." *Manual of Survey* § 355 at 286. Witness testimony is weighed "in proportion to its completeness and agreement with the calls of the field notes of the original survey," corroborated "in direct proportion to the uncertainty of the particular statements advanced by the individual who testifies," and supports regarding a corner as obliterated, but not lost, if it is "unquestionable" and establishes a narrowly defined original location "beyond reasonable doubt." *Id.* §§ 349, 355 at 283, 285-86. An exhaustive search also includes searching for other evidence bearing on the location of a missing corner. Thus, restoring lost corners is a last resort, undertaken only after a search for "all evidence, both original and collateral, that may be found acceptable" and "every other means of identifying" the true, original positions has been exhausted. *Manual of Survey* §§ 349, 350, 361 at 283, 289; *see Domenico Tussio*, 37 IBLA at 145-46.

After full inquiry and an exhaustive search, original corners are recovered, relocated, or restored based on the "best evidence available." *Howard Vagneur*, 159 IBLA at 278; *Manual of Survey §* 402 at 317. Such evidence includes: original monuments and accessories or physical evidence of same; testimony/acts relating to original monuments before they were destroyed; and collateral evidence, including other

[13] Nearly all other original corners in the Animas Valley were found by Olsen and were in remarkable agreement with his measurements, including known quarter-corners immediately to the north and south. *See* n.7. Olsen's failure to set a stake at 40.07 chains and compare that position with known corners and available evidence is unexplained in the record and inexplicable under the *Manual of Survey*.

testimony, unofficial survey plats, and "drainage or irrigation ditches, when intended to be located with reference to the subdivision line." *Manual of Survey* §§ 355, 419 at 286, 323. The first two types of evidence provide the resurvey's basic control (*i.e.*, found and obliterated corners), from which positions are derived and compared with "less certain collateral evidence." *Id.* § 410 at 319. By requiring the location of corners based on "best" evidence, a natural hierarchy is created whereby original monuments trump physical evidence, which trumps testimony of perpetuated (obliterated) corners, which trumps other collateral evidence, which takes precedence over the rule of proportionate measurement. If such evidence is bona fide, bears on the location of an original corner, and compares favorably with known corners, it constitutes the best evidence available for restoring a missing (lost) corner and protecting bona fide rights. *See id.* § 360 at 289 ("If there is some acceptable evidence of the original location, that position will be employed in preference to the rule that would be applied to a lost corner").[14]

An exhaustive search and full inquiry are required to protect bona fide rights. *See Manual of Survey* §§ 392-398, 402, 409, 419 at 312-15, 317, 319, 323. By statute, boundaries may be marked on dependent resurvey only "after full investigation," provided "no such resurvey or retracement shall be so executed as to impair the bona fide rights or claims of any claimant, entryman, or owner of the lands affected by such resurvey or retracement." 43 U.S.C. § 772 (2006). The 1910 and 1916 maps on entry and for patent demonstrate that bona fide rights were affected and must be protected under the *Manual*. Hanger's 1910 map shows the lands entered in sec. 15 (both on homestead and Desert Land entry) were bisected by the Eastside Ditch and that the lands he entered on homestead entry and later relinquished in the SW¼NE¼ sec. 22 included only a sliver below that ditch. It is inconceivable that Samuel Hanger would eschew Desert Land Entry in sec. 22 had he known or reasonably believed this corner was below the Eastside Ditch as he would then have ready access to water for cultivating and earning patent to those lands and a failure to so act would have deprived his father from legal access to that water for his patented lands. Thus, the Hangers' bona fide rights in secs. 15 and 22 were based on the original corner being adjacent to and above the Eastside Ditch, as depicted in the 1900 plat and these 1910 and 1916 maps. Since the Blancetts are successors-in-title to these same lands, their rights were impaired by reestablishing the disputed corner in their cultivated field, rather than in or adjacent to the Eastside Ditch as demonstrated by their evidence.

[14] The best evidence for a locating a missing corner is clear and convincing testimony that an original monument was perpetuated at a narrowly defined location; the next best evidence is "acceptable evidence" bearing on its original location. Only if no such evidence is found can a lost corner be restored by proportionate measurement.

The Blancetts' several submissions are bona fide, bear on the original location of the disputed corner, and place it in or above the Eastside Ditch. Weaver's plat was prepared before Odenkirk widened the Eastside Ditch in the early 1900s and shows the disputed corner above that ditch. Hanger's 1910 and 1916 maps were prepared after that widening and depicted the defining corner for his entry and patent adjacent to and above the Eastside Ditch. The 1938 State map also places that corner near and above the Eastside Ditch, as does Knowlton's 2005 sworn testimony that it was "above the ditch on the east side next to the road." Olsen called the upper edge of the Eastside Ditch at 40.26 chains; since that ditch is on a slope and 4 feet wide at the bottom, its lower edge clearly extended more than 16 feet from its upper edge (0.25+ chains), thereby placing the original corner called at 40.07 chains well within the area disturbed by that ditch after it was widened by Odenkirk.

Knowlton's testimony corroborates and is corroborated by the Blancetts' other evidence.[15] Their evidence is consistent with Powel's call placing the original corner at 40.07 chains, compares favorably with known quarter-corners immediately to the north and south, and places the disputed corner in or above the Eastside Ditch. This evidence was clearly available to Olsen: the 1900 plat was at the Clerk's Office in San Juan County; Hanger's applications for entry, maps, and patent were on file and noted on BLM's Master Title Plat; the 1938 State map was provided by BLM; and Knowlton is a life-long resident of the Animas Valley. We have accepted less to affirm BLM findings that a corner is obliterated but not lost; I would not require that substantially more need be shown by the Blancetts to avoid an obvious impairment on their bona fide rights. Clearly, this evidence could have been accepted by Olsen to relocate or restore this missing corner and to protect bona fide rights under the *Manual of Survey*. Absent record support showing he considered and rejected that evidence, I find it sufficiently probative to show that Olsen's resurvey failed to comply with the *Manual*.

BLM and the majority disagree, contending, speculating, and/or finding there are deficiencies in the Blancetts' evidence. The evidence and their very different views are discussed separately below (where appropriate).

Construction and Widening of the Eastside Ditch This ditch was constructed in 1886, used to irrigate the lands at issue during entry and before homestead patent issued

[15] Even if Knowlton's statement is less than clear and convincing to show Powel's sandstone had been perpetuated, it describes a sufficiently narrow position that he accepted (as a landowner) to be the location of the original corner. *See* discussion *infra*.

in 1888,[16] and later widened (expanded) by Odenkirk in the early 1900s.

Weaver's 1900 Survey and Plat Surveyors must use original corners in a private survey. In performing his survey of the Eastside Ditch during January and early February 1900, Weaver had the benefit of and was required to use Powel's corner monuments in the Animas Valley near that ditch, including the north-quarter corner of sec. 10 to which his plat was tied. BLM recognizes this tie to the original survey,[17] but claims its section grid could have been rotated around that tie and might not accurately depict the ditch in relation to the disputed corner. Answer at 17. BLM's speculation is not well taken because measured distances between the ditch and known section and quarter-corners compare favorably with Weaver's plat and show his 1900 survey was "sufficiently accurate within a reasonable limit for what is required in normal surveying practice." *Manual of Survey §* 355 at 286; *see infra* n.4. Weaver's plat simply could not have been rotated as hypothecated by BLM given its tie on the north and its position between known corners to the south.

The majority views Weaver's plat as a "sketch . . . intended only to convey an overall sense of where the ditch lies." 178 IBLA at 289. I find the majority's speculation contrary to logic and common sense because if all Odenkirk wanted was "an overall sense of where [his] ditch lies," he could have drawn his own sketch rather than pay for 6 days of field work by Weaver. Nor would I infer that all Odenkirk wanted was a squiggly line drawn without regard to his ditch's location relative to individual 1/16 sections.[18] Since he retained a surveyor to file a plat identifying 1/16 sections,

[16] While water rights based on the Eastside Ditch do not identify *where* this corner was located, *see* 178 IBLA at 290, they establish *when* this ditch was constructed (1886) and give added import to its location vis-a-vis lands patented on Homestead and Desert Land entry, as depicted on the 1900 plat, 1910 and 1916 maps on entry and for patent, and the 1938 State map.

[17] The majority views that tie and this plat quite differently, finding it contains nothing "related to the original survey or any corner it established." 178 IBLA at 290.

[18] BLM claims Weaver's plat errs by showing "uniform 40-acre squares [] which do not exist as originally surveyed." Answer at 17; *see* 178 IBLA at 289. Powel's plat of original survey shows uniform 160-acre quarter-sections; Olsen's plat similarly depicts uniform quarter-sections in the Animas Valley (*e.g.*, in secs. 14, 20, 21, 28, 31, 35). I therefore find no error in Weaver further subdividing uniform quarter-sections into uniform 1/16 sections (40-acre squares), as is commonly used to describe lands on entry and for patent under the rectangular system of survey.

Odenkirk obviously wanted to identify which patented lands in secs. 10, 15, 22, and 27 had benefitted or would benefit from his ditch (*e.g.*, E½NW¼ sec. 22, patented on homestead entry in 1888, and Hanger's subsequently patented lands in W½SE¼ sec. 15). Odenkirk contracted for a survey he could rely on; nothing in the record suggests he did not receive what he paid for.

Hanger's 1910 and 1916 Maps BLM claims these maps "contribute little reliable insight into the precise positioning of the disputed quarter corner" because they conflict with Weaver's plat. Answer at 17. Whatever "conflict" BLM perceives is readily resolved by considering when these maps and that plat were prepared. Weaver's survey was performed at the same time Odenkirk was widening the Eastside Ditch; Hanger's maps were prepared long after the Eastside Ditch was widened and show the disputed corner adjacent to that expanded ditch. Moreover, any such discrepancy is of little or no consequence to his bona fide rights or properly restoring this missing (lost) corner to protect those rights.

The majority claims Hanger's maps could have been disregarded because they do not show "positive knowledge of the original position" of the sandstone set by Powel. Since Hanger's maps depict the lands he entered and cultivated for patent to issue, there can be no question regarding his bona fides in preparing those maps. *See Manual of Survey* § 255 at 286. Viewed in that context and recognizing that Hanger was seeking entry and patent to W½SE¼ sec. 15, it is illogical to conclude (or infer) that he prepared these maps without regard to a sandstone monumenting his lands' defining corner.[19] Absent evidence showing Olsen even considered this evidence, I am unwilling simply to assume (or presume) he properly rejected this evidence in 1969. Morever, these maps clearly show where Hanger understood this corner was located on entry and when patent issued and should, therefore, have been accepted by Olsen to protect bona fide rights under the *Manual of Survey*.

The New Mexico State Engineer's 1938 Hydrographic Survey and Map BLM discounts the 1938 State map because it is not an official boundary survey and "does not accurately detail the location of original survey lines and corners." Answer at 16; *see* 178 IBLA at 289. The State Engineer positioned original corners in detailing fences, buildings, foot bridges, the Eastside Ditch, and modifications made to that ditch since 1900 (*e.g.*, minor course adjustments in NW¼SE¼ and SW¼NE¼, sec. 15). *Compare* 1938 State map *with* 1900 survey plat. To aid in adjudicating water rights involving multiple irrigation ditches, including the Eastside Ditch (then referred to as the Ralston

[19] Hanger's maps are also probative in showing the lands he cultivated on entry and, as such, could be used to conform his patent to the lands he actually earned on that entry.

Ditch), the State Engineer performed a hydrographic survey and mapped the lands affected by that adjudication (*e.g.*, SE¼SW¼ sec. 27 and NE¼NW¼ sec. 34). *See* Ex. 29 (Judgment) at 202; Ex. 4 (State map). BLM offers no evidence the State map is inaccurate or that the State Engineer did not rely on Powel's monuments in preparing his highly detailed map. As with Weaver's plat and Hanger's maps, I find the State map is bona fide, sufficiently accurate, and bears on where this corner was established on original survey. I am similarly unwilling to assume (or presume) Olsen properly considered this evidence under the *Manual of Survey* to locate this missing corner and protect bona fide rights.

Knowlton's 2005 Sworn Statement Knowlton's sworn testimony that this corner was perpetuated by a post "above the ditch on the east side next to the road" is consistent with and corroborated by the Hanger and State maps. Powel monumented this corner at 40.07 chains, which would place it in or under the Eastside Ditch after it was widened in the early 1900s. *See* discussion *supra*. Since water is controlled by gravity, it is readily apparent why this corner would be moved when constructing and widening the Eastside Ditch in 1886 and 1900 and then "perpetuated" next to and above its adjacent road. More importantly, his testimony as an adjacent landowner shows this position was locally accepted as the location of this corner. *See Manual of Survey* § 417 at 322 (since "it is better to accept a position based upon local interpretation rather than to disturb satisfactory existing conditions[, t]he engineer will endeavor to avoid disturbing the position of locally recognized lines when such action may adversely affect improvements").

BLM counters that Knowlton's statement is fatally deficient because it does not demonstrate "original knowledge of the type of marker used [by Powel] to identify the quarter corner." Answer at 16; *see* 178 IBLA at 290-91, n.20. An exhaustive search and full inquiry under the *Manual of Survey* includes discussions with landowners before a lost corner is restored by proportionate measurement. Had such a search and inquiry been made in this case, the depth of Knowlton's knowledge would have been vetted by Olsen. Since the Field Notes are silent and BLM destroyed Olsen's contemporaneous field file, it rings hollow to now claim that this sworn statement is fatally defective. Knowlton identifies a post set in a pile of rocks (rather than a sandstone), but BLM proffers no evidence suggesting this was not the disputed corner's locally accepted location. As such, I am unpersuaded his statement is unworthy of our consideration on appeal.

In sum, BLM quibbles with the Blancetts' evidence but has submitted no contrary evidence (only assumption and conjecture) as to what Olsen considered and concluded on dependent resurvey. Viewing that evidence separately and weighing it collectively, I find the Blancetts preponderated in showing Olsen failed to consider readily available

collateral evidence for locating this missing corner and protecting bona fide rights and that his resurvey did not conform with the *Manual of Survey*. I would set that resurvey aside for gross error and must therefore dissent from the majority's conclusion that Olsen complied with the *Manual* by applying the rule of proportionate measurement to reestablish this missing (lost) corner.

II. Olsen Failed to Isolate Powel's Original Measurement Blunder.

Only if the surveyor's exhaustive search and full inquiry fail to uncover any physical evidence, clear and convincing testimony of perpetuation, or "some acceptable evidence" for locating a missing corner and protecting bona fide rights,[20] may the rule of proportionate measurement be applied to restore that corner. *Manual of Survey* §§ 360, 361 at 289. At this stage, the engineer "should have determined upon an approximate position of the original monument based upon his findings resulting from retracements leading from known corners to the lost corner, from one, two, three, or four directions." *Manual of Survey* § 361 at 289; *see* discussion *supra*. In sorting out discrepancies between the original call (40.07 chains) and a theoretical point derived by proportionate measurement (38.23 chains, as determined by Olsen)[21] so as to avoid giving "*weight to a position where it is obviously not justified,"* the *Manual* directs surveyors to: "recall the difficulties of keeping a chain at standard length and the inaccuracies of measuring steep

[20] As prescribed by the *Manual*: "If there is some acceptable evidence of the original location, that position will be employed in preference to the rule [of proportionate measurement] that would be applied to a lost corner." *Manual of Survey* § 360 at 289. Thus, a lost corner is restored by using "acceptable evidence," or if such evidence is lacking, by applying the rule of proportionate measurement. *See Domenico Tussio*, 37 IBLA at 145-46.

[21] The corners immediately west, north, and south of the disputed corner in the Animas Valley were known, as was the boundary corner on the high mesa to the east. Rather than set temporary stakes for this corner's probable location or consider known quarter-corners to the north and south, Olsen simply applied the rule of proportionate measurement. Had he considered these corners before applying that rule, he would have realized Powel's call at 40.07 chains was in harmony and entitled to greater weight and that his reestablished corner at 38.23 chains was discordant (*e.g.*, comparing Olsen's measurements with Powel's calls to these known corners suggests this corner was originally 39.78 chains east of its section corner and less than 20 feet from where a temporary stake should have been set by Olsen). *See* n.7; *Manual of Survey* §§ 363, 412 at 290, 320-21. More than a rote application of the rule was required in this case (*i.e.*, consideration of where Powel's original measurement blunder occurred in 1880).

slopes" (particularly for surveys performed before 1900 when most lines of survey were measured with a Gunter's link chain); place original measurement "blunders" where they properly belong; and remove such "manifest errors" before distributing any remaining surplus/deficiency by proportionate measurement. *Manual of Survey* § 363 at 290; *see Domenico Tussio*, 37 IBLA at 146-47.

Our lead case addressing measurement blunders is *Domenico Tussio*, 37 IBLA at 133, 146-48, where we found gross error under circumstances remarkably similar to this case. The original survey in that case was by Powel's partner, John C. Taylor (Taylor & Powel); the challenged resurvey was also by Olsen.[22] 37 IBLA at 135. The disputed quarter-corner was in a valley and controlled by corners on a high mesa and in that valley. *Id.* at 140, 143-44. Appellants claimed and proffered evidence showing this corner was obliterated, that acceptable evidence existed to restore that corner, and that even if the rule of proportionate measurement were applicable, it was misapplied by Olsen's failure to place Taylor's blunder where it occurred on original survey (*i.e.*, in ascending the high mesa, as opined by appellants' expert surveyor).

Based on our review of the hearing record, we set that resurvey aside for gross error because Olsen failed to follow the *Manual of Survey*. We agreed with appellants that the disputed corner was obliterated, that "the Government erred by using proportionate measurement [in lieu of acceptable evidence to restore that corner]," and then held:

> Lastly, even if it be assumed that Olsen did not err in using proportional measurement, he erred in failing to place the blunder (in measuring up and down the cliff) where it belonged, before applying proportional measurement, and thus moved the quarter corner over 400 feet to the east of its true location. He thus ignored the requirements of § 363 of the Manual, which states [full text of *Manual* omitted].

Id. at 145-46. Since similar circumstances should give rise to similar results, I believe *Tussio* impels that we set aside Olsen's 1969 resurvey for gross error.

BLM argues this case is dissimilar from *Tussio* because Powel might have blundered in chaining across the Animas River. BLM's speculation is not supported by

[22] The only other Olsen resurvey appealed to this Board was referred for a hearing to determine whether it was "an accurate retracement and reestablishment of the lines of the original survey." *Frank Lujan*, 30 IBLA 95, 100 (1977). A similar referral preceded our *Tussio* decision. *Domenico A. Tussio*, 30 IBLA 92, 94 (1977).

the record, which shows that river to be shallow (3 feet), hardly a problem for an experienced surveyor, and Powel's calls in chaining across the Animas River between other corners show no manifest errors. *Compare* Powel Field Notes *with* Olsen Field Notes. Morever, the record confirms that Powel's blunder occurred in ascending the high mesa. Differences between Powel's calls and Olsen's measurements from known corners to the township boundary are remarkably consistent: 200.49 vs. 190.08 chains (from the known quarter-corner to the north); 200.54 vs. 188.77 chains (from the known quarter-corner to the south); and 240.16 vs. 230.18 chains (from the known NW corner of sec. 22). It is therefore manifest that Powel consistently blundered by 10 to 11 chains in ascending the high mesa, which confirms the opinion of the Blancetts' expert, Scott Andrae, Intermountain Mapping Services, LLC. *See* Ex. 28. As in *Tussio*, I find the original measurement blunder occurred in chaining up the high foot mesa in 1880, not in traversing the relatively flat Animas Valley.

The majority suggests Powel blundered *before* he reached the Animas River by assuming the Animas Road and the Animas River are in the same positions they occupied in 1880. 178 IBLA at 284-85. But if these unsupported assumptions were correct, it would mean Powel made a 2+ chain blunder in calling the west side of the Animas Road at 8.75 chains in 1880, whereas Olsen's call from the east side of that road was only at 6.76 chains. Rather than rely on unsupported assumptions to locate Powel's original measurement blunder, I find the Blancetts preponderated in showing that blunder occurred in chaining up the high mesa, as noted in the *Manual*, held in *Tussio*, and opined by their expert.

The majority separately asserts that locating the disputed corner at 40.07 chains, as called by Powel, is inconsistent with his topographical to "ascend high mesa" less than 3 chains further to the east (at 43.00 chains). 178 IBLA at 286.[23] Although BLM concedes that call was ambiguous, the majority finds it was unambiguous because the

[23] The majority also claims that placing the disputed corner at 40.07 chains would not be at the mid-point because the section line is only 76.46 chains long and that "this is precisely the situation considered in [*Volney Bursell*, 130 IBLA 55, 56-57 (1994)]." 178 IBLA at 284. There, the missing corner was between two immediately adjacent corners that were separated by 156.45 chains but called on original survey at 160 chains. Without more being shown, we affirmed using proportionate measurement rather than the original call to that corner (80 chains). The corner in this case was not reestablished between immediately adjacent corners, but between corners separated by roughly 3 miles, and the Blancetts have presented substantial evidence supporting their claim that the original corner was in or near the Eastside Ditch. Clearly, *Bursell* is inapposite and factually distinguishable from the circumstances here presented.

Section Line Profile (Ex. 6) shows Powel's ascent was made where there is a "marked change in the slope." Answer at 12; 178 IBLA at 286. The Section Line Profile is laterally divided in 100 meter (5 chain [24]) increments, which places the point of his ascent between 42 and 43 chains and the disputed corner less than 3 chains to the west at 39.50± chains. Comparing Powel's call at 40.07 chains and Olsen's reestablished corner at 38.46 chains, it is obvious that Powel's call (and the Blancetts' proffered position) represents a better fit to that data. Rather than find certainty in the face of ambiguity, I place relatively little weight on this topographical call, and unlike the majority, do not find it dispositive to a proper outcome of this case. *See Howard Vagneur*, 159 IBLA at 284 ("topographical calls . . . are not utilized to provide precision, but instead merely to provide general descriptions of the area in which corners are found").

I find this case to be virtually indistinguishable from *Tussio*. Neither BLM nor the majority have identified any record evidence that casts doubt on the opinion of the Blancetts' expert or his reliance on the *Manual's* recognition that measurement errors were commonly made in chaining up steep slopes prior to 1900. *See* Ex. 26 (Report of Scott Andrae); *Manual of Survey* § 363 at 290. We set aside Olsen's dependent resurvey in *Tussio*; we should also do so here.

SUMMARY

I recognize that not every piece of collateral evidence will come to light during even the most diligent and exhaustive of dependent resurveys and that not every departure from the *Manual of Survey* constitutes gross error. But the Blancetts' evidence is substantial, was readily available, and clearly should have been considered by Olsen. The lack of a record showing he considered any of this evidence, much less rejected it, is especially troubling. Quibbles with each piece can be identified, but I am unpersuaded that this evidence is inaccurate, deficient, inconsistent, or otherwise undeserving of BLM's consideration on dependent resurvey. To the contrary, I find it presents a clear, logical, and consistent picture of the circumstances presented and shows that bona fide rights were affected and impaired by this resurvey and that the disputed corner should have restored based on acceptable evidence under the Manual of Survey (even if insufficient to identify it as an obliterated corner), rather than to apply the rule of proportionate measurement.

[24] The section line was measured by Olsen as 76.46 chains. The profile depicts that distance as 15¼ increments (15.25 increments X 5 chains/increment = 76.25 chains), a difference of less than 0.3% (0.21 chains).

But even if I could agree this corner was lost, that no "acceptable evidence" existed to restore it, and the rule of proportionate measurement therefore applied, I would still be unable to affirm. Olsen's failure to place the original measurement blunder where it occurred (*i.e.*, when Powel chained up the high mesa in 1880) separately constitutes gross error under the Manual. Since we found such error in his execution of a remarkably similar dependent resurvey in 1972, I believe his 1969 resurvey should be set aside for the very same reasons. I must dissent.

/s/
James K. Jackson
Administrative Judge