

# Surveyor's Library – Review of the 2009 BLM Manual

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*[NOTE: Numbers in brackets are references to the quoted section of the 2009 Manual. All emphasis has been added by the reviewer.]*

The 2009 edition of the Bureau of Land Management (BLM) Manual of Surveying Instructions is the latest in a long line of official instructions for surveyors engaged in the execution of official federal surveys. An official federal cadastral survey is “the highest form of boundary evidence available to the Federal Government, providing legal evidence of the geographic limits of the Federal interest in land.” [1-5]

The differences from the 1973 Manual are considerable, starting with the price — \$125. This Manual has half again as many pages as its predecessor, glossy paper, and multicolor illustrations. While the '73 Manual had a sprinkling of citations to court decisions; the list of cases in the new manual covers two pages of the index and legal issues are as significant a theme as surveying technique.

The instructions have been changed in significant ways, but the procedural core remains unchanged. Several significant issues centering around the degree of influence the Manual should exert on private surveyors retracing Public Land Survey System (PLSS) boundaries for private clients remain and to this writer are not clearly resolved by the new manual.

The BLM points to four significant changes in the new manual:

1. The standard of evidence required to accept a corner as obliterated has changed from “beyond a reasonable doubt” to “substantial evidence.” This fundamentally changes the evaluation of corner evidence. The 2009 manual has a new Chapter 6, “Resurveys and Evidence” that expands the discussion of corner evidence.
2. In Chapter 2, “Surveying Methods,” “repeatable coordinates” are identified as possible “collateral evidence of a corner position” that in some cases “may constitute substantial evidence of the position of an obliterated corner.” [2-34] This statement is followed by a brief exposition of some factors limiting the “repeatability” of coordinate positions. Interestingly, coordinates are not included in the lengthy discussion of collateral evidence in Chapter 6.
3. A 42-page chapter, “Resurveys and Water Boundaries” has been added with extensive discussion of the legal issues of water law with very good diagrams and maps. Three cases touching on Arkansas water boundaries are included two concerning the Arkansas River and one about a fraudulent two-square-mile lake conjured up by a deputy surveyor in Northeast Arkansas.
4. Instructions for Mineral Surveys have been expanded.



On the first page of the Manual, the BLM announces that the policy supported by the instructions has changed from “one favoring disposal and settling of the unreserved public lands to one favoring retention, administration, and control.” In other words, the days of the land sales rush are over, from now on the steady duty to maintain the existing Federal boundaries will predominate. Chapter 2, “Methods of Survey” has shrunk from 46 pages in the 1973 Manual to 12 pages. The overall emphasis of the instructions has shifted from original surveys to resurveys.

The Manual is explicitly designed to direct official surveys of the boundaries of “Federal Interest Lands.” The perennial question arising from this Manual as with previous ones is the extent to which the surveyor engaged in determining P.L.S.S. boundaries for private clients should be guided by it. This Manual raises the obverse question: To what extent should Federal surveys accept the work of private surveys as evidence for the determination of corners and boundary lines? This review focuses on this debate in the context of Chapters 5 and 6, “Principles of Resurveys” and “Resurveys and Evidence,” of the 2009 Manual and as it applies to survey practice in Arkansas.

Obviously, the BLM instructions are mandatory for surveys and resurveys upon U.S. government lands. The manual states that the boundary between Federal interest land and private land must be governed by the rules in the Manual, because these procedures implement Federal statutory law as to



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the re-establishment of the corners and lines of the original surveys. The "original survey" is, of course, the government survey represented on the General Land Office (GLO) plat which was the basis of the sale and patent of the land from the U.S. government to the entryman. It is equally obvious that where both sides of a boundary have passed into private ownership "final determination in the matter of fixing the position of disputed land boundaries rests with the local courts." [5-18] However, the statute law or regulations of some States requires the use of the BLM manual in the location of all P.L.S.S. boundaries.

Where Federal interest and private ownerships adjoin, there is a real possibility of disagreement between the re-tracement surveys of each interest. The Federal survey and the private survey should both respect the public interest in the stability of boundaries. However, the Manual points out that Federal Statute law protects that interest in a very different way than the Common Law used in State courts:

*Stability of boundaries in the non-federal arena is often given as a guiding principle behind boundary resolution theories such as adverse possession or acquiescence. The Federal statutory scheme . . . does not seek to reward a land owner who merely maintains an enclosure or improvement for a long period of time . . . stability is inherent in protecting the lines run and marked in an official survey . . . all evidence gathered, whether direct or collateral [should] be analyzed with a view toward discovering the best evidence of the official survey lines. [6-2]*

This language seems to say that evidence of long possession and use cannot be determinative of P.L.S.S. corner and boundary location. However, the new Manual goes very far in opening the door to including such evidence in the boundary evaluation. The purpose of any resurvey, of government or private lands is "protection of existing rights acquired under the original survey in the matter of location on the earth's surface." [5-25] The 2009 instructions early on advise the government surveyor to consider "local surveys," non-official (private) surveys



*Taking a GPS observation on a U.S. Forest Service monument near Treat, AR.*

of P.L.S.S. boundaries, because the evidence provided may serve to protect "bona fide rights as to location in good faith reliance on evidence of the original survey." [5-4] The BLM acknowledges that such local surveys "may provide the best available evidence of the original survey." [5-7]

The Manual sets out a number of paths by which local surveys and possession evidence may become "reliable collateral evidence of the original surveyed and protracted lines and corners, particularly where those surveys were followed by use and occupancy by the land owners" [6-6]:

- The local survey was based on original monuments prior to their destruction. [6-6]
- The "Good Faith Location Rule" applies where an entryman has located his boundaries "as might be expected by the exercise of ordinary intelligence under existing conditions." [6-35] Verification of "Good Faith Location" may include analysis of "monuments of unknown origin," improvements including fencing," "pipes or stones commonly used at the time." [6-36]
- The survey "marked the corners of legal subdivisions according to the prevailing law using the accuracy standards for the time and locale. [6-6]
- The "Satisfactory Local Conditions" Rule envisions yielding to improvements such as "roads, fences, and other evidence of use" where their position does not differ significantly from where an analysis (perhaps a section breakdown using proportional measure would be useful?) places the original subdivision lines. However, "something is needed in support of these locations. This will come from whatever intervening record there may be, the testimony of individuals who may be acquainted with the facts, and coupling of these things to the original survey." [6-41]
- Acceptance as "Local Points of Control" of "duly qualified and locally recognized points of control . . . where locally accepted lines are in substantial agreement with evidence of the original survey, although without testimony or record evidence relating to the original survey." The "class of evidence forming the basis" for identification of such a point includes: "recorded monuments established by local surveyors and duly agreed upon by interested property owners . . . boundary fences determined in the same manner; and the lines of public roads, drainage and irrigation ditches, and timber cutting lines; when intended to be located with reference to the original subdivisional lines." [6-46] "Monuments of unknown origin must be judged on their own merits, but these monuments should never be rejected out of hand without careful study." [6-48] The manual cautions that "there is no legal authority to disregard the identified evidence of the original survey or to accept a fraudulent or grossly erroneous local corner position." [6-55]

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The Manual discusses direct evidence of the corners of the original survey — testimony of individuals, topographic calls from the field notes, corner accessories, witness corners, and line trees, in language very similar to that of the 1973 Manual. Paragraphs [6-19] through [6-29].

The purpose of the evidence identified in a resurvey is to locate the corners of the original survey. Based on the best available evidence a corner is identified as either existent, obliterated, or lost. Existent or obliterated corners can be placed in their original position using the evidence. Lost corners must be positioned using proportional measure from related corners because there is insufficient evidence to determine their position in the original survey. The 2009 manual has significantly reworked the evidentiary requirements for the three types of recovered corners. Now the treatment of lost corners is separated from the discussion of existent and obliterated corners and placed in Chapter 7, "Resurveys and Restoration." The expanded and well-diagramed exposition of the methods of proportional measure is also found in Chapter 7.

"An **existent corner** is one whose original position can be identified by substantial evidence of the monument or its accessories." [6-11]. This is not a significant change from the standard set out in the '73 Manual.

"An **obliterated corner** is an existent corner where, at the corner's original position, there are no remaining traces of the monument or its accessories but whose position has been perpetuated, or the point for which may be recovered by substantial evidence from the acts or reliable testimony of the interested land owners, competent surveyors, other qualified local authorities, or witnesses, or by some acceptable record evidence. An obliterated corner position can be proven by substantial direct or collateral evidence." [6-17] Thus, the entire panoply of collateral evidence set out above is available to the surveyor seeking to re-establish the position of an obliterated corner.

Compare this with the parsimonious definition of an obliterated corner in the 1973 Manual: "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 interested land owners, competent surveyors, other qualified local authorities, or witnesses, or by some acceptable record evidence." [5-9, 1973]

As Jeffery Lucas pointed out in the December 2009 issue of *Point of Beginning* magazine, it was not possible for the prosecution to convict O.J. Simpson under the "beyond reasonable doubt" standard of proof. In both Manuals, the above text on obliterated corners is followed by a qualification: "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." [5-9, 1973] Note that the 2009 Manual reads "reliable testimony." It is clear that an item of collateral evidence can not in isolation constitute substantial evidence.

The **lost corner** is now an estranged stepchild not to be thought of unless "every means of identifying the original position of a corner has been exhausted." [7-1] It is one whose original position cannot be determined by substantial evidence, either from traces of the original marks or from acceptable evidence or reliable testimony that bears upon the original position, and whose location can be restored only by reference to one or more interdependent corners." [7-2] It is tempting to say that a local surveyor would have to be unlucky, lazy, and unimaginative to find themselves stuck with this wall flower very often. However, the surveyor must have a clear vision of the shades of difference between collateral and substantial evidence in evaluating the position of a corner or line.

Substantial evidence is "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion . . . more than a scintilla, but less than a preponderance." [6-11] In Latin "scintilla" means a spark or a mere flicker of light in the darkness. Collateral evidence can constitute substantial evidence when it is relevant to the original survey and its collective mass is sufficient to kindle a glow that illuminates the situation.

The final question is the extent to which this new BLM Manual "shall be used by Arkansas professional surveyors as a guide for the restoration of lost or obliterated corners and subdivision of sections." [Ark. Standards of Practice 3.1.B]. The 2009 Manual states that "the Director cannot assume jurisdiction over or responsibility for the acts or results of surveys made by county, local, or private surveyors, or by surveyors . . . employed by other branches of the Federal Government . . . . On the other hand . . . local surveyors as well as cadastral surveyors of the BLM are constantly called upon to search for existing evidence of original monuments, and in this work the surveyors should be guided by the same general methods." [6-4]

Arkansas, unlike its neighbors Missouri and Oklahoma, does not have a statutory scheme of rules to guide surveyors in resurveys. Without the Manual, what is our guide? The magisterial text by Elgin and Knowles, **Legal Principles of Boundary Location for Arkansas** deals with this question:

*Most of the questions that surveyors have about resurveys of the land system and the subdivision of sections . . . are not addressed in the Arkansas Supreme court decisions. Only a few legal principles concerning these subjects can be derived from the limited number of cases. The supposition that surveyors have been following the restoration and resurvey procedures published by the GLO and BLM since 1883 is generally not true . . . . Fortunately the courts have recognized the procedures that were adverse to BLM methods and in by far the majority of the cases they have decided in favor of and reaffirmed BLM procedures... When the court has before it two conflicting surveys, one performed using BLM methods and the other not*

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*following BLM methods, it has, with only one possible exception, upheld the survey that followed BLM procedures. Although the court has stated that these BLM procedures are "advisory only," it certainly has closely followed and upheld [them]. It does not take a very astute surveyor to positively conclude that BLM procedures should be followed when performing resurveys of the U.S. Public Land System. [pages 86 and 121]*

So the Manual seems to be a safe and useful guide, but for all its liberality in accepting evidence, the 2009 Manual again and again comes back to a bedrock principle: "The position of a tract of land, described by legal subdivisions, is *absolutely fixed by the original corners* and other evidences of the original survey and not by occupation and improvements unrelated to the original survey or by lines of a resurvey that do not *follow the original as faithfully as possible* for the time." [5-29] Evidence not related to the location of the original lines and corners lacking any other relevant support *fail* to support a position.

At this point the unpleasant reality about the original surveys in this state becomes relevant. These surveys drew to a close over 150 years ago — direct evidence of the original surveys is not commonly found in the populated areas of the state. Furthermore, for more than half of the 40-year duration of the original surveys in Arkansas, the office of Surveyor General was controlled by a syndicate of corrupt politicians more concerned with providing their large families and retainers with no-show surveying contracts and plundering federal funds than with actually performing surveys. Finally, the 20-year period immediately following the completion of the original surveys was one of civil war, disorder, and dislocation during which the normal operations of state and county government and land tenure itself were continually disrupted. As a result, reliable record evidence directly connected to the original surveys is rare. Those original surveys that were faithfully completed were guided by Tiffin's instructions — quite different from the scheme found in the 2009 BLM Manual. A thorough familiarity with Commissioner Tiffin's preferences is at least as important as knowledge of the BLM's scruples in 2009.

The Manual makes some acknowledgement that direct evidence of the original surveys can disappear over time or may never have existed: "Where the evidence of the original survey is so obliterated that lack of good faith in location cannot be charged against the entryman, whose claim boundaries may differ from a theoretical location determined by more rigid surveying rules and principles, the available collateral evidence is to be regarded as the best indication of the original position of the claim included in the original description." [6-63] But as is usual when surveyors find themselves in such technical thickets, the best

guidance is to work hard and apply your best professional judgment where you find yourself:

"The surveyor should neither rigidly apply the rules for restoration of lost corners or the rules for subdivision of sections without regard to effect on location of improvements nor accept the position of improvements without question regardless of their relation or irrelation to existing evidence of the original survey . . . The solution to the problem must be *found on the ground* by the surveyor. The responsibility to resolve the question of good faith as to location rests primarily upon the *surveyor's judgment*." [6-37] Corner positioning by proportional measurement can be perpetrated by a licensed surveyor safely immured behind his computer screen — it can and is done without a visit to the field with the use of an unequivocal formula. However, the real rule is that the valid and valuable boundary determination is made by the professional surveyor who has scoured the ground and the record and then struggled amid uncertainty to make the best judgment.