

Instructions for Maps to Accompany Proof of Appropriation and Beneficial Use of Ground Water

Part II of the Proof of Appropriation (Form U.W. 8)

All maps to accompany proof of appropriation and beneficial use of ground water **must** be prepared and certified by a professional engineer or land surveyor licensed to practice within the State of Wyoming. The maps must be in conformity with the specific requirements as set forth in the Manual of Rules and Regulations of the State Engineer's Office, Part II, with regard to map size, acceptable materials, information which must be shown, proper arrangement, scales, survey ties, legends, and other related water rights information. Generally, the map specifications have been formulated to ensure accuracy, clarity, longevity, and consistency at a minimal cost to the ground water user. ***No map will be accepted unless it conforms to the State Engineer's regulations.***

Two types of maps are acceptable for ground water right purposes depending upon the use of the water and quantity of water being used.

A. The map for wells where the use is described as *miscellaneous* and where the yield or flow is ***twenty-five (25) gallons per minute or less*** may be prepared on a 7½-minute United States Geological Survey (U.S.G.S.) Quadrangle map provided that:

1. The **entire** U.S.G.S. Quadrangle Map must be submitted. Do not cut.
2. The section(s) in which the well and area(s) or point(s) of use are located must be subdivided into forty (40) acre tracts and the well location and area(s) or point(s) of use are clearly labeled and described.
3. An identified section corner must be shown on said Quadrangle Map along with section, township, and range (A survey tie to the well is **not** required on this type of map).
**** Policy Memo: GPS coordinates are required for the well location on all maps submitted after April 1, 2006.**
4. Black waterproof ink must be used.
5. All pipelines, storage facilities, etc. must be shown.
6. The map must be certified by a professional engineer or land surveyor licensed to practice within the State of Wyoming.

B. Maps for all other types of wells must be completed in accordance with the specifications of Chapter V, Part II of the State Engineer's Rules and Regulations, January, 1974, by an engineer or land surveyor licensed to practice within the State of Wyoming.

Part II
Chapter V
Map and Survey Requirements for Maps to
Accompany Proof of Appropriation and
Beneficial Use of Ground Water

Section 1. **Required Plats and Maps.**

a. Linen plats conforming to the following requirements are required as Part II of the Proof of Appropriation and Beneficial Use of Ground Water for all wells with the exception of certain wells used for miscellaneous, domestic and stock watering purposes. (See Sections 2 through 18 of this Chapter for linen plat requirements).

b. The plat for wells where the use is described as **Miscellaneous** and where the yield or flow is **twenty-five (25) gallons per minute or less** may be a 7½ minute United States Geological Survey Quadrangle map in lieu of a linen tracing provided that the U.S.G.S. Quadrangle is in compliance with the following conditions:

(1) The entire United States Geological Survey Quadrangle map must be submitted to the State Engineer's Office.

(2) The scale on said Quadrangle Map must be one to twenty-four thousand.

(3) An identified section corner or quarter corner must be shown on said quadrangle map along with section, township and range.

(4) The section in which the well is located and the section(s) where the area(s) or point(s) of use are located must be subdivided into forty (40) acre tracts and the well location and area(s) or point(s) of use clearly labeled and described.

(5) Black waterproof ink must be used for all information shown on these maps.

(6) All pipelines, storage facilities, etc., must be shown.

(7) Said Quadrangle Map showing the well location and area(s) or point(s) of use must be certified by a professional engineer or land surveyor licensed to practice within the State of Wyoming. The above requirements also apply to wells used for domestic and stock watering purposes (See page 62 for sample Quadrangle Map).

Section 2. **Responsibility**. In all cases, the engineer or surveyor who signs an application or map will be held personally responsible for the correctness and completeness of his work, including the work done by those in his employ or under his direction.

Section 3. **Accuracy**. The accuracy of measurement required on all water right surveys shall conform in general to the principles set forth in the American Congress on Surveying and Mapping publication entitled "Technical Standards for Property Surveys". Measurements shall be made with instruments capable of attaining the required accuracy for the particular problem involved. The minimum accuracy of linear measurements involving ties to wells or other control points shall be 1/500, and the maximum allowable error in any tie, regardless of length, shall be 10 feet. Irrigated acreages in each subdivision should be accurate to the nearest 1/10 of an acre.

Section 4. **Care**. Care must be taken to determine and accurately locate the irrigable land. The boundaries of irrigable land should be meandered unless they follow section lines or regular subdivision lines of a section, or unless such boundaries can be accurately defined through the use of aerial photos.

Section 5. **Corner Ties**. The well, separator, or sump must be located by course and distance from a corner of the public land survey.

Section 6. **Latest Accepted Survey**. The engineer or surveyor should obtain full information concerning the latest accepted survey (including protractors of unsurveyed areas) of any lands involved in a water right application, petition, or proof of appropriation and beneficial use of ground water. This information should be obtained from the office of the U.S. Department of the Interior, Bureau of Land Management, P.O. Box 1828, Cheyenne, Wyoming, 82001, or from county records or other sources of information, prior to making this survey or preparing the map.

Section 7. **Field Notes**. The State Engineer may require copies of field notes of surveys. The engineer or surveyor should keep a complete record of each survey made, including a print of the map, facts coming to his knowledge at the time, copies of all field notes, reports, and correspondence, in order that such evidence may be produced in the future if necessary.

Section 8. **Aerial Photographs**. Map information taken from aerial photographs may be used, with discretion, to supplement field surveys, but the location of public survey boundaries, the points of diversion of ditches, wells, and the extent and area of irrigable or irrigated lands must be determined by actual field surveys.

Section 9. **Acceptable Materials**.

a. All proofs of appropriation and beneficial use of ground water must be accompanied by maps in duplicate; one of which must be on good quality tracing linen or equivalent. Original drawings prepared on polyester base films with a minimum thickness of 0.004 inch will be acceptable. This will include Estar, Cronaflex, and Mylar drafting films. Maps accompanying original applications must be neatly drawn in either black waterproof ink or acetate ink which will print clearly. Maps, on which pencil, ball-point pen, or ink other than black has been used, will not be acceptable.

b. Maps to accompany enlargement applications or amendments of previous filings may be prepared by securing a duplicate original of the map already on file in the State Engineer’s Office, and by making the necessary alterations and additions thereto. Duplicate originals, in order to be acceptable must be on Mylar, Estar, Cronaflex, or equivalent drafting films with a matte surface designed to accept ink and with a minimum thickness of 0.004 inch.

c. Maps which have been folded will not be accepted.

Section 10. **Sizes.**

a. All linen plats must conform to one of the standard sizes listed. Linen plats prepared on sheets of any other size will not be accepted. If one sheet is not sufficient to show the proposed work, two or more sheets of the same size may be used. Keep all map information within the border line.

b. Loose-leaf books are in use for each size given below, and all linen plats are filed flat in order to preserve the record contained on them. Linen plats must be made on sheets of the following sizes and dimensions:

OVERALL MAP DIMENSIONS—MARGINS

<u>Map Size</u>	<u>~ height</u>	<u>~ width</u>	<u>Binding Side</u>	<u>Other</u>
B	15”	10 ¾”	1 ½”	¼”
D	21 ½”	15”	1 ½”	3/8”
E	30”	21 ½	1 ½”	½”
F	40”	35”	¾”	¾”
*G	24”	36”	1 ½”	½”

****Policy Memo:** Also acceptable: **Map Size G**

***See pages 58 and 59 for pictorial representation of plat sizes and margin arrangements.**

- (1) The “F” size sheet is very unhandy to file and to use; consequently, it is preferred that the “B”, “D”, “E”, or *(“G”) size sheets be utilized if possible.
- (2) The preferred plat size for ground water plats is the “B” size. Statutory provisions also permit the use of size “A” which is 8-1/2 inches wide and 11 inches long; size “AA” which is 8-1/2 inches wide and 14 inches long; and size “C” which is 22 inches wide and 36 inches long. The State Engineer’s Office, however, is not equipped with books for filing these sizes; therefore, the sizes included in the above tabulation are preferred.

Section 11. **Arrangement**. See Pages 60 through 61 for ideal arrangement of data. Attention is called to the necessity of placing the binding edge as indicated. Provide a 1" x 4" space for the State Engineer’s endorsement, as shown on the sample plats (i.e. bottom center). Orient the plat so the meridian is parallel to the binding edge, and, if possible, so the “north arrow” points to the top of the plat.

Section 12. **Title**. Always place the title in the lower right-hand corner. The title on the plat should conform with the names given in the accompanying petitions or proofs of appropriation and beneficial use of ground water. The title should include the names of all ditches, enlargements, reservoirs, pipelines, and/or wells which are directly involved in the petitions or ground water proofs. The names and addresses of the petitioners or permittees [applicant(s)], and the scale of the plat should also be included in the title block. The permit numbers for the ground water rights involved must be shown.

Section 13. **Scale**. Location plats and maps must be drawn to a scale of not less than 2" = 1 mile. Use a large enough scale to show all of the required information clearly. Show the scale used for all plats.

Section 14. **Ties**.

- a. Ties must be shown on the plat from a corner of the public land survey to the well, separator, sump or pump location where pits are involved.
- b. All distances must be shown in feet. Plats must be plotted to the true meridian, and bearings shown must be true bearings, reading less than 90° to the east or west from the north and south points.

Policy Memo: GPS coordinates are required for the well location on all maps submitted after April 1, 2006. For maps other than a U.S.G.S. Quadrangle Map, the GPS coordinates must be obtained with survey-grade GPS equipment. These coordinates shall supersede and replace the GPS coordinates shown on the Statement of Completion, if those coordinates were obtained using a handheld GPS unit.

Section 15. **Information to be Shown.**

a. The well must be shown in such a manner that its location stands out clearly, and the name must be shown. Sufficient detail of the conveyance system must be shown so that it is apparent as to how water will be conveyed to point(s) of use. On ground water plats, it should be noted whether the system carries ground water, surface water, or both.

b. Entire sections must be shown in all cases. When any part of a section is involved in an application or petition, the entire section, subdivided into forties and lots, must be shown. Where lots or tracts are shown, they must be plainly labeled on the plat, and the entire lot or tract is to be shown. Homestead entries and mineral surveys are to be related to the nearest section to indicate their position in the township. In cases where the well is located within a recorded subdivision, an insert showing the well location within the section may be added.

c. Certificate of Engineer or Surveyor must be shown. An example is shown on page 57 and may be used as a general guide.

d. The location and acreage of all lands being irrigated in each subdivision must be shown on ground water plate.

(1) Such lands must be indicated on the plat by symbols or cross-hatching.

(2) Lands under different permits must be shown by distinctively different crosshatching or symbols.

(3) The plat must contain a legend showing the kind of cross-hatching or symbols.

(4) Water coloring wrinkles the linen and therefore must not be used.

(5) The lands shown on a ground water plat must be the actual acreage irrigated from the ground water source at the time of the survey.

e. On ground water plats, only the actual acreage irrigated from existing surface water sources should be shown. The source of the surface water must be identified. For example: "Jones Ditch conveys water from Sweetwater Creek." It is not necessary to research water records; only to show what is actually in the field.

f. For secondary recovery operations, all injection wells, distribution lines and storage facilities are to be shown. If a separator is the source of the water, a tie to the separator must be provided.

Section 16. **Pipelines, Gathering Systems, Etc.** In situations where pipelines, gathering systems, etc., are contemplated or proposed, the State Engineer may require a plat prepared by a licensed engineer or land surveyor showing the proposed pipeline route and points of use.

Section 17. **Additional Required Information.** Plats for Proof of Appropriation and Beneficial Use of Ground Water are also required to show the following:

a. Storage facilities, if involved in the use of ground water, must be shown. Permits for sources of ground water used within the distribution system, but brought from outside the area shown on the map, must be identified by note.

b. If lands are owned by more than one party, or are owned by the State or Federal Government, such ownership must be clearly shown. Roads, railroads, and other important cultural features also should be shown, where practical.

c. The term “supplemental supply” does not apply to ground water. If more than one well irrigates the same land, or if both ground and surface water are applied to the same land, it is sufficient to reference the well names on the plat and to identify all wells in the title block. Acreage irrigated from surface water sources must be shown so as to reflect any use of surface water on the same lands covered by the ground water rights surveyed.

d. A blank area, at least 4 inches wide and 2 inches deep, must be left in the upper right-hand corner of the plat. Examples are shown on pages 60 and 61. This blank area, to be completed in the State Engineer’s Office only, will be used to reference surface water rights as they are shown on existing records.

Section 18. **Sample Flats and Maps.** Pages 58 through 62 contain sample plats and maps prepared in accordance with the requirements of the State Engineer’s Office, and should be used as guides in the preparation of plats and maps to be filed with the Proof of Appropriation and Beneficial Use of Ground Water.

**Part II
Chapter VI
Sample Linen Plats and Quadrangle Maps**

Section 1. **Dimensions and Arrangement**. Pages 58 through 60 contain sample plates and map prepares in accordance with the requirements of the State Engineer’s Office, and should be use as guides in the preparation of plats and map to be filed with Proof of Appropriation and Beneficial Use of Ground Water – Form U.W. 8.

Section 2. **Engineer’s Certificate**.

a. Certificate for plats and map to accompany Proof of Appropriation and Beneficial Use of Ground water – Form U.W. 8.

(1) All linen plats (**Mylar**) must have the following certificate:

CERTIFICATE OF ENGINEER OR SURVEYOR

STATE OF WYOMING))
) SS.
COUNTY OF _____)

I, _____ of _____ hereby certify that this plat was made from notes taken during an actual survey made by me on _____, _____, or made on _____, _____, under my direction by _____, for whose work I stand personally responsible. Such survey is accurately represented on this plat, and **correctly shows the location of the well(s) and acreage under irrigation at the time of the survey (and/or) correctly shows the location of the well(s) and point(s) of use at the time of the survey.**

Surveyor’s Seal **Signed** with Signature
PE and/or LS

(2) All **Quadrangle Maps** must have the following certificate:

CERTIFICATE OF ENGINEER OR SURVEYOR

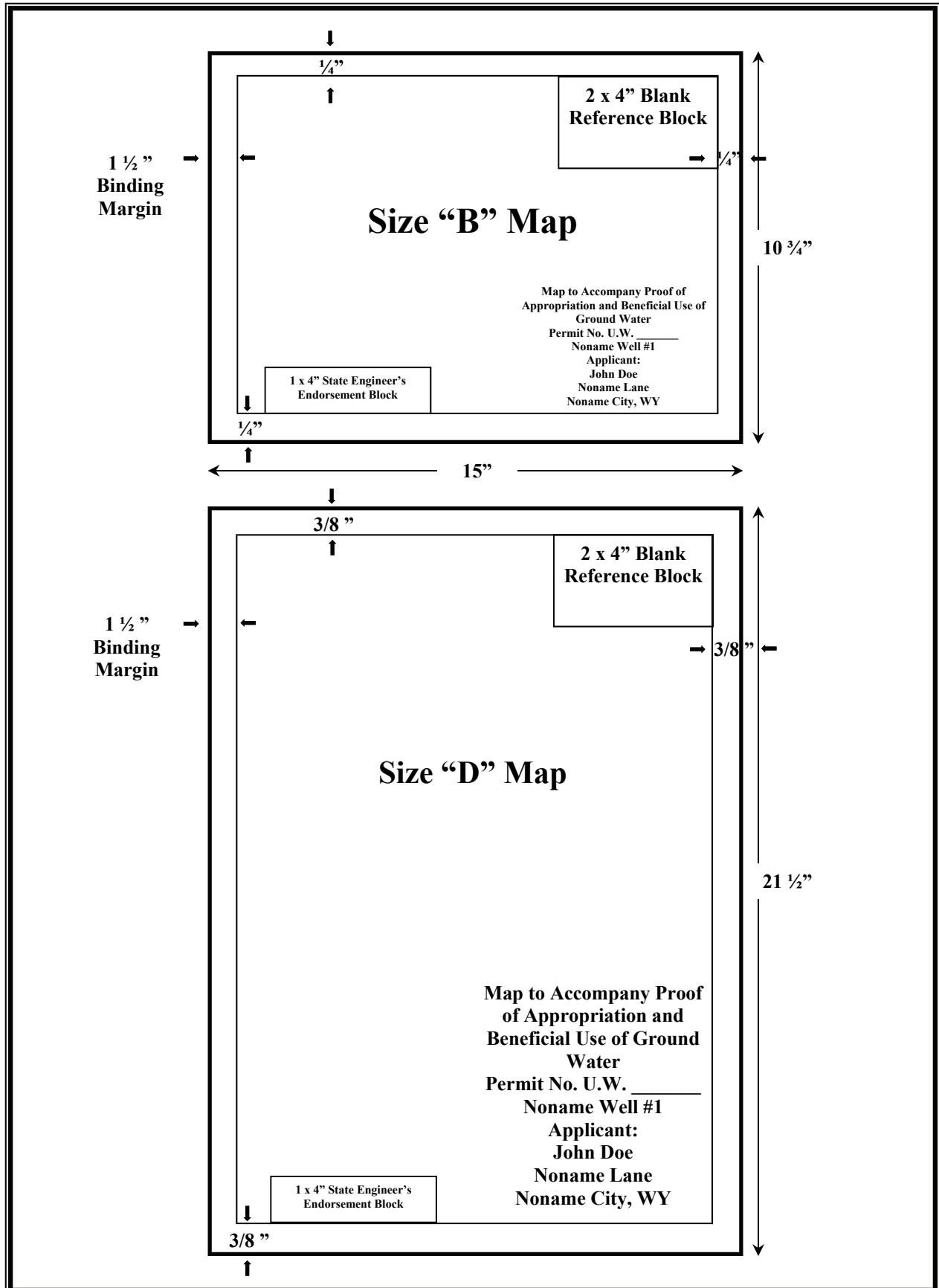
STATE OF WYOMING))
) SS.
COUNTY OF _____)

I, _____ of _____ hereby certify that this plat was made from notes taken during an actual survey made by me on _____, _____, or made on _____, _____, under my direction by _____, for whose work I stand personally responsible. Such survey is accurately represented on this plat, and **correctly shows the location of the well(s) and point(s) of use at the time of the survey.**

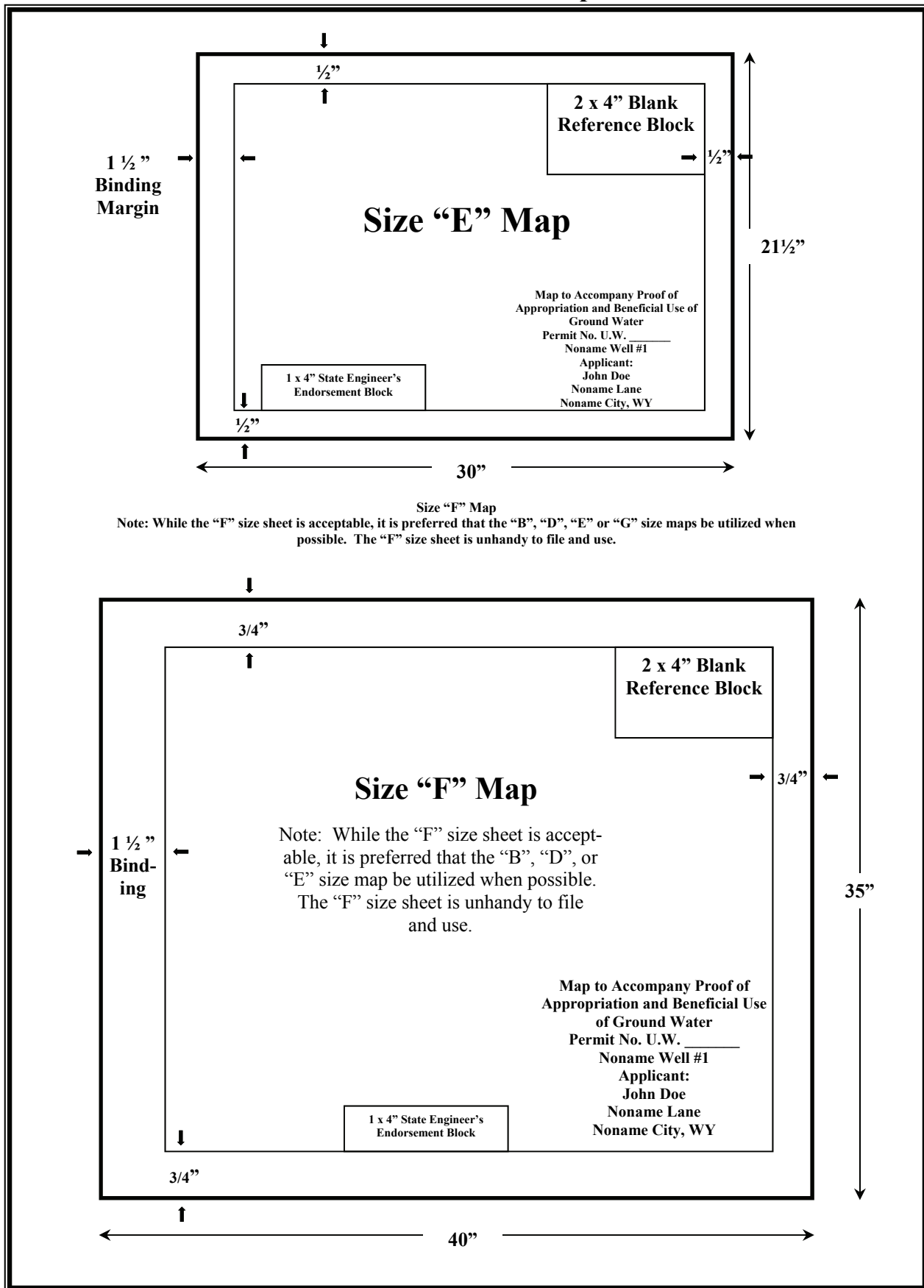
Surveyor’s Seal **Signed** with Signature
PE and/or LS

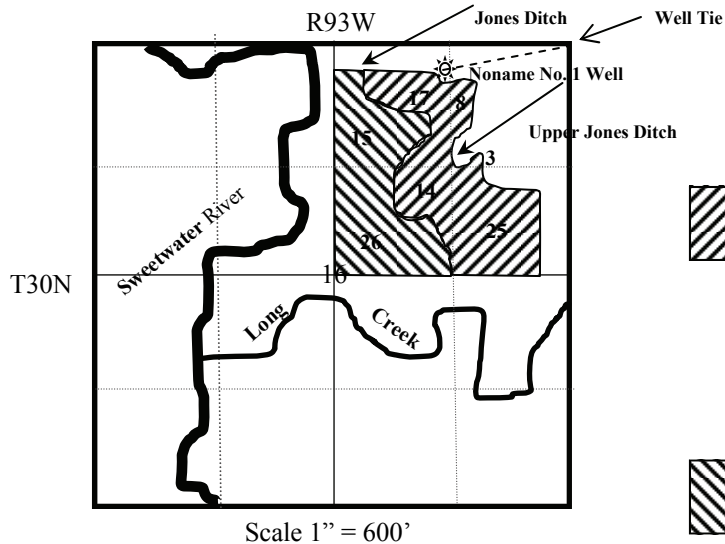
NOTE: All certificates should also credit the use of information obtained from other sources where other sources are used. Care should be taken that certification indicates the source of all information shown on the map.

Standard Sizes of Maps



Standard Sizes of Maps





Scale 1" = 600'



Legend

Lands irrigated under this appropriation through the Upper Jones Ditch. 67.0 Acres

*Note:
Upper Jones Ditch conveys ground water only.

Jones Ditch conveys surface water only.

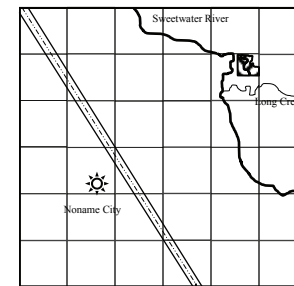


Lands irrigated from Sweetwater River through the Jones Ditch. 41.0 Acres



2 x 4 Blank Reference Block

Vicinity Map



Scale

STATE OF WYOMING)
)) SS.
COUNTY OF _____)

I, _____
_____ of _____
_____ hereby

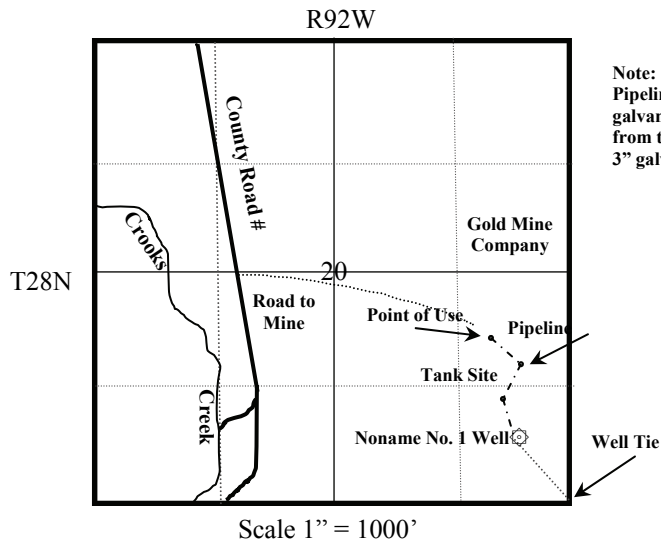
Certify that this plat was made from notes taken during an actual survey made by me on _____, (or made on _____, _____, _____ under my direction by _____ for whose work I stand personally responsible). Such survey is accurately represented on this plat, and *correctly shows the location of the well(s) and acreage under irrigation at the time of the survey (or) correctly shows the location of the well(s) and point(s) of use at the time of the survey.*



1 x 4 State Engineers
Endorsement Block

**Map to Accompany Proof
of Appropriation and
Beneficial Use of Ground
Water
Permit No. U.W. _____
Noname No. #1 Well**

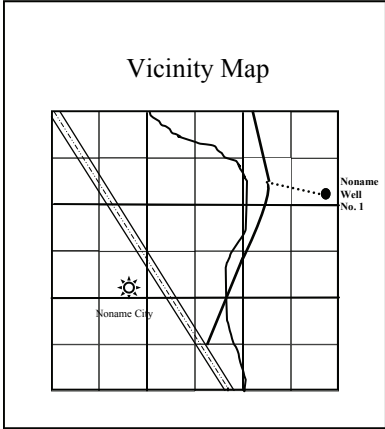
**Applicant:
John Doe
Noname Lane
Noname City, WY**



Note:
 Pipeline from well is 1" galvanized steel. Pipeline from tank to point of use is 3" galvanized steel.



2 x 4 Blank Reference Block



Station	Bearing	Distance
SE Corner Sec. 20		
Well	N40° 46' W	1043'
Sta. 2+79	N19° 05' W	279'
Tank Site	N25° 33' E	387.6'
Point of Use	N39° 56' W	523.6'
	S27° 33' E	2036.7'
SE Corner Sec. 20		

STATE OF WYOMING)
)
 SS.)
 COUNTY OF _____)
 I, _____ of _____

hereby certify that this plat was made from notes taken during an actual survey made by me on _____, _____, (or made on _____, _____, under my direction by _____, for whose work I stand personally responsible). Such survey is accurately represented on this plat, and **correctly shows the location of the well(s) and acreage under irrigation at the time of the survey (or) correctly shows the location of the well(s) and point(s) of use at the time of the survey.**



1 x 4 State Engineers
 Endorsement Block

**Map to Accompany Proof
 of Appropriation and
 Beneficial Use of Ground
 Water
 Permit No. U.W. _____
 Noname No. #1 Well**

**Applicant:
 John Doe
 Noname Lane
 Noname City, WY**



Example of a Quadrangle Map prepared as Map to Accompany Proof of Appropriation and Beneficial Use of Ground Water (for wells producing 25 gpm or less).