

1996 JUL -1 PM 3:18
DISTRICT COURT-SRBA
TWIN FALLS CO., IDAHO
FILED

REPORT REGARDING CLAIM TO WATER RIGHT NO. 36-00047

In Re SRBA
Twin Falls County Civil Case No. 39576
Sub-Case No. 36-00047

Report to the SRBA District Court

Prepared by the Idaho Department of Water Resources
Karl J. Dreher, Director
David B. Shaw, Adjudication Bureau Chief
David R. Tuthill Jr., Acting Adjudication Bureau Chief

July 1, 1996

COPY

REPORT REGARDING CLAIM TO WATER RIGHT NO. 36-00047

The Director of the Idaho Department of Water Resources (IDWR) submits this report regarding claim to water right no. 36-00047 in response to the request of Special Master Haemmerle, pursuant to Idaho Code §42-1412(4) and the court's Order Re: Contested Claims for Amounts Claimed in Excess of .02 CFS. This report was prepared under the supervision of Karl J. Dreher, Director, David B. Shaw, Adjudication Bureau Chief, and David R. Tuthill Jr., Acting Adjudication Bureau Chief for IDWR. The following persons assisted in the preparation of the following portions of this report:

David B. Shaw, Adjudication Bureau Chief, reviewed and verified this Report Regarding Claim to Water Right No. 36-00047. The Affidavit of David B. Shaw describes Mr. Shaw's education and work experience, and is incorporated by reference herein. Mr. Shaw also reviewed IDWR's Report Regarding Evaluation of Irrigation Diversion Rates, described below.

Jeff Peppersack, Adjudication Engineer, prepared and verified IDWR's Report Regarding Evaluation of Irrigation Diversion Rates, which is incorporated by reference herein. The Affidavit of Jeff Peppersack describes Mr. Peppersack's education and work experience, and also describes the use of polysonic meters to measure water flows, and is incorporated by reference herein. Mr. Peppersack also reviewed IDWR's Report Regarding Consumptive Use for Irrigation in the Hagerman Area, described below.

David R. Tuthill Jr., Acting Adjudication Bureau Chief, prepared IDWR's Report Regarding Consumptive Use for Irrigation in the Hagerman Area, which is incorporated by reference herein. Mr. Tuthill also reviewed this Report Regarding Claim To Water Right No. 36-00047. The Affidavit of David R. Tuthill Jr. describes Mr. Tuthill's education and work experience, and is incorporated by reference herein.

Steven C. Clelland, Senior Water Resource Agent, investigated and prepared the preliminary recommendation for claim no. 36-00047. The Affidavit of Steven C. Clelland describes Mr. Clelland's education and work experience, and is incorporated by reference herein. The affidavit also includes a general description of his investigation of claims in the Hagerman area. The Affidavit of Steven C. Clelland Regarding Claim No. 36-00047 describes Mr. Clelland's investigation of the quantity and place of use of this water right; it is attached hereto and incorporated by reference herein.

Helen L. Harrington-Thornton, formerly Senior Water Resource Agent and currently Hydrogeologist, participated in the field examination for claim no. 36-00047. The Affidavit of Helen L. Harrington-Thornton describes Ms. Thornton's education and

work experience and is incorporated by reference herein. The Affidavit of Helen L. Harrington-Thornton Regarding Claim No. 36-00047 describes her investigation of the quantity and place of use of this water right; the affidavit is attached hereto and incorporated by reference herein.

I. INVESTIGATION AND RECOMMENDATION OF CLAIMS GENERALLY

IDWR's general methodology for the investigation and recommendation of claims is described in Appendix A, which is incorporated herein by reference.

II. WATER RIGHT NO. 36-00047

A. Basis of Claim

Claim no. 36-00047 was filed with IDWR by Dixie L. Adamson on July 21, 1988.¹ A notice of change in ownership was filed with IDWR on May 11, 1994, informing IDWR of a change in ownership to Bruce R. and Mary L. Bothwell. A Standard Form 3 was later filed with the court informing the court of a change in ownership to William E. Norrix, David L. And Linda C. Cropper, Blaine Richard and Vivian Cropper, and Dave and Nancy Anderson. The claim is to a water right decreed to Earl and Mary Allison Fish in the *New International Mortgage* decree, entered in 1932.² The decreed right is numbered in IDWR's files as water right no. 36-00047. The right, along with numerous others in the decree, was decreed for "irrigation, domestic, power and other purposes."

B. Name and Address of Claimant

The name and address of the claimant set forth in the claimant's motion for summary judgment is the same as stated in the Standard Form 3 previously filed with the court.

¹ The original notice of claim is currently located in the files of the SRBA District Court, attached to IDWR's response to the claimant's objection.

² *New International Mortgage Bank v. Idaho Power Co., et al.*, Equity No. 1602 (D.S.Id. 1932), at pp. 3-4.

C. Source of Water

The source of water set forth in the claimant's motion for summary judgment is Sherman Springs. The source of water is described in the director's report as Sherman Springs tributary to Billingsley Creek.

The director's report includes the body of water to which the source of the right is tributary for each water right in the director's report, except for rights to ground water. IDWR adopted this standard for the description of the source of water rights because there are so many instances, sometimes in the same administrative basin, where different surface water sources bear the same name.³

D. Date of Priority

The priority date set forth in the claimant's motion for summary judgment is the same as recommended in the director's report.

E. Point of Diversion

The point of diversion set forth in the claimant's motion for summary judgment is the same as recommended in the director's report.

F. Purpose of Use

The purpose of use stated on the notice of claim and recommended in the director's report is irrigation. The objection sought to add stockwater. The claimant's motion for summary judgment now seeks to add wildlife, recreation, aesthetics, and "diversion system maintenance" in addition to stockwater.⁴

The description of the purposes of use of this right in the decree is ambiguous in that it describes the purposes of use for this right and others in the same list collectively as "irrigation, domestic, power and other purposes," rather than

³ IDWR relied upon the following in reaching its conclusion: Idaho Code §42-1411(2) (which provides that the director shall determine the source of the right to the extent the director deems appropriate and proper to define and administer water rights acquired under state law).

⁴ The filing fee for claims other than small domestic and stockwater claims consists of a \$50.00 flat fee, plus a variable fee of \$1.00 per acre for any claimed irrigation use, plus a per cfs fee for other claimed purposes of use. The filing fee paid for this claim was limited to the purposes of use and the number of acres claimed in the notice of claim. Filing fees are set forth in Idaho Code §42-1414 and IDWR's Adjudication Rules, IDAPA 37.03.01 *et seq.*

specifically identifying each purpose of use for each right.⁵ IDWR's investigation confirmed the use of water for irrigation, as further described below in the sections addressing quantity and place of use. Neither the claimant nor IDWR's investigation has yielded information that would confirm the beneficial use of water for the other purposes not listed in the claim, either pursuant to the right as originally appropriated or as currently used.⁶ Such information is necessary not only to confirm the use but to quantify the amount of water beneficially used for that purpose.

G. Quantity of Water Used

The notice of claim states a quantity of 1.60 cfs for irrigation. The quantity recommended in the director's report is 0.60 cfs for irrigation, or 0.02 cfs per acre. The objection and the claimant's motion for summary judgment seek 1.60 cfs, the same as stated on the notice of claim.

The quantity decreed for right no. 36-00047 in the *New International Mortgage* decree is 1.6 cfs. The decreed place of use for this right contains approximately 46 acres. Using the decreed rate of diversion and the decreed place of use, the per acre rate of diversion is approximately 0.035 cfs per acre. The claimant's lands as described in the deed include approximately 36 acres of the decreed 46 acres. (The claimant owns approximately 40 acres, but 4 of these are outside the decreed place of use.) Based on the description of the claimant's lands in the deed, the claimant's proportionate share of right no. 36-00047 is 1.26 cfs.⁷ IDWR does not have information indicating whether or how any amount greater than this proportionate

⁵ IDWR relied upon the following in reaching its conclusion: *Morgan v. Udy*, 58 Idaho 670, 79 P.2d 295 (1938) (a water right decree that omitted the description of the point of diversion necessarily determined the point of diversion but was ambiguous as to its location).

⁶ IDWR relies upon the following in reaching this conclusion: Idaho Code §42-1427 (which allows an ambiguity in a prior decree or license to be resolved based on current beneficial use); the statement of the Presiding Judge that this section "cannot change or exceed the previously decreed or recorded element of the decreed or licensed right" nor "be used to claim an expansion of use beyond the beneficial use existing at the time the right was originally memorialized in a decree or license," Revised Memorandum Decision and Order on Basin-Wide Issue 4, dated May 17, 1995, at page 9; and the statement of the Presiding Judge that, "the purpose of use is defined by the intentional application of water to an intended beneficial use of water," Memorandum Decision and Order Re: Basin-Wide Issue 5, dated April 26, 1996, at page 8.

⁷ IDWR relied on the following in reaching its conclusion: *Koon v. Empey*, 40 Idaho 6, 231 P. 1097 (1924) (a conveyance of land conveys the appurtenant right absent express provision to the contrary); *Crow v. Carlson*, 107 Idaho 461, 690 P.2d 916 (1984) (division of tract of land to which water is appurtenant works a division of the water right in the same proportion as the land is divided, absent express provision to the contrary.)

share came to be appurtenant to the claimant's lands. IDWR did not previously request this information from the claimants of right no. 36-00047 because there were no competing claims to all or part of this water right.⁸

As noted above, the director's report recommended a quantity of 0.60 cfs for irrigation, or 0.02 cfs per acre, as the quantity beneficially used. This is based in part on the fact that the land is irrigated with a sprinkler system. At the time of its original recommendation, it was IDWR's experience that the on-farm requirement for sprinkler systems is rarely greater than 0.02 cfs per acre; indeed, many sprinkler systems are designed with an application rate of 5/8 or 3/4 inch to an acre (0.0125 or 0.015 cfs per acre). In addition, because water is delivered to the place of use through a pipeline, there was no information indicating that conveyance losses between the point of diversion and place of use were sufficiently significant to warrant recommendation of an additional amount for conveyance losses. Subsequent to the filing of the director's report, IDWR obtained further information indicating that some of those rare instances in which the on-farm requirement for sprinkler systems may be more than 0.02 cfs may exist in some cases in the Hagerman area. IDWR therefore requested, and the claimant has agreed to provide, the information necessary for IDWR to conduct further analysis of the irrigation requirements for the claimant's lands. This information has not been received; IDWR will supplement this report with the results of that analysis as soon as the information is received and it can complete the analysis.

The recommendation is also based upon polysonic measurements of the flow of water in the pipeline through which this right is diverted taken by IDWR Senior Water Agents Steve Clelland and Helen Thornton. One measurement, taken near the intake for the pipeline, measured 0.69 cfs. Other measurements, taken at a location where the pipeline crosses Billingsley Creek, measured 0.58 and 0.56 cfs. The differences in the measurements were the result of "garden valves" in the pipeline, which allow water to be released from the pipeline. The field examination for this claim is described in the Affidavit of Steven C. Clelland Regarding Claim No. 36-00047, and the Affidavit of Helen L. Harrington Thornton Regarding Claim No. 36-00047. The Affidavit of Jeff Peppersack Regarding Polysonic Meters describes the use of polysonic meters in measuring water flows.

⁸ IDWR does not require all claimants to submit information showing a "chain of title" demonstrating ownership of all or part of a previously decreed or licensed right in its investigation of the claims. Generally, IDWR requires information as to ownership as part of the investigation of claims only where there are competing claims to the same water right.

As to the quantity for other purposes of use stated in the claimant's motion for summary judgment, neither the claimant nor IDWR's investigation has yielded information that would confirm the beneficial use of water for other purposes, as noted in section F above. Therefore, IDWR does not have information that would confirm the quantity used for the other purposes.

H. Period of Year Water is Used for Each Purpose of Use

Both the notice of claim and director's report state a period of use of 3/15 to 11/15 for irrigation. The claimant's objection states a period of use of 1/1 to 12/31. The claimant's motion for summary judgment states the period of use as "the irrigation season." The *New International Mortgage* decree does not state a period of use for irrigation.

The recommended season of use is consistent with season of use standards for irrigation developed by IDWR for various climatic regions throughout the state, which are based on a 75% chance of a 24 degree Fahrenheit frost. In addition, the director's report included general provision 12b, which allowed use of water for irrigation outside the season of use stated in the description of the individual right subject to certain conditions. In the Memorandum Decision and Order Re: Basin-Wide Issue 5, the Presiding Judge concluded that general provision 12 is not necessary and would not be decreed. This decision further provided that "all decrees for irrigation in the SRBA shall set the period of use as the "irrigation season." Order, pp. 15-16. The district court denied a subsequent motion for permission to appeal the decision. Pending any further proceedings on the decision, any further statement of the basis for IDWR's recommendation as to the season of use for irrigation appears to be unnecessary.

As to the season of use for other purposes of use stated in the claimant's motion for summary judgment, neither the claimant nor IDWR's investigation has yielded information that would confirm the beneficial use of water for other purposes, as noted in section F above. Therefore, IDWR does not have information that would confirm the season of use for the other purposes.

I. Legal Description of the Place of Use

The place of use for irrigation claimed in the notice of claim and recommended in the director's report are the same. The objection did not contest the place of use. Although the legal description under item 8 in the claimant's motion for summary judgment is the same as the legal description of the place of use for irrigation recommended in the director's report, the claimant's motion for summary judgment

seeks to increase the number of irrigated acres per 40-acre subdivision. The number claimed in the notice of claim and recommended in the director's report is 30; the claimant's motion for summary judgment states 39.8.

IDWR Senior Water Resource Agents Steve Clelland and Helen Thornton confirmed the irrigation of only 30 acres within the claimed and recommended quarter-quarter section by personal observation and aerial photography. The irrigated area consisted of a sprinkler-irrigated 19 acre tract in which potatoes were being grown, and an 11 acre sprinkler-irrigated pasture. The examination of the place of use for this claim is described in the Affidavit of Steven C. Clelland Regarding Claim No. 36-00047 and the Affidavit of Helen L. Harrington-Thornton Regarding Claim No. 36-00047.

As to the legal description of the place of use for other purposes of use stated in the claimant's motion for summary judgment, neither the claimant nor IDWR's investigation has yielded information that would confirm the beneficial use of water for other purposes, as noted in section F above. Therefore, IDWR does not have information that would confirm the place of use for the other purposes.

J. Annual Volume of Consumptive Use

The notice of claim states an annual volume of consumptive use of 90 AFY, or 3.0 AFY per irrigated acre. The annual volume of consumptive use recommended in the director's report is the same. The claimant's objection contests the recommended consumptive use, but does not state an amount. The claimant's motion for summary judgment states an amount of 179.1 or 4.5 AFY per acre. The Affidavit of Charles E. Brockway, submitted by the claimant in support of the motion for summary judgment, states "that 3.75 acre feet per acre per annum is the amount of consumptive use that is reasonable [in the Hagerman area] based upon a yield of ten tons [of alfalfa] per acre." Applying this standard, the total annual consumptive use volume would be 112.5 AFY for the 30 acres claimed and recommended, or 149.25 AFY for the 39.8 acres stated in the claimant's motion for summary judgment.

IDWR developed standards for annual volume of consumptive use for the various climatic areas throughout the state. The standard for the area in which the claimant's place of use is located is 3.0 AFY. IDWR's recommendation is based on this standard. The development of IDWR's standards for annual volume of consumptive use is described in IDWR's Report Regarding Evaluation of Irrigation Diversion Rates. IDWR has conducted further analysis of the annual volume of consumptive use based on further information IDWR received subsequent to its

original analysis. The further analysis is described in IDWR's Report Regarding Consumptive Use for Irrigation in the Hagerman Area. Based on this further analysis, IDWR recommends an annual volume of consumptive use of 3.5 AFY per acre, for a total of 105 AFY for the claimed and recommended 30 acres.

K. Conditions on the Exercise of the Right and Other Necessary Matters

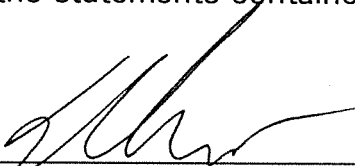
Neither the claimant's motion for summary judgment nor the director's report include other matters.

REPORT REGARDING CLAIM TO WATER RIGHT NO. 36-00047

State of Idaho)
) ss.
County of Ada)

David B. Shaw, being first duly sworn, upon oath, deposes and says:

That I am the Adjudication Bureau Chief for IDWR, that I have read the foregoing report, know its contents, and that the statements contained therein are true to the best of my knowledge and belief.



David B. Shaw

Subscribed and sworn to before me this 1st day of July, 1996.

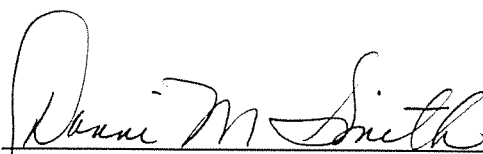


Notary Public for Idaho
Residing at: Boise ID
My commission expires: 11-14-1998

Certificate of Mailing

I certify that on the 1st day of July, 1996, I hand-delivered copies of the foregoing document, including all attachments, to the following:

Patrick D. Brown
133 Shoshone St North
Twin Falls, ID 83303



Person mailing document(s)

APPENDIX A

A. INVESTIGATION AND RECOMMENDATION OF CLAIMS GENERALLY

To promote the accuracy and consistency of water right decrees, and to minimize the burden on the court and the claimants in a water right adjudication, the state has made the specialized expertise of IDWR available through IDWR's investigation and reporting function.¹

The resources the state has made available for this function, however, are limited. IDWR has the duty to conduct a reasonable investigation within the spending authority granted by legislative appropriation. Those resources are not sufficient for IDWR to exhaustively investigate each and every potentially relevant fact regarding each and every claim and to make a conclusive determination of the water right. Rather, IDWR reviews the claim and the information already available to IDWR, and conducts such further investigation as is reasonable to determine whether there is sufficient information to support recommendation of the water right to be decreed.

To make the most efficient use of the available resources, IDWR must make determinations as to what is a reasonable level of investigation for various classes of claims prior to making a recommendation to the court regarding any particular claim. IDWR has employed two primary mechanisms to identify a reasonable level of investigation. First, the statutes set criteria and IDWR has developed standards for various types of uses, requiring less information to support a claim to water within those standards and more information to support a claim outside those standards. Second, IDWR has adopted a "tier" approach, identifying classes of claims which for various reasons merit further investigation.

Generally, with claims based on beneficial use², IDWR conducts a "licensing type" field exam, which includes confirmation of the source, point(s) of diversion, purpose(s) of use, place(s) of use, and an examination of the water delivery system and the quantity of water beneficially used. IDWR also contacts the claimant to obtain information supporting the priority date claimed. This level of examination is conducted because there has been no prior administrative or judicial

¹ Idaho Code §§ 42-1410 and 42-1411.

² Water rights based on beneficial use are sometimes referred to as constitutional rights or grandfather rights.

confirmation of the existence and extent of a water right based on beneficial use.³

Generally, for water rights that have been previously confirmed by license or decree, IDWR begins its examination by comparing the claim to information already available to IDWR. Other information includes, for example, IDWR's decree files; license, permit and transfer files; remotely sensed data, including Landsat imagery of irrigated acres and aerial photography; watermaster reports; applicable laws and IDWR's interpretation of those laws in light of the water resource policies of the state; etc. If there are discrepancies between the claim and information already available to IDWR, IDWR conducts further investigation to resolve the discrepancy, which generally includes a field exam and/or contacting the claimant for further information. Thus, where there has been a prior judicial or administrative confirmation of the existence and extent of a water right, IDWR uses information already available to IDWR to limit its review to issues identified by its discrepancy analysis.

Finally, IDWR uses both the court-ordered notice of error process⁴ and the statutory objection process to identify claims which merit further review. If this further review yields new information that supports a different description of the water right, then IDWR will revise its recommendation (in the case of a notice of error) or submit a supplemental director's report or offer a standard form 5 (in the case of an objection), consistent with the new information.⁵

Further information as to IDWR's standards and procedures for the investigation and recommendation is set forth in IDWR's Claim Investigation Manual, Field Examiner's Handbook, Administrative Memorandums, and

³ IDWR conducts a more summary investigation of beneficial use claims limited to domestic and/or stockwater use up to 0.24 cfs.

⁴ The notice of error process, as originally conceived and implemented, was limited to disagreements between the claimant and IDWR as to fairly straight-forward "errors", such as clerical errors or other readily verifiable matters. Based on its experience in the test basins, IDWR has subsequently recommended that the notice of error process be expanded to address any type of perceived error, as well as to address disagreements between claimants.

⁵ This "tiered" approach to determining a reasonable level of investigation is embodied in the statutory framework for water right adjudications. See §42-1410 (which provides for the discretion of the director in determining the level of IDWR's investigation, and allows but does not require the agency to conduct hearings), and §42-1412 (which authorizes IDWR to submit supplemental reports, and authorizes the court or the parties to request further investigation by IDWR in contested subcases). The tiered approach embodied in the statutory framework promotes efficiency and minimizes the burden on the court and the claimants by providing a report/objection process to identify disputed matters, and reserving the highest level of investigation for disputed matters.

Adjudication Memorandums.⁶

B. METHODOLOGY TO DETERMINE IRRIGATED ACREAGE

The area of irrigated acreage can be determined by information obtained from scaled and non-scaled photographs of the place of use supplied by one of several U.S. government agencies. The use of aerial photography by the U.S. government dates back to 1937, when the U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service (ASCS, now known as the Farm Service Agency, or FSA) began photographing selected counties of the United States on a repetitive basis. This coverage continues today and aerial photos are used by the ASCS (FSA) to figure acreage planted on farms for purposes of managing farm programs. Photos used by IDWR typically include: ASCS photos and 35 mm color slides⁷; NAPP photos⁸; ortho-photoquads⁹; and U2

⁶ These documents set forth general standards and procedures and do not address all possible exceptions to the general standards and procedures. In addition, as a result of its experience in the test basins, statutory changes, judicial decisions, etc., IDWR has identified refinements and revisions to its standards and procedures for the investigation and recommendation of claims that have not yet been included in these documents.

⁷ Both the photos and slides are high oblique and vertical aerial photography. The ASCS photos are scaled and have selected features, such as roads, section lines, ditches, and field acreage superimposed on them by the ASCS. The color slides are simply color slides frequently taken with hand-held 35mm equipment. IDWR staff typically obtain copies (which are not scaled) of maps for lands claimed as the place of use during the investigation of the claims, either from the claimant or from the local ASCS office. Color slides may also be checked-out from the local ASCS office as needed; IDWR sometimes obtains the color slides as they are discarded by the local ASCS office.

⁸ NAPP (National Aerial Photography Program) photos are all color-infrared aerial photography. IDWR obtained coverage for most of the Snake River Basin, including all of the test basins; the photos are primarily from flights during 1987 and 1988, though some are from 1986 or 1989. The date of the flight is shown on the photo. NAPP photography is available from the U.S. Geological Survey Earth Resources Observation Systems (EROS) data center in Sioux Falls, South Dakota.

⁹ The full name for an ortho-photoquad is "orthographic photograph quadrangle." These are black and white photoimages prepared from aerial photographs that have been rectified to eliminate image displacement due to terrain relief that cover a systematically subdivided area of latitude and longitude. IDWR obtained coverage for most of the Snake River Basin, including all the test basins; the photos are primarily from flights during the 1970's. The date of the flight is shown on the quad sheet. Most of the orthophotos were obtained from the U.S. Geological Survey National Cartographic Information Center (NCIC) in Menlo Park, California. In some areas, maps were not available from U.S.G.S. but were available from other agencies, such as the United States Department of Agriculture, Forest Service.

aerial photos¹⁰.

A photographic "scale," like a map scale, is an expression that states that one unit of distance on a photograph represents a specific number of units of actual ground distance.

$$S = \text{Photo scale} = \frac{\text{Photo distance}}{\text{Ground distance}} = \frac{d}{D}$$

The scale may be expressed as unit equivalents, representative fractions, or ratios. For example, if 1 mm on a photo represents 25 m on the ground, the scale of the photo can be expressed as 1 mm = 25 m (unit equivalents), or 1/25,000 (representative fraction), or 1:25,000 (ratio).

The photo(s) used by IDWR personnel have varying scales. The ASCS photographs have map features drawn in by the ASCS. These photos are stated to be "not to scale," but do include the field acreage as determined by ASCS written on the places of use. NAPP photography is at a nominal scale of 1:40,000; U2 aerial photography is at a nominal scale of 1:120,000; and ortho-photoquads have a scale of 1:24,000.

To determine the area used, IDWR staff employed various transparent overlays, known as grid templates. These templates are available at most blueprint supply stores. One type consists of lines forming rectangles or squares of known area in the same scale that is utilized in the scaled photograph. The grid is placed over a scaled photograph and the area of a ground unit is estimated by counting grid units that fall within the unit to be measured.

Another commonly used grid is the dot grid, which is composed of uniformly spaced dots on a transparent overlay. The grid is placed over the photograph and the dots falling within the region to be measured are counted. The value assigned to each dot is dependent on the scale of the photograph. First, the number of acres per centimeter (or other measuring unit) is computed. This figure is then divided by the number of dots per measuring unit on the grid to obtain the acreage represented by each dot. For instance, a square 3.4 cm on each side containing 640 dots will cover 160 acres on a photo with a nominal

¹⁰ These photos are color-infrared aerial photography obtained by the National Aeronautics and Space Administration (NASA) Airborne Instrumentation Research Project, and available from EROS. IDWR obtained coverage of most of the southern portion of the Snake River Basin, most of which was flown in 1977. In addition, because the State of Idaho was part of an ongoing project with NASA to photograph selected areas, photography from various areas in various years is also available. The date of the flight is shown on the photo.

scale of 1:24000; 640 dots divided by 160 acres equals 4 dots to the acre, thus 1 dot equals 0.25 acres.

Because of its simplicity, the grid system is a practical method to determine the size of irrigated areas; it nonetheless requires some training and experience to be used effectively.

For non-scaled photos, such as the ASCS 35 mm photos, IDWR did not directly make acreage determinations. Instead, these photos were used to confirm whether the place of use and amount of irrigated acreage had changed for that year according to common landmarks visible in the photographs.

ALAN G. LANCE
Attorney General
State of Idaho

CLIVE J. STRONG
Deputy Attorney General
Chief, Natural Resources Division

BRENT KING
CHARLES L. HONSINGER
Deputy Attorneys General
Department of Water Resources
P.O. Box 83720
Boise, ID 83720-0098
Telephone: (208)327-5458
Fax: (208)327-5400

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT
OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA	)	Subcase No. 36-00047
	)	
Case No. 39576	)	AFFIDAVIT OF STEVE CLELLAND
	)	REGARDING CLAIM NO. 36-00047
_____	)	

STATE OF IDAHO	)
	) ss.
County of Twin Falls	)

I, STEVE CLELLAND, being first duly sworn on oath, depose and state as follows:

1. I am a Senior Water Resource Agent with the Idaho Department of Water Resources (IDWR).

2. My work address is Idaho Department of Water Resources (IDWR), Southern Regional Office, 222 Shoshone St. East, Twin Falls, ID 83301-6105. I reside in Twin Falls, Idaho.

3. My educational background and work history both outside and within IDWR are detailed in my Affidavit of Steve Clelland as to the Investigation of Claims in the Hagerman Area.

4. As part of my duties as a senior water rights agent, I investigated the acreage claimed as irrigated in claim no. 36-00047. The pertinent details of that investigation are as follows:

A. On July 27, 1990, IDWR water agent Helen Thornton and I conducted a field examination in Hagerman to determine the irrigated acreage claimed pursuant to claim no. 36-00047.

B. During that examination, I observed that water pursuant to this claim was applied to the place of use solely by means of sprinkler irrigation.

C. During that examination, I observed two irrigated parcels: an irrigated parcel planted with potatoes; and a smaller southern parcel containing pasture.

D. Upon returning to the office, I observed that the pertinent NAPP photograph was consistent with my observations as to irrigated and unirrigated areas.

E. I observed that the pertinent ASCS map showed that the parcel planted with potatoes was 18.9 acres in size. The ASCS map did not show as irrigated the parcel I had observed was irrigated pasture.

F. Based on the sizes of surrounding measured parcels as shown by the ASCS map, I estimated the size of the parcel containing irrigated pasture to be 11 acres.

G. By adding the 18.9 acre parcel and the 11 acre parcel together, I found that 30

acres were actually irrigated with water delivered pursuant to this claim.

H. The only irrigated area within the 40 acre tract claimed as irrigated was the 30 acres I had observed that were actually irrigated.

5. As part of my duties as a senior water agent, I investigated the quantity of water delivered pursuant to claim no. 36-00047. The pertinent details of that investigation are as follows:

A. On August 10, Helen Thornton and I returned to the property to conduct a field examination for the purposes of determining the quantity delivered pursuant to claim no. 36-00047.

B. I observed that water pursuant to this claim was delivered to the sprinkler irrigation pump solely by means of a gravity operated siphon system.

C. I observed that the siphon was full and at capacity at the time of the field examination.

D. Through the use of a polysonic flowmeter, Helen Thornton and I observed that the flow of water through the siphon at the head of the pipeline near the source was .69 cfs. We did this polysonic flow measurement properly and in accordance with our training.

E. I observed that there were two garden hose valves inserted in and affixed to the siphon pipe near the head of the pipeline. I observed that these valves were open and running water.

F. I observed a third garden hose valve inserted in and affixed to the siphon pipe near the lowest point of the siphon. Helen Thornton and I fully opened this garden hose valve before proceeding to our next measurement.

G. Through the use of a polysonic flowmeter, Helen Thornton and I observed that the flow of water was .56 cfs at the lowest point of the siphon. This measurement was made with the garden hose valve fully opened. We did this polysonic flow measurement properly and in accordance with our training.

H. Helen Thornton and I then closed the third garden hose valve before the next measurement. Through the use of a polysonic flowmeter, Helen Thornton and I observed that the flow water was .58 cfs at the lowest part of the siphon with the third garden hose valve closed.

I. As stated earlier, I observed that water pursuant to this claim was delivered to the claimed place of use entirely through a siphon pipe. Conveyance losses pursuant to this claim were calculated as insignificant. Through my observations, I concluded that the insignificant conveyance losses were due to the impermeable nature of the delivery system.

DATED this 1st day of July, 1996.

Steve Clelland

STEVE CLELLAND

SUBSCRIBED AND SWORN to before me this 1st day of July, 1996.

Danni M Smith

Notary Public for the State of Idaho

Residing at Bose

My commission expires: 12-5-2000

CLIVE J. STRONG
Deputy Attorney General
Chief, Natural Resources Division

BRENT KING
CHARLES L. HONSINGER
Deputy Attorneys General
Department of Water Resources
P.O. Box 83720
Boise, ID 83720-0098
Telephone: (208)327-5458
Fax: (208)327-5400

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT
OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA	)	Subcase No. 36-00047
	)	
Case No. 39576	)	AFFIDAVIT OF HELEN THORNTON
	)	REGARDING CLAIM NO. 36-00047
	)	
STATE OF IDAHO	)	
	) ss.	
County of Ada	)	

I, HELEN THORNTON, being first duly sworn on oath, depose and state as follows:

1. I am currently a Hydrogeologist with the Idaho Department of Water Resources (IDWR). At the relevant time for purposes of this affidavit, I was employed as a Senior Water Resource Agent with IDWR.

2. My work address is Idaho Department of Water Resources (IDWR), 1301 N. Orchard, Boise, ID 83706. I reside in Boise, Idaho.

3. My educational background and work history both outside and within IDWR are detailed in my Affidavit of Helen Thornton as to the Investigation of Claims in the

Hagerman Area.

4. As part of my duties as a senior water rights agent, I investigated the acreage claimed as irrigated in claim no. 36-00047. The pertinent details of that investigation are as follows:

A. On July 27, 1990, IDWR water agent Steve Clelland and I conducted a field examination in Hagerman to determine the irrigated acreage claimed pursuant to claim no. 36-00047.

B. During that examination, I observed that water pursuant to this claim was applied to the place of use solely by means of sprinkler irrigation.

C. During that examination, I observed two irrigated parcels: an irrigated parcel planted with potatoes; and a smaller southern parcel containing pasture.

D. The only irrigated areas within the 40 acre tract claimed as irrigated were the two parcels just described.

5. As part of my duties as a senior water agent, I investigated the quantity of water delivered pursuant to claim no. 36-00047. The pertinent details of that investigation are as follows:

A. On August 10, Steve Clelland and I returned to the property to conduct a field examination for the purposes of determining the quantity delivered pursuant to claim no. 36-00047.

B. I observed that water pursuant to this claim was delivered to the sprinkler irrigation pump solely by means of a gravity operated siphon system.

C. I observed that the siphon was full and at capacity at the time of the field

examination.

D. Through the use of a polysonic flowmeter, Steve Clelland and I observed that the flow of water through the siphon at the head of the pipeline near the source was .69 cfs. We conducted this polysonic flow measurement properly and in accordance with our training.

E. I observed that there were two garden hose valves inserted in and affixed to the siphon pipe near the head of the pipeline. I observed that these valves were open and running water.

F. I observed a third garden hose valve inserted in and affixed to the siphon pipe near the lowest point of the siphon. Steve Clelland and I fully opened this garden hose valve before proceeding to our next measurement.

G. Through the use of a polysonic flowmeter, Steve Clelland and I observed that the flow of water was .56 cfs at the lowest point of the siphon. This measurement was made with the garden hose valve fully opened. We conducted this polysonic flow measurement properly and in accordance with our training.

H. Steve Clelland and I then closed the third garden hose valve before the next measurement. Through the use of a polysonic flowmeter, Steve Clelland and I observed that the flow of water was .58 cfs at the lowest part of the siphon with the third garden hose valve closed.

DATED this 15th day of July, 1996.

Helen L. Harrington-Thornton
HELEN L. HARRINGTON-THORNTON

SUBSCRIBED AND SWORN to before me this 15th day of July, 1996.

J. Sherman
Notary Public for the State of Idaho
Residing at: Boise ID
My commission expires: 11-14-1998