

## **Domenico A. Tussio and Malyle Tussio**

37 IBLA 135

The position of the  $\frac{1}{4}$  section corner of section 5 and 8 and the  $\frac{1}{4}$  section corner of section 8 and 17 as determined in the 1972 BLM dependent resurvey was challenged by Mr. and Mrs. Tussio, owners of the east half of section 8. The challenge was based on calls to a road and lava bed contained in the original field notes. BLM could not reconcile the topographic calls with the location of the recovered original corners at the NE and SE corners of section 8 and chose to reestablish the corners by single proportionate measurement. This method placed the  $\frac{1}{4}$  section corner of section 5 and 8 east of the present location of the road whereas the original survey established it west of the road.

This topographic map shows a portion of a watershed, likely for the Cedar River. The map is divided into sections 4, 5, 6, 7, 8, 9, 16, 17, and 18. Section 18 is labeled 'Bed'. The map includes contour lines, a road, and a creek. The following table summarizes the data points and features for each section:

Section	Area Description	Key Data Points (Elevations/Labels)
Sec. 4	Top right area	611.76, 60.13, 60.43, 60.42, 60.47, 60.52, 60.57, 60.58, 60.63, 60.68, 60.74, 60.80, 60.84, 60.88, 60.92, 60.96, 60.99, 61.03, 61.07, 61.11, 61.15, 61.19, 61.23, 61.27, 61.31, 61.35, 61.39, 61.43, 61.47, 61.51, 61.55, 61.59, 61.63, 61.67, 61.71, 61.75, 61.79, 61.83, 61.87, 61.91, 61.95, 61.99, 62.03, 62.07, 62.11, 62.15, 62.19, 62.23, 62.27, 62.31, 62.35, 62.39, 62.43, 62.47, 62.51, 62.55, 62.59, 62.63, 62.67, 62.71, 62.75, 62.79, 62.83, 62.87, 62.91, 62.95, 62.99, 63.03, 63.07, 63.11, 63.15, 63.19, 63.23, 63.27, 63.31, 63.35, 63.39, 63.43, 63.47, 63.51, 63.55, 63.59, 63.63, 63.67, 63.71, 63.75, 63.79, 63.83, 63.87, 63.91, 63.95, 63.99, 64.03, 64.07, 64.11, 64.15, 64.19, 64.23, 64.27, 64.31, 64.35, 64.39, 64.43, 64.47, 64.51, 64.55, 64.59, 64.63, 64.67, 64.71, 64.75, 64.79, 64.83, 64.87, 64.91, 64.95, 64.99, 65.03, 65.07, 65.11, 65.15, 65.19, 65.23, 65.27, 65.31, 65.35, 65.39, 65.43, 65.47, 65.51, 65.55, 65.59, 65.63, 65.67, 65.71, 65.75, 65.79, 65.83, 65.87, 65.91, 65.95, 65.99, 66.03, 66.07, 66.11, 66.15, 66.19, 66.23, 66.27, 66.31, 66.35, 66.39, 66.43, 66.47, 66.51, 66.55, 66.59, 66.63, 66.67, 66.71, 66.75, 66.79, 66.83, 66.87, 66.91, 66.95, 66.99, 67.03, 67.07, 67.11, 67.15, 67.19, 67.23, 67.27, 67.31, 67.35, 67.39, 67.43, 67.47, 67.51, 67.55, 67.59, 67.63, 67.67, 67.71, 67.75, 67.79, 67.83, 67.87, 67.91, 67.95, 67.99, 68.03, 68.07, 68.11, 68.15, 68.19, 68.23, 68.27, 68.31, 68.35, 68.39, 68.43, 68.47, 68.51, 68.55, 68.59, 68.63, 68.67, 68.71, 68.75, 68.79, 68.83, 68.87, 68.91, 68.95, 68.99, 69.03, 69.07, 69.11, 69.15, 69.19, 69.23, 69.27, 69.31, 69.35, 69.39, 69.43, 69.47, 69.51, 69.55, 69.59, 69.63, 69.67, 69.71, 69.75, 69.79, 69.83, 69.87, 69.91, 69.95, 69.99, 70.03, 70.07, 70.11, 70.15, 70.19, 70.23, 70.27, 70.31, 70.35, 70.39, 70.43, 70.47, 70.51, 70.55, 70.59, 70.63, 70.67, 70.71, 70.75, 70.79, 70.83, 70.87, 70.91, 70.95, 70.99, 71.03, 71.07, 71.11, 71.15, 71.19, 71.23, 71.27, 71.31, 71.35, 71.39, 71.43, 71.47, 71.51, 71.55, 71.59, 71.63, 71.67, 71.71, 71.75, 71.79, 71.83, 71.87, 71.91, 71.95, 71.99, 72.03, 72.07, 72.11, 72.15, 72.19, 72.23, 72.27, 72.31, 72.35, 72.39, 72.43, 72.47, 72.51, 72.55, 72.59, 72.63, 72.67, 72.71, 72.75, 72.79, 72.83, 72.87, 72.91, 72.95, 72.99, 73.03, 73.07, 73.11, 73.15, 73.19, 73.23, 73.27, 73.31, 73.35, 73.39, 73.43, 73.47, 73.51, 73.55, 73.59, 73.63, 73.67, 73.71, 73.75, 73.79, 73.83, 73.87, 73.91, 73.95, 73.99, 74.03, 74.07, 74.11, 74.15, 74.19, 74.23, 74.27, 74.31, 74.35, 74.39, 74.43, 74.47, 74.51, 74.55, 74.59, 74.63, 74.67, 74.71, 74.75, 74.79, 74.83, 74.87, 74.91, 74.95, 74.99, 75.03, 75.07, 75.11, 75.15, 75.19, 75.23, 75.27, 75.31, 75.35, 75.39, 75.43, 75.47, 75.51, 75.55, 75.59, 75.63, 75.67, 75.71, 75.75, 75.79, 75.83, 75.87, 75.91, 75.95, 75.99, 76.03, 76.07, 76.11, 76.15, 76.19, 76.23, 76.27, 76.31, 76.35, 76.39, 76.43, 76.47, 76.51, 76.55, 76.59, 76.63, 76.67, 76.71, 76.75, 76.79, 76.83, 76.87, 76.91, 76.95, 76.99, 77.03, 77.07, 77.11, 77.15, 77.19, 77.23, 77.27, 77.31, 77.35, 77.39, 77.43, 77.47, 77.51, 77.55, 77.59, 77.63, 77.67, 77.71, 77.75, 77.79, 77.83, 77.87, 77.91, 77.95, 77.99, 78.03, 78.07, 78.11, 78.15, 78.19, 78.23, 78.27, 78.31, 78.35, 78.39, 78.43, 78.47, 78.51, 78.55, 78.59, 78.63, 78.67, 78.71, 78.75, 78.79, 78.83, 78.87, 78.91, 78.95, 78.99, 79.03, 79.07, 79.11, 79.15, 79.19, 79.23, 79.27, 79.31, 79.35, 79.39, 79.43, 79.47, 79.51, 79.55, 79.59, 79.63, 79.67, 79.71, 79.75, 79.79, 79.83, 79.87, 79.91, 79.95, 79.99, 80.03, 80.07, 80.11, 80.15, 80.19, 80.23, 80.27, 80.31, 80.35, 80.39, 80.43, 80.47, 80.51, 80.55, 80.59, 80.63, 80.67, 80.71, 80.75, 80.79, 80.83, 80.87, 80.91, 80.95, 80.99, 81.03, 81.07, 81.11, 81.15, 81.19, 81.23, 81.27, 81.31, 81.35, 81.39, 81.43, 81.47, 81.51, 81.55, 81.59, 81.63, 81.67, 81.71, 81.75, 81.79, 81.83, 81.87, 81.91, 81.95, 81.99, 82.03, 82.07, 82.11, 82.15, 82.19, 82.23, 82.27, 82.31, 82

Original Field Notes  
John C. Taylor 1881

79

S. 9 N. R. 9 N.

East on a Random line, bet. sec's, 15 & 8,  
Ta. 13' 17' E.

40 00 Set Temporary 1/4 sec. cor.

41 00 Lean Sand Bed N. & S.

42 40 Road N. & S.

53 70 Ascend Mead N & S.

63 00 Top of same.

80 44 Intersected N. & S. line 22 rods,  
from sec's, 4, 5, 8 & 9, from  
which cor. drawn

S. 89°, 51' N.

on true line bet. sec's. 5 & 8,

40 22 Set Sand Stone 18x12x6 in mound, of stone  
marked 3/4 on N. side for 1/4 sec. cor.

80 44 Cor. to sec's, 5, 6, 7 & 8,

Sand Broken & Stony, Soil 3' Rate, Good  
Grass, Pine, Birch & Cedar.



S. 9 N. R. 9 N.

East on Random line bet. sec's, 8 & 17.

N.  $13^{\circ} 17' E$ ,

1300 Leave farm bet N. & S.

2700 Road N. & S.

3800 Leave Valley. Ascend mesa N. & S.

4000 At temporary 1/4 sec. cor.

5070 Ascend ledge N. & S.

6400 Top of mesa. N. & S.

8060 Intersected N. & S. line 28 exs N. of

cor. to sec's, 8, 9, 16 & 17, from which

cor. run

N.  $87^{\circ} 48' W$ .

on true line bet. sec's 17 & 8.

4030 At sandstone 14x12x5 in mound of stone

marked 1/4 cor. N. side for 1/4 sec. cor.

8060 Cor. to sec's, 7, 8, 17 & 18.

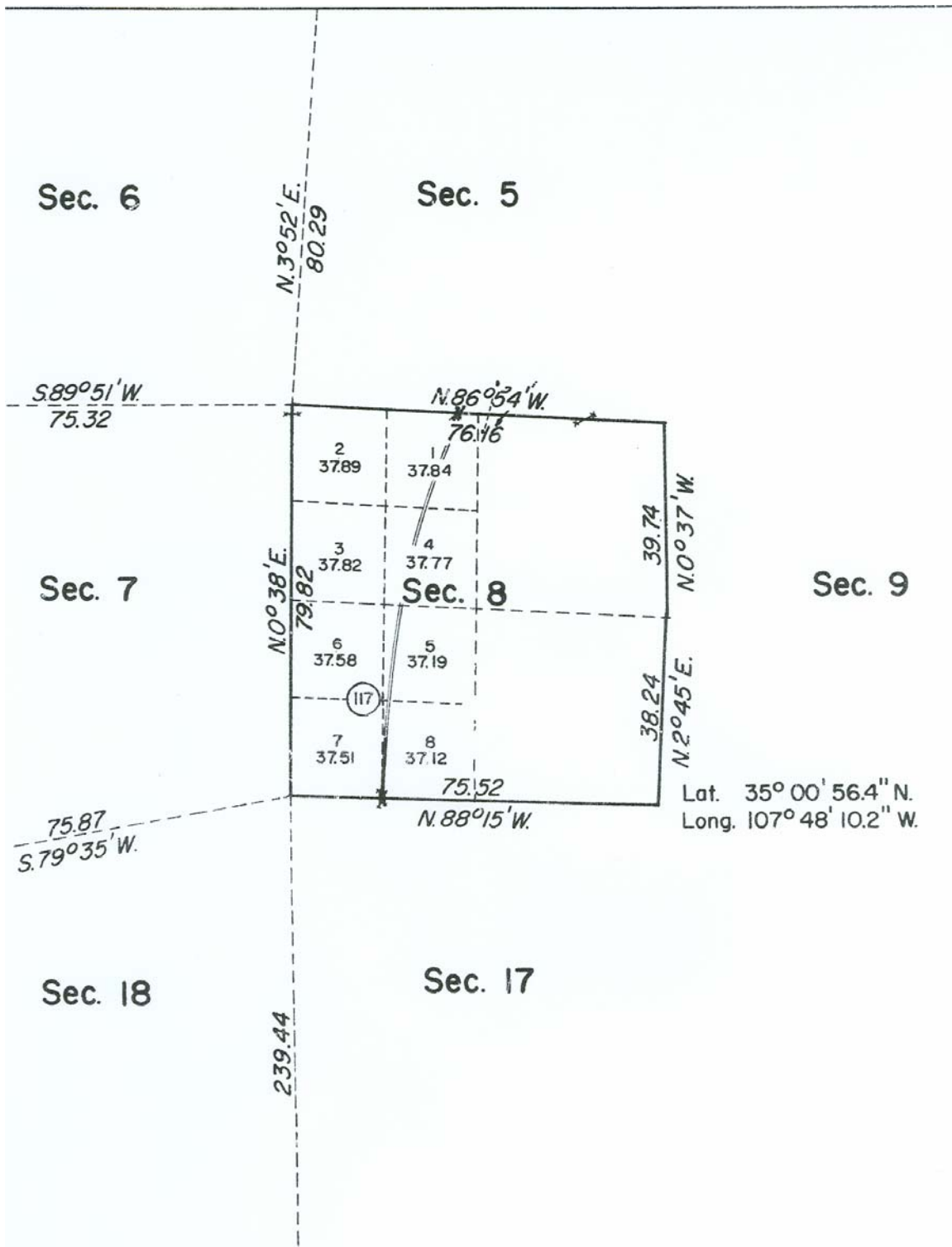
Land very broken & stony. Soil 3' Rate, Poor  
Grass, some cedar & Piñon,

N. & S.

# 1972 BLM Dependent Resurvey

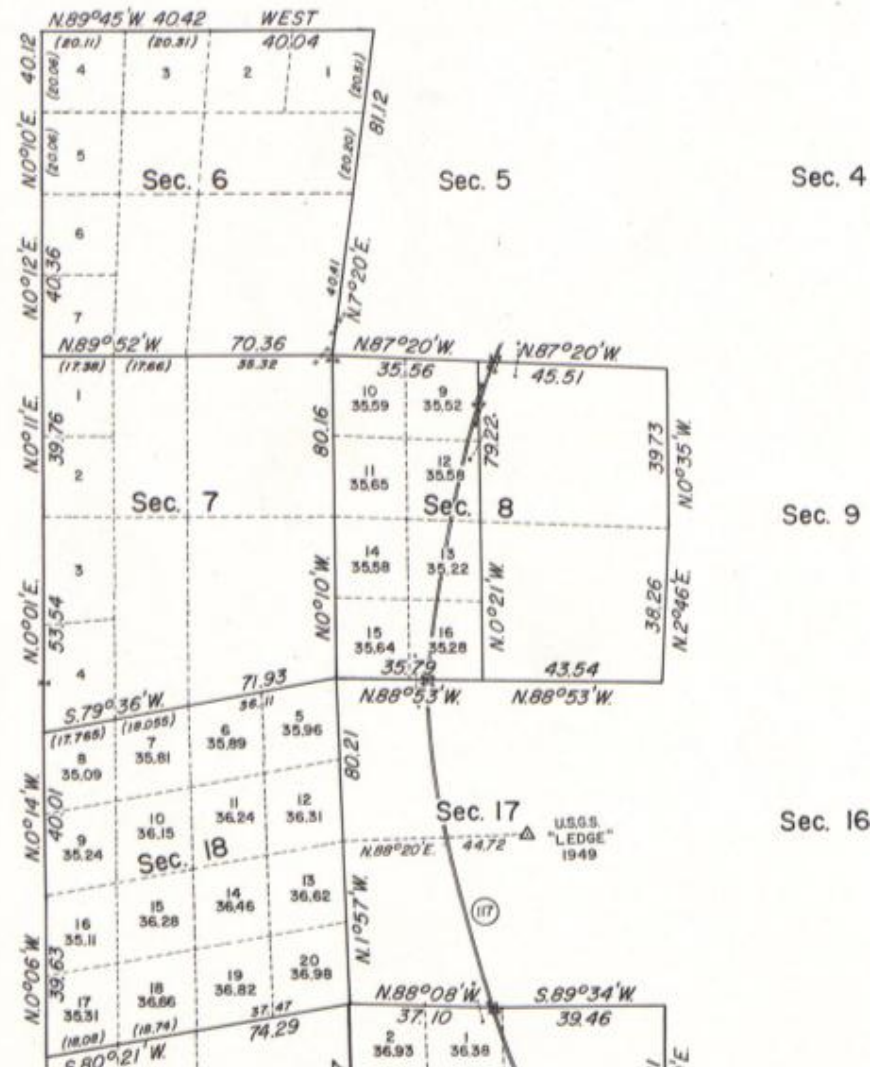
Cancelled October 3, 1978

(This survey was canceled as a result of the IBLA decision  
and a corrective resurvey was executed in 1979)



# 1979 Corrective Dependent Resurvey

The Marginal Data explains that  
“The corrective resurvey was made  
in compliance with decision 37 IBLA 132.



## 1979 BLM Corrective Dependent Resurvey

### Field Notes

(The topographic calls in the corrective dependent resurvey are identical with the calls in the 1972 dependent resurvey)

	<p>From the cor. of secs. 8, 9, 16 and 17.</p> <p>N. 88°53' W., bet. secs. 8 and 17.</p> <p>Ascend gradual E. slope, through moderate pinon and juniper.</p>
15.60	Ridge, bears N. and S., descend series of ledges.
33.14	Base of ledge, bears N. and S., continue descending.
43.54	<p>Point for the <math>\frac{1}{4}</math> sec. cor. of secs. 8 and 17, determined longitudinally at record dist. from the base of the ledge to E. and highway to W. and latitudinally on line bet. the cor. of secs. 8, 9, 16 and 17 and the cor. of secs. 7, 8, 17 and 18; no evidence of the original cor. could be found.</p> <p>From this point, the <math>\frac{1}{4}</math> sec. cor. of secs. 8 and 17, re-established in 1972, bears N. 87°35' E., 5.82 chs. dist., monumented with an iron post, 2½ ins. diam., surrounded by a mound of stone, 3 ft. base, 1 ft. high, with brass cap mkd. as described in the official record of the cancelled resurvey of a portion of the subdivisional lines.</p>
	<p>Destroy marks on bearing objects mkd. in 1972 and remove the iron post.</p> <p>At the corner point</p> <p>Reset the iron post, 30 ins. long, 2½ ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <div style="text-align: center;"><p>T9N R9W S 8 — <math>\frac{1}{4}</math> S17</p><p>1979 1972</p></div> <p>from which new bearing trees</p> <p>A juniper, 16 ins. diam., bears N. 4½° E., 50 lks. dist., mkd. <math>\frac{1}{4}</math> S8 BT.</p> <p>A juniper, 10 ins. diam., bears S. 46° E., 69½ lks. dist., mkd. <math>\frac{1}{4}</math> S17 BT.</p> <p>Raise a mound of stone, 3½ ft. base, 2 ft. high, N. of the cor.</p> <hr/> <p>N. 88°53' W., beginning new measurement.</p> <p>Descend gradual W. slope, through scattered pinon and juniper.</p>
12.56	Right-of-way fence, extends N. and S.
13.30	New Mexico State Highway No. 117, bears N. and S.
14.30	Right-of-way fence, extends N. and S.
16.02	Power line, bears N. and S.
22.70	Enter broken lava flow, bears N. and S.
35.79	The cor. of secs. 7, 8, 17 and 18.



- 41.80 New Mexico State Highway No. 117, bears NNE and SSW.
- 42.70 Right-of-way fence, extends NNE and SSW.
- 43.70 Narrow finger of lava flow extending from W.
- 44.82 Enter main body of lava flow, bears N. and S.
- 45.51 Point for the  $\frac{1}{4}$  sec. cor. of secs. 5 and 8, determined longitudinally at proportionate dist. bet. the E. edge of the main body of the lava flow and the cor. of secs. 5, 6, 7 and 8 and latitudinally on line bet. the cor. of secs. 4, 5, 8 and 9 and the cor. of secs. 5, 6, 7 and 8; no evidence of the original cor. could be found.

From this point, the  $\frac{1}{4}$  sec. cor. of secs. 5 and 8, re-established in 1972, bears S.  $89^{\circ}42'$  E., 7.44 chs. dist., monumented with an iron post,  $2\frac{1}{2}$  ins. diam., firmly set, projecting 6 ins. above the ground, with brass cap mkd. as described in the official record of the cancelled resurvey of a portion of the subdivisional lines.

Destroy marks on bearing trees mkd. in 1972 and remove the iron post.

At the corner point

Set an iron post, 30 ins. long,  $2\frac{1}{2}$  ins. diam., over a cross chiseled on lava flow and supported by a mound of stone, 5 ft. base, to top, with brass cap mkd.

T9N R9W

S5

$\frac{1}{4}$  —

S8

1979

1972



DOMENICO A. TUSSIO ET AL.

IBLA 76-637 (Supp.)

Decided October 4, 1978

Appeal from decision of the Division of Cadastral Engineering, Bureau of Land Management, dismissing appellants' protest against the acceptance of the plat of dependent resurvey in T. 9 N., R. 9 W., New Mexico principal meridian, Group 719, New Mexico.

Reversed; new survey ordered.

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

A dependent resurvey by BLM which does not follow the Manual of Surveying Instructions (1973) constitutes gross error and must be canceled. Such gross error includes conducting a dependent resurvey in which data in the official plat of survey of the township and its field notes are ignored and changing corners established by the original survey to the prejudice of bona fide property rights acquired in good faith in reliance on the integrity of the original survey.

APPEARANCES: Stanley P. Zuris, Esq., Albuquerque, New Mexico, for appellants; Gayle E. Manges, Esq., Office of the Solicitor, Santa Fe, New Mexico, for BLM.

OPINION BY ADMINISTRATIVE JUDGE HENRIQUES

Domenico A. Tussio and Malyle Tussio, his wife, appeal from the decision of the Acting Chief, Division of Cadastral Engineering, for the Director, Bureau of Land Management, dated May 7, 1976, dismissing their protest of a dependent resurvey of a portion of sec. 8, T. 9 N., R. 9 W., New Mexico principal meridian, in Group 719, New Mexico.

Appellants contended essentially that the dependent resurvey positioned the north quarter corner of sec. 8 east of the existing

road, contrary to its placement west of the road in the 1881 survey, and that the resurvey did not accord proper weight to known monuments and topographical constraints in the retracement of the 1881 survey.

In our initial consideration of this case, we observed troublesome and contradictory evidence in the record before us. Accordingly, pursuant to 43 CFR 4.415, we ordered a hearing before an administrative law judge to receive testimony and evidence relative to the proper placement of the north quarter corner of sec. 8, T. 9 N., R. 9 W., New Mexico principal meridian, and directed the judge to submit a recommended decision to this Board, as well as affording the parties to this controversy an opportunity to file briefs thereon with this Board.

A hearing in the matter was held December 2, 1977, at Albuquerque, New Mexico, before Administrative Law Judge John R. Rampton, Jr. On July 2, 1978, he issued a recommended decision that the placement of the north and south quarter corners of sec. 8, T. 9 N., R. 9 W., as a result of the dependent survey constituted gross error in that the Manual of Surveying Instructions (1973) was not followed, and therefore the dependent resurvey must be set aside. A copy of the recommended decision was served on each party to this matter. None of them has submitted any brief thereon to this Board.

We have reviewed the record established at the hearing and note that the Judge's recommended decision sets out the pertinent evidence and the applicable law. We agree with his conclusions, and therefore adopt the recommended decision and incorporate it as part of this decision.

[1] A dependent resurvey by the Bureau of Land Management which does not follow the Manual of Surveying Instructions (1973) constitutes gross error and must be canceled. See, Frank Lujan, 30 IBLA 95 (1977). Such gross error includes the making of a dependent resurvey in which data of the official plat of survey of the township and its field notes are ignored and the changing of corners established by the original survey to the prejudice of bona fide property rights acquired in good faith in reliance upon the integrity of the original survey.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the dependent resurvey of sec. 8, T. 9 N., R. 9 W., New Mexico principal meridian, depicted on the plat of survey accepted for the Director, Bureau of Land Management, on May 10, 1972, is hereby canceled, and

the case is remanded to the Director, BLM, for further action consistent herewith.

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Douglas T. Henriques  
Administrative Judge

We concur:

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Newton Frishberg  
Chief Administrative Judge

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Joseph W. Goss  
Administrative Judge

July 7, 1978

DOMENICO A. TUSSIO and	:	NEW MEXICO GROUP 719
MALYLE TUSSIO,	:	(IBLA 76-637)
Protestants	:	
v.	:	Involving a protest
	:	against the position
BUREAU OF LAND MANAGEMENT,	:	of a quarter section
Respondent	:	reestablished during
	:	a dependent resurvey.

RECOMMENDED DECISION

On July 18, 1881, a survey of Township 9 North, Range 9 West, N.M.P.M., by John C. Taylor of Taylor and Powel, U.S. Deputy Surveyors, under contract No. 117, was completed.

On March 23, 1972, the State Director of the Bureau of Land Management, Santa Fe, New Mexico, authorized a dependent resurvey of Section 8 therein to identify the boundaries of public lands. The survey commenced March 30, 1972, and was completed April 13, 1972. The plat representing the resurvey was accepted on May 10, 1972.

A protest of the dependent resurvey of a portion of Section 8 was filed by Domenico A. Tussio and Malyle Tussio,



his wife, who own the east half of Section 8, T. 9 N., deriving their title from a patent. If the dependent resurvey is correct, they stand to lose access to some seven or eight hundred feet of frontage along the state highway and their property is landlocked.

The protest was dismissed by the Acting Chief, Division of Cadastral Survey and the Director of the Bureau of Land Management on May 7, 1976. An appeal was filed and in Domenico A. Tussio et al., 30 IBLA 92 (1977), we remanded the case to the Office of Hearings and Appeals for a hearing on the protest and recommended decision. The hearing was held before Administrative Law Judge John R. Rampton, Jr., on December 2, 1977, in Albuquerque, New Mexico, and the final brief filed on March 24, 1978.

#### Findings and Conclusions

The sole issue presented is whether the dependent resurvey correctly reestablished the corners of Section 8 as they were placed in the original survey. In challenging the resurvey, the appellants have the burden of proof and the risk of nonpersuasion that the placement of the quarter corners was erroneous. The dependent resurvey has been accepted by the Secretary. Once a survey has been accepted, it is presumed to be correct and will not be disturbed except upon clear proof of fraud or gross error.

Ralph E. May, C. S. McGhee, A-29014 (January 30, 1962); Nina R. P Levinson, 1 IBLA 252, 78 I.D. 30 (1971); Frank Lujan, 30 IBLA 95 (1977).

In J. M. Beard, 52 I.D. 451 (1928), the Department defined the intent of a dependent resurvey as follows:

A dependent resurvey consists of a retracement and reestablishment of the lines of the original survey in their true original positions, according to the best available evidence of the positions of the original corners.

The Manual of Instructions for the Survey of the Public Lands of the United States, 1947, Section 400, states:

The dependent resurvey is designed to accomplish a restoration of what purports to be the original conditions according to the record, based, first, upon identified existing corners of the original survey and other recognized and acceptable points of control, and, second upon the restoration of missing corners by proportionate measurement in harmony with the record of the original survey. This type of resurvey is applicable to those cases showing fairly concordant relation between conditions on the ground and the record of the original survey. Titles, areas, and descriptions should remain absolutely unchanged in the typical dependent resurvey.

The dependent resurvey was conducted by Duane Earl Olsen, a cadastral surveyor employed by the BLM, with a crew of two surveying technicians and three surveying aides. He

testified at the hearing that using the original plat and original Taylor survey field note records, the crew was unable to find evidence of the original survey monuments for the section corner common to Sections 5 and 8. They therefore set up a temporary point and ran a random line to the east and set up a second temporary position approximately 40 chains from the original temporary point. At this second point, they were unable to find a monument and ran a random line south and were able to locate the monument as described in the field notes common to Sections 8 and 9. Again establishing a temporary point somewhere in the vicinity common to Sections 4, 5, 8 and 9, they continued east with the original field notes and found a monument corresponding with the field notes which was the northeast corner of Section 8. Using random lines, they found the corner common to Sections 6, 7, 1 and 12. A fourth monument was found at the north boundaries of Sections 5 and 6 and a monument on the southeast corner of Section 8. Two more monuments as described in the original survey were located on the corner common to Sections 7, 12, 13 and 18 and the corners common to Sections 29, 30, 31 and 32.

Since he was unable to locate the northwest corner of Section 8, he used the proportional method as given in the instruction manual. Concluding that the corners found were harmoniously related to one another, he reestablished the northwest

corner and the southwest corner of Section 8 in relation to the seven known monuments found on the ground.

Testifying for the appellants was Robert B. Stevenson, a registered engineer and land surveyor in New Mexico, a registered land surveyor in Arizona, and a member of the New Mexico and Federal Bars. He has been engaged in the practice of land surveying continually since 1955 in New Mexico and is currently the president of a New Mexico association of surveying and mapping. He has taught land surveying for the preceding ten years, initially a review course to assist candidates for registration to prepare for the examination, and as an instructor in schools operated by the Association of Surveyors and Mappers. He has also taught as a visiting professor at the University of New Mexico and is the author of a surveying manual on the New Mexico coordinate system. He has done dependent resurveys in five townships to the west of the T. 9 N., over an area of 30 square miles.

Mr. Stevenson was retained by the appellants to review the original Taylor 1881 survey, the field notes, and the dependent resurvey performed under Mr. Olsen's directions and his field notes.

He stated that according to the Taylor-Powel field notes, the north quarter corner of Section 8 is located 51.48 feet into a lava bed going westerly from the east edge and 143.38 feet west of the road, with the distance between the



east edge of the lava and the road measured at 92.4 feet. The Taylor field note measurements conform to his own on-the-ground observations, and in his opinion, it was an honest survey, for the surveyors could not have possibly made up field notes that conformed to the calls and distances and the natural topography of the ground. By the method used, Olsen placed the quarter corner of Section 8 268.62 feet east of the road and 412.50 feet east of the original Taylor Section 8 quarter corner. The south quarter corner as placed by Olsen is 378.84 feet east of the original Taylor placement.

On Exhibit 9, an aerial photo of the disputed area, he identified the dark portion on the lower portion as being malpais lava varying 6 to 10 feet above the level of the natural ground to the east of the flow. To the east there is a slight rise and the land then breaks into a series of cliffs having a rise of over 400 feet over a relatively short distance. East of the cliff is a mesa which is more or less flat. Between the lava flow and the cliff is a road which could not possibly be located significantly different in 1881 or any time other than where it is at present because of the alluvial flat created by the deposit of the eroded soil trapped by the lava flow at the base of the cliff. Although it would be possible to move the road to the east, evidence of it would remain because there would be a line of clearing through the junipers. There would also be indicia of where the road went down into the washes and

back up. None of these occur and he concluded that the road is fixed and is essentially the same today as it was in 1881.

He stated that the Taylor survey used a Gunther chain. They had no plumb bob or transit by which they could triangulate, and it was impossible to make an accurate measurement up the series of near vertical cliffs. In his opinion, the difference between the actual measurement between the Taylor north quarter corner and Taylor northeast section corner as measured by today's instruments is explained by the equipment used and the fact that the Taylor survey was done of the entire township in six days, which would require measuring 10 miles a day. The obvious blunder was made in measuring from the base to the top of the cliffs.

Although he agreed that the northeast corner and the southeast corner of Section 8 were found and recovered by Mr. Olsen, in his opinion, the northwest corner of the east half of Section 8 as surveyed and platted in the Taylor survey would not be as Olsen placed it. All evidence available, and which is satisfactory beyond reasonable doubt, confirms the location of the Taylor corner. In this case, the blunder can be definitely pinpointed by the discrepancy in the topographic calls. It did not occur in the calls from the lava flow to the road or the road to the base of the cliff, but between the base of the cliff and the top of the cliffs.

He concluded that the true location of the north quarter corner in Section 8 is 412.5 feet west of the Olsen quarter corner, which was set by proportional measurement without removing the blunder as the manual of instructions dictates. The same reasoning applies to the south quarter corner, and by using the topographic calls particularly to the road, the true location of the south quarter corner as set by Taylor and Powel is 378.84 feet west of the Olsen placed brass cap.

The exhibits received in evidence and the authorities cited in appellants' briefs clearly support the conclusions of appellants' expert witness.

Appellants derived title from a patent (Ex. 12) granted according to an official plat, and it has been held that official plats of survey and the data thereon are as much to be considered in determining what the patent is intended to include as if they were set forth in the patent; the language in the patent stating that it is granted according to the official plat of survey adopts the plat as part of the patent itself. The plat is a part of the patent. United States v. Otley, 127 F.2d 988, 993 (1942); Cragin v. Powell, 128 U.S. 691, 696 (1888); Hardin v. Jordan, 140 U.S. 371, 380 (1890); Chapman & Dewey Co. v. St. Francis Levee Dist., 232 U.S. 186, 197 (1913); Mitchell v. Smale, 140 U.S. 406, 413 (1890); United States v. Lane, 260 U.S. 662 (1922).

A copy of a portion of the official plat of survey (Ex. 10) shows a lava bed in the west half of Section 8, an escarpment or mesa in the east half of Section 8, and a road running in a north-south direction which, by actual measurement on the plat itself, intersects the north boundary of Section 8 to the east of the north quarter corner.

The aerial photograph (Ex. 9) shows the location of the road between the lava bed on the west and the escarpment or mesa on the east, and also shows the locations of the four exterior corners of the east half of Section 8 as they were placed by the dependent resurvey. It is clearly evident that there is no discrepancy between the topography shown on the official plat of survey and the topography shown on the aerial photograph.

The Government concedes that the locations of the four exterior corners of the east half of Section 8 as shown on the aerial photograph are at the locations where they were placed by the dependent resurvey. (Tr. 40). The north quarter corner is circled on the aerial photograph with a pencil mark. The Olsen resurvey, however, placed the north quarter corner to the east, instead of to the west, of the road as shown by the official plat of survey. As testified to by Mr. Stevenson, the location of the road where it crosses the north and south boundaries of Section 8 have not changed since the date of the original survey; for it is evident that the road is confined to its



present location at both points by lava beds on the west and cliffs on the east. Evidence of removed trees, cuts in the banks of arroyos, or tracks of any nature would be clearly shown on the photo if the road had been changed since 1881. There is no such indication.

The lava bed is mainly in the west half of Section 8 and is a very distinct natural feature. No part of the lava bed is east of the road. There is no mistaking the existence or location of the lava bed; it is a very obvious natural monument, just as the road is a very obvious artificial monument. Both are shown in the official plat of survey; both are referred to, and measured from, in the field notes in the placement of the north quarter corner.

The north and south boundaries of the east half of Section 8 consist, in large part, of a series of steep cliffs. As testified to by Mr. Stevenson at the time the original survey was performed, transits were not employed and it was not possible to obtain accurate measurements with Gunther chains and the other surveying equipment then in use when measuring distances up steep cliffs. The surveyor who prepared the official plat of survey obviously blundered when he measured the north and south boundaries of the east half of Section 8 up and down the steep cliffs east of the road. The amount of error was almost exactly the distance by which the dependent resurvey places the north quarter

corner to the east of the point where it was placed by the original surveyor. That is, the original north quarter corner is 412.5 feet west of the north quarter corner located by the dependent resurvey, as compared to the distance between the base and the top of the cliff east of the road, which is 442 feet less than the distance measured with inaccurate equipment by the original surveyor.

It is evident that in executing the dependent resurvey, Olsen failed to follow the manual. First, the north quarter corner must be considered as obliterated, not lost. An obliterated corner is defined in the Manual of Surveying Instructions as follows:

355. 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. (Underscoring added.)

Second, if the corner be deemed a lost corner, the Government erred by using proportional measurement. That is,

the second sentence of § 360, quoted below, directed the surveyors to use acceptable evidence in lieu of applying this method, and the plat, the field notes, and the natural and artificial monuments in the immediate vicinity of the quarter corner, give clear indication as to the location of the place where the quarter corner is:

360. A lost corner is a point of survey whose position cannot be determined, beyond reasonable doubt, 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.

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.

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:

363. In cases where the probable position cannot be made to harmonize with some of the calls of the field notes due to errors in description or to discrepancies in measurement, made apparent by the retracement, it must be

ascertained which of the calls for distances along the line are entitled to the greater weight. Aside from the technique of recovering the traces of the marks, the main problem is one that treats with the discrepancies in measurement.

Existing original corners cannot be disturbed; consequently, discrepancies between the new and those of the record measurements will not in any manner affect the measurements beyond the identified corners, but the differences will be distributed proportionately within the several intervals along the line between the corners.

The retracements will show various degrees of accuracy in the lengths of lines, where in every case it was intended to secure true horizontal distances. Until after 1900 most of the lines were measured with the Gunther's link chain, so that the surveyor must recall the difficulties of keeping a chain at a standard length, and the inaccuracies of measuring steep slopes by this method.

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.

Both Stevenson and Olsen agreed that the north quarter corner of Section 8 was placed in the lava bed in the Taylor

survey. (Tr. 48, 116). Mr. Olsen admitted that the lava bed, just west of the road, where the north quarter corner was originally established can be determined. Using the original field notes, the survey team which performed the dependent resurvey was able to find the northeast and southeast corners and the east quarter corners in the township. Mr. Olsen praised the quality of workmanship of the original survey and the original field notes conform to actual topographic conditions on the north and south boundaries of Section 8. They are not fraudulent or fictitious, and are therefore reliable.

The official plat of survey and the field notes both place the north quarter corner west of the road, and the field notes place it 51.48 feet west of the east edge of the lava bed, and 143.88 feet west of the road. The following holdings from Weaver v. Howatt, 161 Cal. 77, 118 Pac. 519, 522 (1911), indicate the procedure that should have been followed when the dependent resurvey was executed:

. . . While it is true that the errors in the field notes and plat make it impossible to locate the exact spot fixed by the official survey as the common corner of sections 1, 2, 11 and 12, in the absence of the monument set to mark it, yet there is ample evidence to show that it was not fixed at or near the place selected by the court, upon its theoretical subdivision of the line. It is not the province of the court to determine where the corner should have been fixed. This is not an action to vacate the government survey. It must be

assumed that the line was measured and the monuments set. Their positions as set fix the rights of the parties, regardless of the inaccuracy of the measurements and the errors in distance found in the field notes. The court must ascertain, as near as may be, where this monument was set by the government surveyor. If the exact spot cannot be found, it must, if possible, decide from the data appearing in evidence its approximate position, and the proportional method is to be used only when no other reasonable method is possible, and it must be so used that it does not contradict or conflict with the official data that are not impeached, and which if not impeached, confine the actual position within certain limits. The application of the proportional method must, in that case, be also confined to the same limits. (Underscoring added.)

The above was remanded for a new trial, the subsequent judgment was appealed and the appellant court sustained the restoration of the corner in question by use other than the proportional method. Weaver v. Howatt, 171 Cal. 302, 152 Pac. 925 (1915).

The dependent resurvey was performed under the authority of 43 U.S.C. 772, which provides, in part:

The Secretary of the Interior may, as of March 3, 1909, in his discretion cause to be made, as he may deem wise under the rectangular system on that date provided by law, such resurveys or retracements of the surveys of public lands as, after full investigation, he may deem essential to properly mark the boundaries of the public lands remaining undisposed of: Provided, That 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 lands affected by such resurvey or retracement. . . . (Underscoring added.)

In conformance with the statute, the courts have uniformly held the dependent resurveys of public land must follow the original survey and cannot, in the absence of fraud, change the corners and boundaries as established by the original survey to the prejudice of bona fide property rights acquired in good faith in reliance of the integrity of the original survey. Spawr v. Johnson, 49 Kan. 788, 31 Pac. 664 (1892); Ward v. Rodriguez, 43 N.M. 191, 88 P.2d 277 (1939), cert. denied, 307 U.S. 627 (1939); Valasquez v. Cox, 50 N.M. 338, 176 P.2d 909 (1946).

The placement of the north and south quarter corners of the west half of Section 8 as a result of the dependent resurvey constituted gross error in that the Manual of Surveying Instructions was not followed; the data in the official plat of survey and field notes were ignored and the natural and artificial monuments not considered. Further, the resurvey did not take into consideration or protect the rights of the appellants who acquired title under and relied on the patent acquired under the official plat of survey.

The dependent resurvey must therefore be, and is, set aside. Although there appears to be no error in the placement

of the east quarter corners of Section 8, a second dependent resurvey must be made and the placement of the west quarter sections made in accordance with accepted dependent resurvey procedure.

Respectfully submitted,

John R. Rampton, Jr.  
Administrative Law Judge

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