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S:\CLIENTS\3314\10\Affidavit of Terry Scanlan.DOC

*Attorneys for Mays Land and Livestock Inc. and  
Blaine County Canal Company*

**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

Case No. 35976

Case Nos.:33-69, 33-70,33-71, 33-72,  
33-73, 33-74, 33-76, 33-78, 33-79, 33-  
80, 33-81, 33-82, 33-2086A, 33-2086B,  
33-2090, 33-2091, 33-7018

**AFFIDAVIT OF TERRY M.  
SCANLAN**

STATE OF IDAHO     )  
                                  ) ss.  
County of Ada         )

Terry M. Scanlan, being first duly sworn, deposes and states as follows:

1. My name is Terry M. Scanlan, and my work address is Scanlan Engineering, 600 East River Park Lane, Suite 105, Boise, ID 83706.

2. My educational background includes M.S. and B.S. degrees in geological engineering from the University of Idaho granted in 1986 and 1983, respectively. I am registered as a professional engineer and as a professional geologist in the State of Idaho.

3. My work experience includes ten years as Principal Engineer and Hydrogeologist for Scanlan Engineering. This work has consisted primarily of consulting on water supply matters. The work has also included investigations of water rights and SRBA claims, and preparation of applications for numerous water right permits and transfers. Prior to forming Scanlan Engineering, I was employed by Montgomery Watson for eight (8) years working on water supply, water right, and environmental projects. I was employed by the US Geological Survey from 1984 through 1986 and by the Idaho Bureau of Mines (now the Idaho Geological Survey) in 1982 and 1983.

4. I provided expert testimony before the Idaho Department of Water Resources in the matter of Application Transfer Nos. 4221, 4222, 4223, 4224, 4225, 4226 and 4227 in the name of Sagewillow, Inc., which matter was the subject of the Idaho Supreme Court's decision in *Sagewillow, Inc. v. Idaho Department of Water Resources, James Mays, Mays Land & Livestock, Blaine County Canal Company*, 138 Idaho 831, 70 P.3d 669 (2003). My testimony concerned the nature of the ground and surface water sources in the vicinity of the Knollin Ranch and the anticipated hydrologic effects of increased use of ground water for irrigation by Sagewillow, Inc. ("Sagewillow"), beginning in the year 1989 through 1994.

5. I have reviewed the Affidavit of Charles E. Brockway dated December 11, 2003 (the "Brockway Affidavit") and appended reports filed with the Court in this matter by Sagewillow in support of Sagewillow's Motion for Leave to File Late Objections.

6. The appended report dated December 11, 2003 attached to the Brockway Affidavit states that "the net depletion of the total water resource based on 978 added acres of irrigation is 2,464 acre-feet during the growing season." The Brockway Affidavit also predicts

that this additional depletion will result in a reduction in streamflows at the Blaine County Canal Company headgate of 5.88 cubic feet per second ("cfs").

7. The Little Lost River and the aquifer are interconnected in the vicinity of the Sagewillow lands. Several miles downstream from Sagewillow, the river is perched above the aquifer. Undiverted river flows ultimately sink and provide a primary source of recharge to the aquifer in this area. As a result of these hydraulic relationships, the 2,464 acre-foot annual depletion estimated by Dr. Brockway is manifested as: (1) reduced streamflow in the River downstream from Sagewillow; and (2) reduced recharge to the aquifer downstream from the Sagewillow lands.

8. The aquifer in the Little Lost River Valley downstream from the Sagewillow lands is highly dependent on the total amount of annual recharge. Although water level hydrographs for wells in the area generally do not show chronic long-term water-level declines since the 1950s, they do show significant declines during multi-year drought periods. These declines appear to recover during multi-year wet periods. During the drought periods, well yields decline, wells can go dry, and groundwater rights are not fully filled. Blaine County Canal Company Exhibit 1 provides evidence of these types of impacts in the early 1990s. Reductions in the annual recharge to the aquifer resulting from increased consumptive use upgradient will exacerbate these problems and impact existing water rights during drought periods.

9. Early priority surface water rights on the Little Lost River are routinely curtailed during the irrigation season. As a result, depletions to surface water flow downstream of the Sagewillow lands will generally result in earlier curtailment of senior priority surface water rights relied upon by downstream irrigators.

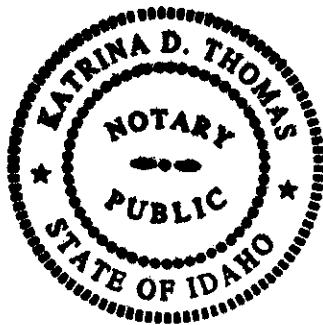
10. The reduction in streamflow of up to 5.88 cfs predicted by Dr. Brockway also will reduce the amount of incidental aquifer recharge from canal leakage and other irrigation activities that otherwise would occur if this water continued to be available for diversion to irrigation use by the Canal Company. The loss of this incidental recharge due to reduced streamflows further reduces ground water availability to junior ground water users below the Knollin Ranch.

11. The time of travel calculations presented in the December 11, 2003 report by Brockway may underestimate the time that is required for stream depletions to develop as a result of well pumping. Rather than time of travel calculations, stream depletion calculations which evaluate the spreading cone of depression from a pumping well may be more applicable. In the Little Lost River Basin, stream depletion was previously calculated by the USGS (Mundorf and others, 1963, USGS Water Supply Paper 1539Q, pages 32-34). These calculations show that a well two-tenths (0.2) miles from the river might derive eighty percent (80%) of its pumped water as a stream depletion after one month of pumping. A well two (2) miles from the river, might only derive twenty percent (20%) of its flow as a stream depletion after four (4) months. The majority of the Sagewillow wells are less than one-half ( $\frac{1}{2}$ ) mile from the river, suggesting relatively rapid stream depletion. The actual timing of depletions will depend on a variety of factors, including well depth and vertical hydraulic conductivity.

12. Regardless of the timing, however, the net depletions to the interconnected water sources will reduce water availability to existing water rights, particularly during drought periods when these rights already are not being filled.

  
TERRY M. SCANLAN, P.E., P.G.

SUBSCRIBED AND SWORN to before me this 8<sup>th</sup> day of January, 2004.



Katrina Thomas

Notary Public for the State of Idaho

Residing at: Boise, ID

My commission expires: 4-10-06

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on the 8<sup>th</sup> day of January, 2004, I served a true and correct copy of the foregoing by delivering the same to the following by the method indicated below, addressed as follows:

### Original to:

Clerk of the District Court  
Snake River Basin Adjudication  
253 Third Avenue North  
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Chief, Natural Resources Division  
Office of the Attorney General  
State of Idaho  
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Environment and Natural Resource Division  
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Michael C. Creamer