

# Certified Federal Surveyors Certification Program



## Course 7 Boundary Standards

Version 3.0  
January 2010

## Course 7: Boundary Standards Study Guide

**COURSE DESCRIPTION:**

The final course offered in the initial CFedS Training Program is about the Federal Boundary Standards and business practices. It offers foundational explanation of the forms and services CFedS uniquely provide to tribes and reservations, as well as explains some of the basic requirements of any survey performed by a CFedS.

**COURSE OBJECTIVES:**

Upon completion of this course, students will be able to:









- Learn proper application of cadastral business practices
- Understand Boundary Standards for Indian Country surveys
- List requirements for all CFedS surveys

**COURSE INSTRUCTOR(S):**

Ron Scherler, Bureau of Land Management

**VIDEO LECTURE TITLE:**

Boundary Standards – Part 1 (48 minutes)

ICON LEGEND							
 WEB COURSE	 EXERCISE	 DIAGRAM	 READING ASSIGNMENT	 PROBLEM	 HANDOUT	 2009 BLM MANUAL	 QUIZ

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 1

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### Overview

Well we are nearing the end of the program now. I hope you have found it to be interesting. I hope you have learned a lot and I hope it will in the future pay benefits and dividends to you in your career.

Today we want to look at standards for Indian trust lands boundaries. This is something probably most of you have not heard of. It is something that has been developed recently and we just want to kind of give you an overview of what is going on there.

So in this session, we want to look at is an introduction to those standards for boundary evidence; give you just an overview so that you understand what they are, where they come from, that information, review the four certificates. In these standards, there are four different certificates and we will look at those and see what they are about and how to proceed with those. And then we want to talk a little bit about the standards for CFedS state authority surveys.

As a CFedS you will be called upon to do a lot of surveys that are not under federal authority, but under state authority under your license and there are a few additional I guess we want to say requirements that we want included in those types of surveys.

And what we want to accomplish when we are done with this session, we would hope that you will feel comfortable with the boundary standards, what those are all about, how those certificates are supposed to be executed, what work is necessary to do those, how to go about that and then again the requirements for state authority surveys, why those are there, how they should be carried out, and the purpose for those. So when we are done with this, we hope you will feel comfortable with that and if you are called upon to do that, you will be able to do it and know exactly what's going on there. So let's look at the boundary standards.

#### Standards for Boundary Evidence

- Introduction of the Standards for Boundary Evidence
- Review the four certificates
- Examine the standards for CFedS State Authority Surveys

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### Origin of the Boundary Standards

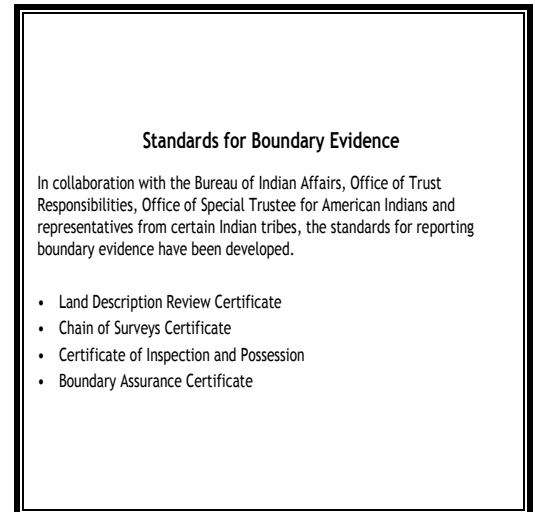
First of all in collaboration with the Bureau of Indian Affairs, the Office of Trust Responsibilities, the Office of Special Trustee for American Indians, and representatives from certain Indian tribes, the standards for reporting boundary evidence have been developed.

Now let's take a moment and just think about, let's say you had a client come to you and they said, you know I just purchased this piece of property and I am going to use it for something, it could be something it could be anything from I am going to lease to a wheat farmer, to I am going to build a 60 story skyscraper on this parcel and anything in between. The client comes to you and says I just purchased this and I want to know about this, do I need to do anything boundary wise, survey wise to take care of this. Well what would you do?

Probably, the very first thing that you would do is read the description. Is it adequate, is it ambiguous, what's there read that description I think that's probably the first thing I would do. I think probably the second thing that you would do is make a search of the records to find the existing survey data on it, all the way from the original GLO survey to any county surveys or local surveys, state authority surveys that have been done on that piece of property.

You would probably look at all of the corner evidence you could find, either in local records, sometimes a timber company, land owner, large rancher, large farmer might have evidence about corner information. Gather all of that information.

Next, I think probably you would want to get a look at the property. So you would probably go out and look around, say you know what does it look like, is there a road through the middle of it that the fishermen have been using for the last 50 years to take their boats out after they drift the river, are there some easements or prescriptive right type situations, possible situations out there? Are there encroachments? Are there any monuments out there?



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Are there fences? What's out there?

And then last I think that you would compile all of that information into some kind of document that you would provide to your client. Well, really that is exactly what these boundary evidence standards are all about.

What we have done is really we have formalized the business practice. I think that is what you will see as we begin to work through it. Let's talk first about what the four certificates are.

### The Four Certificates

Number one, the first certificate is a **land description review certificate**. And that is basically what it says; it is a review of the land description. We'll look at those in detail in a little while.

The second one is a **chain of survey certificate**. Putting together all the record survey information including corner information that may not necessarily be on a survey plat, but may be tucked away almost anywhere in someone's records.

Next is the **certificate of inspection and possession**. And this is not a new form; this is something the Department of Justice has required for quite some time. But we have some kind of new twist to it here. So we will talk about that.

And then **boundary assurance certificate**. That is the last one. That is where we give the opinion. That is where we compile it all and put all this information together. So standards for boundary evidence.

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The primary purpose of these certificates is to document and formalize the collection and analysis of boundary evidence in Indian land conveyances.

We are not really talking about doing a survey here, we are talking about a surveyor using his/her expertise, using his/her knowledge of the situation to gather information, to analyze the information and then to report back to a manager, a resource person, an owner about the situation of their boundaries, so they can make good judgments about what needs to be done.

And of course depending upon what you are going to do with a parcel you could end up with some different answers even for the same parcel. Like I said, if you are going to lease it for wheat farming, there could be some problems with the boundaries, and we might feel comfortable leasing it to a wheat farmer, however, if we are building a 60-story office building, then we are going to want to know that we have those boundaries exactly and we can defend them and there are no problems with those boundaries.

And of course anything that happens in between is going to affect, we may be doing some kind of development. We may just be dividing it into two parcels, to build a house on each parcel. Then we are going to need some good boundaries, better than we would need with the wheat farmer, but maybe not to the extent that we need for the 60-story office building. So one of the things that you will see is that on these forms it talks about purpose. So it is really an analysis of the evidence. What is out there right now?

The objectives of these certificates are to satisfy the Secretary's Trust responsibility of Indian trust assets. The Secretary of Interior is very concerned about this responsibility and doing it correctly, adequately and documenting that process and this formalizes the process that has really been in place for quite some time.

Now we formalize it with these certificates that will be in the file and it gives us this really nice chain of evidence to follow. So the Secretary is concerned about this.

### Standards for Boundary Evidence

- A. The primary purpose of these certificates is to document and formalize the collection and analysis of boundary evidence in Indian land conveyances.
- B. The objective of these certificates is to satisfy the Secretary's trust responsibilities of Indian trust assets.

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### Preparation of the Certificates

The standards for Indian trust land boundary evidence documents may be prepared by a CFedS. Now this is something that directly affects you. In preparing the regulations for these certificates, the regulations specifically state that they can be prepared by a CFedS. This is a new working relationship between the federal government, the Department of Interior and the private sector, but not the entire private sector, only the CFedS certified people, only you who are going to be certified as a certified federal surveyor, will qualify for preparing and gathering this evidence for these boundary standards. And we will look at that a little bit more as we go through.

Now think about who might want this evidence. It might be a tribe. Right? The tribe has purchased some land and they want to get a good handle on what their boundary is like, what kind of evidence is out there, how secure is that boundary, how accurate is it. They plan to do some kind of development. So they may want these boundary certificates to be completed on this parcel. Well, they are probably going to be the one to contact you and make arrangements for payment, the contract that whole process yet at the end of all of this as we will see in a little bit, these forms are approved by the Bureau of Land Management.

### Boundary Standards Financial Agreements

So this is a little bit different working relationship that is going on here and one of the things that are included in the rules and regulations is this statement about the payment of funds and the financial agreements.

Here is what it says, “the requestor of a boundary standards certification is required in all cases to make satisfactory arrangements with the CFedS for the payment of his/her services and those of his/her assistants in making the certification. As BLM is not to be held responsible for the same.

Even though BLM is the one approving the certification, we normally are not the one paying for the certification, are not the

#### Standards for Boundary Evidence

- The Standards for Indian Trust Lands Boundary Evidence documents may be prepared by a CFedS.

#### Standards for Boundary Evidence

- The Requestor of a Boundary Standards Certification is required, in all cases, to make satisfactory arrangements with the CFedS for the payment of his or her services and those of his or her assistants in making the certification, as the BLM will not be held responsible for the same. The Cadastral Chief has no jurisdiction to settle differences relative to the payment of charges for the work between CFedS, and requestors of Boundary Standards Certifications. These are matters between the parties and must be enforced in the ordinary manner. Nonetheless, proof of a sufficient contract or payment scheme must be submitted to Cadastral Chief prior to a CFedS performing this work.

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one contracting with the CFedS, all we are doing is giving technical direction and approving it. So we want that to be clear.

That is an operation or an agreement between the CFedS and the requestor. It goes on to say the Cadastral Chief has no jurisdiction to settle differences relative to the payment of charges for the work between CFedS and requestors of boundary standards certificates. These are matters between the parties and must be enforced in the ordinary manner.

Nonetheless, proof of a sufficient contract or payment scheme must be submitted to Cadastral Chief prior to a CFedS performing this work. We just want to make sure that there is some kind of an agreement that is sufficient and that BLM is not going to be pulled in to some kind of a disagreement, so make sure that that takes place.

### Land Description Review Certificate

Now let's take a look at the first one. Land description review purpose: the size and location of a parcel of land is determined by its physical boundaries. In general for all or a portion of that parcel to be conveyed, a written description identifying the physical boundaries is required.

A written description that is free of error, conflict or ambiguity and can withstand legal challenge is the intent of a land description. A land description review seeks to assure that that intent is realized. So that is what we are about here. We have a land description. We want to ensure that it does actually describe the parcel we want, that there are not ambiguities that it can't be misinterpreted, that it doesn't describe something that is not intended. We want to look at that description and make sure that it does what we intend it to do. That's what this land description review is about.

#### Land Description Review

- **Purpose:** The size and location of a parcel of land is determined by its physical boundaries. In general, for all or a portion of that parcel to be conveyed, a written description identifying the physical boundary is required. A written description that is free of error, conflict or ambiguity and can withstand legal challenge is the intent of a *land description*. A *Land Description Review* seeks to assure that intent is realized.



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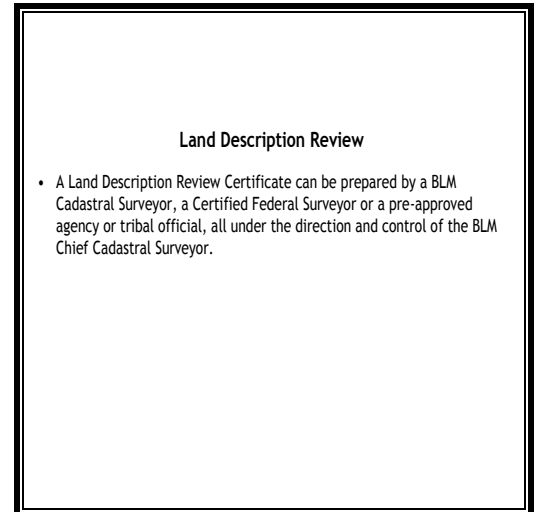
A land description review certificate can be prepared by a BLM Cadastral Surveyor, a Certified Federal Surveyor, or a pre-approved agency or tribal official, all under the direction and control of the BLM Chief Cadastral Surveyor. This comes directly out of the regulations.

Look at what this is saying. This is saying that BLM Cadastral Surveyor can do this; it is saying a certified federal surveyor can do it and it is saying that a pre-approved tribal or agency official can do it. That's it. It also says that it is done under the direction and control of the Chief Cadastral surveyor, BLM. This is a new working relationship.

This is a new business practice. There will probably be some glitches along the way, but this is attempt by the Secretary of Interior to begin to use the resource of the Certified Federal Surveyor to accomplish the goal of identifying land boundaries and parcels in Indian country accurately, to the standards that the Secretary wants and we realize, that the Department of Interior through the Bureau of Land Management doesn't have the resources to do all the work ourselves. This is a business practice that begins to formalize how we will use CFedS to accomplish that goal.

Let's look at the form, and you should have downloaded this form before we started this session and the form is just a two page thing and you should have it in front of you now and we will go through it and I have some slides on the screen that we can go through and you can follow on your copy in front of you.

First of all, you know at the top it has the parcel number and the BIA land area code and some of that information. It also has the purpose. That is a real key. What is this land about to be used for? Something is going to happen to this parcel of land. It is going to be used for something, what is it? That affects maybe the outcome when we are all done. Because what we are talking about is the land description adequate for the purpose that it is about to be used for.



**HANDOUT** A full version of the land description review certificate form can be found in the Handouts section at the end of this study guide.

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The next thing on there says, at your request the land description or descriptions as stated in the attached conveyance documents for the above referenced realty or resource action has been reviewed, the following determination has been made.

First of all there is a request. And there is a request form; I didn't bring a copy of that. I don't think it is important for you to really see. Just be aware that there is a request form that comes from the tribe, the BIA, an individual, sometimes even another government agency, the forest service if it is abutting Indian land, or maybe a private entity, a private company, a corporation that is abutting Indian land.

The request comes from them and it requests this boundary assurance or this boundary evidence certificate and here is the first one the land description review so it is requesting this from the Bureau of Land Management and they are also though making arrangements with you the CFedS to actually do it.

But you are going to do it under the direction and control of the Chief Cadastral Surveyor. Now right below that there are three basic answers to the question, is this land description adequate?

We have three responses; first the land description is acceptable as written and presented. See comments below. It is OK. It will do the job. Second, the land description has potential problems as noted below, however, the risk appears minor and the conveyance/activity should not be affected. In here by conveyance or activity; conveyance activity. We are doing something out there. Again were leasing it. Well you know there's something in the document that may be a little ambiguous, but it's not going to affect the lease.

It could affect the lease if we were trying to survey it. And exactly trying to identify corners there's a possibility but it is not an issue for a farmer to grow wheat on it. Again this response is always tied to the purpose.

**Land Description Review**

- At your request, the land description (s) as stated in the attached conveyance document (s) for the above referenced realty/resource action has been reviewed.

The following determination has been made:  
*Check one!*

**Land Description Review**

- The land description is acceptable as written and presented, see comments below.
- The land description has potential problems as noted below; however, the risk appears minor and the conveyance/activity should not be affected.

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And the last one, the land description has potential problems should not be used as written in the subject conveyance or activity document. The following errors and/or concerns are noted below. Need to be corrected or addressed before this description should be used.

So it is not saying stop everything, it is telling the manager, the resource person, the decision maker here, it is telling them there are problems here, we need to address these concerns or problems before you proceed.

Sometimes it can be a very minor thing that needs to be taken care of or sometimes it can be major. But this is giving the decision maker the information gathered by an expert, you, the CFedS; you are the expert at gathering this information. At looking at this land description and evaluating it, you've done that and you are now reporting to the decision maker so they can make a good decision about how to proceed.

### Sufficiency of the Land Description for the Stated Purpose

As we follow on down you will notice, that we say sufficiency of the land description to the land for the stated purpose. How good does this land description work for the stated purpose, and we have a little space there to fill that in. One of the points I want to make is don't be limited by the size of the form, if you have to attach 12 pages to completely answer this one little statement, then do it.

Don't feel that you are limited by the space on the form to only write in two sentences or something. That is not the case. You're not limited by the size of the form. Put in all of the information that is necessary, it might include adjoiner deeds; it might include survey plats, all kind of information. Whatever it takes to completely convey information to the decision maker needs to be put on this form. Is it sufficient for its stated purpose? That is our first question to ask and it is on the form.

#### Land Description Review

- The land description has potential problems and should not be used as written in the subject conveyance/activity document. The following errors and/or concerns as noted below, need to be corrected/addressed before this description should be used.

#### Land Description Review

- Sufficiency of the land description to the land for the stated purpose:
- Condition of corner monuments based upon (existing knowledge or office investigation or field investigation).
- Condition of boundary line marking based upon (existing knowledge or office investigation or field investigation).

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### **Condition of Corner Monuments**

The next one is what is the condition of corner monuments and we are going to do this based on existing knowledge. I may know what the state of those corners is because I have been out there previously, two months ago, three months ago, or I found a local record, or I have talked with another surveyor that has been out there, or I talked with the landowner, and he said yeah all of those monuments are still there.

Office investigation, we can again gather records to see what it is or field investigation. Again, what we are doing is telling the manager or the decision maker, the resource person, we are saying according to this record, the monuments are there, or according to the landowner these monuments are there or according to my investigation, I went out and saw them and I saw them on this date and they are there. We are giving the manager that amount of information.

It isn't the purpose to say, either the monuments are all there or they aren't. We need to give them more about how do we know it. We want to convey exactly what we have done, so if we have done a field investigation, we want to tell them that. If we have done a record investigation, we want to tell them that. If we talked to the landowner, that's what we want to tell them that. So that the person using this form to make a decision knows exactly what is going on.

They may look at this form and say, you know, the landowner said that all of those corners are there but why don't you go out and check and make sure. I am not comfortable with that. I want you to make sure. So we proceed to do that.

### **Condition of Boundary Line Marking**

Next thing, condition of the boundary line marking based upon, same thing. Well, here we can talk about whether we are in farm country, prairie country, desert country; we may be talking about fences. That is generally what marks the boundary. If we are in

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timber country, we may be talking about blaze lines, fence posts set along the lines, carsonite posts set along the line, or we may be talking about fences there also.

We may be talking about where some roads are; some people think the road goes down the line. Well, does it or doesn't it? This is general information about the boundary lines themselves on the ground. Can you walk out there and see where the boundaries are or are there some ambiguities or does it appear that where every one thinks the boundaries are is not where they really are. Information about the condition of the marking of the line.

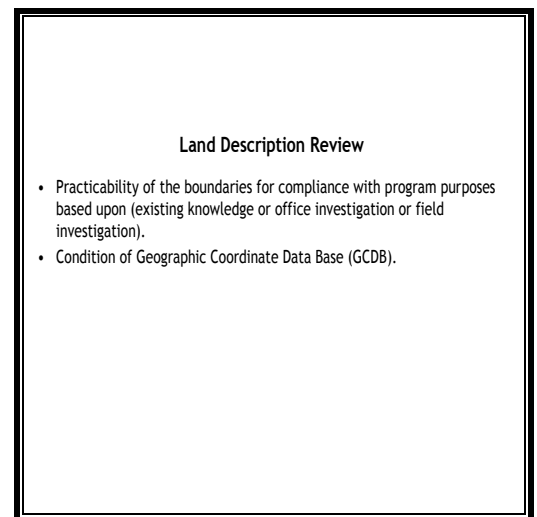
Practicability of the boundaries from compliance with program purposes based upon. Again, we are back to the boundaries and the purpose.

Are those boundaries marked well enough and in an appropriate fashion for the purpose that is going to take place out there? We may have no marking and we may be going to lease it, maybe we are to build something on it, maybe we are going to develop it, then maybe the boundaries need to be marked.

The corners may all be there, the survey is good, the legal description is good, but the boundaries are not marked. So that kind of information conveyed to the manager or the decision maker based on either field investigation, knowledge I already have, office investigation, calling people, talking with people who know about the property.

### Condition of the Geographic Coordinate Database (GCDB)

Condition of the geographic coordinate database, some of you are probably familiar with this, some may not be. I want to give you the definition first. We'll look at that then talk about it.



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The Bureau of Land Management's geographic coordination database is a collection of geographic information representing the public land survey system of the United States. Let's stop there.

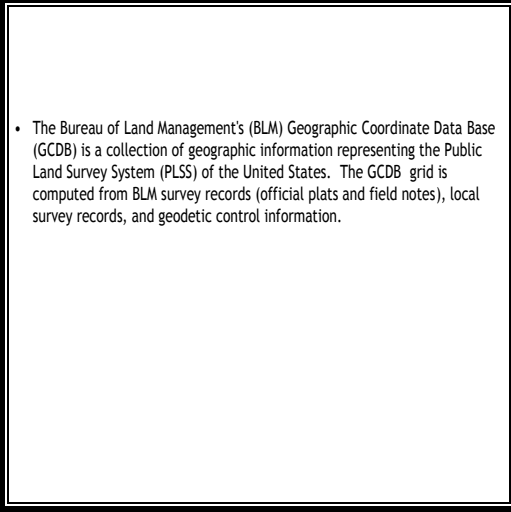
What that is, we have gathered geographic position of corners of the public land survey system, latitude and longitude for corners of the public land survey system. We haven't stopped there.

From that we have computed subdivision of section corners, 16<sup>th</sup> corners, and other corners depending on the ownership in an area. But those coordinates are based on the best survey information we could come up with. So they could be very good or they may not be as good. So let's continue.

The GCDB grid is computed from BLM survey records, that is official plats and field notes, local survey records, that is all those surveys that are in the county, your state where they are filed in your area, and geodetic control information.

So sometimes it is even unsurveyed information, sometimes it is highway surveys, railroad surveys, construction surveys for large projects, any information we can gather that tells us something about where corners of the public land survey are we have evaluated and then we have tried to use the best information to gather this.

Of course, in some places, the only information is the original survey, an 1862 original survey, is the only survey there. If that's it, that is what we have used. In other places, we have 2005, 2002 surveys that are very, very accurate and give us very good positions. That is what we have used there. Well what it gives us is a position for corners of the public land survey system. Of course that is the base layer for a GIS.

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- The Bureau of Land Management's (BLM) Geographic Coordinate Data Base (GCDB) is a collection of geographic information representing the Public Land Survey System (PLSS) of the United States. The GCDB grid is computed from BLM survey records (official plats and field notes), local survey records, and geodetic control information.

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So BLM collects the GCDB data on a township basis, the survey boundaries are delineated by computing the geographic positions of township section, aliquot part, government lot and special survey corners. Next official land descriptions are assigned to each land unit in the grid. Now that is a little bit misleading. Those official designations really have already been assigned.

Basically it is attaching the legal parcel name to the parcel. That has already been done on the official plat. So, the records are then reformatted so geographic information system software can be used to view the PLSS information especially. It is the base layer for the GIS system and it is available to you. It is one of the things in this process that we want you to review because we want to know, has the GCDB done on in your area, on this project and how accurate are those coordinates and those coordinates give you a reliability factor, and they may say well the reliability is 200 feet, that is the best we've got. Or maybe they may say the reliability is a foot.

We've got a good survey there and we have good information about exactly where those corners are. Gather that information and report what it is.

The BLM began collection of the Geographic Coordinate information in 1989. The data collection effort continues today. GCDB data has been collected for approximately  $\frac{3}{4}$  of the townships in the western United States and the BLM eastern states office has collected GCDB for over 300 townships east of the Mississippi River.

Now this is an important issue with tribes and tribal lands. One of the issues for managing land properly is to know where it is and to develop a good GIS system; you need a good base layer that shows where the boundaries are. The GCDB is that good base layer and you will see that there are a lot of projects out there on reservations gathering data to make this Geographic Coordinate Database better.

- BLM collects the GCDB data on a township basis. The survey boundaries are delineated by computing the geographic positions of township, section, aliquot part, government lot, and special survey corners. Next, official land descriptions are assigned to each land unit in the grid. The records are then reformatted so Geographic Information System (GIS) software can be used to view the PLSS information spatially.

- The BLM began collection of the geographic coordinate information in 1989 and the data collection effort continues today. GCDB data has been collected for approximately three quarters of the townships in the Western United States. The BLM Eastern States Office has collected GCDB for over 300 townships east of the Mississippi River.

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Any time a new survey comes into an area and we get better measurements, those coordinates can be upgraded, they can be recomputed. We get tighter positions on existing corners and where those corners are. So any time we have a new survey, we want to get a position on those corners and update that GCDB and get better positions. So it is an important issue.

It is an issue where the CFedS is going to play I think a major role in many areas.

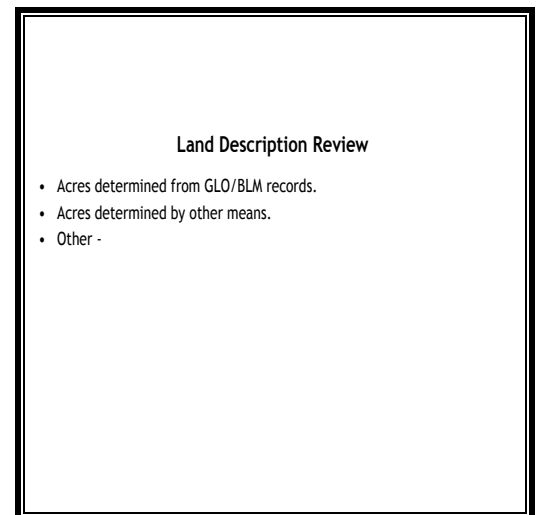
### Area

Next, acres determined from GLO BLM records. This would simply be taking the acreage from the official plat and that would be 40 acres for an aliquot part, maybe 20, 40, 10 and we are going to say where we get it though. That is important.

Where did we get it. Or we may have a more recent survey that has resurveyed, subdivided the section and we know exactly how many acres are in that aliquot part and we are going to report that and we are going to report where we got that information and again that is good information for the manager or the decision maker. And of course, the last is other.

What else? What else has happened in reviewing this legal description? You know a survey I was involved in several years ago in reviewing a legal description, we found three major parcels of land and one was a housing development actually and one was about seven acres of timber, three major errors in the legal description.

These were exceptions that were left out of the legal description. We found when we actually went out to survey, we found numerous encroachments, we found some horrible ambiguities in the descriptions contained in that legal description, and all by just reviewing it. We never had to set foot on the ground at all you had to do is read it, and immediately you identified probably 15 or 20 major problems with the legal descriptions.





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That's the kind of things we want to convey to our managers, decision makers, or resource people. They need to know what is the status of that land description. Is it good? Is it bad? Why is it good? Why is it bad? How do I know it is good? How do I know it is bad? That is all the information that is going to be conveyed on this land description review certificate.

### Approval

Once we have completed it down at the bottom, there is a place for you to sign and then it goes on and the final approval is, this land description review correctly represents the records and documents compiled under my direction and control.

Now this is being signed by the Chief Cadastral Surveyor. He is saying that it was done under his direction and control and in conformance with requirements of the Department of Interior standards for Indian trust lands boundary evidence of the tracts or parcels of land identified above.

This work that you are going to do as a CFedS, this document that you are going to prepare, then comes to the Bureau of Land Management to be signed by the Chief Cadastral Surveyor.

Let me say probably the first few of these certificates that you prepare and submit to the Chief Cadastral Surveyor are going to be scrutinized very, very carefully. As the Chief Cadastral Surveyor becomes more comfortable with your expertise, with your level of effort in gathering this information, with your knowledge, with your documentation, I think you will see a little more closer working relationship where the review is not nearly as strict, they will begin to trust your experience, your judgment, your methods.

So that is one of the things that you kind of need to be prepared for. Its building this relationship and as you begin to work on these that relationship get a little stronger and there will be more trust in there and we hope that this becomes a very smooth system for you as a CFedS to gather this information, document this information and present it to the Bureau of Land Management for approval.

#### Acceptance and Filing

- Certification: This Land Description Review correctly represents the records and documents compiled under my direction and control and in conformance with the requirements of the Department of the Interior *Standards for Indian Trust Lands Boundary Evidence*, of the tract(s) or parcel(s) of land identified above.
- Signed by the State Chief Cadastral Surveyor
- This form is to be retained in the official case file

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Again, since it is under his/her direction and control, we need to make sure that there is communication throughout the process. As I said, it is signed by the state Chief Cadastral Surveyor and it is filed in the official case file. So that document is there now forever for us to use in the future.

We can see that in 2008, we executed this land description review, here is all the information we find, then in 2015 that is still there and we know something about the state of the boundary at that time. We know something about what was done at that time and we have it all recorded and it is easily accessible, it is documented. It is a business practice that begins to really formalize that.

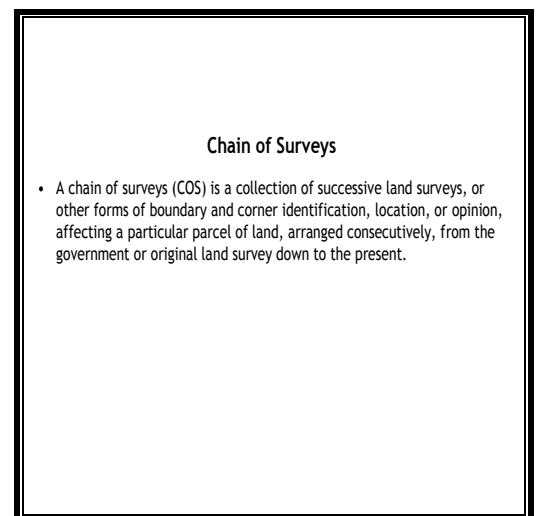
### Chain of Surveys Certificate

Well, let's look at the next one. The second certificate is the chain of surveys. So you need to get that one out, again it is not too complicated a form, it is pretty straightforward, it is a two page document. Again at the top it identifies the parcel and identifies the purpose. Parcel and Purpose. Again, there has been a request for this. Now we are beginning to look at this. What is the chain of surveys?

Chain of surveys is a collection of successive land surveys or other forms of boundary or corner identification, location or opinion affecting a particular parcel of land, arranged consecutively from the government or original land survey down to the present.

So it's not all the survey plats we can find, it is also any corner descriptions, any time someone has visited that corner, anytime a landowner has information about that corner and can give us an affidavit or some other information. Sometimes it will even be adjoining deeds, there may be information tied to a corner, a monument in a deed that tells us something about when that monument was there, that it was there at least prior to that deed.

So all the information that we can gather about the monuments, the measurements, the surveys of that parcel, we want to gather into this chain of surveys.



## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 1

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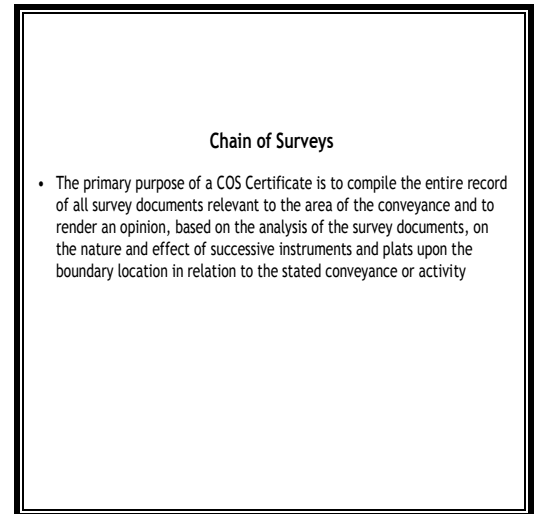
### Purpose of the Chain of Surveys

The primary purpose of the certificate is to compile the entire record of all surveyed documents related to the area of the conveyance and to render an opinion based on the analysis of the surveyed documents on the nature and effect of successive instruments and plats upon the boundary location and relation to the stated conveyance or activity. Let's say that we have done all of this and we have two surveys all done in the last 20 years and from the record it is clear from the record that surveyor number two did not agree with surveyor number one on one of the corners and placed his monument a foot away.

So we have two corner monuments there. We have gathered that information. Now we need to do some analysis about it. What is the parcel going to be used for? Lease for a wheat farm. They are going to farm it. Well, then we do a little more research and we find that these two monuments fall at the intersection in a road.

Well, one foot in the intersection of the road is really not going to affect that lease for the wheat farm, so we probably would, on our chain of surveys, we would mention it, we would explain the process, we would explain that they fall in the road and we would explain that there really be no adverse affect on the activity that they are planning, which is to lease this for a wheat farm.

However, if we were going to divide the parcel, if we were going to create several new parcels, if we were going to do something where we were developing it, and the exact boundaries even out in the road are very important, then we are going to say, we have a problem here and the chain of surveys has identified it and we are going to analyze it and probably make a recommendation for how to proceed and what needs to be done next.



## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 1

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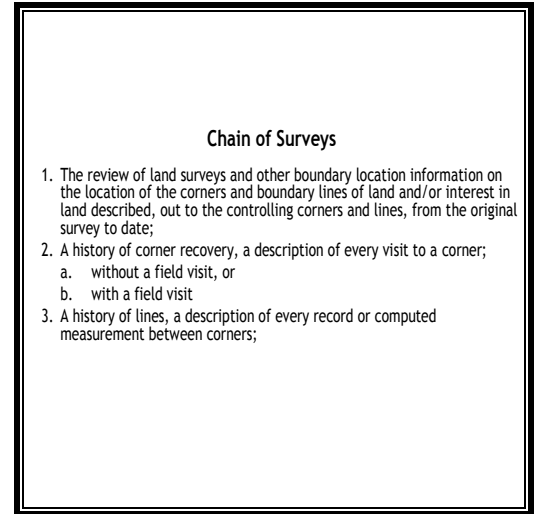
### Extent of the Research

Chain of surveys, the review of land surveys and other boundary location information on the location of the corner and boundary lines of land and/or interest in land described out to the controlling corners and lines from the original survey to date.

We may be talking about a parcel in the middle of a section; we may be talking about 20 acre aliquot part in the center of a section. What we are talking about here is the chain of surveys needs to go out to at least to the boundaries of that section, to the controlling corners, not just look at the parcel and say “well, gee there is no surveys around this parcel. I’ve done my chain of surveys.”

No we need to know if it is an aliquot part within a section, we need to know about the boundaries of the section because they are what are going to be used to define that parcel, if it hasn’t been defined yet. So we need to go out to the controlling corners that define that parcel. That is what the chain of surveys needs to cover.

A history of corner recovery, a description of every visit to a corner, every visit to a corner that we find in a record, we want to put in this chain of surveys, people need to know about that. With a field visit or without a field visit. Either way. A history of lines, a description of every record or computed measurement between corners.



## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 1

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We want to know every measurement that has been made that affects that parcel of land, every measurement, even maybe ones that are not official-every measurement?

The practicability of the corners and/or lines for the intended land use based upon the COS, chain of surveys. We need some kind of recommendation here. Other related information after a discussion between the requestor and the BLM Cadastral survey office.

As you put this together, we may find some other information that we may want to follow up on or some other information that needs to be gathered. Sort of a rabbit trail that we want to follow. That needs to be taken care of in this document too. It needs to contain all the information that pertains to the boundaries and the corners of this parcel and how it can be identified.

### Preparation of the Chain of Surveys Certificate

So let's look at the form some more, and again this is directly out of the regulations, a chain of surveys certificate can be prepared by a BLM Cadastral surveyor or a certified federal surveyor, you will notice that agency or pre-approved tribal official is not in here anymore.

There are only two individuals who can do this, a Cadastral surveyor or a CFedS surveyor. That is it. You can see how the Department is planning to rely on this CFedS program and you as a CFedS surveyor to accomplish our goals in managing our trust responsibility here. You can see we are building that relationship into our regulations. And again these are done under the direction and control of the BLM Cadastral Chief Surveyor. Back to the form.

**Chain of Surveys**

4. The practicability of the corners and/or lines for the intended land use based upon the COS;  
and/or
5. Other related information (after a discussion between the Requestor and BLM Cadastral Survey Office).

**Chain of Surveys**

- A COS Certificate can be prepared by a BLM Cadastral Surveyor or a Certified Federal Surveyor under the direction and control of the BLM Chief Cadastral Surveyor.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 1

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At your request the chain of surveys for the attached land descriptions for the above referenced realty/ resource action have been compiled. The following determination has been made. Again, at your request. There has been a request made. All right, here are the results and again we have three responses.

The land surveys are acceptable. See comments below. The land survey had potential problems as noted below, however, the risk appears minor and the conveyance/activity should not be affected

### Chain of Surveys

- At your request the chain of surveys for the attached land description(s) for the above referenced realty/resource action has been compiled. The following determination has been made:

### Chain of Surveys

- The land surveys are acceptable, see comments below.
- The land surveys have potential problems as noted below; however, the risk appears minor and the conveyance/activity should not be affected.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 1

And the last one is the land surveys have potential problems and should not be used for the subject conveyance/activity. The following errors and/or concerns as noted below need to be corrected or addressed before this survey should be used.

So we basically have three responses again, similar to the previous one that deal with using these surveys, how adequately are these surveys and these corner monuments for the intended purpose. And of course we go down and document our answer.

Sufficiency of the chain of surveys of the land for the stated purpose. We have a purpose here, is it going to work?

Again, I want to make a point don't be limited by the size of the form. Put as much information into this as you need to and attach as many pieces of paper you need to. If you have a really massive amount of information, you probably will want to summarize it and then attach the backup documentation because we don't want to overwhelm a manager or whoever is going to be using this form with page after page of stuff, we want to give them a summary, and then back it up with documentation so if they feel that they need to learn more about it, it is all there for them. Comments, corrections, concerns. We are going to comment on things.

Procedures, maybe we look at a survey here and the procedure is questionable or maybe the procedure is not shown. So it may be correct. The survey may be very good. But we don't really know because the surveyor hasn't told us what he has done. Comments, corrections, concerns.

### Chain of Surveys

- The land surveys have potential problems and should not be used for the subject conveyance/activity. The following errors and/or concerns as noted below, need to be corrected/addressed before the surveys should be used.

### Chain of Surveys

- Sufficiency of the chain of survey of the land for the stated purpose:
- Comments/Concerns/Corrections:
- Corner History:
- Line and Measurement History:

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 1

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### Corner History

Corner history. Now again what has happened to that corner, how many people have been there? When have they visited? Is it a perpetuation? Is it original? Where did it come from? Is there more than one monument? Everything about it.

Everything we know about that corner and the history of that corner. Line and measurement history. Every measurement of any line that affects this parcel. This is not just the boundaries of the parcel; it is every line that affects it. The controlling boundaries, so if we are in the center of a section, we are talking about measurements on the boundaries. Every measurement of any line that affects this parcel. We want to know that history.

Now again, the certification. This chain of surveys correctly represents the records and documents compiled under my direction and control and in conformance with the requirements of the Department of Interior standards for Indian trust land evidence of the tract or tracts or parcels of land identified above.

<p style="text-align: center;"><b>Chain of Surveys</b></p> <ul style="list-style-type: none"><li>• Certification: This Chain of Surveys correctly represents the records and documents compiled under my direction and control and in conformance with the requirements of the Department of the Interior <i>Standards for Indian Trust Lands Boundary Evidence</i>, of the tract(s) or parcel(s) of land identified above.</li><li>• Signed by the State Chief Cadastral Surveyor</li><li>• This form is to be retained in the official case file</li></ul>
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### Approval

Again this is signed by the chief Cadastral surveyor. It is signed by you as a CFedS with a certification up above and then this is what the Chief Cadastral Surveyor is certifying to, he/she is certifying to your work.

That is something new in Cadastral survey and the execution of our duty and our responsibility in trust land. Signed by the Chief Cadastral Surveyor and this form is to be retained in the official



## **STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 1**

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case file. So again we are going to have a record of this. We can come back to at anytime. We've documented everything that was done at this point. So this completes the chain of surveys.

So let's take a break now, when we come back we are going to take a look at the certificate of inspection and possession.



**HANDOUT**

**Land Description Review Certificate**  
United States Department of the Interior  
[Agency/Company]  
[Location/Address]

To: [Agency or Tribe and Office]  
Attention:

From: [Chief Cadastral Surveyor]  
BLM [State Office]

Subject: Land Description Review (LDR) Certificate

BIA LAND AREA CODE:	ALLOTMENT/TRACT NO.:	PURPOSE:

At your request, the land description(s) as stated in the attached conveyance document(s) for the above referenced realty/resource action has been reviewed. The following determination has been made:

*(Check one!)*

<input type="checkbox"/>	The land description is acceptable as written and presented, see comments below.
<input type="checkbox"/>	The land description has potential problems as noted below; however, the risk appears minor and the conveyance/activity should not be affected.
<input type="checkbox"/>	The land description has potential problems and should not be used as written in the subject conveyance/activity document. The following errors and/or concerns as noted below, need to be corrected/addressed before this description should be used.

Sufficiency of the land description to the land for the stated purpose:

Comments/Concerns/Corrections:

Condition of corner monuments:

Condition of boundary line marking:

Condition of Geographic Coordinate Data Base (GCDB):

I certify that the parcel described on the attached conveyance document contains the following acreage(s):

\_\_\_\_\_ acres determined from GLO/BLM official records.

\_\_\_\_\_ acres determined by \_\_\_\_\_.

**Certification:** This Land Description Review correctly represents the records and documents compiled by me or under my direct supervision in conformance with the requirements of the Department of the Interior Indian Trust Lands Boundary Standards, of the tract(s) or parcel(s) of land identified above.

<i>Name: Cadastral Surveyor,                  Certified Federal Surveyor, or                  Pre-approved Agency or Tribal Official or Agent</i>	<i>Title and Contact Information:</i>	<i>Date:</i>
[Signature]		
[Print Name]		

**Certification:** This Land Description Review correctly represents the records and documents compiled under my direction and control and in conformance with the requirements of the Department of the Interior Indian Trust Lands Boundary Standards, of the tract(s) or parcel(s) of land identified above.

<i>Name: Chief Cadastral Surveyor</i>	<i>Contact Information:</i>	<i>Date:</i>
[Signature]		
[Print Name]		

Attachments:

**Chain of Surveys Certificate**  
United States Department of the Interior  
[Agency/Company]  
[Location/Address]

To: [Agency or Tribe and Office]  
Attention:

From: [Chief Cadastral Surveyor]  
BLM [State Office]

Subject: Chain of Surveys (COS) Certificate

BIA LAND AREA CODE:	ALLOTMENT/TRACT No.:	PURPOSE:

At your request the chain of surveys for the attached land description(s) for the above referenced realty/resource action has been compiled. The following determination has been made:

*(Check one!)*

<input type="checkbox"/>	The land <b>surveys</b> are acceptable, see comments below.
<input type="checkbox"/>	The land surveys have potential problems as noted below; however, the risk appears minor and the conveyance/activity should not be affected.
<input type="checkbox"/>	The land surveys have potential problems and should not be used for the subject conveyance/activity. The following errors and/or concerns as noted below, need to be corrected/addressed before the surveys should be used.

Sufficiency of the chain of survey of the land for the stated purpose:

Comments/Concerns/Corrections:

Corner History:

Line and Measurement History:

**Certification:** This Chain of Surveys correctly represents the records and documents compiled by me or under my direct supervision in conformance with the requirements of the Department of the Interior Indian Trust Lands Boundary Standards, of the tract(s) or parcel(s) of land identified above.

<i>Name: Cadastral Surveyor, or Certified Federal Surveyor</i>	<i>Title and Contact Information:</i>	<i>Date:</i>
[Signature]		
[Print Name]		

**Certification:** This Chain of Surveys correctly represents the records and documents compiled under my direction and control and in conformance with the requirements of the Department of the Interior Indian Trust Lands Boundary Standards, of the tract(s) or parcel(s) of land identified above.









<i>Name: Chief Cadastral Surveyor</i>	<i>Contact Information:</i>	<i>Date:</i>
[Signature]		
[Print Name]		

Attachments:

## Course 7: Boundary Standards Study Guide

<b>COURSE DESCRIPTION:</b>	The final course offered in the initial CFedS Training Program is about the Federal Boundary Standards and business practices. It offers foundational explanation of the forms and services CFedS uniquely provide to tribes and reservations, as well as explains some of the basic requirements of any survey performed by a CFedS.
<b>COURSE OBJECTIVES:</b>	<p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Learn proper application of cadastral business practices</li> <li>• Understand Boundary Standards for Indian Country surveys</li> <li>• List requirements for all CFedS surveys</li> </ul>
<b>COURSE INSTRUCTOR(S):</b>	Ron Scherler, Bureau of Land Management
<b>VIDEO LECTURE TITLE:</b>	Boundary Standards – Part 2 (55 minutes)

### ICON LEGEND

 WEB COURSE	 EXERCISE	 DIAGRAM	 READING ASSIGNMENT	 PROBLEM	 HANDOUT	 2009 BLM MANUAL	 QUIZ
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## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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### Certificate of Inspection and Possession



**HANDOUT** A full version of the CIP  
Forms 3 & 4 can be found in the Handout section  
at the end of this study guide.

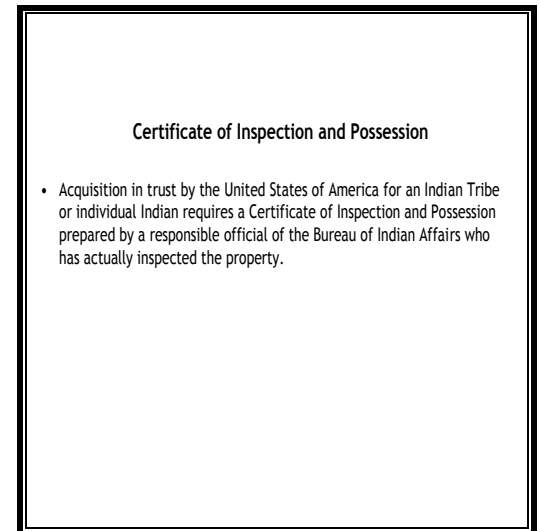
Now we are going to look at the certificate of inspection and possession and if you look at the forms that you downloaded, you will notice that there are two forms, form 1 and form 2. We are going to talk about that and why that is there in a moment.

First of all, let's see what it is, an acquisition in trust by the United States of America for an Indian tribe or individual Indian requires a certificate of inspection and possession prepared by a responsible official of the Bureau of Indian Affairs who has actually inspected the property.

Land is often acquired by a tribe, by an individual and it is fee land that is then placed back into trust and in that process what actually happens is the land is conveyed back to the federal government and the federal government then holds it in trust for that tribe or that individual. But there is actually a conveyance document that conveys the land from the tribe or individual back to the federal government to be held in trust.

Well, the Department of Justice has some standards for land that the federal government that will accept. That is not just Indian land, its any federal agency, the forest service, fish and wildlife, Bureau of Indian Affairs, park service. Any land that the federal government is going to take back from fee back into federal ownership needs to meet some certain standards, and one of the standards is a certificate of inspection and possession.

The point is this form is to make sure that the acquiring agency or the one responsible for this has really looked carefully at what is out on the ground they know where the land is, they know what is going on and we will see on the form how that is documented. But this is a required form. This is something that is not new. This has been around for quite some time in all federal agencies, but we are





## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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beginning to formalize it a little bit more in the process here and we are changing the form and the process a little bit and I will explain that as we go along.

### Purpose of the CIP

The primary purpose of the CIP or Certificate of Inspection and Possession is to deliver an opinion based on a physical inspection of the premises of possible defects, conflicts, ambiguities, and adverse claims of use or ownership of the subject property.

If we go out and take a look at the property and we find somebody has an old trailer sitting out there and they are living out there and they say its there's. Well, what kind of problems is that going to create? The federal government doesn't want to take that into ownership and take on whatever kinds of problems that might create. What if there are boundary problems, multiple corners, and conflicting surveys?

Sometimes when you go out on the ground, you can actually see what's going on. You can see that there are trespasses. It is a physical inspection on the ground to determine if there are problems there that really the federal government doesn't want to get involved with.

A CIP certificate can be prepared by a BLM Cadastral surveyor or a certified federal surveyor under the direction and control of the BLM Chief Cadastral Surveyor.

Again, this is a new business practice, this is right out of the regulations, BLM is going to use CFedS for this purpose under the direction and control of the Chief Cadastral Surveyor, and it is a new way of getting this work accomplished. What are we going to do?

#### Certificate of Inspection and Possession

- The primary purpose of a CIP is to deliver an opinion, based on a physical inspection of the premises, of possible defects, conflicts, ambiguities and adverse claims of use or ownership of the subject property.

#### Certificate of Inspection and Possession

- A CIP Certificate can be prepared by a BLM Cadastral Surveyor or a Certified Federal Surveyor under the direction and control of the BLM Chief Cadastral Surveyor.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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Physical inspection of the boundary and the premises can reveal evidence of possible defects, conflicts, ambiguities, and adverse claims of use or ownership.

The inspection should include all those areas covered in the certificate of inspection. In other words, we don't just want to drive by and look at it from the road as we drive by, we want to look at the entire parcel and sometimes we might be talking about 5 or 10 parcels, maybe they are all in one group, but they have separate legal descriptions and they may have separate issues.

We want to look at all of every parcel that is involved in this CIP.

<p style="text-align: center;"><b>Certificate of Inspection and Possession</b></p> <ul style="list-style-type: none"><li>• Physical inspection of the boundary and the premises can reveal evidence of possible defects, conflicts, ambiguities and adverse claims of use or ownership.</li><li>• The inspection should include all those areas covered in the Certificate of Inspection:</li></ul>
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### Identification of the Boundaries

Identification of boundaries, lines and corners, and you will see that that is a major part of this form; we want to know where is the parcel. We don't want to just drive out there and say well there is a fence out there and that is the parcel?

We want to know where are the corners and where are the boundaries. And if those are not located, we want to know that. That needs to be reported on this form before the federal government is going to accept the title of this back into federal ownership; we need to know the state of those boundaries. Are there corners out there? What is going on with this parcel?

<p style="text-align: center;"><b>Certificate of Inspection and Possession</b></p> <ol style="list-style-type: none"><li>1. Identification of boundaries, lines and corners.</li><li>2. Note any work or labor performed or any materials furnished in connection with any improvements or repairs or improvements on the subject land that would entitle any person to a lien on the premises.</li><li>3. Verify in relevant records any persons or entities that have rights of possession or other interests adverse to the owner of record or the U.S..</li></ol>
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Note any work or labor performed or any materials furnished in connection with any improvements or repairs or improvements on the subject land that would entitle any person to a lien on the premises.

As we begin to go through these documents you are going to see some of these don't really look like they pertain to what a surveyor does. This is not really what we do. Let me explain maybe a little bit of history.

## **STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2**

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Since these forms began to be required, it has normally been completed by a single individual; often it was looked upon as a formality. In other words this is another form that we have to sign and fill out and send in to get this through. The process really wasn't done completely and accurately.

As we go through this form, you will see that we probably need several different disciplines to properly do the inspections that are required here. One of the things that we have attempted to do and the reason that there are two forms, is we have attempted to make a place on the form for more than one signature.

We have placed a signature block there for a surveyor. Now if you read the form you are going to say, whoa the surveyor is certifying to a lot of information. The answer to that is certify to what can certify, nothing else. Cross out anything else on that form that you cannot certify to. Let somebody else take care of that. You take care of the boundaries and the corners. That is where your expertise is, that is what you know, that is what you want to certify to.

So some of these things, as we go through them, these are the things that are on the form. You are going to say well that really does not involve me. You are right and if you can't certify to them, you just cross them out. You just certify to the things you are knowledgeable of and that you can verify. Verify any relevant records, any persons or entities that have rights of possession or other interest adverse to the owner of record of the US.

### **Title**

As a surveyor, you might be able to identify some of those things by inspection on the ground and you may also have done that by review of the title or maybe someone else, a realty officer, may be the one who is doing that portion of the verification.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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Verify that there is no outstanding unrecorded deed, mortgage, lease, contract or other instrument adversely affecting title to the property.

That is probably not going to be your job, that is probably going to be somebody on the land side, on the realty side, but it is on the form and if you can't verify to it, you cross it out on the portion you are certifying to.

Verify that there are no vested or accrued water rights for mining, agriculture, manufacturing nor any other purposes, nor any ditches, or canals constructed by or being used upon under authority of the US nor exploration nor operation for development of coal, oil, gas or other minerals no possessory rights in existence owned or exercised by any third party under any reservation contained in any patent or patents issued by the US.

That again is probably would not be something that you as a surveyor are going to certify to, that is something that the title people, the lands and realty people are going to deal with. Your main concern is the boundary issues.

### Certificate of Inspection and Possession

4. Verify that there is no outstanding unrecorded deed, mortgage, lease, contract or other instrument adversely affecting title to the property.

### Certificate of Inspection and Possession

5. Verify that there are no vested or accrued water rights for mining, agricultural, manufacturing or other purpose; nor any ditches or canals constructed by or being used thereon under authority of the U.S.; nor exploration or operations for development of coal, oil, gas or other minerals; no possessory rights in existence owned or exercised by any third party under any reservation contained in any patent or patents issued by the U.S..

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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Verify that there are no outstanding rights and any person or entity to possession of the premises nor any outstanding right, title, interest, lien, in or estate existing on being asserted in or to the premises except such as are disclosed and evidenced by the public records as revealed by the government's title evidence.

**Certificate of Inspection and Possession**

6. Verify that there are no outstanding rights in any person or entity to possession of the premises, nor any outstanding right, title, interest, lien or estate existing or being asserted in or to the premises except such as are disclosed and evidenced by the public records, as revealed by the government's title evidence.

### Unwritten Rights

One of the things that you may do if you are out there is identify possible unwritten rights, easements, maybe there are some prescriptive rights, other things that appear to maybe be an unwritten right situation, maybe an encroachment, it could be a valid adverse possession claim. As a surveyor, those are some things you can identify in your field inspection, and you should and you should document it.

Verify the premises are wholly unoccupied and they can except for the occupancy of persons from whom disclaimers of right, title and interest in and to the premises have been obtained. In other words, make sure there are no trespassers out there, there is nobody encroaching, there is nobody out there that is not supposed to be there.

**Certificate of Inspection and Possession**

7. Verify that the premises are wholly unoccupied and vacant except for the occupancy of persons from whom disclaimers of right, title and interest in and to the premises have been obtained.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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### Certification

Now here what the certification says, I hereby certify that on this date, I, and we are talking about you as a certified federal surveyor now, I made a personal examination and inspection of that certain tract or parcel of land identified above and that I am fully informed as to the boundaries, lines and corners of said tract on the basis of my inspection, I hereby certify that the following statements are accurate, or if one or more statements is not accurate I have marked it/them and I have indicated on this sheet or on attachment, my findings which vary from the statement.

**Certificate of Inspection and Possession**

I hereby certify that on [date] \_\_\_\_\_, I made a personal examination and inspection of that certain tract or parcel of land identified above, and that I am fully informed as to the boundaries, lines and corners of said tract. On the basis of my inspection, I hereby certify that the following statements are accurate, or, if one or more statements is not accurate I have marked it/them and I have indicated on this sheet or on a attachment my findings which vary form the statement:

So, what you've done is you are certifying first of all that you know where the boundaries are, and then any statement on the form that you have not verified, that you have crossed out, and if you want to add something to a form, if you want to add information about what you have gathered, you want to alter what you have said, you do that on this form.

This is not just another form to sign and pass on; we want this to be a form that accurately represents what you have done and what you have verified.

I have worked on a number of surveys of land that was acquired by various federal agencies, a Certificate of Inspection and Possession was signed, it is in the file, a request came in to the Bureau of Land Management to survey that parcel and on that inspection and possession, it was signed and it said, I am fully informed as to the boundaries, lines and corners of this parcel.

Well, when we went out and looked at it, we couldn't find the boundaries, there were no corners. It took a survey, and sometimes a pretty extensive survey, to identify the boundaries. There was no way that the person signing this form had any idea where the boundaries were. There might have been a fence out there or a road or somebody pointed out, or a realtor said, oh it is here. They didn't really know.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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This says, I am fully informed. That is what we want. So what we are trying to do is we are trying to get this surveyor into the picture in filling these out. We want you as a CFedS to use your expertise to actually be fully informed about the boundaries. And if we don't know where the boundaries are, we want this form to say that.

What is happening is people are saying well gee we need to get this form signed or it won't be accepted. So we just sign it. That is not what we want.

There is a reason that this form must be executed properly. Because the federal government does not want to accept land that has problems. We want to get those problems resolved before the federal government accepts that back. That is what this form is about, that is what this certificate is about.

So it needs to be executed property and diligently and as a surveyor, as a CFedS surveyor, when you read this form, you will see that there is only a portion of it that you will have the expertise to deal with. That is what you should do. That portion and certify only to the things that you have done and that you have knowledge of and that you are qualified to certify to.

### Boundary Assurance Certificate

Last one, the fourth certificate. Boundary Assurance Certificate. This is where we put it altogether.



**HANDOUT** A full version of the BAC form can be found in the Handout section in the end of this study guide.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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The BAC is an opinion by the Chief Cadastral Surveyor as to the risk of loss or damage for the current/intended use of the land based upon the land description certificate, chain of surveys certificate and the certificate of inspection and possession.

The Chief Cadastral Surveyor is not saying the boundaries are absolutely perfect. That is not what this is.

It is his/her opinion about the risk of loss or damage. Again, go back to our example of a lease for a wheat farmer. We are going to lease this land to a farmer to grow wheat. What is our risk of loss or damage if we carry out that lease based on the information that we have gathered in our three certifications? Very low? There might be some kind of a problem. We can make that assessment.

However, again, if we are doing some major development, then maybe the risk is higher and we need to make that assessment. It is a document to convey information to the people making decisions and it is a document that as a surveyor we have expertise in creating. We can give the manager; the decision maker input so that he/she feels comfortable with the situation out here and can make a good decision. That is what this form does. That is what this certificate does.

The BAC is a statement of all known boundary location defects, conflicts, ambiguities, gaps, overlaps, unwritten rights, and failure of legal descriptions, surveys, use and occupancy and other boundary evidence for a tract of land certified to by a Cadastral surveyor or certified federal surveyor and approved by the State Cadastral Chief.

This is going to tell us everything we can find about that parcel. We have gathered all the information, we have done field visits, we have gathered everything we can about the description, about the survey, about the parcel on the ground itself now we have combined all of this into basically a report.

### Boundary Assurance Certificate

- The BAC is an opinion by the Chief Cadastral Surveyor as to the risk of loss or damage for the current /intended use of the land based upon the Land Description Certificate, Chain of Surveys Certificate and the Certificate of Inspection and Possession.

### Boundary Assurance Certificate

- The BAC is a statement of all known boundary location defects, conflicts, ambiguities, gaps, overlaps, unwritten rights, and failure of legal descriptions, surveys, use and occupancy, and other boundary evidence for a tract of land, certified to by a Cadastral Surveyor or Certified Federal Surveyor, and approved by a State Cadastral Chief.



## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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The BAC is not an official survey or a local survey and should not be used in lieu thereof. An actual survey may reveal further evidence or clarify the proper use of existing evidence thereby resulting in a different corner or boundary location than certified to.

We need to make this clear now. This is not saying that the existing surveys are perfect. This is not saying the existing legal description is perfect. It is reporting the information and giving an opinion. Sometimes the opinion might be you need to get a survey. We have a problem here and it needs to be surveyed. Sometimes it is going to be for the use that you have in mind right now. The opinion is there is not going to be a risk of loss.

However if you are going to use it for other things in the future, then there may be, so you may have to revisit it in the future if you are to change that use to get a new opinion and you may need a survey or something else.

This is gathering all the information. It is interesting because as I look at these, what I see is the process exactly the process that the BLM uses when a request comes from another agency or an internal request.

This is exactly what we do and we put all of this information together, and then we begin to prepare special instructions and decide how to do the survey. This is all of the pre-work so that we can understand everything about that job, everything about that parcel, before we begin making decisions and before we decide if a survey is actually needed.

### Boundary Assurance Certificate

- NOTE: A BAC is not an official survey or a local survey, and should not be used in lieu thereof. An actual survey may reveal further evidence or clarify the proper use of existing evidence thereby resulting in a different corner or boundary location than certified too.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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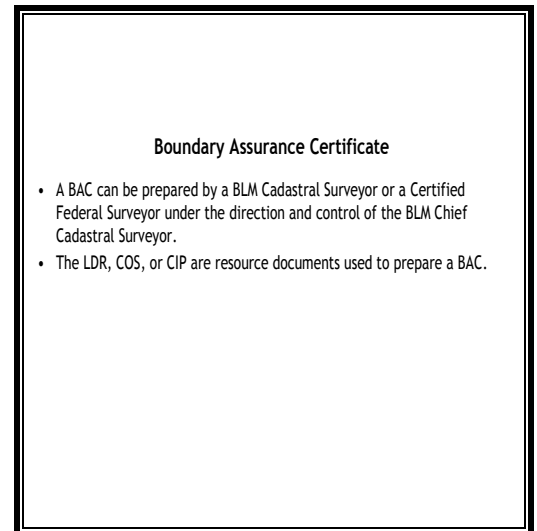
### Purpose of the BAC

The purpose of a BAC is to render an opinion on the risk of loss or damage of a current intended use of land. That is the purpose and keep that in mind. That is all that is.



BAC can be prepared by BLM Cadastral surveyor or a certified federal surveyor under the direction and control of the BLM Chief Cadastral Surveyor.

Again, just either a Cadastral surveyor or a certified federal surveyor. Those are the only two that are authorized to prepare these documents and it is in a working relationship with the Chief Cadastral Survey that you are going to be preparing these.



The LDR, Land Description Review; the COS, chains of surveys; or the CIP, the certificate of inspection and possession are resource documents used to prepare a BAC.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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Basically all three of those documents have to be prepared before we begin to prepare the BAC. That is the groundwork, all of that information goes together and then we put together the BAC. And here is that certification, subject to the exceptions, conditions and stipulations listed on Schedule B and here when you look at this form, you will there is a place for all of that. There is a place document everything we have found out about this parcel.

So subject to those things, I, the Chief Cadastral Surveyor, certify that the critical records have been examined and boundaries have been inspected and as of the date of boundary assurance shown in Schedule A, assure that the United States of America will not sustain or incur a loss or damage based upon the current/intended use of the land or interest in land as shown in Schedule A by reason of the land description review, we've done that, the chain of surveys and the certificate of inspection and possession.

We have used all three of those documents to come to this determination about how the BAC, that we are not going to have a loss or damage. It is signed by the Chief Cadastral Surveyor just like the others and the form is in the case file, just like the other four.

### Boundary Assurance Certificate

- Subject to the exceptions, conditions and stipulations, listed in Schedule B, I, \_\_\_\_\_, Chief Cadastral Surveyor certify that critical records have been examined and boundaries have been inspected, and as of the Date of Boundary Assurance shown in Schedule A, assure that the United States of America will not sustain or incur a loss or damage, based upon the current/intended use of the land or interest in land shown in Schedule A, by reason of:

### Boundary Assurance Certificate

1. Land Description Review;
2. Chain of Surveys; and
3. Certification of Inspection and Possession.
  - Signed by the State Chief Cadastral Surveyor
  - This form is to be retained in the official case file

## **STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2**

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### **Filing the Boundary Standard Certificates**

So now at the end of this process, we have a complete record about the boundary status of that parcel. We know about the legal description, we know about all of the surveys, and everyone that has visited the monuments, we know about the monumented corners, the measurements of the lines, and we have made a determination or an opinion about the need for further surveys or not for the intended purpose of that property.

That all goes into the file and if the use of that land is going to change then we may need to update this information, but we don't need to go back and redo it all, we already have a chain of surveys, we have to build on what we already have on that chain of surveys.

We have already reviewed the legal description. We are going to look at it again. But we probably don't have to redo everything. We just have to build on everything we have already done.

So when the whole thing is done, we have this package to give to the management, the decision makes, the tribe, the individual, the Bureau of Indian Affairs, whoever, that tells them everything that we have been able to gather about the determination of where that parcel is and the state of the boundaries and hopefully will allow them to make good decisions about what they need to do for intended purposes of that parcel. Well, this concludes the portion on the boundary evidence standards.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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### Standards for State Authority Surveys

We want to go on now and look at standards for state authority surveys. We are kind of changing gears here a little bit but this is another place that you as a CFedS are obviously going to be called to perform these duties.

First of all let me say that it is anticipated that our longer range goal, and when I say long range goal, I don't mean 25 years from now, I mean much sooner than that, it is anticipated that all the boundary surveys within Indian country are performed under federal authority, not state authority.

That doesn't mean that BLM is going to do all those surveys, that means that you as CFedS are going to do those surveys, but under federal authority. We are already working on some business practices that will allow that to happen in certain situations. We will see how that develops over the years. But that is our long-term goal.

However we realize that there are going to be surveys executed under state authority and we want to make sure that they meet the needs of the Secretary and the needs of the tribes and the Bureau of Indian Affairs. So let's go through that briefly.

As a CFedS where there is a federal interest and so here we are not even just talking about Indian land, we are talking about federal interest, there may be federal land, forest service, Bureau of Land Management, park service on the other side, where there is a federal interest your surveys will be required to meet the following standards. This is what we want you to do when you do a survey when there is federal interest land.

### Standards for State Authority Surveys

### Standards for State Authority Surveys

As a CFedS, where there is a federal interest, your surveys will be required to meet the following standards :

1. Meet all state standards for land surveys.
2. Surveys will be filed/recorded, as appropriate, in the state, county, township, parish, borough, etc.
3. Surveys in Indian country will also be filed with the BIA Land Title Record Office (LTRO).

## **STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2**

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### **Meet State Standards**

First it must meet all state standards for land surveys that have to happen.

One of the things that has been happening in the past, is within Indian reservations, certain states do not require plats to be filed basically, they do not require the surveys to meet the state standards and therefore many of the surveys on Indian lands within reservation do not meet state standards, are not filed and are really an inferior product. We want to get past that.

One of the things that we want to do is to make sure that all of these surveys are of high standards. That is what we are aiming for.

### **Filed Per State Requirements**

Next. Surveys will be filed or recorded as appropriate in the state, county, township, parish, boroughs, etc., wherever yours are supposed to be filed. Now there are situations some counties will not file surveys that are executed on the reservations. They refuse. There are some situations where tribes are not sure they want surveys of their land filed with the county. We just have to work through that.

We have some short-term goals, which I will show you here in a minute. There are some ways to deal with that. But where we want to get to is all of these are filed in the state, county, township or wherever your area files surveys.

### **Filed with land Title and Records Office**

Now to deal with the places where we are having trouble getting that done, we also want to make sure that your surveys in Indian country will also be filed with the BIA Land Title Records Office, the LTRO. They need to be there. There needs to be a copy there. Even if it is filed with the county, there needs to be a copy at the LTRO.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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If you happen to be in a place where the county, state or parish or whatever you are working in refuses to file, absolutely make sure that there is a copy is at the LTRO office. Then we can find it. Then we will know it is there.

However, I think that we will work as a group, the Bureau of Land Management with the CFedS and the BIA and the Office of Special Trustee and tribes to try and work that out so that we can get those filed in the county, or the state or whatever is appropriate for your area. But make sure that you get a copy in the LTRO.

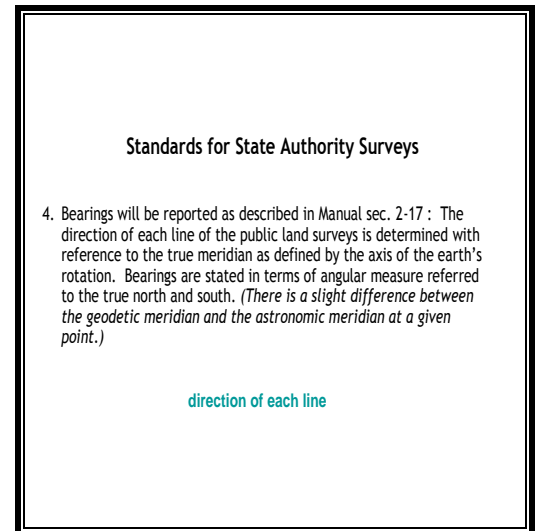
### Reporting Bearings

Bearings will be reported as described in the Manual, Section 2-5. Here is what it says. The direction of each line of the public land surveys is determined with reference to the true meridian, as defined by the axis of the earth's rotation.

Bearings are stated in terms of angular measure referred to true north or south bearings. (There is a slight difference between geodetic and the astronomic meridian at any given point.). So what are we talking about here?

Astronomic and Geodetic bearings are very slightly different. For our purposes either is acceptable unless you are dealing with some larger scale surveys, then you may have to deal with the difference. What we are usually talking about is maybe 2 or 3 or 4 seconds in bearing between the astronomic and geodetic. For boundary surveys for our purpose, that is not a problem, so either one of those works.

One of the things I want to point out to you is when you look at our slide it says, the direction of each line of the public land survey is determined, it says the direction of each line, we are not talking about determining, or lets say we get a shot on Polaris and so we determine we get an astronomic bearing for the east boundary of our section and then we basically do a plain survey of everything else we are surveying, based on the angles we turned.



## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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That is not what we are talking about; we are talking about reporting true bearing for every line of the survey. And I want to talk about this a little bit.

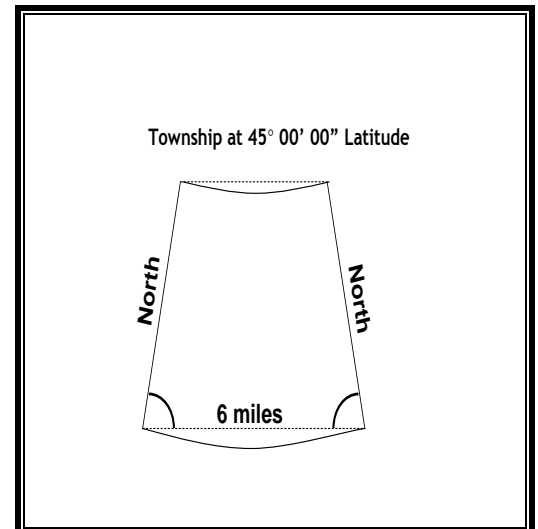
### Convergence of Meridians

For some of you this is going to be review; for some it's going to be stuff that you knew about but haven't thought about because you haven't worked this way with lines and bearings before.

First of all, if I go to the equator and I run a line, a meridian, straight north, eventually I intersect the North Pole. If I move one mile east or west along the equator and run another meridian straight north, eventually I intersect the North Pole.

Those two lines eventually meet. They converge. Of course the farther north you go, the more pronounced the convergence is. That is what we want to talk about and how we want to deal with that.

So here we have a diagram, this is at 45 degrees latitude and we have two meridians both going exactly north, and I have exaggerated in the diagram just so we can see it a little better, two lines going north and they do converge slightly obviously not near this much, but they do converge. These two lines are 6 miles apart.



So let's look a little bit about what happens here. First of all, lines of latitude, parallels of latitude are lines of constant bearing that's number one.

They are curved lines; the bearing does not change if we have a



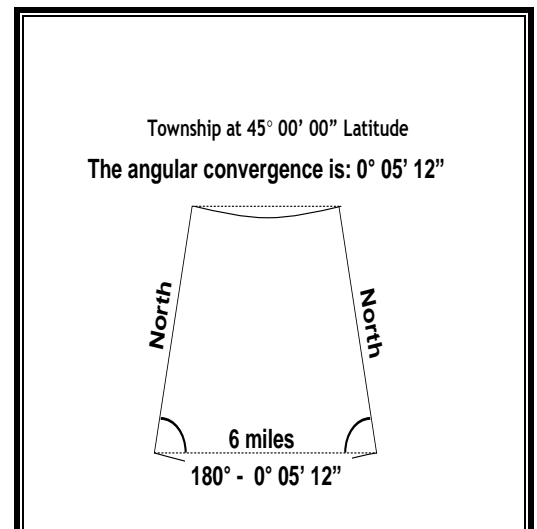
## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

line that has the exactly same latitude all along that line, the bearing does not change. It is a curved line; it is a line of constant bearing.

So the angular convergency at 45 degrees for 2 lines, two meridians, directly north, true north, that is what a meridian is, a line that north south line that is true north. 2 meridians 6 miles apart is 5 minutes and 12 seconds. I will show you a table where we get that information.

What that means is that if I go down here and turn an angle to this corner over here and I have a direct line of site between those corners, and each of those corners is exactly on the 45<sup>th</sup> parallel, they are exactly 45 degrees latitude and they are exactly 6 miles apart and I turn that angle, it is not going to equal 180 degrees.

Both these lines are north, they are both meridians, both true north, and they are 6 miles apart and I can see directly between them, I have a straight line between them and I turn those 2 angles it will not be 180 degrees. What will it be? It will be 180 degrees minus 5 minutes 12 seconds, the convergency.



### Linear Convergence

In a regular township, the meridians will converge by 0.726 chains that are at 45 degrees latitude.

Convergency does two things; there is an angular convergency that we just talked about, at this latitude 2 meridians that are 6 miles apart will converge at 5 minutes 12 seconds.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

However, there is another form of convergency that has to do with area in a township, 36 square miles at 45 degrees the meridians are going to converge by 0.726 chains. That is a function of area, no matter what the shape of the area, at 45 degrees an area of 36 square miles is going to converge by 0.726 chains.

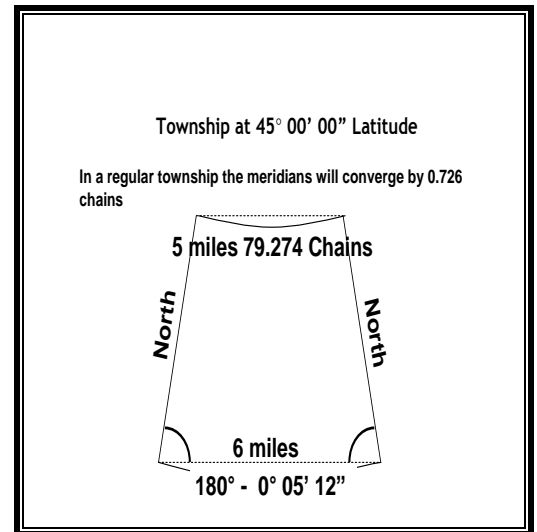
Lets see what that does. That makes the north boundary of this township we laid out, not 6 miles like the south boundary, it makes the north boundary 5 miles 79.274 chains long. It is 0.726 chains less than the 6 miles along the south boundary because the meridians are converging and we are reporting true bearing.

So if you were to survey a parcel 36 square mile parcel at 45 degrees in latitude and your work was perfect and you reported true bearing on every line, when you calculated your closure, you would find that it miscloses by 0.726 chains because based on the numbers on the bearings, this north boundary should be 6 miles but because there is convergency it is not.

First of all let's look at the standard field tables, page 199 in the standard field tables. This chart, table 11, convergency of meridians 6 miles long and 6 miles apart, they are really talking about a township, right? And differences of latitude and longitude. Now I want to concentrate on this part over here that column.

Let's look at what happens at 45 degrees. We go down here to 45 degrees and what we see is the convergency at 45 degrees for these two meridians is 72.6 links, and that is what we had on the other one, the convergency in angle is 5 minutes 12 seconds.

This table tells us for the various latitudes how much the meridians are converging angularly and it also tells us about misclosures based on area. This is for an entire township. We can divide that to find out how much it would miscloses for a section or any other area. And then there is one more chart that has very similar information found in the standard field tables as well.



**TABLE 11.—CONVERGENCY OF MERIDIANS, SIX MILES LONG AND SIX MILES APART, AND DIFFERENCES OF LATITUDE AND LONGITUDE.**

Lat.	Convergency.		Difference of longitude per range.		Difference of latitude for—	
	On the parallel.	Angle.	In arc.	In time.	1 mL.	1 Tp.
°	Links.	' "	' "	Seconds.		
25	33.9	2 25	5 44.34	22.96		
26	33.4	2 32	5 47.20	23.15		
27	37.0	2 39	5 50.22	23.35		
28	38.6	2 46	5 53.40	23.56	0.871	6.220
29	40.2	2 53	5 56.74	23.78		

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

Convergence						
Lks.	''	''	''	''	''	''
35	50.9	3 38	6 20.78	25.39		
36	52.7	3 46	6 25.33	25.70		
37	54.7	3 55	6 30.52	26.03	0.870	5.221
38	56.8	4 4	6 35.76	26.38		
39	58.8	4 13	6 41.27	26.75		
40	60.9	4 22	6 47.06	27.14		
41	63.1	4 31	6 53.15	27.54	0.860	5.216
42	65.4	4 41	6 59.56	27.97		
43	67.7	4 51	7 6.29	28.42		
44	70.1	5 1	7 13.39	28.89		
45	72.6	5 12	7 20.86	29.39		
46	75.2	5 23	7 28.74	29.92	0.869	5.211
47	77.8	5 34	7 37.04	30.47		
48	80.6	5 45	7 45.80	31.05		
49	83.6	5 59	7 55.06	31.67		
50	86.4	6 12	8 4.83	32.32		
51	89.6	6 25	8 15.17	33.03	0.868	5.207
52	92.8	6 39	8 26.13	33.74		
53	96.2	6 54	8 37.75	34.52		
54	99.8	7 9	8 50.07	35.34		

This chart has increments of curvature and if you read the subtitle, change in azimuth due to convergency of meridians and it is by 10 chain increments, departure and chains, east west and if we go down to 45 degrees, we will find that right over here we have for 80 chains, 52 seconds, well if you take 6 times 52 seconds, you get back to that 5 minutes and 12 seconds that we had on the previous chart.

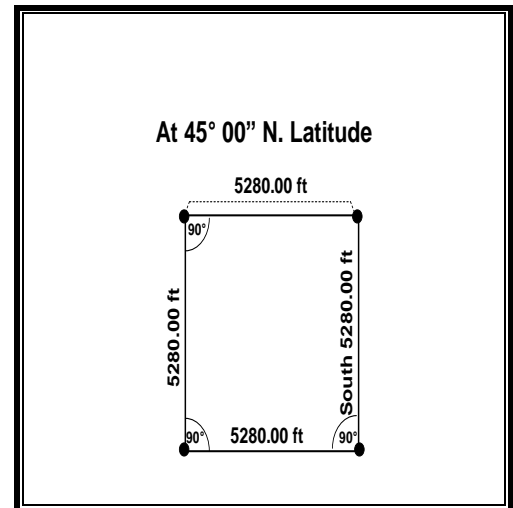
These two charts work together. They give you the information in a little different way. Those are available on the standard field tables and you might want to look at those. So lets just look at some other examples and practically how this works.

TABLE 18.—INCREMENTS OF CURVATURE												
Change in azimuth due to convergency of meridians												
Lat.	Departure in chains										Lat.	
	10	20	30	40	50	60	70	80	90	100		
0	''	''	''	''	''	''	''	''	''	''	''	0
25	0 3	0 6	0 9	0 12	0 15	0 18	0 21	0 24	0 27	0 30	0 33	25
26	0 3	0 6	0 10	0 13	0 16	0 19	0 22	0 25	0 28	0 32	0 35	26
27	0 3	0 7	0 10	0 13	0 17	0 20	0 23	0 26	0 30	0 33	0 37	27
28	0 4	0 7	0 10	0 14	0 17	0 21	0 24	0 28	0 31	0 35	0 38	28
29	0 4	0 7	0 11	0 14	0 18	0 22	0 25	0 29	0 32	0 36	0 39	29

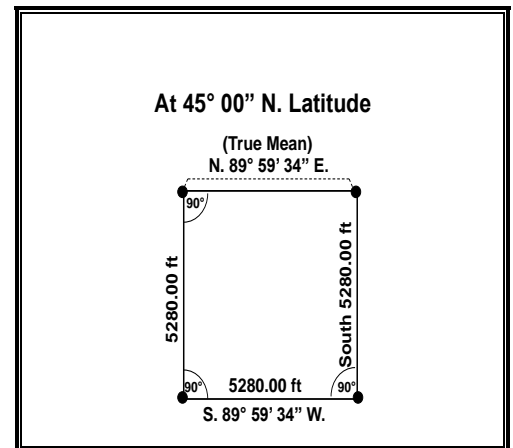
## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

### True Bearing of Each Line

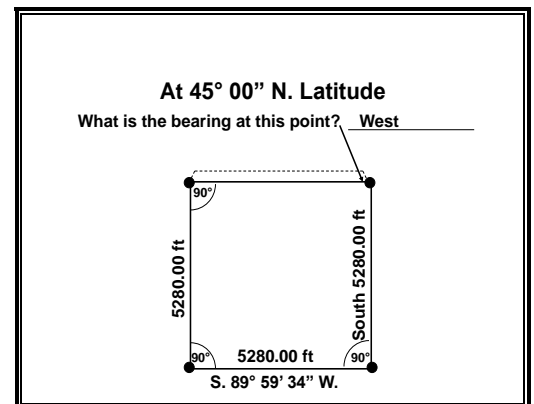
Now we are going to see what happens if we lay out a square, a perfect square, 90 degree angles all the way around, one mile on each side at 45 degrees north latitude.



When we are talking true bearing what happens to that square? If we start at a point and we survey south. Exactly south true bearing and we turn exactly 90 degrees, and we survey exactly 1 mile, we turn exactly 90 degrees again for exactly 1 mile. We turn exactly 90 degrees again, what is the distance up here? What is that distance? Remember these are all true bearing, so the distance is 5280.00 ft. True bearing does not affect that. We turned 90 degrees at all of these angles. It is going to be 5280.00 feet exactly a perfect square.

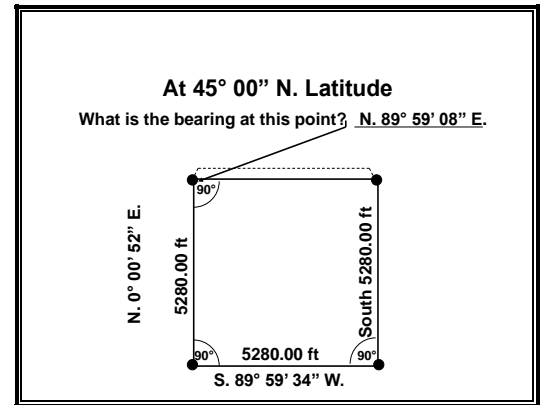


But what is the bearing? Well, let us think about that. We have curvature to deal with because we are dealing in true bearing. The bearing is North 89° 59' 34" E. That is the mean bearing of that line the true mean bearing of that line. That is because we have gone a mile west and we have to deal with curvature because we are on a true bearing basis. So, let us look at a couple more things. What is the bearing of the south boundary? It is South 89° 59' 34" W. Those two lines are parallel. So let us look at a few more things.



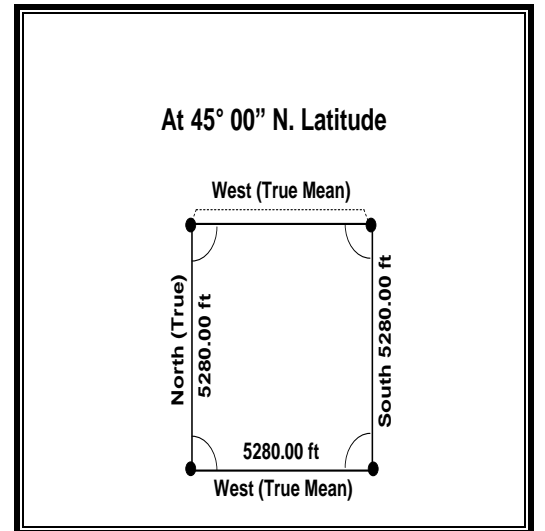
## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

What is the bearing of the line at the northeast corner of this diagram? So we go up to there to that northeast corner, what is the bearing of that north line? Well, the bearing at that point is west because we are back over at the point we began at back over turning off our true meridian, so at that point it is west. The bearing over there about a mile away, a mile west of there the bearing is going to be  $89^{\circ} 59' 08''$  that is 52 seconds at 45 degrees latitude. That is what we found in our Table, 52 seconds per mile. So you can see that when we are dealing with true bearing we have to account for that curvature. Account for that convergency and our angular closures or angles are not going to add up to the bearings unless we take in the factors from the table we just looked at for curvature.

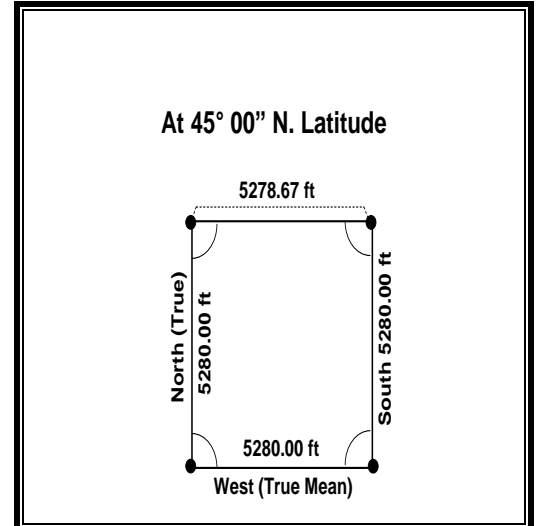


Let's look at another example. We are going to do almost the same but something different. We are going to survey south, we begin at a point and we are going to go south. This time instead of turning 90 degrees, we are going to survey a line that is true west, the mean bearing of this line is true west, 5,280 feet.

Then we are going to survey north on the meridian, true north 5,280 feet. Then we are going to connect those two lines, true west, mean bearing. So what is the distance of this line now? 5,278.67 feet. These meridians are converging. If we use true bearing for everything, then that north boundary is going to be less than 5,280 and again, I got this number from the tables.



## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

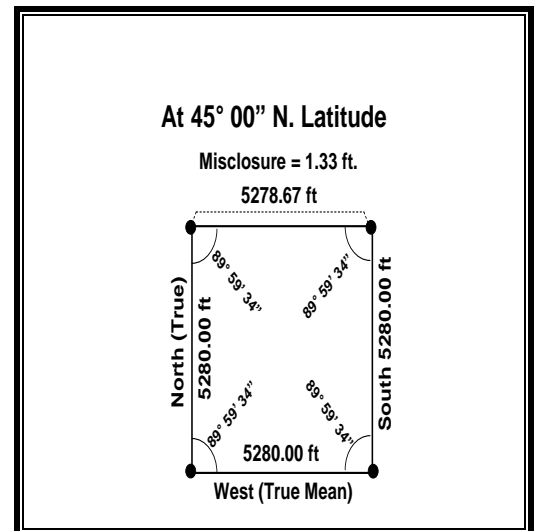


What you are going to find is that if you use true bearings for all of your lines around this parcel, when you calculate your closure, you are going to find that it miscloses by 1.33 feet, if you did your work perfectly.

Not because there are errors in the work, but because the meridians are converging and you are using true bearing not angular, you are not calculating these by all of the angles that you turned, you are calculating this closure based on the true bearings of the lines.

And these angles would be 89, 59, 34. All of them. That is what the angles would be to get mean bearings across there. And those are all cardinal lines now, cardinal mean bearing lines.

Take a little time to work through this, look at those tables, and make sure you get a good understanding of what is happening here. Because it is important that we report true bearing on each line of the survey, not just that we have reported true bearing on one line of the survey and then turned angles and computed bearings off of that.



## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

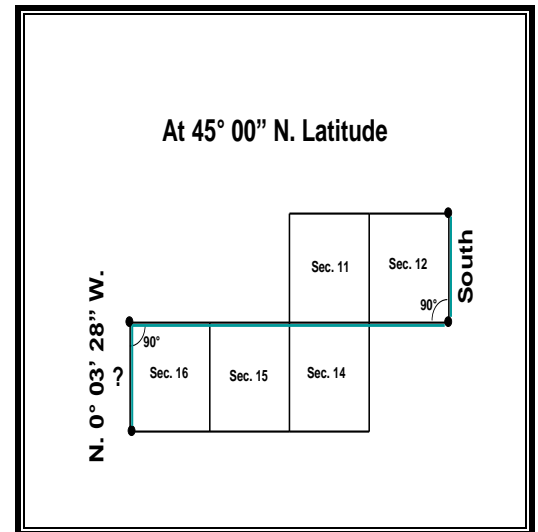
Here is an example. Lets say we are doing a little larger job. And first of all, we survey the east boundary of section 12 and we find that to be south.

We then survey this south boundary of 11 and 12 and the north boundary of 15 and 16, we have surveyed four miles, line of site, we turn that angle of 90 degrees and we happen to be able to see all the way four miles across to this other corner and we have turned 90 degrees and then we turn 90 degrees south and we can see the next corner.

We just happen to find them all right where they are supposed to be. Well, what is the bearing of this west boundary of 16? Is it south? We started with a south bearing and we turned two 90-degree angles. Is it south? The answer is no, it is not south because the meridians are converging.

These two lines are four miles apart, therefore the convergency at 45 degrees for two lines four miles apart is 0 degrees, 3 minutes, 28 seconds. The bearing of that line is north 90 degrees, 3 minutes, 28 seconds west. That is the bearing that we want to report.

We don't want to report north for that line because we started with an astronomic bearing on the east boundary of 12 and then turned angles to calculate a bearing over here on the other side. The Manual says we are calculating the true bearing of each line in a survey. So I hope that helps clarify what is going on there.

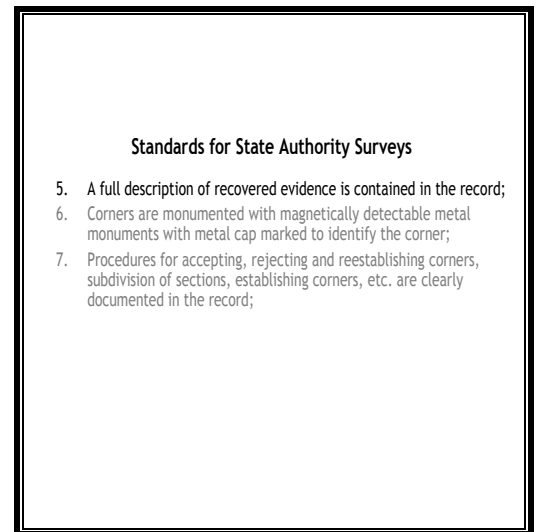


## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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### Corner Description and Monumentation

Now we also want a full description of recovered evidence. We want the record to contain a full description of recovered evidence; corners are monumented with magnetically detectable metal monuments with metal cap marked to identify the corner.



We want it to identify the corner, not just some made up name, but what the corner really is. If it is a 16<sup>th</sup> corner, it should say it's a 16<sup>th</sup> corner. If it is a 64<sup>th</sup> corner, it should say it's a 64<sup>th</sup> corner. If it is a section corner, it should say it's a section corner. We don't want plastic caps out there marked with just the surveyor's LS number. The people paying for these surveys need to know what these monuments are.

Resource people need to be able to come to a monument, know what it is, know where they are and be able to do their business based on those monuments that are out there. If a resource person, land manager, an owner, a homeowner comes and looks at this and all they find is a rebar with a plastic cap with an LS number, they don't know what that is supposed to monument, but if says the south 16<sup>th</sup> between 27 and 28, we know where we are and what corner that is. And that is what we want, metal monument with a metal cap marked to identify the corner.

### Complete Documentation

We want the record to contain the procedures for accepting, rejecting, reestablishing corners, subdivision of sections, establishing corners, etc. We want it to be clearly documented in the record.



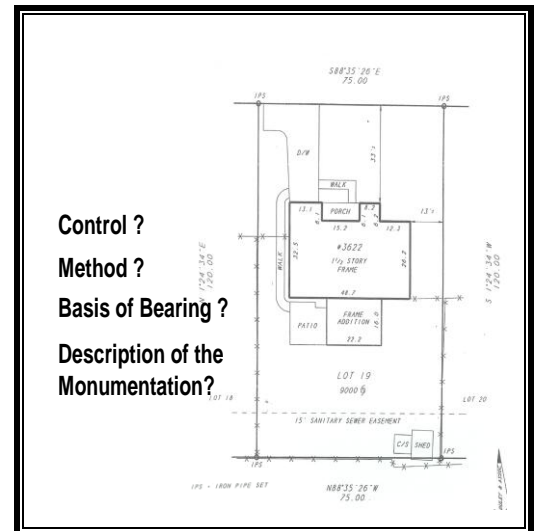
## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

This is really important when we are creating this survey document. The record needs to be very clear about what happens. I want to show you an example. This is a real survey plat. I took out the title block and some other information to kind of protect the guilty here, but if you look at this, we see first of all down here they say that iron pipe set, that is what IPS means, and they actually have an iron pipe set at each of these corners, yet there is nothing on this document anyplace that describes what methods they used, what control they used.

There is nothing about that. As we look at this document, we begin to have some questions, like what was the control, there is nothing that talks about it. All there is is some bearings and distances and saying where some monuments were set. What is the method? Did we come record bearing and distance from some other monuments? Did we proportion? Are we using it based on some kind of a plat? What is our reference?

How did we determine where those monuments go? Basis of bearings? There are bearings reported to the second, but there is nothing about the basis of bearing or what those refer to. Description of the monumentation. It says iron pipe set. Well, what does that mean?

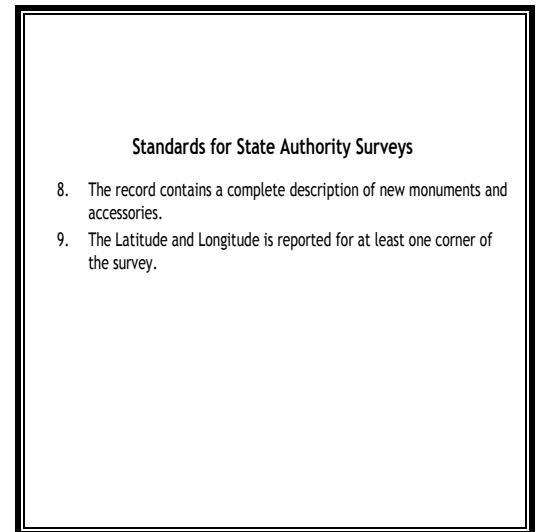
There are a lot of different sizes and shapes and kinds of iron pipes. And it says nothing about any kind of cap that might be on it and nothing about how it might be marked. The record should be clear and should contain all the information about the monument, how it is set, how it is marked, and it should be a metal monument, give a size and all of that kind of information.



## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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The record should contain a complete description of new monuments and accessories. The plat that we just looked at, did not. Iron pipe set. That is not a complete description. We need a complete description of the monument set. How they are marked, that type of information.



### Geodetic Position

Latitude and Longitude is reported for at least one corner of the survey. Now again we talked earlier about the Geographic Coordinate Database, the GCDB, and how important that is in the building of a good GIS, a GIS that is useable that does the kinds of things people expect it to do.

That base layer, it is important that it is accurate and it accurately identifies parcel boundaries, land boundaries. The only way to do that is to get good geographic position on surveys as we do them.

So one of the requirements is to report a longitude and latitude on at least one corner of every survey that you do. That allows us to compute accurate coordinates for every corner on your survey and often times update the position of corners in adjacent surveys and begin to really tighten up the coordinate values and the position of all of the corners within a township or within that area. So that is a very important one.

It's a thing that is much easier to do now that we have GPS that we use on a lot of surveys, and even when GPS is not used, it is still important that we report a lat and long for at least one corner on the survey.

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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### Conclusion

All right. So we have completed our standards for boundary evidence. We have looked at what those standards are and we have introduced you to those.

I hope that we have covered the information that we talked about in the beginning. As we look at what we talked about in the beginning we said there was going to be an introduction to the standards for boundary evidence. I think that we have done that.

I think now that you can see how you as a CFedS fit in to this vision as to how we are going to document boundary evidence and this new business practice.

We have reviewed the four certificates and you have them in front of you and you can obviously see the kinds of information that needs to be gathered to prepare them properly and I hope that you will feel comfortable in doing that.

Again, this is something that is done under the direction and control of the Chief Cadastral Surveyor, so what do you want to do? You either want to make contact either with your BILS surveyor, that is the BLM surveyor that is located in the Bureau of Indian Affairs regional office, talk with him/her, get to know him/her, get to work with them so that anytime you have a question, anytime you are not sure about the procedure, you want direction to make sure that you are doing it right, it is going to be acceptable by the Chief Cadastral Surveyor, talk to that person or get in touch with the state Cadastral office for direction especially on the first few that you might do.

Make that contact so that you are all on the same page and that you are all working towards the same goal, and I think the process will go much smoother. So I hope that you now feel comfortable with what is wanted here, what the purpose of these documents is, and how they are going to be prepared.

And then last, the standards for a CFedS state authority survey, which we have just gone through. I hope that you can see what the

#### Standards for Boundary Evidence

- Introduction of the Standards for Boundary Evidence
- Review the four certificates
- Examine the standards for CFedS State Authority Surveys

## STANDARDS FOR INDIAN TRUST LANDS BOUNDARY EVIDENCE – PART 2

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purpose is, we are not just trying to add some additional requirements that make it more difficult for you, there is a reason for each one of those requirements that we have placed there.

We do not believe are a huge burden but we believe that they increase the value of the survey and the documents you are creating tremendously and so we really encourage you to do that and I hope you understand now why that is required and really how to go about it. If you have questions, talk to your BILS, talk to your Cadastral Chief and we hope that that can be resolved and you will feel comfortable with that.

This concludes the boundary standards evidence; I hope you feel comfortable with those now and I hope that you see where as a CFedS you really fit in to the vision for how the Secretary plans to carry out the trust responsibilities in Indian land.

In your handouts, you will find Standards for Indian Trust Lands Boundary Evidence Certificates are provided as an example of how the certificates are completed. The surveyor may be ask to complete portions of the Certificate of Inspection and Possession (CIP) or to point out the corners and boundaries to the official completing the CIP. In this case the surveyor is not completing the CIP but has provided a statement to be attached to the CIP.



**QUIZ** It's time to take the Course 7  
Quiz which you can access from CFedS website.



**HANDOUT**

**CERTIFICATE OF INSPECTION AND POSSESSION**  
(Form # 1)

This relates to an acquisition of the following described land, or an interest therein, by the United States of America.

**A. Property and project information:**

1. The acquiring federal agency is: [name the agency]

2. The name and address of the owner(s) of the property is:

[name and address of owner]

3. The property is identified and/or described as follows:

[insert some or all of the following: agency parcel number and project name, street address, acreage, common name of property or other reference sufficient to identify it; plus the name of the county and state where it is located; plus, if available, a legal description here or on an attached exhibit]

4. The estate(s) to be acquired is/are:

[insert and identify estate (ex: fee simple, utility easement)]

5. The condemnation proceeding name and civil action number are:

[if applicable, insert the condemnation proceeding name and civil action number]

**B. Certification:** I hereby certify that on [date] \_\_\_\_\_, I made a personal examination and inspection of that certain tract or parcel of land identified above, and that I am fully informed as to the boundaries, lines and corners of said tract. I also spoke with the above-named owner(s) and with any other occupants (identified below) of said land. On the basis of my inspection and inquiry, I hereby certify that the following statements are accurate, or, if one or more statements is not accurate I have marked it/them and I have indicated on this sheet or on an attachment my findings which vary from the statement:

\_\_\_\_\_  
(date)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
(print name, title, address and telephone number)

1. No work or labor has been performed or any materials furnished in connection with the

making of any repairs or improvements on said land within the past \_\_\_\_\_ months that would entitle any person to a lien upon said premises for work or labor performed or materials furnished.

2. There are no persons or entities (corporations, partnerships, etc.) which have, or which may have, any rights of possession or other interest in said premises adverse to the rights of the above-named owner(s) or the United States of America.
3. There is no outstanding unrecorded deed, mortgage, lease, contract, or other instrument adversely affecting the title to said premises.
4. There are no vested or accrued water rights for mining, agricultural, manufacturing, or other purpose; nor any ditches or canals constructed by or being used thereon under authority of the United States, nor any exploration or operations whatever for the development of coal, oil, gas or other minerals on said lands; and there are no possessory rights now in existence owned or being actively exercised by any third party under any reservation contained in any patent or patents heretofore issued by the United States for said land.
5. There are no outstanding rights whatsoever in any person or entity (corporation, partnership, etc.) to the possession of said premises, nor any outstanding right, title, interest, lien, or estate, existing or being asserted in or to said premises except such as are disclosed and evidenced by the public records, as revealed by the government's title evidence.
6. Said premises are now wholly unoccupied and vacant except for the occupancy of the following, from whom disclaimer(s) of all right, title and interest in and to said premises, executed on [date] \_\_\_\_\_ has (have) been obtained:

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This CIP form is taken from the Department of Justice Title Standards 2001.

**CERTIFICATE OF INSPECTION AND POSSESSION**  
(Form # 2)

This relates to an acquisition of the following described land, or an interest therein, by the United States of America.

**A. Property and project information:**

1. The acquiring federal agency is: [name the agency]

2. The name and address of the owner(s) of the property is:

[name and address of owner]

3. The property is identified and/or described as follows:

[insert some or all of the following: agency parcel number and project name, street address, acreage, common name of property or other reference sufficient to identify it; plus the name of the county and state where it is located; plus, if available, a legal description here or on an attached exhibit]

4. The estate(s) to be acquired is/are:

[insert and identify estate (ex: fee simple, utility easement)]

5. The condemnation proceeding name and civil action number are:

[if applicable, insert the condemnation proceeding name and civil action number]

**B. Certification (physical inspection):** I hereby certify that on [date]\_\_\_\_\_ I made a personal examination and inspection of that certain tract or parcel of land identified above, and that I am fully informed as to the boundaries, lines and corners of said tract. On the basis of my inspection, I hereby certify that the following statements are accurate, or, if one or more statements is not accurate I have marked it/them and I have indicated on this sheet or on an attachment my findings which vary from the statement:

---

(date)

---

(signature)

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(print name, title, address and telephone number)



1. No work or labor has been performed or any materials furnished in connection with the making of any repairs or improvements on said land within the past \_\_\_\_\_ months that would entitle any person to a lien upon said premises for work or labor performed or materials furnished.
2. There are no persons or entities (corporations, partnerships, etc.) which have, or which may have, any rights of possession or other interest in said premises adverse to the rights of the above-named owner(s) or the United States of America.
3. There are no vested or accrued water rights for mining, agricultural, manufacturing, or other purpose; nor any ditches or canals constructed by or being used thereon under authority of the United States, nor any exploration or operations whatever for the development of coal, oil, gas or other minerals on said lands; and there are no possessory rights now in existence owned or being actively exercised by any third party under any reservation contained in any patent or patents heretofore issued by the United States for said land.
4. There are no outstanding rights whatsoever in any person or entity (corporation, partnership, etc.) to the possession of said premises, nor any outstanding right, title, interest, lien, or estate, existing or being asserted in or to said premises except such as are disclosed and evidenced by the public records, as revealed by the government's title evidence.
5. Said premises are now wholly unoccupied and vacant except for the occupancy of the following, from whom disclaimer(s) of all right, title and interest in and to said premises, executed on [date] \_\_\_\_\_ has (have) been obtained:

**C. Certification (owner inquiry):** I hereby certify that on [date]\_\_\_\_\_ I spoke with the above-named owner(s) and with any other occupants (identified below) of said land. On the basis of my inquiry, I hereby certify that the following statements are accurate, or, if one or more statements is not accurate I have marked it/them and I have indicated on this sheet or on an attachment my findings which vary from the statement:

\_\_\_\_\_  
(date)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
(print name, title, address and telephone number)

1. No work or labor has been performed or any materials furnished in connection with the making of any repairs or improvements on said land within the past \_\_\_\_\_ months that would entitle any person to a lien upon said premises for work or labor performed or materials furnished.

2. There are no persons or entities (corporations, partnerships, etc.) which have, or which may have, any rights of possession or other interest in said premises adverse to the rights of the above-named owner(s) or the United States of America.
3. There is no outstanding unrecorded deed, mortgage, lease, contract, or other instrument adversely affecting the title to said premises.
4. There are no vested or accrued water rights for mining, agricultural, manufacturing, or other purpose; nor any ditches or canals constructed by or being used thereon under authority of the United States, nor any exploration or operations whatever for the development of coal, oil, gas or other minerals on said lands; and there are no possessory rights now in existence owned or being actively exercised by any third party under any reservation contained in any patent or patents heretofore issued by the United States for said land.
5. There are no outstanding rights whatsoever in any person or entity (corporation, partnership, etc.) to the possession of said premises, nor any outstanding right, title, interest, lien, or estate, existing or being asserted in or to said premises except such as are disclosed and evidenced by the public records, as revealed by the government's title evidence.
6. Said premises are now wholly unoccupied and vacant except for the occupancy of the following, from whom disclaimer(s) of all right, **title** and interest in and to said premises, executed on [date]\_\_\_\_\_ has (have) been obtained:

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This CIP form is taken from the Department of Justice Title Standards 2001.

**UNITED STATES OF AMERICA  
BOUNDARY ASSURANCE CERTIFICATE**

Boundary Assurance Certificate No. \_\_\_\_\_

**Certification:** Subject to the exceptions, conditions and stipulations, listed in Schedule B, I, \_\_\_\_\_ [Print Name] \_\_\_\_\_, Cadastral Surveyor/Certified Federal Surveyor, certify that critical records have been examined and boundaries have been inspected, and as of the Date of Boundary Assurance shown in Schedule A, assure that the United States of America will not sustain or incur a loss or damage, based upon the current/intended use of the land or interest in land shown in Schedule A, by reason of:

1. Land Description Review;
2. Chain of Surveys; and
3. Certification of Inspection and Possession.

\_\_\_\_\_  
Cadastral Surveyor or Certified Federal Surveyor

\_\_\_\_\_  
Date

**Certification:** This Boundary Assurance Certificate correctly represents the records and documents compiled under my direction and control and in conformance with the requirements of the Department of the Interior Indian Trust Lands Boundary Standards, of the tract(s) or parcel(s) of land identified above.

\_\_\_\_\_  
Chief Cadastral Surveyor  
[            ] State Office

\_\_\_\_\_  
Date



## **Sample Chain of Surveys, Land Description Review and Boundary Assurance Certificate**

The following Standards for Indian Trust Lands Boundary Evidence Certificates are provided as an example of how the certificates are completed. The surveyor may be asked to complete portions of the Certificate of Inspection and Possession (CIP) or to point out the corners and boundaries to the official completing the CIP. In this case the surveyor is not completing the CIP but has provided a statement to be attached to the CIP.

**Land Description Review Worksheet**  
 United States Department of the Interior

[Redacted], Community Development, [Redacted] Tribe,  
 [Redacted] Tribal Center, [Redacted] WA 98 [Redacted]

To: BLM Oregon Cadastral Survey, P.O. Box 2965, Portland, OR 97208  
 Attention: Mary Hartel, Chief Cadastral Surveyor, Washington

Work to be performed by: [Redacted] Certified Federal Surveyor, [Redacted] WA 98 [Redacted]  
 Subject: Land Description Review (LDR) Worksheet

BIA LAND AREA CODE:	ALLOTMENT/TRACT NO.:	PURPOSE:
130	[Redacted] Lot 2, Volume 32 of Short Plats, Page 99, records of [Redacted] County, Washington	Fee to Trust conveyance

Please review the land description(s) in the attached conveyance/activity document(s) for the case identified above, please complete the attached interoffice memo and return them to me for filing in the official case file [when applicable]. The purpose for the LDR is: **Fee to Trust Conveyance**

In addition BLM is to report upon (check box(s), and within the brackets circle the service(s)):

- Condition of corner monuments based upon (existing knowledge or office investigation or field investigation)
- Condition of boundary line marking based upon (existing knowledge or office investigation or field investigation).
- Practicability of the boundaries for compliance with program purposes based upon (existing knowledge or office investigation or field investigation).
- Condition of Geographic Coordinate Data Base (GCDB).
- Acres determined from GLO/BLM records.
- Acres determined by other means.
- Other - \_\_\_\_\_

The LDR is needed by: JULY 1 - 2008

Authorized by:

Name:	Title and Contact Information:	Date:
[Redacted] [Signature]	[Redacted] (Community Development) [Redacted] Ext. 135 [Redacted] Tribe [Redacted] Tribal Center [Redacted] WA 98 [Redacted]	MAY 27-2008
[Redacted] [Print Name]		

Date Received By Cadastral Survey: \_\_\_\_\_ Received By: \_\_\_\_\_

Attachments: TO CFEDS

Preliminary title report, adjoining deeds and 50 year chain of title

*This worksheet is to be retained in the official case file*

**Land Description Review Certificate**  
 United States Department of the Interior  
 Oregon State Office  
 Bureau of Land Management  
 333 S.W. First Avenue  
 Portland, OR 97204

To: XXX Tribe

From: Mary Hartel, Chief Cadastral Surveyor  
 BLM Oregon State Office

Subject: Land Description Review (LDR) Certificate

BIA LAND AREA CODE:	ALLOTMENT/TRACT No.:	PURPOSE:
<b>130</b>	<b>Lot 2, Volume 32 of Short Plats, Page 99, records of [REDACTED] County, Washington</b>	<b>Fee to Trust Conveyance</b>

By letter dated May 28, 2008 received by this office on 6-2-2008, the land description(s) as stated in the attached conveyance document(s) for the above referenced realty/resource action has been reviewed. The following determination has been made:

*(Check one!)*

✓	The land description is acceptable as written and presented, see comments below.
	The land description has potential problems as noted below; however, the risk appears minor and the conveyance/activity should not be affected.
	The land description has potential problems and should not be used as written in the subject conveyance/activity document. The following errors and/or concerns as noted below, need to be corrected/addressed before this description should be used.

**Sufficiency of the land description to the land for the stated purpose:** The land description contained in [REDACTED] Title Report Order No. [REDACTED] is unambiguous and sufficient for a fee to trust conveyance.

**Comments/Concerns/Corrections:** Volume 32 of Short Plats, Page 99, records of [REDACTED] County, Washington is the short plat that created the subject parcel. Note 6 on sheet 2 of 2 of said short plat explains deficiencies with the description of the parent parcel and outlines the procedure used to calculate the boundaries. Since the above referenced title report refers to lot 2 of said short plat, it is my opinion that [REDACTED] Title Company has accepted the boundaries of said short plat, as recorded, as sufficient to convey title.

**Condition of corner monuments:** All monuments were found in good condition on 5-30-2008 except for the most easterly corner monument, which was disturbed by recent excavation. To perpetuate the position of this corner, two new monuments were set at a 100-foot offset along the northeasterly and southeasterly lines. In addition, new monuments were set at the intersection

of easements shown on said short plat along the northeasterly and southwesterly lines.

**Condition of boundary line marking:** The northeasterly line was created on 10-25-2007 during the subdivision of the parent parcel per Volume 32 of Short Plats, Page 99, records of ██████ County, Washington. Said line falls along a side hill of a road grade. No fence line or occupational indicators exist along this line.

Three new monuments were set along this line, two at the location of an ingress and egress easement for walkway purposes created per said short plat, and one at a 100 foot offset from the most easterly corner as noted above.

The southeasterly line falls within 0.5 feet of an existing chain link fence for most of the line except where said fence jogs around an existing shed where said fence falls 5 feet northwesterly of the line. The shed appears to have previously housed an electrical switch that now appears abandoned. Said shed (which is on skids and not attached to the ground) encroaches approximately 0.8 feet onto the subject property. In addition, a utility line was found that is interior of the subject property up to the existing shed where it then crosses onto the adjoining property. No document could be found indicating the exact location of this apparent easement. One new monument was set along this line at a 100-foot offset from the most easterly corner as noted above.

The southwesterly line was created on 10-25-2007 during the subdivision of the parent parcel per Volume 32 of Short Plats, page 99, records of ██████ County, Washington. No fence line or occupational indicators exist along this line. One new monument was set along this line at the intersection of the 60-foot ingress and egress easement created per said Short Plat.

The northwesterly line falls between an existing chain link fence and a concrete curb. The chain link fence falls between 0.4 feet and 1 foot southeasterly of the property line. The concrete curb falls between 0 feet and 1.28 feet northwesterly of the property line.

**Condition of Geographic Coordinate Data Base (GCDB):** Not applicable.

I certify that the parcel described on the attached conveyance document contains the following acreage(s):

\_\_\_\_\_ acres determined from GLO/BLM official records.

13.065 acres determined by survey.



Certification: This Land Description Review correctly represents the records and documents compiled by me or under my direct supervision in conformance with the requirements of the Department of the Interior *Standards for Indian Trust Lands Boundary Evidence*, of the tract(s) or parcel(s) of land identified above.

<i>Name:</i> [REDACTED], <i>Certified Federal Surveyor</i>	<i>Title and Contact Information:</i>	<i>Date:</i>
[Signature]	[REDACTED], PLS, CFS	6-5-2008
[Print Name]	[REDACTED], WA 98 [REDACTED]	

Certification: This Land Description Review correctly represents the records and documents compiled under my direction and control and in conformance with the requirements of the Department of the Interior *Standards for Indian Trust Lands Boundary Evidence*, of the tract(s) or parcel(s) of land identified above.

This attached opinion is based on the information supplied and the official record. Other record information not in our possession could influence this report. No warranty is expressed or implied as to the accuracy of the State authority survey.

The documents supplied to this office include:

<i>Name:</i> <i>Chief Cadastral Surveyor</i>	<i>Contact Information:</i>	<i>Date:</i>
[Signature]		
[Print Name]		

Attachments:

Title report from [REDACTED] Title Company.  
 Adjoiner deeds from [REDACTED] Title Company.  
 50-year chain of title from [REDACTED] Title Company.

*This certificate is to be retained in the official case file*

**Land Description Review Worksheet**  
 United States Department of the Interior

Community Development, [redacted] Tribe,  
 [redacted] Tribal Center, [redacted] WA 98[redacted]

To: BLM Oregon Cadastral Survey, P.O. Box 2965, Portland, OR 97208  
 Attention: Mary Hartel, Chief Cadastral Surveyor, Washington

Work to be performed by: [redacted] Certified Federal Surveyor, [redacted] WA 98[redacted]  
 Subject: Land Description Review (LDR) Worksheet

BIA LAND AREA CODE:	ALLOTMENT/TRACT NO.:	PURPOSE:
130	[redacted] Lot 2, Volume 32 of Short Plats, Page 99, records of [redacted] County, Washington	Fee to Trust conveyance

Please review the land description(s) in the attached conveyance/activity document(s) for the case identified above, please complete the attached interoffice memo and return them to me for filing in the official case file [when applicable]. The purpose for the LDR is: **Fee to Trust Conveyance**

In addition BLM is to report upon (check box(s), and within the brackets circle the service(s)):

- Condition of corner monuments based upon (existing knowledge or office investigation or field investigation)
- Condition of boundary line marking based upon (existing knowledge or office investigation or field investigation).
- Practicability of the boundaries for compliance with program purposes based upon (existing knowledge or office investigation or field investigation).
- Condition of Geographic Coordinate Data Base (GCDB).
- Acres determined from GLO/BLM records.
- Acres determined by other means.
- Other - \_\_\_\_\_

The LDR is needed by: JULY 1 - 2008

Authorized by:

Name:	Title and Contact Information:	Date:
[redacted] [Signature]	[redacted] (Community Development) [redacted] Ext. 135 [redacted] Tribe [redacted] Tribal Center [redacted] WA 98[redacted]	<u>MAY 27 - 2008</u>
[redacted] [Print Name]		

Date Received By Cadastral Survey: \_\_\_\_\_ Received By: \_\_\_\_\_

Attachments: TO CFEDS

Preliminary title report, adjoining deeds and 50 year chain of title

*This worksheet is to be retained in the official case file*

**Chain of Surveys Certificate**  
 United States Department of the Interior  
 Oregon State Office  
 Bureau of Land Management  
 333 S.W. First Avenue  
 Portland, OR 97204

To: [REDACTED] Tribe

From: Mary Hartel, Chief Cadastral Surveyor  
 BLM Oregon State Office

Subject: Chain of Surveys (COS) Certificate

BIA LAND AREA CODE:	ALLOTMENT/TRACT NO.:	PURPOSE:
130	<b>Lot 2, Volume 32 of Short Plats, Page 99, records of [REDACTED], Washington</b>	<b>Fee to Trust Conveyance</b>

By letter dated May 28, 2008 the chain of surveys for the attached land description(s) for the above referenced realty/resource action has been complied. The following determination has been made:

*(Check one!)*

✓	The land surveys are acceptable, see comments below.
	The land surveys have potential problems as noted below; however, the risk appears minor and the conveyance/activity should not be affected.
	The land surveys have potential problems and should not be used for the subject conveyance/activity. The following errors and/or concerns as noted below, need to be corrected/addressed before the surveys should be used.

**Sufficiency of the chain of survey of the land for the stated purpose:** The chain of survey evidence is sufficient for a fee to trust conveyance.

**Comments/Concerns/Corrections:** There have been many surveys showing the boundaries of the parent parcel, which the subject property was once a part of. However, full disclosure in the public record showing sufficient controlling boundary monumentation and procedures used to justify boundaries did not occur until 2004 when a comprehensive survey was performed for the [REDACTED]. This survey recorded in Volume 56 of Surveys, Page 91, records of [REDACTED] County, Washington documents how the Sampson Claim, the Inner Harbor line of the [REDACTED] harbor were derived. Subsequent to said survey the subject property was subdivided into 3 lots at the request of the Washington State Department of Transportation (WSDOT) and recorded in Volume 32 of Short Plats, Page 99, records of [REDACTED] County, Washington. The description of the boundaries of the parent parcel used to subdivide said

property was poorly written and failed to reference adjoining record documents. Note 6 on said short plat adequately explains the procedure used to calculate the boundaries.

**Corner History:** The monuments of the subject parcel were originally established in 2007 during a subdivision of the parent parcel for the Washington State Department of Transportation (WSDOT). This subdivision is recorded in Volume 32 of Short Plats, Page 99, records of ██████ County, Washington. On 5-30-2008, an additional survey was done of the subject property to determine the condition of the corner monuments and the condition of the boundary lines. All monuments were found in good condition except for the most easterly corner monument, which was disturbed by recent excavation. To perpetuate the position of this corner, two new monuments were set at a 100-foot offset along the northeasterly and southeasterly lines. In addition, new monuments were set at the intersection of easements shown on said short plat along the northeasterly and southwesterly lines.

**Line and Measurement History:** The subject parcel falls within the boundaries of two original plats, the James Sampson Claim and the “Map of the tide land of the City of ██████, ██████ County, Wash”. Below is a chronological list of surveys showing line measurements that affect the boundaries of the subject parcel.

1891-The James Sampson Claim was surveyed by John W. Ashley, U.S. Deputy Surveyor between September and November 1891 with the Plat being filed on October 26, 1893.

1893-The “Map of the tide land of the City of Port Angeles, ██████ County, Wash” was surveyed by Norman R. Smith, Civil Engineer and dated April 10, 1893.

1899-The James Sampson Claim was subdivided in lots “A” through “F” and recorded in Volume 2 of Plats, Page 61 on June 6, 1899 at the request of R.C. Wilson. There is no indication of who surveyed or prepared the plat noted thereon.

1944- E.F. Duffy, Professional Engineer, performed a property survey of the entire James Sampson Claim and its subdivision for Fibreboard Products Inc. dated December 18, 1944. Said survey map shows that Mr. Duffy recovered numerous concrete monuments in addition to setting new pipe and hub monuments at the corners and subdivision lines of the Sampson Claim.

1956- Irving Zirpel, Jr. Cartographer, (Cadastral), recovered a spike at the southwest corner of the Sampson Claim and set a witness monument to said corner during the retracement of the United States Navy and Military Reservation between April 27 and June 8, 1956.

1973- Kenneth A. Clark, Professional Land Surveyor, monumented the centerlines of Third Street and Marine Drive. Marine Drive, by deed is described as the south 70 feet of portions of The Sampson Claim. Said survey shows monument number 4 of the 1947 Duffy survey but does not disclose the method of determining the south line of the Sampson Claim. This survey is dated March 28, 1973, is unrecorded and found in the files of the City of ██████.

1981- Kenneth A. Clark, Professional Land Surveyor, performed a survey for the Port of Port Angeles of portions of Tideland Blocks 14-16 West of Laurel Street and portions of tracts “D” through “F” of the Sampson Claim and recorded it in Volume 6 of Surveys, Page 82, records of ██████ County, Washington on April 20, 1981. Said survey does not disclose the monuments or methodology used to determine the boundaries of the Sampson Claim or the Tideland Blocks. The most southerly corner of parcel 1 of this survey is cited as the point of beginning in subsequent conveyances of the subject parcel.

1988- Silas W. Davis III, Professional Land Surveyor, performed a survey of the Port Angeles Mill site for the James River Corp. and recorded it in Volume 13 of Surveys, Page 29, records of ██████ County, Washington on February 24, 1988. Said survey accepted the 1973 Clark centerline monuments along Marine Drive.

1989- Ronald L. Nesary, Professional Land Surveyor, performed a comprehensive survey for Merrill and Ring, Inc. of the entire Sampson Claim, portions of tideland Blocks west of Laurel Street and portions of the ██████ and recorded it in Volume 15 of Surveys, Page 81 on June 8, 1989. Said survey does not show or disclose the entire methodology needed to determine the location of the Inner Harbor line or the northeasterly boundary of the Sampson Claim.

1993- Robert H. Winters, Professional Land Surveyor, performed a “Centerline Intersection Monumentation” survey of Marine Drive for the City of ██████ and recorded it in Volume 26 of Surveys, Page 65 on March 10, 1993. Said survey relied on the unrecorded 1973 Clark survey as a basis to set new monuments.

1997-Barrat G. Scott, Professional Land Surveyor, performed a survey within Blocks 124 and 131, Townsite of ██████ for Rayonier, ██████ Mill and recorded it in Volume 38 of Surveys, Page 33, records of ██████ County, Washington on October 30, 1997. This survey shows monument number 4 of the 1947 Duffy survey but does not disclose the method of determining the south line of the Sampson Claim. Said survey relied on the unrecorded 1973 Clark survey to determine the centerline of Marine drive

2002- Jerry D. Moore, Professional Engineer, prepared a plan of the ██████ Graving Dock Site for the Washington State Department of Transportation, which was approved and adopted on November 22, 2002. A note on sheet 13 of said plans states that “Data shown on this plan based on record of survey filed in Volume 6, Page 82, records of ██████ County. Additional information found on record of survey filed in Volume 15, Page 81.” Said plans do not disclose the methodology needed to determine the location of the Harbor lines or the boundary of the Sampson Claim.

2003- Rob Johnston, Professional Land Surveyor, performed a survey of lease lots within parcels 1 and 2 of the 1981 Clark survey, recorded in Volume 51 of Surveys, Page 96, records of ██████ County, Washington, and recorded it on March 27, 2003. Said survey contains a note citing slight differences in measurements between his survey and the 1981 Clark survey and the 1989 Nesary survey. This survey shows monument number 4 of the 1947 Duffy survey but does not show or disclose the entire methodology needed to determine the location of the inner Harbor line or the northeasterly boundary of the Sampson Claim.

2004- Bradley R. Lyman grover, Professional Land Surveyor, performed a survey to subdivide portions of tracts D through F of the Plat of the Sampson Claim. This survey also included portions of Tideland Blocks 14 through 16 and other lands for the ██████ and recorded it in Volume 30 of Short Plats, Page 76, records of ██████ County, Washington on May 4, 2004. Said survey contains a surveyor’s report that explains the review and acceptance of the 1944 Duffy survey. The report also explains a discrepancy with the 1981 Clark survey, the 1989 Nesary survey and the 2003 Johnston survey. This discrepancy has no affect on the subject property.

2004- Bradley R. Lyman grover, Professional Land Surveyor, performed a survey to subdivide

portions of Parcel 2 of Volume 30 of Short Plats, Page 76, records of ██████ County, Washington and recorded it in Volume 1 of Binding Site Plans, Page 10, records of said County, on June 4, 2004. Said survey contains a surveyor's report that explains the review and acceptance of the 1944 Duffy survey. The report also explains a discrepancy with the 1981 Clark survey, the 1989 Nesary survey and the 2003 Johnston survey. This discrepancy has no affect on the subject property.

2004-James Wengler, Professional Land Surveyor, performed a survey for the ██████ ██████ encompassing areas within the ██████ Harbor and recorded it in Volume 56 of Surveys, Page 91, records of ██████ County, Washington on December 3, 2004. This survey shows the first comprehensive reconstruction of the entire James Sampson Claim and the inner and outer Harbor lines within the ██████. Extensive notes on said survey explain the procedures and methodology used to determine said boundaries. Although minor discrepancies were found when comparing the previous surveys performed by Clark, Nesary, Johnston and Lyman grover, the results indicate that the all of these previous surveys were faithful retracements of the 1944 Duffy survey even though all of the controlling monuments needed to support the boundaries were not disclosed.

2007- James Wengler, Professional Land Surveyor, performed a subdivision of a parcel described in Auditor's file number 2005-1150797, records of ██████ County, Washington and recorded it in Volume 32 of Short Plats, Page 99, records of said County on October 25, 2007. Note 6 on sheet 2 of 2 of said short plat explains deficiencies with the description of the parent parcel and outlines the procedure used to calculate the exterior boundaries. Lot 2 of this short plat is the parcel that is the subject of this report. Both the northeasterly and southeasterly lines of said parcel 2 were created per instructions received from the Washington State Department of Transportation.

2008-James Wengler, Professional Land Surveyor, performed a retracement survey of lot 2 of Volume 32 of Short Plats, Page 99, records of ██████, Washington and recorded it in Volume 12 of Surveys, Page 34, records of said County on June 10, 2008. Note 3 on-said survey reports the conditions of the corner monuments and lines as follows:

During the course of this survey the condition of the corner monuments were investigated. All monuments were found to be in good condition except for the most easterly corner of the subject property. Said monument was found to be at the edge of recent excavation and is in danger of being lost. To perpetuate the position of this corner 2 new monuments were set at 100-foot offsets along the northeasterly and southeasterly lines as shown hereon.

In addition, the condition of the boundary lines were also investigated and are reported as follows:

The northeasterly line was created on 10-25-2007 during the subdivision of the parent parcel per Volume 32 of Short Plats, Page 99, records of ██████ County, Washington. Said line falls along a side hill of a road grade. No fence line or occupational indicators exist along this line.

Three new monuments were set along this line, two at the location of an ingress and egress easement for walkway purposes created per said short plat, and one at a 100 foot offset from the most easterly corner as noted above.

The southeasterly line falls within 0.5 feet of an existing chain link fence for most of the line

except where said fence jogs around an existing shed where said fence falls 5 feet northwesterly of the line. The shed appears to have previously housed an electrical switch that now appears abandoned. Said shed (which is on skids and not attached to the ground) encroaches approximately 0.8 feet onto the subject property. In addition, a utility line was found that is interior of the subject property up to the existing shed where it then crosses onto the adjoining property. No document could be found indicating the exact location of this apparent easement. One new monument was set along this line at a 100-foot offset from the most easterly corner as noted above.

The southwesterly line was created on 10-25-2007 during the subdivision of the parent parcel per Volume 32 of Short Plats, Page 99, records of ██████ County, Washington. No fence line or occupational indicators exist along this line. One new monument was set along this line at the intersection of the 60-foot ingress and egress easement created per said short plat.

The northwesterly line falls between an existing chain link fence and a concrete curb. The chain link fence falls between 0.4 feet and 1 foot southeasterly of the property line. The concrete curb falls between 0 feet and 1.28 feet northwesterly of the property line.

**Certification:** This Chain of Surveys correctly represents the records and documents compiled by me or under my direct supervision in conformance with the requirements of the Department of the Interior *Standards for Indian Trust Lands Boundary Evidence*, of the tract(s) or parcel(s) of land identified above.

<i>Name: ██████, Certified Federal Surveyor</i>	<i>Title and Contact Information:</i>	<i>Date:</i>
[Signature]	██████, PLS, CFS	6-5-2008
[Print Name]	████████████████████ 98 ██████ ████████████████████	

**Certification:** This Chain of Surveys correctly represents the records and documents compiled under my direction and control and in conformance with the requirements of the Department of the Interior *Standards for Indian Trust Lands Boundary Evidence*, of the tract(s) or parcel(s) of land identified above.

<i>Name: Chief Cadastral Surveyor</i>	<i>Contact Information:</i>	<i>Date:</i>
[Signature]		
[Print Name]		

**Attachments:**

1891-The James Sampson Claim and notes

1893-The "Map of the tide land of the City of [REDACTED], [REDACTED], Wash"  
1899-The James Sampson Claim, Volume 2 of Plats, Page 61  
1944- E.F. Duffy survey for Fibreboard Products Inc.  
1956- Irving Zirpel, Jr. Cartographer, (Cadastral) survey and notes  
1973- Kenneth A. Clark unrecorded survey of Third Street and Marine Drive  
1981- Kenneth A. Clark survey, Volume 6 of Surveys, Page 82  
1988- Silas W. Davis III survey, Volume 13 of Surveys, Page 29  
1989- Ronald L. Nesary survey, Volume 15 of Surveys, Page 81  
1993- Robert H. Winters survey, Volume 26 of Surveys, Page 65  
1997-Barrat G. Scott survey, Volume 38 of Surveys, Page 33  
2002- Jerry D. Moore plan of the [REDACTED] Graving Dock  
2003- Rob Johnston survey, Volume 51 of Surveys, Page 96r  
2004 Bradley R. Lymangrover survey, Volume 30 of Short Plats, Page 76  
2004 Bradley R. Lymangrover survey, Volume 1 of Binding Site Plans, Page 10  
2004-James Wengler survey, Volume 56 of Surveys, Page 91  
2007- James Wengler survey, Volume 32 of Short Plats, Page 99  
2008- James Wengler survey, Volume XX of Surveys, Page XX



**Certificate of Inspection and Possession Attachment**

I hereby certify that I am a Registered Profession Surveyor in the State of Washington and a Certified Federal Surveyor and that I have made a personal examination and inspection of [REDACTED] Lot B, Volume 66 of Surveys, Page 60, records of [REDACTED], Washington, and that I am fully informed as to the boundaries, lines and corners of said tract. I have personally pointed out the corners and boundaries to the following individual:

1. [REDACTED], Realty Specialist, [REDACTED] Tribe, on July 7, 2008.

July 8, 2008

\_\_\_\_\_  
(date)

[REDACTED]

\_\_\_\_\_  
(signature)

**UNITED STATES OF AMERICA  
BOUNDARY ASSURANCE CERTIFICATE**

Boundary Assurance Certificate No. **BES-2008-1**

To: [REDACTED], Community Development, [REDACTED] Tribe

From: **Chief, Branch of Geographic Sciences**

Subject: [REDACTED] Lot B, Volume 66 of Surveys, Page 60, records of [REDACTED] County, Washington

Certification: Subject to the exceptions, conditions and stipulations, listed in Schedule B, I, **Ron Scherler, BLM Cadastral Surveyor**, certify that critical records have been examined and boundaries have been inspected, and as of the Date of Boundary Assurance shown in Schedule A, assure that the United States of America will not sustain or incur a loss or damage, based upon the current/intended use of the land or interest in land shown in Schedule A, by reason of:

1. Land Description Review dated 07-22-2008, prepared by [REDACTED], Certified Federal Surveyor No. [REDACTED];
2. Chain of Surveys dated 07-22-2008, prepared by [REDACTED], Certified Federal Surveyor No. [REDACTED] and;
3. Certification of Inspection and Possession dated 07-22-2008, prepared by [REDACTED].

\_\_\_\_\_  
**Ronald W. Scherler**  
**Cadastral Surveyor**

\_\_\_\_\_  
Date

Certification: This Boundary Assurance Certificate correctly represents the records and documents compiled under my direction and control and in conformance with the requirements of the Department of the Interior *Standards for Indian Trust Lands Boundary Evidence*, of the tract(s) or parcel(s) of land identified above.

\_\_\_\_\_  
Acting Chief Cadastral Surveyor  
**Washington State Office**

\_\_\_\_\_  
Date

**SCHEDULE A**

Boundary Assurance Certificate No. **BES-2008-1**

Date of Boundary Assurance \_\_\_\_\_ [at a.m./p.m.]

1. Name of Authorizer: [REDACTED], **Community Development, [REDACTED] Tribe**
  
2. The land or interest in land referred to in this Boundary Assurance is described as follows: [REDACTED] **Lot B, Volume 66 of Surveys, Page 60, records of [REDACTED] County, Washington**
  
3. The boundary of the land or interest in land which is covered by this Boundary Assurance is: **The assurance pertains to all boundaries of the subject parcel.**
  
4. The current/intended use of the land or interest in land is: **The purpose of this Certificate is to facilitate the fee to trust conveyance.**

**SCHEDULE B**

Boundary Assurance Certificate No. **BES-2008-1**

**EXCEPTIONS FROM BOUNDARY ASSURANCE COVERAGE**

This Boundary Assurance Certificate does not cover loss or damage which arise by reason of:

1. **The destruction of survey monuments subsequent to the latest recorded survey. It is noted that numerous recently established survey monuments were destroyed prior to the 2008 survey of the subject parcel recorded in Volume 66 of Surveys, Page 60, [REDACTED] County Washington.**
  
2. **The following minor encroachments identified in the Land Description Review:**
  - a. **The southeasterly line falls within 0.5 feet of an existing chain link fence for most of the line except where said fence jogs around an existing shed where said fence falls 5 feet northwesterly of the line. The shed appears to have previously housed an electrical switch that now appears abandoned. Said shed (which is on skids and not attached to the ground) encroaches approximately 0.8 feet onto the subject property.**
  - b. **A utility line was found that is interior of the subject property up to the existing shed where it then crosses onto the adjoining property. No document could be found indicating the exact location of this apparent easement.**
  - c. **The northwesterly line falls between an existing chain link fence and a concrete curb. The chain link fence falls between 0.4 feet and 1 foot southeasterly of the property line. The concrete curb falls between 0 feet and 1.28 feet northwesterly of the property line.**