

EUREKA_002

**In the Matter of the Determination of the Relative Rights
In and To all Waters of Diamond Valley
Hydrographic Basin No. 10-153
Elko and Eureka Counties, Nevada**

**Expert Report by Robert O. Anderson, P.E., CFM, WRS
Eureka County Claims V04501, V04503, V04504, V04505, V04506,
V04507, V04508, V04509 and V004510**

January 2019

Prepared for:

EUREKA COUNTY PUBLIC WORKS

P.O. Box 714

Eureka, NV 89316

Prepared by:

Robert O. Anderson, P.E., CFM, WRS

R.O. ANDERSON ENGINEERING, INC.

1603 Esmeralda Avenue

Minden, Nevada 89423



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1 Introduction

Our firm, R.O. Anderson Engineering, Inc., was retained by Eureka County to assist them research and review historical documents and records to document their claims of vested rights to surface waters of Diamond Valley Hydrographic Basin 10-153, Elko and Eureka Counties. Upon completing that effort, we prepared and filed Amended Proofs of Appropriation for Proofs V04501, V04503, V04504, V04505, V04506, V04507, V04508, V04509 and V04510 including supporting documents.

These springs together with the spring known as Prospect Spring (V04502) are the subject of certain certificated permits, including the demonstrated and documented diversion rate of 0.111 cfs. Each source by name, claim number and corresponding permit and certificate numbers, is listed in the following table.

Summary of Claims by Source

<i>Claim No.</i>	<i>Name</i>	<i>Permit No.</i>	<i>Certificate No.</i>	<i>Certificated Diversion¹ Rate (cfs)</i>	<i>Priority (on or before)</i>
V04501	<i>Gorman Spring</i>	40158	12929	0.111	4/10/1875
V04502	<i>Prospect Spring</i>	40165	12936	0.111	9/30/1880
V04503	<i>Lucky Springs & Tributaries</i>	40164	12935	0.111	3/19/1879

¹ The total combined rate of diversion for the 10 springs is 0.13 cfs.

V04504	<i>Summit Spring</i>	40163	12934	0.111	1879
V04505	<i>Middle Spring & Tributaries</i>	40162	12933	0.111	8/4/1873
V04506	<i>Lani Spring</i>	40161	12932	0.111	1870
V04507	<i>Fred Spring</i>	40160	12931	0.111	1878
V04508	<i>Florio Spring & Tributaries</i>	40159	12930	0.111	1875
V04509	<i>Bullwacker Spring</i>	40157	12928	0.111	1874
V04510	<i>Richmond Spring</i>	40156	12927	0.111	1874

In order to document and establish the chain of title to the County's ownership of the rights to these sources as well as demonstrate continuous beneficial use of each, extensive research was performed at the County of Eureka, inclusive of Official Records of the Clerk, Recorder and Assessor's Offices. Official Records of Lander County were also examined, as were documents and records of the Nevada Division of Water Resources. These efforts included reviewing historic documents available at:

- the Nevada State Library and Archives, State Museum, and Nevada Historical Society;
- the University of Nevada Knowledge Center, its Special Collections and Digital Collections, and DeLaMare Science and Engineering Library;
- Nevada Division of State Lands and Bureau of Mines and Geology;
- Eureka County's Eureka Sentinel Museum; and,

- the Bureau of Land Management through the National Archives and Records Administration.

Additionally, various published books containing the history of Eureka were reviewed and interviews with former Eureka County residents and employees were held. Collectively the findings from these efforts establish that these specific springs, and their use as associated water works, have been beneficially used initially for mining purposes and since for municipal and domestic purposes adjacent to or within the Town of Eureka since about 1871. A complete record of the pertinent supporting documents was attached to Eureka County's filings of Amended Proofs of Appropriation pursuant to the State Engineer's Order in this adjudication; however, brief highlights of some of the older history of the subject springs and associated works are provided below:

- On August 2, 1869, the Board of County Commissioners of Lander County, "ordered that a township be and is hereby created to be known and called "Eureka Township".
- W.W. McCoy, also known as Major McCoy, platted the southern half of the town of Eureka, and the Major, "...after it became sufficiently populous to justify it, originated a system of waterworks for its use". The local paper, the *Eureka Sentinel*, provided the citizens of the town with periodic updates of McCoy's progress. One such entry, dated September 5, 1871, stated:

"Water Works: - On Saturday evening there was a display of the water works of Major McCoy. A jet of water was thrown 40 feet high from the pressure of the water and the whole of Main Street irrigated and the fronts of houses were washed. Major McCoy invited the citizens to a free lunch and the health of the Major and his chief engineer, Jacob Echternoch, who has been with the work from the first, was freely drank, and everyone was pleased."

- An Act to create the County of Eureka was approved on March 1, 1873. Major McCoy's entry in the 1873 Tax Roll of Eureka County included "Possessory interest in and to the Eureka Water Works & Improvements connected therewith consisting of ditches, pipes, tanks and springs."
- In 1873 the Richmond Mining Company was formed as a subsidiary of the Richmond Consolidated Mining Company, Ltd. In June of that year they purchased a large parcel of land with four springs. This acquisition was described in the 1874 Tax Roll of Eureka County as the Richmond Water Works

Tract, including: "Possessory interest in and to a tract of land and Springs situated in Eureka Cañon about 2½ miles southerly from the town of Eureka in Eureka County, State of Nevada. Known as the Richmond Water Works Tract". Three of these springs were later known as the South, the Middle and the East Spring.

- In 1877, the Richmond Mining Company purchased a spring of water which had been known by several names, The Silver Brick, The West, or the Gillen Spring. The 1882 Map of Eureka District of Nevada, a copy which today hangs in the County of Eureka's Recorder's Office, labels the spring as Gillen Springs. From the location reflected on the map, it is clear that this is the spring now known as Gorman Spring.
- In 1881 the Richmond Mining Company purchased another tract of land which included a spring known as Clark Spring. The tax roll describes the location of the parcel, "Possessory interest in and to a tract of land situated in Eureka Cañon about 1½ miles southerly from the Town of Eureka in Eureka County State of Nevada including Clark's Springs and described as follows to wit: commencing at a point 300 feet north from the N.E. Corner of the Toll House and Commencing thence East 200 feet thence South 1000 feet thence West 1100 feet; thence North 1000 feet; thence East 1000 feet to the place of the beginning." This description clarifies that the spring once known as Clark Spring, is now known as Florio Springs.
- During the years that the Richmond Mining Company was developing their water works, Major McCoy continued to grow his, presumably to support the growing population for water use and fire protection. From entries within the County's annual tax rolls we have confirmed that in 1878, McCoy Water Works consisted of numerous springs and "2200 feet of ditches and water pipes including tunnels, Water Tanks, etc." In 1880, these same official records suggest that McCoy's water works included up to "... 14,145 feet of water pipe and ditches including tunnels, water tanks, etc."

The following chart provides a summary of the change in population within the Town of Eureka since 1870. The sources for this population data include:

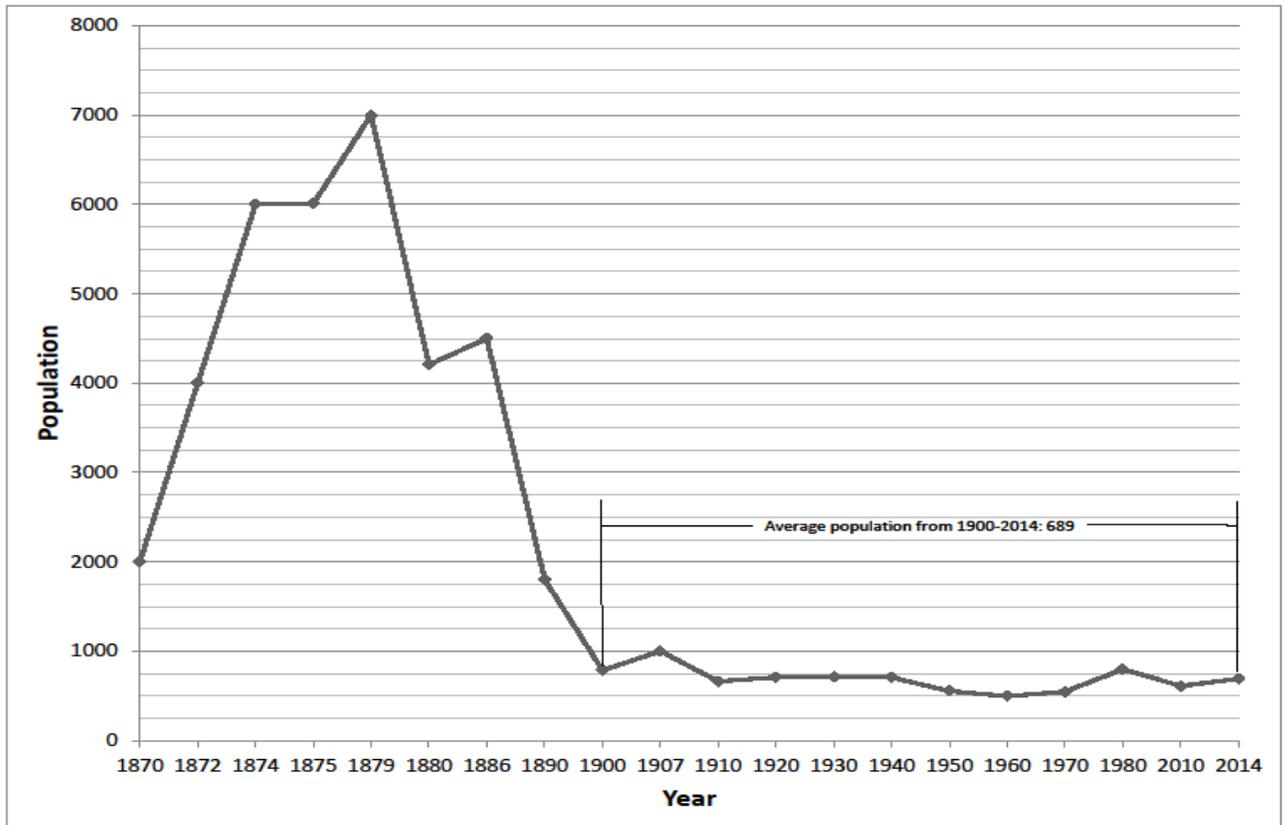
- Appendix to Journals of Senate and Assembly, of the Eighth Session of the Legislature of the State of Nevada, Volume 2, 1877
- Census of the Inhabitants of the State of Nevada, 1875, Volume 1, pp. 390
- Town of Eureka Map, Sanborn Map & Publishing Co., Limited, dated January 1886 - UNR Historic Map Collection
- Town of Eureka Map, Sanborn - Perris Map Co., Limited, dated October 1890 - UNR Historic Map Collection
- Town of Eureka Map, Sanborn Map Company, dated 1907 - UNR Historic Map Collection
- Nevada Place Names Populations, 1860 – 2000, Eureka County – Compiled from US Decennial Census Reports, Nevada State Library, Reno, 2004

The Town's population was at times quite high due to mining influences.² From 1869 through about 1982, when the predecessors-in-interest to the County drilled and equipped a well to supplement the surface water supply, these springs were the sole source of water serving the municipal demands within the Town site. Understanding that the per capita demand for water was quite low until indoor plumbing was available and established, these sources were adequate and sufficient to serve municipal demands for what was at certain periods in the Town's history, a substantial population. It is also verifiable from a detailed review of the records that McCoy and Richmond owned other springs that were used to supply the town, but those sources have since dried up or proven to be unreliable.

Annually the subject springs and associated works are generally sufficient to meet winter demands from the residents and businesses of Eureka. Based on the historic record, after being established in the 1860's, the Town of Eureka was never abandoned or unpopulated. Furthermore, our research of these same historical records confirmed that once the water supply was established at no time did the Town abandon its use of waters from the springs that are the subject of these proofs. From the historical record it is clear that at least one of the springs (Lani) has been in continuous and beneficial use since at least 1870. Based on the results of our research, use of the other springs followed shortly thereafter and each has been in use continuously since the dates set forward above.

² Some have described the Town's population at its peak as 9,000.

Town of Eureka – Historic Population Trends



With this background and knowledge of Eureka County's claims and long-standing use of the subject springs, I have completed a review and analysis of the *Abstract of Claims in the Matter of the Determination of the Relative Rights In and To All Waters of Diamond Valley, Hydrographic Basin No. 10-153, Elko and Eureka Counties, Nevada*, as well as the *Preliminary Order of Determination in the Matter of the Determination of the Relative Rights In and To All Waters of Diamond Valley, Hydrographic Basin No. 10-153, Elko and Eureka Counties, Nevada*, both documents issued by Jason King, P.E., State Engineer, on August 30, 2018. I offer the following opinions regarding Claims V04501, V04503, V04504, V04505, V04506, V04507, V04508, V04509, and V04510, owned by Eureka County, as well as my opinions on the State Engineer's findings relative to claims filed by Claimant Baumann to Lani, Middle, Fred, Bullwacker and Richmond Springs.

2 Allowed Diversion Rate/Duty

For Eureka County Claims V04501; V04503; V04504; V04505; V04506; V04507; V04508; V04509; and V04510: Objection to Allowed Diversion Rate/Duty.

From information available to me the allowed diversion rate/duty as listed in the Preliminary Order of Determination rely solely upon measurements taken by representatives of the State Engineer's during a site visit on June 13, 2017 plus those spring flow measurements made and reported to the State Engineer's office by Eureka County on October 27, 2016 and June 4, 2018. From this limited sample, it appears that the State Engineer randomly picked one of these measurements as the basis for diversion for each claim in its Preliminary Order of Determination. In contrast, for other claims filed in this adjudication, the State Engineer appears to have accepted at face value the claimed diversion rate stated in the claim with no supplemental investigation or measurement of the claimed diversion rate. In my professional opinion, in an adjudication that seeks to confirm the historic maximum diversion rate of water it is not appropriate to rely on a single measurement where spring flows are known to fluctuate depending on several factors. While the measurements relied upon by the State Engineer in the Preliminary Order are evidence of flow rate on the specific date of measurement (or a computation of the average daily flow rate derived from the monthly volumes recorded by Eureka County for the past 12 months), there exists other evidence of flow rate including Eureka County's historic water use of these sources. The following paragraphs form the basis of my opinion:

- Water Right Permits 40156 through 40164, were issued to Eureka Water Association, Inc., predecessor to Eureka County, for these same surface water sources by the State Engineer in April 1982.
- Proofs of Completion of Work for each respective permit were subsequently submitted in accordance with the permit terms.
- On June 21, 1989, on behalf of Eureka Water Association, Inc., a Proof of Beneficial Use together with supporting documentation was submitted. The

supporting documentation included meter readings that were compiled between August 1986 and May 1989. The diversion rate measurement was taken at a meter located at the confluence of the flows from the respective springs.

- The water works at each spring and meter readings were subsequently field verified by a representative (Robert Steward) of the State Engineer's Office – see record of Field Investigation dated December 17, 1990.
- In response to the field investigation, the State Engineer issued its certificate for each of the permits (e.g. 12927 – 12935) for an appropriation of up to 0.111 cfs, but not to exceed 26.18 million gallons annually.
- These data are from records from within the State Engineer's office; they represent the best available flow data for the combined duty of the sources; and are evidence of the actual flows derived from the springs during the period.
- The amount of water available from these springs is known to vary seasonally; however, since Eureka County, as a successor-in-interest to Eureka Water Association, Inc., acquired the springs, they have captured and beneficially used 100% of the flow from each of these sources. See Affidavit of Ron Damele, dated May 19, 2016, paragraph 21; Affidavit of Leonard Fiorenzi, dated May 18, 2016, paragraph 13.
- While 2017 was a relatively wet water year, it followed several consecutive, or nearly consecutive drought years. Flow measurements captured during one wet year within a series of drought years doesn't, in my opinion, provide enough data from which to ignore established, previously accepted and certificated flow measurements for purposes of an adjudication.

3 Priority Date for Claims of Vested Right

For Proofs V-04503; V04504; V04506; and V04508-V04510, the State Engineer's determination of the priority date for the claims of vested right was determined by the date the water was first put to beneficial use for municipal purposes. (See Preliminary Order of Determination, pages 262-270).

For each of these claims, the State Engineer's Preliminary Order of Determination recognizes the water was used for mining or other purposes from the priority date claimed by Eureka County for the vested right. Notwithstanding the acknowledged chain of title and use of each spring on the date claimed by Eureka County in its Proof, the State Engineer disregarded the established prior use and, in my opinion erroneously determined the priority date for Eureka County's claims of vested right on these springs as the date the water was first put to beneficial use for municipal purposes. The change in manner of use of these sources occurred pre-1905 (refer to newspaper articles establishing the date water was delivered to the town for fire protection and other purposes). There was no codified water law in Nevada prior to 1905. As a result, Eureka County's predecessors could not have and were not required to file applications to change the manner of use of their water and the priority date should be established as the date from which beneficial use (irrespective of the manner of use) commenced NRS 533.085(1) prevents any application of a statute that impair rights which had vested prior to the enactment of the 1913 water law statutes. See *In re Waters of Manse Springs*, 60 Nev. 280, 283-284, 108 P.2d 311, 313-314 (1940), *Andersen Family Associates, v. Hugh Ricci, P.E.*, 124 Nev. 182, 179 P.3d 1201 (2008).

4 V04509 (Bullwacker Spring) V04510 (Richmond Spring)

Regarding V04509 (Bullwacker Spring) and V04510 (Richmond Spring), findings in the Preliminary Order reject Eureka County's claim of a vested right based on when the Town of Eureka incorporated these two sources into its water system, circa 1962.

- In making this finding, the State Engineer either ignored or discounted the detailed and thorough chain of title provided with and in support of these respective claims of vested rights. These documents demonstrate that the County is the successor-in-interest to the original patent holder (John E. Plater, USA Survey 104, 11/24/1876; Mineral Certificate No. 283, Patent No. 2094). The GLO Surveyor noted "The improvements consist of the pipe conveying water from the springs to the tanks, ditches, tunnels, to which I hereby certify were made by the applicant."
- The submitted chains of title further establish that there are no other parties having an interest in these sources of water.
- Supporting documentation for these claims included pictures taken during the county's Spring Improvement Projects and the Affidavit from Ron Damele, Public Works Director for Eureka County, demonstrate that:
 - o Bullwacker Spring was a tunnel and included evidence that the site had been hand dug (as opposed to mechanically drilled).
 - o The works at Richmond Springs were found to be "consistent with the old era".
- Historically, and even today, water developed for mining and milling purposes was also used for fire protection and culinary or quasi-municipal purposes. The importance of water for fire protection purposes from springs south of the historic town site was well documented in the historic newspaper articles included in the materials submitted with the Amended Proofs of Appropriation.

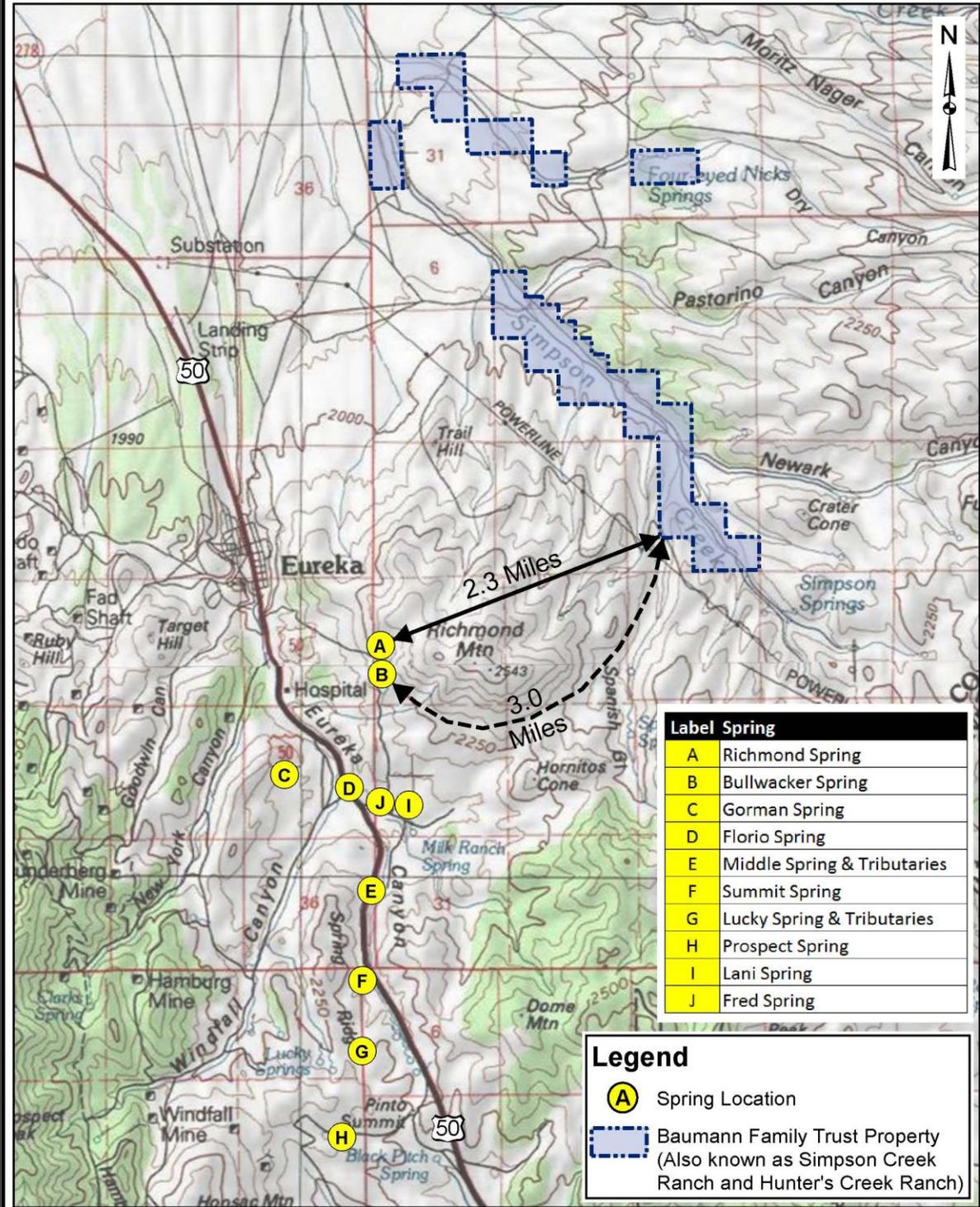
5 Baumann Claims

Baumann Family Trust (Baumann) filed claims of vested rights on the sources known as Lani, Middle, Fred, Bullwacker and Richmond Springs. The Preliminary Order of Determination errantly, in my opinion, grants Baumann claims despite the following facts:

- The records of the State Engineer's files show that neither Baumann nor their predecessors-in-interest, protested Applications 26532 – 26540, which were filed in 1972 by Eureka Water Association, Inc. for these same spring sources.
- The records of the State Engineer's files show that neither Baumann nor their predecessors-in-interest, protested Applications 40156, 40157, 40160, 40161 and 40162, which were filed in 1979 by Eureka Water Association, Inc. for these same spring sources.
- While the Baumann's supporting documentation demonstrate ownership of Simpson Creek Ranch (sometimes referred to as Hunter's Creek Ranch or Shannon Station), there is no actual evidence or proof included with their vague documentation (e.g. chain of title, measurements of flow, evidence of improvements or maintenance of these sources, etc.) that support their claim for the actual and definitive use of what are now known as Lani Spring, Middle Spring, Fred Spring, Bullwacker or Richmond Spring prior to 1905.
- The Simpson Creek Ranch is located approximately three miles east of Richmond and Bullwacker springs, and even a greater distance to Lani Spring, Middle Spring and Fred Spring. Baumann cannot, therefore, claim a title interest in these springs. See attached Map entitled 'Spring Relationships to Baumann Family Trust Properties'.

Eureka County, Nevada

SPRING RELATIONSHIPS TO BAUMANN FAMILY TRUST PROPERTIES



R|O Anderson



MAP

Print Date:11/07/2018 -- File:\2346-001\GIS\Baumann.mxd -- GIS Mapping by Eric Herron

- Baumann did not appear or claim title to Lani, Middle, Fred, Bullwacker and Richmond Spring in the quiet title action Eureka County filed in 2010. See Judgment Quieting Title filed September 17, 2010 in Case No. CV 10006-141 filed in the Seventh Judicial District Court of the State of Nevada, In and For the County of Eureka, entitled *Eureka County vs. Eureka Water Association, Inc. and all persons unknown claiming any right, title, estate, lien or interest in the real property described in the complaint adverse to Eureka County's ownership, et al.* The Court found Defendants and "all other person claiming rights in the said water rights, are permanently enjoined from asserting any adverse claim to Eureka County's right, title to, or interest in, said water rights."
- Eureka County's chain of title establishes and confirms their interests as a successor-in-interest to the original patent holder for Richmond Spring and Bullwacker Spring. Their title and interest in these sources is well documented in the files of the State Engineer, and unbroken and unencumbered by any third-party claimant including Baumann.
- If Baumann had any claims to Lani, Middle, Fred, Bullwacker and Richmond Springs, any such claims have been abandoned by Baumann by virtue of the preceding facts and non-use of these sources since at least 1979.
- For Richmond Spring and Bullwacker Spring, Baumann cannot rightfully claim that they have historically "used (and still is being used)" by their ranch "prior to the formation of, and in conjunction with the Eureka Water Association or Eureka County abandoned the use of this spring in approximately 1992". Neither Eureka County, nor its predecessor-in-interest, ever abandoned the use of either of these springs for mining or municipal uses in the Town of Eureka. In fact, the records on file at the office of the State Engineer confirm that the Town of Eureka, Eureka Water Association and/or Eureka County was making continuous progress toward demonstrating beneficial use of these sources from 1979 until they were certificated in 1991.

- Documentation submitted in support of Eureka County's claims to these springs (and others) establish that between 2011 and 2013, Eureka County spent \$2,936,200 to rehabilitate its springs. To address comments made by Nevada Department of Wildlife (NDOW) as part of the environmental assessment for the spring rehabilitation project, Eureka County agreed to add a wildlife trough to mitigate loss of wildlife at Bullwacker Spring. The right of way stipulation also states the vested claims of Baumann on the Richmond and Bullwacker Springs will be recognized and Eureka County will provide a meter and appurtenances necessary for the Baumann's to divert their vested claim of 1/20 of a cubic foot per second (22.44 gallons per minute), for use during the grazing season of their term grazing permit(s). Ron Damele, Eureka County Public Works Director, has never seen Baumann's cows at Richmond Spring or Bullwacker Spring since the troughs were put in. Per Mr. Damele's affidavit, Ithurralde historically watered his cows and sheep in the area of these springs, not Baumann. In the referenced right of way stipulation Eureka County did not relinquish its right to object to Baumann's claims of vested right at Richmond and Bullwacker Springs in a future adjudication process, only to provide the listed water works (i.e. troughs).
- Until these springs were improved by Eureka County in 2012 to include troughs for wildlife purposes, there was no physical provision for stock to access these springs. Use of the springs by cattle between 1979 and until improved in 2012 would have conflicted with the municipal and domestic (drinking water) purposes of Eureka County.
- The Baumann's claims are within the Spanish Gulch Grazing Allotment. As set forth in Paragraph 24 and Exhibit 5 to the Affidavit of Ron Damele filed on May 27, 2016 in this matter, the Baumann's, through previous agreements, could not graze on the allotment above 7,000 feet and Bullwacker and Richmond Spring are both located at elevations above 7,000 feet.
- Lani Spring: Eureka County's chain of title establishes and confirms their interests as a successor-in-interest to the party who filed the Notice of Water Right Location

(1889) Their title and interest in this source is unbroken and unencumbered by any third-party including Baumann.

- Middle Spring: Eureka County's chain of title, dating back to 1873, establishes and confirms that they are the successor-in-interest to the owner of the water source. From 1873 forward in time, their title and interest in this source is unbroken and unencumbered by any third-party including Baumann.
- Fred Spring: Eureka County's chain of title establishes and confirms their interest in this source from county tax records (1878). From that date forward, their title and interest in this source is unbroken and unencumbered by any third-party including Baumann. Additionally, at the time of Eureka County's Spring Rehabilitation Projects (2011 – 2013) this spring was not visible, and the actual location was indistinguishable without the aid of a metal detector (see affidavit of Ron Damele). As a result, their claims notwithstanding, there was no surface water available at this source for Baumann's stock.

6 Conclusion

Based on the foregoing facts, as well as my understanding and knowledge of applicable standards of Nevada water law for claiming pre-statutory water rights, Eureka County's claims for the subject sources, as submitted in furtherance of the State Engineer's Order in this matter, should be approved. The approval should include the requested diversion rate and duty as well as the priority dates demonstrated with the documents supporting the Amended Proofs of Appropriation.

Furthermore, for the reasons detailed above, it is my opinion that Baumann's claims to the sources now known as Richmond Spring, Bullwacker Spring, Lani Spring, Middle Spring and Fred Spring lack the necessary proofs of actual appropriation and beneficial use to demonstrate a pre-statutory water right and should be rejected.

7 Appendices

Appendix 1: Curriculum Vitae – Robert O. Anderson, P.E., WRS, CFM
(Submitted as Exhibit, “Eureka 001”)

Appendix 2: Affidavit of Robert O. Anderson, P.E., WRS, CFM
(Submitted as Exhibit, “Eureka 030”)