Family Surveying

Certified Federal Surveyor Exam
Beta testing shows positive results

National Readjustment
NGS provides the details

A Visit to SECO
Products that streamline our work
t was a cold and misty Friday, the sort of day that’s good for staying inside. I was tired, and felt like a hard day’s work was finally done. I answered the last question on the six-hour final exam and turned in the answer sheet. It had to be beer-thirty. There was still an hour left in the work day, but not much real work would be done. I began to reflect. This afternoon marked the final round of this period of my efforts as a candidate for Certification as a Federal Surveyor.

It all started when I had replied to some correspondence from the Bureau of Land Management about a beta program in cooperation with the Bureau of Indian Affairs to qualify experienced, licensed Land Surveyors to augment in-house resources. I learned the demand for high quality surveys for federal interest properties, particularly Indian trust properties, was higher than they could comfortably meet. Thus began six months of unexpected investment and toil.

The refrain from that old cabaret song by Stoller & Lieber made popular by Peggy Lee some decades ago echoed disquietingly in my memory: “Is that all there is? Is that all there is? If that’s all there is, my friend, Then let’s keep dancing, If that’s all there is…”

One of the lessons of life seems to be how anti-climatic the end games of life’s adventures tend to be. If
The Certified Federal Surveyor program (CFedS) has been approved by the Secretary of the Interior and the Special Trustee in the Office of the Special Trustee (OST). It is one component of the DOI Indian Trust Lands Boundary Standards which were created by BLM Cadastral Survey and BIA Realty in response to the DOI Fiduciary Trust Model (FTM).

The CFedS Program is intended to be a significant addition to the resume and credentials of the private professional land surveyor and Tribal surveyors. The program will provide the BIA and Tribes with a listing of qualified surveyors recommended to be used as needed by the various Agencies and Tribes. The Certified Federal Surveyor program will:

- Increase the pool of qualified surveyors to complete the backlog of surveys in Indian Country.
- Ensure surveys on Indian lands comply with regulations and policies decreasing the chance and expense of rework.
- Offer Tribal surveyors the ability to better serve their Tribe with enhanced skills and knowledge.
- Provide opportunities to increase self-determination.

So, I sent my tuition check and registration forms and waited for my...
study materials. Imagine the surprise when a large three-ring binder with 26 DVDs arrived! Before my studies were completed four 3” binders were needed to hold printed material. That was in addition to the Manual of Surveying Instructions 1973, Standard Field Tables, Restoration of Lost or Obliterated Corners & Subdivision of Sections, glossaries, dictionary, graph paper, calculation sheets, and of course a NCEES approved calculator to learn how to use.

The curriculum was divided into seven courses:

1. History, Record & Administrative Systems
2. Boundary Law & Title Examination
   (reading: IBLA cases, 1973 BLM Manual Chap.3)
3. Survey Evidence Analysis
   (reading: 1973 BLM Manual Chaps. 4 & 6)
4. Restoration of Lost Corners
   (reading: Standard Field Tables and Trigonometric Formulas, Double Proportion Made Complex, Restoration of Lost or Obliterated Corners & Subdivision of Sections, & 1973 BLM Manual Chap.5)
5. Introduction to Water Boundaries
   (reading: 1973 BLM Manual Chap. 7 & web course Water Boundary)
6. Subdivision of Sections
   (reading: Restoration of Lost or Obliterated Corners & Subdivision of Sections, & 1973 BLM Manual Sec 4-38 through 4-44, 3-74 through 3-92, & 7-8 through 7-15)
7. Federal Boundary Standards & Business Practices
   (reading: Boundary Standard Certificates: LDR, COS, CIP, & BAC)

It was an intimidating amount of material, to say the least. Their estimate of 120 study hours was extremely optimistic from my viewpoint. Thoughts of how it will be if I don’t complete this thing successfully crop up. I present seminars, write articles, hold office and have held a surveying license for nearly two decades. I can’t suffer that embarrassment. I have to do well. I have to wait for my results, of course, but I believe I did well enough to become certified.

I am pleased to have taken the course. My surveying will be better for it. Despite Louisiana ostensibly being a PLSS state, my experience has been almost exclusively metes and bounds due to the land ownership and history of south Louisiana (see “Surveying Louisiana,” The American Surveyor, March/April, 2004). Many of the nuances of performing surveys according to “The Manual” are clarified now, much to my satisfaction. Louisiana, like many states, cites “The Manual” and applicable laws in its rules regarding property boundary surveys, so I’ve been responsible for this information all along.

Perhaps a most significant aphorism I took away from the course says something I’ve tried to say myself many times, but says it more succinctly: The duty of the surveyor is to arrive at the same conclusion a court of competent jurisdiction having all the necessary evidence would conclude. Two others are Do the research, and Protect the plat.

The program included about 136 selected candidates. Of that number many had personal or business interruptions of their studies and about 84 of us were set to take the exam together. The test was tiring but seemed fair. It was an open book exam; some details were too fine to expect perfect retention by rote memory. I polled a few
Judy Beale (Virginia & Delaware) opined, “As a licensed surveyor in Virginia and Delaware, both of which are metes and bounds states, the CFedS program has been a great learning experience. When I applied for the program, I knew there would be a lot to study, especially as all of my experience is in the colonial states...I did underestimate the amount of time required to study the course material for each of the seven courses. The program requires a commitment from any surveyor who participates, but it is time well spent.”

Mickey Warwick (New Mexico, Alaska and formerly Arkansas) said, “The course was full of good information. It requires a serious commitment of time. But, it isn’t a waste of time. I am sure everyone learned something they didn’t already know, probably a lot. As in any educational experience, some of the lecturers were easier to listen to than others, but all of the speakers had something important to say. The resource disk that comes with the course is excellent. It has the entire History of the Rectangular System by C.A.

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### 1. History, Record & Administrative Systems


**Instructors:** Dennis Mouland, Bureau of Land Management, Dominica Van Koten, Bureau of Land Management, Priscilla Wilfahrt, Office of the Solicitor, Colleen Kelly, Office of the Solicitor, Ron Applebaum, Bureau of Indian Affairs (Ret.)

- History of Surveying
- Introduction to PLSS & Records Sources
- Non-Federal Records
- Working with Indian Cultures
- Indian Land Law
- Current Status of Indian Land Law
- Indian Land Record System
- BLM Administration
- BIA Administration

### 2. Boundary Law & Title Examination

(read: IBLA cases, 1973 BLM Manual Chap.3)

**Instructors:** Dennis Mouland, Bureau of Land Management, Robert Jackson, U.S. Forest Service, Ron Scherler, Bureau of Land Management

- Basic Boundary Law
  - Identify the Location of a Parcel
- Basic of Metes & Bounds
- Case Study Metes and Bounds
- Chain of Title Evidence
  - Title Concepts
  - The Public Land Survey System
- Federal Boundary Law
- Interior Board of Land Appeals
- Controlling Intermediate Monuments
- U.S. Forest Service & Chewacan Land and Cattle Company

### 3. Survey Evidence Analysis

(read: 1973 BLM Manual Chaps. 4 & 6)

**Instructors:** Stan French, Bureau of Land Management, Dennis Mouland, Bureau of Land Management, Robert Dah, Bureau of Land Management, Ron Scherler, Bureau of Land Management

- Evaluating Corner Evidence
  - Corner Evidence Classifications
  - Interpreting Original Field Notes
  - Determine Proper Locations of Township Corner
  - Determine Proper Cap Marking for a Corner

### 4. Restoration of Lost Corners

(read: Standard Field Tables and Trigonometric Formulas, Double Proportion Made Complex, & 1973 BLM Manual Chap.5)

**Instructors:** Dennis Mouland, Bureau of Land Management, Ron Scherler, Bureau of Land Management, Tim Moore, Bureau of Land Management

- Introduction to Restoration of Lost Corners
- Restoration of Lost Corners
  - Mean Bearing & Linear Convergency
  - Calculate Proportionate Positions of Corners & Adjust Meander Line

### 5. Introduction to Water Boundaries

(read: 1973 BLM Manual Chap.7 & web course Water Boundary)

**Instructors:** Ron Scherler, Bureau of Land Management, Randy Zanon, Bureau of Land Management

- Water Boundaries

### 6. Subdivision of Sections

(read: 1973 BLM Manual Sec. 4-38 through 4-44, 3-74 through 3-92, & 7-8 through 7-15)

**Instructors:** Ron Scherler, Bureau of Land Management, Dennis Mouland, Bureau of Land Management

- Regular Section Subdivisions
  - Calculate Coordinates for Missing Corners
- Area Relationships
  - Calculating Parenthetical Distances
- Fractional Sections
  - Subdividing a Section
  - Determine Proper Bearing for N-S & E-W Center Lines

### 7. Federal Boundary Standards & Business Practices

(read: Boundary Standard Certificates: LDR, COS, CIP & BAC)

**Instructor:** Ron Scherler, Bureau of Land Management

- Boundary Standards
White, as well as the 1973 Manual and a full transcript of the lectures. Dennis Moulard and Ron Scherler are both excellent speakers and did a good job of organizing the materials. They were extremely responsive to the comments we beta testers made. They are working hard to remove as many of the frustrations we encountered as possible.

The course forced the student to review the core of the basics he or she has known and relied on for years to depths he is unlikely to have plumbed; things like cardinal directions, proportions done properly, setting corners even in exceptional situations, how to account for and recognize bona fide rights while “protecting the plat”, determining with confidence the differences between lost and obliterated corners, convergence and reporting true bearings. There was the new stuff like BLM & BIA business procedures to allow for the CFedS dealing with the American Indian communities, and the workings of the trust relationship of the U.S.

Hunter Edwards (Idaho) said, “I’d just like to say that I think that this is a great course. Most people over the last several years have been taught surveying by “going through the ranks” even those going through college are only taught from just a couple of professors. I think that if nothing else this course gives everyone a basis from which to train others and gives everyone a common ground to go from in their professional lives... This should help everyone because of a better understanding of the rules we will have better accuracy and less double corners. I can’t see anything from this course but good. The public is better served. I do find it very difficult though to convince others for the need of this course, people are hesitant to change their ways and resist a challenge. Things take time and we need to make sure that this course improves, survives and thrives.”

To be honest, the course had its share of goofs. A few of the handouts and graphics were of low quality, but the CFedS program managers quickly responded to the comments and requests of this beta class. One embarrassing faux pas happened in Course 4. The BLM has had an on-line program in use for in-house training for this topic and gave it a thumbs-up without the same scrutiny given to the newly developed portions. As Murphy’s Law would have it, it came back to haunt them. There were errors in some of the program’s examples brought to light by the beta class. Ron Scherler promises a new Course 4 for the next class.

From Reggie Janquish (Wisconsin) we read, “The over-all course was interesting. I found it stimulating. It has been several years since I have taken more than a day or two of additional training. I had around 160 hours for the course. That includes verifying all the problems in Course 4, and learning to be a student again. We were, after all the beta test group. Even with the course deficiencies in Course 4, I felt I learned much because it required verifying everything. I also got some recent experience working with latitudes and departures, and true bearings.”

Davey Edwards (Texas & Oklahoma) added: “Seeing that I cut my teeth, literally since my father is a surveyor, with the metes and bounds system of Texas, this course was a challenge for me... I had an idea of how the rectangular system worked but not to such detail. For me this course really taught me the rectangular system... With the push for a more educated professional surveyor across America, this course fits the bill to educate a person to practice in the PLSS states. I feel anyone wanting to practice in a PLSS state should take this course. I also look at this from a perspective as a licensed state land surveyor in Texas...Just like an LS in a PLS state cannot file a township with the BLM office without protocol, only an LS can file field notes with the GLO in Texas. Therefore, I compare the cadastral surveyor from the BLM with the LSLS in Texas. I wanted to be all I could be in whatever I did. This meant this CFedS program was the only way I could be as close to a cadastral surveyor as I would get.”

The consensus seems to be that the course was worth the effort for the learning that occurred. It forced us to use resources we keep on the reference shelf with a dependence that burned the exercise in our memories to forever remain useful. Additionally, the ability to improve our products is satisfying. If the other aims to help and to improve the quality of surveying for Federal Interest properties and for some to improve their businesses by providing these services happen then it will be deemed a success all around.

Postscript:
A few weeks have passed when the letter finally arrived. Welcome news indeed! I was pleased to learn that:
79 sat for the test, and 69 passed it.
The passing grade was a scaled 75%;
The average score was a scaled 85%;
Everyone passed at least one unit.
The original class of CFedS were recognized and received their certificates from Don Buhler, BLM Chief Cadastral Surveyor, on May 4th, 2007 at a banquet during the annual BLM Indian Land Surveyor meeting in Phoenix. Representatives from the Department of the Interior, Bureau of Land Management and the Office of Special Trustee for American Indians were in attendance.