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DEPARTMENT OF
WATER RESOURCES

**BEFORE THE
IDAHO DEPARTMENT OF WATER RESOURCES**

IN THE MATTER OF DISTRIBUTION OF
WATER TO WATER RIGHT NOS. 36-
04103A, 36-04013B AND 36-7148 (Snake
River Farm)

(Water District Nos. 130 and 140)

**DIRECT TESTIMONY OF
RAY ELDRIDGE, P.E.**

SUBMITTED ON BEHALF OF:

**THE IDAHO GROUND WATER APPROPRIATOR'S INC.
NORTH SNAKE GROUND WATER DISTRICT
MAGIC VALLEY GROUND WATER DISTRICT**

SEPTEMBER 11, 2009

LISTS OF SPONSORED EXHIBITS

Exhibit No.	Title
2200	Over the Rim Water Quality Analysis
2201	Over the Rim Conceptual Layout
2202	Snake River Farm Spring Water Quality from October of 2008
2203	Snake River Farm Spring Water Quality from September 1, 2009
2204	USGS Water Quality Station 13095175, Briggs Springs near Buhl, Idaho
2205	Over the Rim Well Field Water Quality Analysis Results, September 1, 2009
2206	Degassing and Aeration System, S-1
2207	Degassing and Aeration System, S-2
2208	Degassing and Aeration System, M-1
2209	Snake River Farm Spring and Over the Rim Well Field Water Quality

1 **DIRECT TESTIMONY OF RAY ELDRIDGE**
2

3 **Q STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.**

4 A My name is Ray Eldridge. I am a partner with Engineering Science Construction, P.C. of
5 200 N. 4th Street, Suite 300, Boise, Idaho, 83702.

6 **Q WHO ARE YOU TESTIFYING FOR?**

7 A I am testifying as an expert witness on behalf of the Idaho Ground Water Appropriators,
8 Inc, (“IGWA”) North Snake Ground Water District and Magic Valley Ground Water
9 District (collectively “Ground Water Districts”).

10 **Q WHAT IS YOUR AREA OF EXPERTISE?**

11 A My expertise includes the analysis, planning and design of fish facilities, hydraulic
12 structures, water supply and treatment.

13 **Q PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL**
14 **BACKGROUND.**

15
16 A I hold Master of Science and Bachelor of Science degrees in civil and environmental
17 engineering from Washington State University. I have practiced as a consulting engineer
18 for 26 years.

19 **Q DO YOU HAVE ANY PROFESSIONAL REGISTRATIONS?**

20 A I am a registered professional engineer in the states of Idaho, Washington and California.

21 **Q WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**
22

23 A The purpose of my testimony is to provide a professional opinion on the usefulness of the
24 proposed Over the Rim water supply for the culture of fish at the Snake River Farm. In
25 preparation for this testimony, I have reviewed the available water quality data at the
26 Snake River Farm, sampled and analyzed water quality data at the Snake River Farm,

1 designed and directed a water quality sampling and analysis plan for the Over the Rim
2 well field and existing spring source for the Snake River Farm, and have reviewed the
3 water quality of many wells and springs in the immediate area of the Snake River Farm.

4 **Q CAN YOU SUMMARIZE YOUR CONCLUSIONS?**

5 **A** It is my opinion that the Over the Rim well field can supply water to the Snake River
6 Farm that is essentially the same water as the existing spring water supply to the Snake
7 River Farm. The variations in well field and spring water quality and temperature are
8 minor. The Over the Rim well field can be expected to perform as well as the existing
9 Snake River Farm water supply for the culture of rainbow trout and other similar fish.
10 The only treatment required before delivery of the water to the SRF will be aeration,
11 which is a simple, non-mechanical practice that is used widely in aquaculture in Idaho
12 and across the US and overseas. My opinion is based on the data and analysis
13 summarized in my report labeled **Exhibit 2200** which I adopt as my testimony.
