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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
ROBERT HARDGROVE, 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 |
|--------------------|--|
| 2000 | Snake River Farms Mititgation "Over the Rim" Opening Testimony Report |
| 2001 | AMEC's Original Alignment |
| 2002 | Conceptual Pipeline Layouts |
| 2003 | Conceptual Pipeline Layout |
| 2004 | Conceptual Pipeline Layout |
| 2005 | Not Used |
| 2006 | SPF's Preliminary Design Drawings |
| 2007 | Elevations and Static Pipeline Pressures |
| 2008 | Schematic of Pressure Control & Flow Meter Facility |
| 2009 | Distribution of Pumping Volumes and Durations by Well Groups |
| 2010 | Typical Well Head Detail |
| 2011 | Distribution of Pumping Volumes and Durations by Wells for Alternative A |
| 2012 | Schematic of Well 4 and 4A Facility |
| 2013 | View of Snake River Farms from the East Alignment on top of the Rim |
| 2014 | View of Open area at the Base of the Eastern Alignment |
| 2015 | IGC Vault |
| 2016 | IGC Portal and 6-inch Gas Line |
| 2017 | Inside of IGC Pipe Tunnel |

DIRECT TESTIMONY OF ROBERT HARDGROVE

I. INTRODUCTION

Q STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.

A My name is Robert Hardgrove. I am employed by SPF Water Engineering, LLC (300 E. Mallard Drive, Suite 350, Boise, Idaho 83706) where I am a Project Manager and Civil Engineer.

Q WHO ARE YOU TESTIFYING FOR?

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

Q WHAT IS YOUR AREA OF EXPERTISE?

A My area of expertise is in civil engineering design and construction management, including extensive experience with buried water and wastewater pipe systems.

Q PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A I hold a Bachelor of Science degree in Civil Engineering from Montana State University. I have over sixteen years experience in civil engineering, construction management, and project management.

Q DO YOU HAVE ANY PROFESSIONAL REGISTRATIONS?

A I am a licensed professional engineer in the State of Idaho.

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

A My retention as an expert witness in this matter regards the routing, design, and constructability of the water pipeline from the well sources up to the Snake River Farm's property line. More specifically, my testimony is contained in Section 1 and Section 3, and the exhibits within these sections, of the Snake River Farms Mitigation "Over the Rim" Opening Testimony Report (**Exhibit 2000**) prepared by SPF Water Engineering, LLC.

Q CAN YOU SUMMARIZE YOUR CONCLUSIONS?

A In summary, the proposed pipeline alignments as shown in the **Exhibit 2003** and **Exhibit 2004** are constructible and will provide a reliable means of transporting water from the wells to the Snake River Farms' property. These conclusions are based on information collected during several site visits, survey work completed by Quadrant Engineering, and design work SPF Water Engineering, LLC has completed. To date, I have not identified any physical challenges with the **Exhibit 2003** and **2004** conceptual alignments that would likely prevent qualified contractors from successfully installing the pipeline.