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DEPARTMENT OF
WATER RESOURCES

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Attorneys for Claimants

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 NOS. 72-16778, 72-16779,
	)	72-16780, 72-16781, 72-16783, 72-16784,
Case No. 39576	)	72-16785, 72-16786, 72-16787, 72-16788,
	)	and 72-16789
_____	)	

AFFIDAVIT OF DAVID B. SHAW

STATE OF IDAHO	)
	) ss
COUNTY OF ADA	)

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

1. My name is David B. Shaw, and my work address is ERO Resources Corporation, 3314 Grace Street, Boise, ID 83703-5836. My telephone number is 208-373-7983.

2. My educational background, professional registrations, and experience are listed in my resume, **Exhibit 1**, attached to and a part of this affidavit. I continue to attend seminars and short courses in the areas of water law, water rights and applicable technology. I have made numerous presentations at seminars covering water law and water right issues, most often regarding some aspect of water right adjudication.

COPY

3. My work experience includes five years of teaching at the University of Idaho in the College of Engineering from 1968 to 1973. I was with the Idaho Department of Water Resources (department) and its predecessor agencies from November 1973 until July 1996. With the Department, I served in a number of technical and administrative positions including Regional Supervisor for the Department's Western Region from 1978 to 1985 and Adjudication Bureau Chief from 1985 to 1996. As Adjudication Bureau Chief, I was responsible for all the Department's obligations in the Snake River Basin Adjudication (SRBA) of water rights. My experience with the department includes successfully managing the SRBA for 11 years and resolving a variety of water right, water supply and water distribution situations.

4. Since July, 1996, I have been employed by ERO Resources Corporation (ERO) providing consulting services to clients in the areas of water rights, water right adjudication, and water distribution and management. In January, 2003, I became a Principal of ERO, one of currently 11 employee owners of the firm. ERO is a natural resources consulting firm based in Denver, Colorado with satellite offices in Boise, Idaho, and Durango and Hotchkiss, Colorado. ERO has a long history of, among other services, providing expertise to clients in water resource matters around the West.

5. In preparation of this affidavit I examined a copy of the 1938 Gossi v. Giampedraglia decree, the Department records of SRBA claims 72-196 and 72-197, the discharge records of the East Fork Salmon River stream gage located about ¼ mile upstream from the confluence of the East Fork and the main Salmon River, the measurement records of 7/28/09 and 9/9/09 and affidavit of Brian Hamilton, the NRCS soil survey data for the area, Valley Sun's Opening Brief

and proposed late claims 72-16782 and 72-16783 and the SF4s and supporting affidavits for those proposed late claims.

6. **Figure 1**, attached to and a part of this affidavit, illustrates the East Fork Salmon River, the narrow valley in which the stream is located and the area of permeable soils as identified by the NRCS. The configuration of the valley, as shown on the 2004 NAIP photograph, illustrates that the water diverted from the East Fork Salmon River and its tributaries is never very far from the river and water lost through seepage from the irrigation ditches and from the fields themselves will return relatively rapidly to the stream aided by the permeable nature of most of the soils in the valley. The NRCS reports the permeability of the soils in the cross hatched area of Figure 1 ranges from 4 to 40 feet per day. With typical valley widths from the valley edge to the river ranging from 400 to 1,600 feet the estimated time for seepage water from irrigation diversions to return to the river ranges from 10 to 400 days.

7. In my experience it is not unusual for irrigators in high, mountain valleys similar to the East Fork of the Salmon River to divert larger quantities of water than are diverted by irrigators in the lower elevation, wider and flatter intensively farmed and irrigated areas of the state. In many cases, as indicated here by Mr. Hamilton's measurements, the excess water returns to the stream as diffused surface flow or shallow ground water and helps maintain the base flow of the stream during the low flow portions of the year.

8. **Figure 2**, attached to and a part of this affidavit, are hydrographs showing the discharge of the East Fork Salmon River downstream of all diversions from the river. The data to create the hydrographs were taken from the Idaho Power gage records that begin on April 22, 2004. The mean hydrograph is made up of the mean daily average discharge for the period of

record for this gage and the 2009 hydrograph is the mean daily discharge for 2009. The hydrographs illustrate the 2009 discharges referred to in Mr. Hamilton's affidavit are above average but not significantly different than the average discharge that occurred over the prior years on the dates of Mr. Hamilton's measurements. Nothing in these hydrographs indicated that Mr. Hamilton's measurements would have lead to a different conclusion if they had been taken in a different year. The hydrographs also illustrate the existence of a relatively constant base flow during the low flow period, probably due in part to the return flows from earlier irrigation diversions that discharge to the river from diffused surface flow or shallow ground water.

9. The 1938 Gossi v. Giampedragli decree recognized the need for additional water to successfully irrigate the lands in the East Fork Salmon River valley, but apparently none of the diversions had been measured. The decree refers to the quantity of water being decreed as being an estimate under a four inch pressure or its equivalent in cubic feet per second of time apparently done without any field verification.

10. In my experience it is not unusual for water rights decreed in an early decree to be supplemented by additional water rights where the water users can show the additional water has been placed to beneficial use. This situation has occurred many times prior to the SRBA (i.e. the Stuart and Bryan decrees on the Boise River and the Rexburg, Foster, Woodville Canal and Eagle decrees on the upper Snake River) as well as during the SRBA. The Department has typically recommended and the court, including the SRBA Court, has typically decreed these supplemental water rights so long as the claimant could show the water was put to beneficial use and the priority of the right could not impact any of the rights decreed in the earlier decree(s).

The priority date in these cases is usually determined to be the later of the date water was first beneficially used or the day after the most recent prior decree.

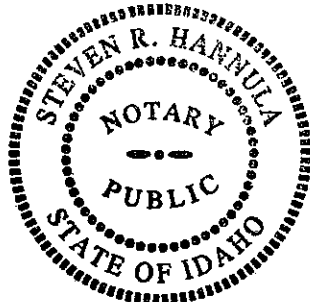
11. Valley Sun's Opening Brief included part of the Department's record for 72-197 but neglected to include any of the Department's record for companion water right 72-196. Exhibit 2, attached to and a part of this affidavit, is a copy of a portion of the Department's record for water right 72-196. This page is a record of the Department's analysis of the irrigation water requirements of the 39 acres of land claimed as the place of use for both 72-196 and 72-197. The Department's analysis shows the irrigation requirement for 9.1 acres of the 39 acre place of use is more than the 2.4 cfs recommended as the combined total quantity of 72-196 and 72-197. The Department cannot recommend water rights for any amount greater than the amount claimed, and recommended these rights for the combined 2.4 cfs. There was nothing in the file to indicate whether the claimant was ever made aware of this analysis or if an additional claim was solicited.

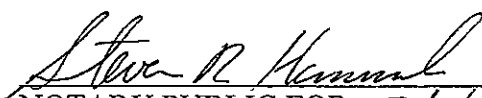
Dated this 15 day of October, 2009.



David B. Shaw

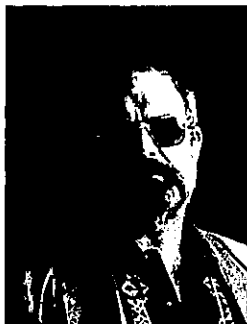
SUBSCRIBED and SWORN to before me this 15 th day of Oct, 2009.





NOTARY PUBLIC FOR Idaho
Residing at: Boise
My Commission Expires: 8-18-11

EXHIBIT 1

David B. Shaw *Engineer/Principal***BACKGROUND**

Dave is an engineer and principal with ERO and manages the Boise, Idaho office. His experience in water resources and management dates from 1974. He specializes in the identification, analysis, and resolution of water issues with experience in both surface and ground water matters. Prior to joining ERO, Dave spent 23 years with the State of Idaho Department of Water Resources. His experience includes water supply and use studies, water right evaluations and investigations, project management, alternative dispute resolution, expert witness testimony, and technical input on legislative and administrative matters.

EDUCATION

M.S. 1972, Agricultural Engineering, University of Idaho

B.S. 1966, Agricultural Engineering, University of Idaho

CERTIFICATIONS AND AFFILIATIONS

National Council of Examiners for Engineering and Surveying, NCEES
#16269

American Society of Agricultural Engineers

U.S. Committee on Irrigation and Drainage

Idaho Society of Professional Land Surveyors

Idaho Certified Water Right Examiner

Oregon Certified Water Right Examiner,
#74051WRE

LICENSURE

Professional Engineer and Land Surveyor, Idaho,
#2648

Professional Engineer,
Oregon, #74051PE

Professional Engineer,
Arizona, #40134

SUMMARY OF EXPERIENCE

Water Rights Investigations. Dave spent 11 years as project manager for the Snake River Basin Adjudication (SRBA) of water rights. His understanding of water rights and his management ability were essential for the successful development of the criteria and process for the identification and evaluation of 170,000 claims to water rights. Dave has been sought by a variety of clients for water rights investigations including adjudication and administrative processing, evaluation and transfer, and the development of new rights and protection of senior rights.

Litigation Support and Alternative Dispute Resolution. Dave is designated by the SRBA Court as an expert in water right adjudications. He provided expert testimony before the court on all aspects of water right adjudications as well as hydrology and water right administration issues. Dave is presently providing technical expertise and coordination to the State of Idaho and water users for the resolution of federal law based water right claims filed by the United States and certain Indian tribes in the SRBA.

Water Supply Evaluations, Development, and Permitting. Dave routinely assists clients with the permitting and development of water uses. A water supply evaluation is required for virtually every new water right filing and for many filings for changes. Delivery system designs are sometimes included with the development and supply evaluations.

Water Quality Evaluation, Monitoring, and Management. Dave has experience designing and implementing water quality monitoring programs for various water users. This includes knowledge of state standards and Total Maximum Daily Load requirements, and how water users can help protect their water uses with water quality data.

Representative Projects *David B. Shaw*

Water Quality Evaluation, Monitoring, and Management

Pioneer Irrigation District, ID

Provided project design, implementation, and management for their water quality sampling program.

Wilder Irrigation District, ID

Provided project design, implementation, and management for their water quality sampling program.

Water Users in Owyhee County, ID

Provided project design, implementation, and management for their water quality sampling program.

Water Rights Investigations

Snake River Basin Adjudication, ID

Developing criteria and procedures to investigate the existence and extent of tens of thousands of water rights.

Little Land and Livestock, Inc., ID

Evaluating water rights for potential land purchase.

Modoc Point Irrigation District, OR

Determined the extent of water use for irrigation in support of water right claims in the Klamath River Adjudication.

Idaho Department of Parks and Recreation, ID

Evaluated the water rights obtained with property either purchased by or donated to the department. Found available water for use at the department's new headquarters building.

Litigation Support and Alternative Dispute Resolution

Office of the Idaho Attorney General, ID

Designated by the SRBA court as an expert in water right adjudications. Provided mediation support for resolution of federal reserved water rights.

Shoshone-Bannock Reserved Water Right Negotiations, ID

Co-chair of the state, Indian, federal, and private technical advisory committee.

Riddle Ranch, ID

Technical expert/negotiator for resolution of federal reserved water rights of the Duck Valley Indian Reservation.

Methow Valley Ditch Users Association, WA

Analysis of ground water/surface water interaction and supply.

Federal Instream Flow Coalition, ID

Mediation support for resolution of federal reserved water rights.

Idaho Office of the Attorney General, ID

Hydrology expert for litigation of federal reserved water rights.

C&G, Inc., ID

Evaluated and provided expert testimony on water drainage and right-of-way issues.

Water Supply Evaluations, Development, and Permitting

Big Lost River Basin, ID

Provided expertise regarding the surface and ground water hydrology and the administration requirements for a ground water recharge project.

District Water Supply, Boise River, ID

Evaluated impact of proposed water right transfer on irrigation. Identified and quantified changes to ground and surface water supply if transfer were approved.

City of Coeur d'Alene, ID

Prepared application for consolidation of all city water rights to allow for full use of the water rights and development of a new well.

Federal Instream Flow Coalition, ID

Evaluating the hydrologic impact of the historical water development in southern Idaho on river flows for Endangered Species Act listed salmonids.

FIGURE 1



East Fork Salmon River

Custer County, Idaho



Permeable Soils

Moderately Rapid 2 to 6 inches per hour

Rapid 6 to 20 inches per hour

Very Rapid more than 20 inches per hour

Source: NRCS, 2009 Soil Survey Geographic
Database for Lemhi-Custer Counties, Idaho
Image Source: 2004 NAIP



Figure 1

Prepared for: Ringier Law
File: 2188-21
October 14, 2009

FIGURE 2

East Fork Salmon River nr Clayton

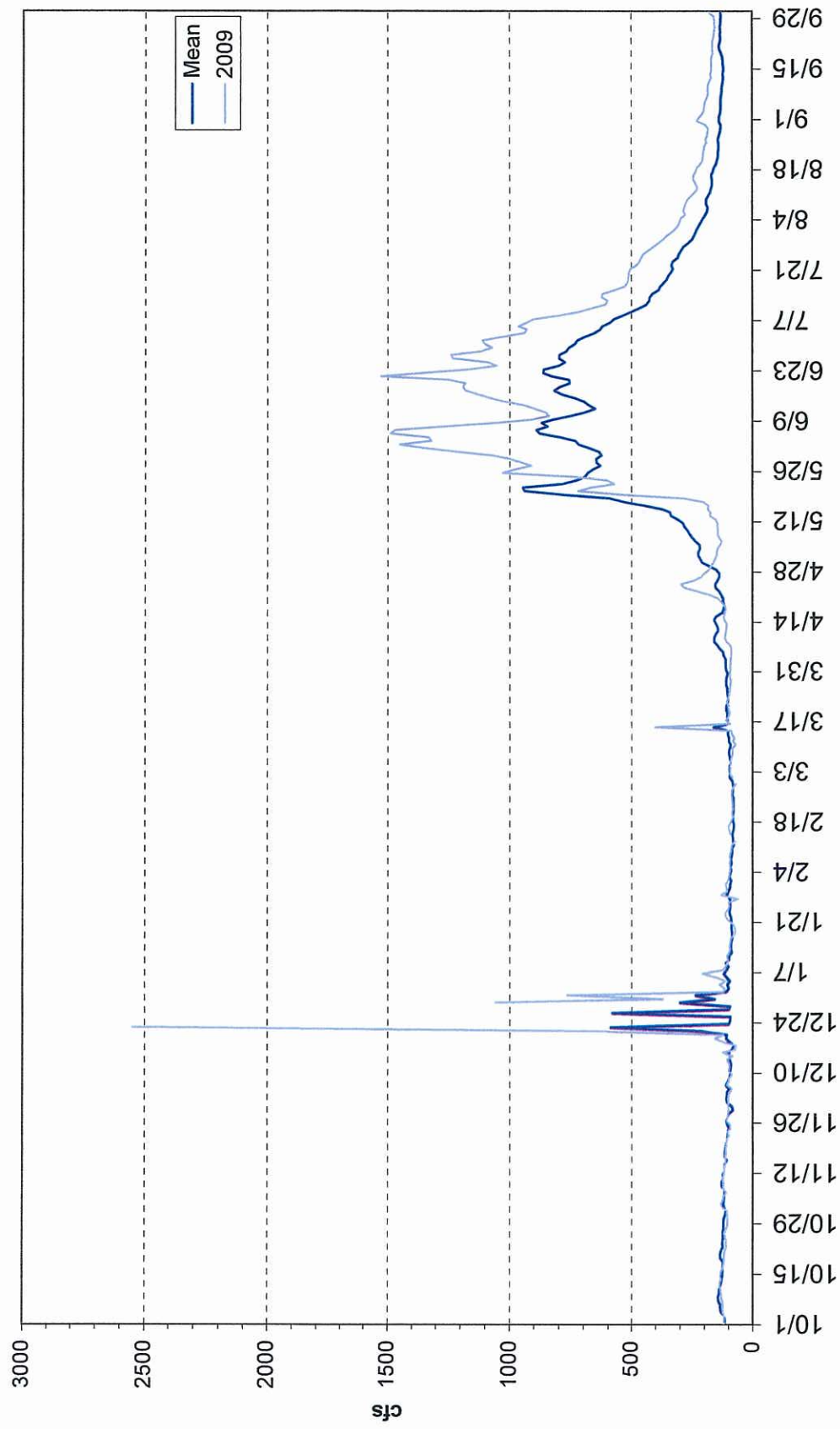


Figure 2

EXHIBIT 2

**REVIEW AND EVALUATION OF IRRIGATION RATES
BASED UPON 1997 REVISED HUBBLE ANALYSIS PROCEDURES**

CLAIM NUMBERS

72-00196

DATE: 11-16, 1998

72-00197

REVIEWED BY DA

CHALLIS AREA SOIL REVIEW

SOIL TYPE	BORDER CFS/AC		FURROW CFS/AC		OPTIMUM ROTATION	
	PAST	ALFA	PAST	ALFA	PASTURE	ALFALFA
ATC	.15	.13			6.49	7.62
BB1	.09	.09			6.09	6.17
BBD						
BC1	.16	.17			5.82	5.46
BK1	.07	.06			10.62	11.86
BT1	.18	.16			3.99	4.19
BT2	.41	.32			2.34	2.87
CB1	.06	.06			11.55	13.47
CHA	.21	.21			4.52	4.76
CP1	.36	.36			2.81	2.78
DB1	.13	.11			5.66	6.65
DBB	.13	.11			5.71	6.69
DEC	.13	.11			5.71	6.69
DMF	.18	.21			5.12	4.72
DT2	.05	.04			12.46	16.50
DWA	.14	.14			4.79	5.01
GO1	.10	.12			12.47	10.51
HAYSE						
KEG	.08	.07			8.73	10.06
MUG	.15	.14			4.54	4.98
NDL	.13	.12			5.30	6.06
PD2	.11	.12			5.15	4.74
RE2	.29	.21			3.15	4.74
RP1	.19	.21			4.89	4.57
SH1	.06	.05			9.37	12.10
SOC	.08	.07			7.38	8.08
SSA	.15	.14			4.79	5.01
SXF	.12	.11			6.14	6.80
TC1	.06	.06			9.82	9.55
TD1	.04	.03			12.48	16.50
WB2	.13	.13			5.37	5.43
WAA	.19	.16			3.81	4.23
WBB	.17	.14			3.36	3.84
WC1	.07	.06			11.24	13.45
WFT	.19	.15			3.16	3.69
WV1	.07	.06			11.24	13.45
XHS						
YN1	.18	.14			5.38	6.92

The rate per acre calculations are based upon a 300 foot run at a 2% slope. An 8 hour set time was also used. Individual graded border evaluations, soil characteristics work sheets, and peak irrigation diversion requirement work sheets have been created and archived separately for each soil type.

Where actual rotation is shorter than the optimal rotation, optimal rotation is the criteria to be used for the recommendation analysis and, therefore, the rotation percentage adjustment is not necessary. The rate becomes the acres per soil type times the rate per acre from the above chart.

SOIL TYPE	OPTIMAL / ROTATION / (chart)	ACTUAL ROTATION (field)	ACRES PER SOIL TYPE (field)	RATE PER ACRE (chart)	TOTAL DIVERSION RATE
<u>Hb1</u>	<u> </u> / <u> </u>	<u> </u>	* <u>29.6</u>	* <u> </u>	= <u> </u> CFS
<u>CP1</u>	<u> </u> / <u> </u>	<u> </u>	* <u>6.3</u>	* <u>.36</u>	= <u>2.29</u> CFS
<u>DBB</u>	<u> </u> / <u> </u>	<u> </u>	* <u>2.8</u>	* <u>.13</u>	= <u>.36</u> CFS
<u> </u>	<u> </u> / <u> </u>	<u> </u>	* <u> </u>	* <u> </u>	= <u> </u> CFS

TOTAL ACRES 38.7

DECREED RATE =

CLAIMED DIVERSION RATE =

MEASURED DIVERSION RATE =

2.4