**Docket No: 1**

***PIPE SPRINGS***

**Preliminary Docket Information**

00-00-0000: water right record

WATER RIGHT RECORD

Park: PISP

Docket Number:
Federal #1

IDENTIFICATION NO: PISP,S,17,40,04,B,F,01,

DITCH/WATER SYSTEM:

SOURCE OF SUPPLY: Tunnel Spring

LOCATION: N41°04'48"W 1014 ft. from the SE Cor. of Sec. 17, T40N, R4W, Gila and Salt River Base & Meridian

WATER RIGHT:

Appropriator: United States of America, National Park Service

Application/Permit Number:

Certificate Record Number:

Date of Priority: October 16, 1907 - Setting aside of the Reservation

Quantity of Water:

Purpose: Domestic, irrigation and stock watering

Irrigated Land Description:

SUMMARY OF STATUS: This is a Federal water right consisting of springs, headgate, tunnels, two control ponds and distribution system.

The old fort at Pipe Springs, locally called Windsor Castle, was built by Morman stockmen in the pioneer days. Later, the area was included in the Kaibab Indian Reservation. In 1923, the SE¼SE¼ of Sec. 17, including the Pipe Springs, was proclaimed a national monument. On June 9, 1924, representatives of the Indian Service, National Park Service, and stockmen, met at Pipe Springs and arranged an inter-Departmental agreement, signed by representatives of each interest, and giving one-third of the spring flow to each.

United States Department of the Interior

NATIONAL PARK SERVICE
Pipe Spring National Monument
HC 65, Box 5
Fredonia, Arizona 86022

IN REPLY REFER TO:

L54

March 25, 1994




MEMORANDUM

To: Field Solicitor, Phoenix Office

From: Acting Superintendent, Pipe Spring NM

Subject: Inquiry Concerning Property and Water Rights at Pipe Spring National Monument

Thank you for the telephone call on Friday and for your time in assisting us. As stated in our conversation, both property and water rights issues need to be addressed as originally requested, but the water rights question has become more pressing.

The Kaibab Paiute Tribe, with whom we have a water agreement, has intentions of developing a casino operation within the next few months and their attorney, John Kennedy, has made inquiries of NPS officials regarding water usage in anticipation of increased need.

This inquiry about the water is presented as a "concern" the Tribe would like resolved before agreeing to a GSA lease renewal the NPS has with the Tribe. The lease is for the use of a tribal owned building for the Pipe Spring Visitor Center/Headquarters. We are presently occupying the building on a 3 month extension, due to expire on 5/31/94.

On the water questions, we suggest coordinating with Chuck Pettee, NPS Water Resources Division, Ft. Collins, Colorado. His telephone number is 303-225-3535. He and Rick Inglis of that office are most familiar with the water matters at Pipe Spring.

Also, as mentioned, we would like an opinion on our GSA lease, a copy of which is enclosed. We believe the lease is valid through 1998 with a new rate being the only current consideration. Our GSA representative, Stan Grover, and the Tribe's attorney seem to believe that the lease itself is up for re-negotiation.

Enclosed, also, is a copy of the 1923 Presidential Proclamation establishing Pipe Spring as a National Monument. It provides for water usage by the Indians of the Kaibab Reservation. Enclosed, too, are: the 1933 agreement of water distribution signed by Assistant Secretary Chapman; a 1966 Memorandum of Understanding

between the Kaibab Paiute and a group of livestock operators; the 1972 water agreement between the NPS and the Kaibab Paiute Tribe and a 1987 amendment to the 1972 agreement.

Again, we appreciate your help in these matters. If further information is needed, please let us know.

Mary C. Davis

Mary C. Davis
Acting Superintendent

Enclosures

cc: Don Falvey, Supt., ZION
Stan Grover, GSA

United States Department of the Interior

OFFICE OF THE SOLICITOR
SUITE 6201, FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138

March 15, 1994

MEMORANDUM

To: Field Solicitor, Phoenix Office

From: Regional Solicitor, Intermountain Region

Subject: Transmittal of Inquiry from National Park Service Concerning Property and Water Rights at Pipe Springs National Monument

Enclosed is a request for legal assistance we recently received from the NPS concerning property and water rights at Pipe Springs National Monument. The background provided is quite substantial. Since this involves issues of Arizona water and title law, we assign this matter to your office.

Please let us know if we can assist you in any manner.

Lynn R. Collins
Regional Solicitor

Attachments

cc: Superintendent, Zion National Park
Regional Director, National Park Service, Rocky Mountain Region

United States Department of the Interior

OFFICE OF THE SOLICITOR
Rocky Mountain Region
P.O. Box 25007
Denver Federal Center
Denver, Colorado 80225

March 3, 1994

Memorandum

To: Regional Solicitor, Intermountain Regional Office, Salt Lake City, UT

From: Regional Solicitor, Rocky Mountain Region

Subject: Property and Water Rights, Pipe Spring National Monument

We are forwarding the attached request to you as it appears to be a question that should be handled by your office.

Ralph O. Canaday
Attorney

Attachments

cc: Superintendent, Zion National Park
Regional Director, National Park Service, Rocky Mountain Region

United States Department of the Interior

NATIONAL PARK SERVICE
Zion National Park
Springdale, Utah 84767

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

FEB 14 1994
OFFICE OF

L54 (ZION-S)

February 4, 1994

Memorandum

To: Regional Director, Rocky Mountain Region

From: Superintendent, Zion National Park

Subject: Property and Water Rights, Pipe Spring National Monument

Attached is a paper outlining our concerns for verification of the Government's ownership of both the 40-acre site and its associated water rights. It appears as the Kaibab-Paiute Tribe moves ahead with its gaming operations these rights may come into question.

We would appreciate a review by both the Solicitor's Office and the Water Resource Office to advise us in this matter. While the attached paper presents some background, a site visit to review the entire file may be in order.

By copy of this memorandum, we have provided the attached paper for both the Regional Solicitor and the Water Resources Office. Your assistance in this matter is appreciated.

Donald A. Falvey

Donald A. Falvey

Enclosure

cc:

Gina Guy, Regional Solicitor, RMR
Dan Kimball, WASO-WRD

# PIPE SPRING NATIONAL MONUMENT

## PROPERTY AND WATER RIGHTS

February 1, 1994

On January 7, 1994, there was a sudden hesitation on the part of the Kaibab-Paiute Indian Tribe to re-negotiate the GSA lease Pipe Spring has with the Tribe for use of the VC/Headquarters building. Additional questions arose out of this incident that indicated the Tribe was looking at ownership and water rights issues connected with the Monument. It is known that in recent months the Tribe has looked into the Supreme Court decision concerning water rights in "Winters v. United States" of January 6, 1908. Also, that last November during a trip to Washington, D.C., tribal members examined early park correspondence surrounding the establishment of Pipe Spring. A great deal of this correspondence dealt with the questions of ownership of Pipe Spring property and the rights to the water from the springs. At the present time, the Tribe is pursuing economic development opportunities. Considerations involved in this pursuit (specifically, a structure to house gambling operations) brought about the hesitation in the lease re-negotiation.

As background, the 40 acre National Monument, established in 1923, is located within a tract withdrawn from settlement on October 15, 1907, and which was confirmed and established as an Indian Reservation for the Kaibab-Paiute by Executive Order of July 17, 1917.

In 1969, NPS officials held a conference after it was discovered that the Kaibab-Paiute Indian Tribe had made plans to develop a portion of the reservation for a motel, swimming pool, curio shop, museum, general store, campground, and filling station. It was obvious to NPS officials that this development would require all of the Pipe Spring water. And that, if there was no establishment of the NPS to prior proprietary legal ownership there would be no acquired water rights as would be handed down through the long line of previous owners. Thus the rights and shares to the Pipe Spring water would be ultimately governed by the "Winters" Supreme Court decision.

Following the conference, Pipe Spring Area Manager Raymond J. Geerdes began researching the deeds and ownership of Pipe Spring and the rights to the water contained therein. He labeled this study, "The Ownership of Pipe Spring. A Legal and Historical Brief." It is dated January 1, 1970. He made this comment after he searched the "voluminous files" on the subject that "...quite unbelievably, the legal proprietary ownership of Pipe Spring had

not been finally dealt with at the time the area was declared a National Monument in 1923 or at any time subsequently."

In December of 1870, Brigham Young, President of the Mormon Church (Church of Jesus Christ of Latter Day Saints, or L.D.S.), made a verbal agreement with Elizabeth Whitmore for the purchase of Pipe Spring. Elizabeth was the widow of Dr. James Whitmore who was issued the first land certificate for the Pipe Spring property - a 160 acre tract - in 1863. A bill of sale was issued to the Winsor Stock Growing Company through Brigham Young as Trustee in Trust, but title to the land was never recorded in the proper county of jurisdiction of the time. The bill of sale was noted in the Winsor Company records. (Geerdes insisted that because of who Brigham Young was and that "his authority was tantamount to law at that time" suffices for any questions about the legality of the transaction.)

Geerdes reinforces that, "as another claim to Pipe Spring water, on May 4, 1874, Brigham Young, Winsor Cattle Company president, paid a Paiute Indian Chief one horse, valued at $40, for the springs."

In 1887, a Federal Law was passed by Congress (Edmunds-Tucker Act) and prosecution of polygamists became vigorous, with eventually 1,000 Church leaders becoming imprisoned and fined. The Church was disincorporated and it's property escheated. Geerdes wrote, "The church attempted to retain some of it's property by having trusted individuals take over property as individual owners. 'Arrangements' were made with some cooperating Gentiles to save a semblance of it's vast holdings. (such as the mysterious and elusive B.F. Saunders who later came to own Pipe Spring.) There was also the formation of 'umbrella type' holding companies in states as distant as New York which operated Church enterprises. Few records were kept and even those records were meant to obscure and confuse. Pipe Spring ownership slid under an aura of confusion and mystery. The evidence of history reveals that during this period the legal ownership of Pipe Spring simply vanished, drifted away, was dispersed to several claimants, disintegrated to non-legality, or was purposely confused and obscured. Only local traditions and legend of ownerships exists."

(Geerdes believed that the break-down in ownership was "from the LDS Church to B.F. Saunders in 1899 (1895?). No legal transfer of recorded property took place." Even though Geerdes seemed to believe that the ownership records were clear from James Whitmore in 1863 through the Heaton quit-claim to the U.S. Government in 1924, he still suggested that the NPS request the LDS Church to issue a quit-claim deed to the NPS or to B.F. Saunders ex-post-facto to ensure this ownership.)

Geerdes stated that the period from 1879 through 1895 was a "frustrating maze of contradicting evidence and traditions about who actually owned Pipe Spring." He went on to say, "The physical

records of ownership simply do not exist in any court of proper records and jurisdiction for this period."

In 1888, Daniel Seegmiller filed application for "unsurveyed land to be located with Certificate E-13, issued to Thomas B. Valentine under the act of April 5, 1872, (17 Stat., 649) known as 'Valentine Scrip'." The "Scrip" could be used only on previously unclaimed, undeveloped, or unpre-empted public domain after proper land survey. Seegmiller's application was refused "completely" by the Prescott Land Office. Seegmiller was the brother-in-law of E.D. Woolley who resided at Pipe Spring intermittently from 1885 to 1895. Both were sons-in-law of Erastus Snow who was President of the St. George LDS Stake, and President of the Canaan Cooperative Cattle Company which had absorbed the Winsor Stock Growing Company in 1879. Geerdes stated that B.F. Saunders purchased all the livestock and holdings of the Canaan C.C. Co. and, in fact, the company itself in 1895.

Geerdes went on to say that, during the time Seegmiller filed his Valentine Scrip, "the church ownership of Pipe Spring was well hidden, included in a New York corporation created to obscure the Church control. So well hidden was Pipe Spring ownership by this device that (even) with the full cooperation of the (LDS) Church Legal Office documentation of this is difficult to find."

Geerdes continued, confusingly, to say that "the ownership of Pipe Spring by the Winsor Company was logically (it was not) transferred to the Canaan Company at mergers. Saunders later became Canaan Company's 'sole stockholder'." Geerdes stated that "from this logical course, it could be reasonably (but falsely) deduced that Saunders became owner of Pipe Spring via acquiring all the Canaan and ipso facto the Winsor claims." Geerdes said this was false because "The Canaan Company did not pass on Pipe Spring, because the Church owned it." In 1883, Saunders purchased 500 head of company grazing stock, but the Canaan Company directors refused to sell him capital stock. (this is recorded in board minutes) From this 1883 meeting until October 1895 when the board and stockholders met in SLC, "all activities and records of the company simply vanish." This last meeting records the sale of all Canaan Company assets; "that is, the company itself," to B.F. Saunders.

"There was a lack of any quit-claim deed from the Church to Saunders for Pipe Spring." "The agreement between Saunders and the Church continued to be a 'gentlemen's agreement' with no records kept." "...there exists no official or legal record anywhere of conveyance from the LDS Church to B.F. Saunders. Perhaps it is possible for the Church to quit-claim Pipe Spring to Saunders 'ex-post-facto, or to the NPS presently, as the undisputed acquirers of all Saunders and previous and subsequent owners rights." (Geerdes)

The first definite indication of legal jurisdiction by Mohave County in Arizona over Pipe Spring is a quit-claim deed on Pipe

Spring property from Dan Seegmiller to B.F. Saunders in 1896. "From then on all Pipe Spring transactions are properly recorded." (Geerdes) (However, Dan Seegmiller never really owned Pipe Spring. As already stated, his application for Valentine Scrip on May 3, 1888, with the Prescott Land Office, was denied.)

Though proclaimed a National Monument on May 31, 1923, the owner of the property, Charles Heaton, did not execute a quit-claim deed to the buyers until April 28, 1924. (David Lavender, Historian/Author)

As to the water, the 1907 decree establishing the Kaibab Reservation had recognized the Indians' right to water without specifying quantities. NPS Director, Stephen Mather, followed the precedent, but sidestepped specifics. The local "cattlemen's association" also claimed a right to the water. On what they based this is uncertain. (Thirteen Heaton sons comprised a large portion of this "association.") In 1933, "over continued water disputes, and following reams of correspondence" (Lavender), the Secretary of the Interior said that each claimant - cattlemen, Indians, and Monument - should receive one-third of the flow.

But, as an additional complication, a report was filed by C.A. Engle, Supervising Engineer of the DOI, U.S. Indian Irrigation Service, on May 14, 1924. He discussed in detail the claims to Moccasin and Pipe Springs by the Jonathan Heaton family - a family who were using land and water at these two locations. "...Jonathan Heaton had already used up his homestead filing rights in Utah and could not file on the land at Moccasin Springs (land included in the Executive Order of July 17, 1917 that established the Reservation)." (Moccasin Springs are roughly 3 miles north of Pipe Spring and the only other reliable water source, besides Pipe Springs, on the Reservation.) To paraphrase Engle's words, Jonathan Heaton's second (polygamous) wife and two sons (Fred C. & Chas. C) made claim on 160 acres each in 1920. (Again, these lands lay within the boundaries of the reservation.) The superintendent of the Kaibab Paiute filed a protest but little came of this but a poorly upheld division of water and a relocation of some of the Indians who were living adjacent to Moccasin Springs. In addition to the lands filed on by members of the Heaton family under homestead laws, as just described, they fenced and made use of an additional 4,000 acres that were included within the Reservation. There was no effort made by the Heatons to compensate the Indians in any way for the use of this land.

In this report, regarding the specific ownership of Pipe Springs, Engle states, "A controversy has existed for many years relative to the ownership of these springs and adjacent lands, and this matter brings in the Heaton family again, camouflaged behind the name of Pipe Springs Land and Livestock Company." "...there is no record of transfer of these lands passing into the hands of the Pipe Springs Company." Charles Heaton, also in 1924, "objected to the use of the Pipe Springs 40 acre tract for a National Monument, as

provided for in the Presidential Proclamation of May 31, 1923, claiming to have sold a portion of it on August 28, 1920, to cattlemen for corral purposes." (Interestingly, Charles Heaton applied for Valentine Scrip on March 3, 1920, on the Pipe Spring property but the application was denied.)

Also of interest is that, initially, the NPS had intentions of hiring Charles Heaton as custodian of the newly established National Monument. However, as correspondence of that time indicates, the NPS became so dismayed over Heaton's actions and attitude about the water and the Indians that, instead, they hired Charles' son, Leonard. This was done with a certain amount of resignation and concession to local sentiment. The NPS gave the site only minimal attention for the next 40 years which allowed public belief to be that the LDS Church owned and ran Pipe Spring. (This assumption was voiced by visitors as recently as 1992.)

## Issues to be Addressed

1. Does the NPS have water rights as would have been handed down through the long line of land owners of the Pipe Spring property?

The Secretary of the Interior issued a memorandum of agreement in 1933, still honored, which evenly divided the water from Pipe Spring three ways: to the Kaibab-Paiute Indian Tribe, to the cattlemen's association, and to the NPS. Is there any legal basis for this agreement?

In 1972, the NPS made an agreement with the Kaibab-Paiute for the use of a tribal owned building for their VC/headquarters and installed a water system on tribal land which would supply water to both the NPS and the Kaibab-Paiute (based on the 1933 agreement). Was this an effort to appease the tribe's need for water and income and forestall the issue of establishing the legal right of the NPS to the property and water?

2. Does the NPS have property rights to the National Monument? Would the "Winters" Decision of 1908, and the establishment of the Kaibab Paiute Indian Reservation in 1907, confirmed in 1917, pre-empt any NPS or other claim to this land and water? The U.S. Government holds a quit-claim deed to the land from Charles Heaton, but did the Heatons ever legally own the land? Since the reservation was "withdrawn from settlement" in 1907, and there is no record of transfer of the land to the Pipe Springs Cattle Company (the Heatons) so as to profess "prior claim," could the Heatons have successfully filed for reservation land (including the land at Moccasin Springs) in 1920?

3. Do the "cattlemen" have any legal right to the water? Do they have any legal right to the land as stated by Heaton (as "sold" to

them in 1920)? The one-third flow provided to the cattlemen is piped from Pipe Spring to BLM land south of the Kaibab-Paiute Reservation boundary. (Of note, is that a descendant of one of the cattlemen named in the "cattlemen's association" in 1924, is the Director of the BLM District Office in Cedar City, UT.)

4. Can it be legally proven that the LDS Church had ownership of the Pipe Spring properties at any time?

5. If any private title to the Pipe Spring 40 acres is valid, when did it go from the original 160 acres (Whitmore's land certificate) to only 40?

IN THE OFFICE OF THE STATE ENGINEER
OF THE STATE OF UTAH

RECEIVED
MAR 18 1994
WATER RIGHTS
SALT LAKE

IN THE MATTER OF APPLICATION NO. 81-3861 (A67411) FILED BY THE CITY OF ST. GEORGE, UTAH, TO APPROPRIATE WATER

P R O T E S T

COMES NOW the, United States Department of the Interior, National Park Service, and protests the granting of the above request for water right on the following grounds, to wit:

1. The applicant seeks to divert ground water at the rate of 15 cubic feet per second or 10,000 acre-feet per year from a well of 600 to 1000 feet depth located approximately 12 miles northwest of a National Park Service well, 14 miles northwest of the springs at Pipe Spring National Monument, and approximately 10 miles southeast of the East Fork of the Virgin River within Zion National Park.

2. That, the United States' claimed reserved water right at Zion National Park is for the minimum amount necessary to preserve extraordinary examples of canyon erosion; to preserve the area for scientific research; to preserve objects of historic and scientific interest; and, to conserve the scenery and the natural and historic objects and the wildlife therein, and to provide for the enjoyment of same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. Further, that the East Fork of the Virgin River and flow from springs in the vicinity of the East Fork of the Virgin River flows through portions of Zion National Park

reserved from the public domain and are essential to the reservation purposes of the said Zion National Park.

3. That, the United States claims reserved water rights under Federal law and/or vested water rights under Arizona State law for flow from the springs at Pipe Spring National Monument. Further, that the spring flow occurring at Pipe Spring National Monument is essential to the purpose of interpretation of the historic site. Additionally, the United States claims a water right under Arizona State law for a well located in Township 40 North, Range 4 West, Section 3, Gila and Salt River Meridian, for domestic and irrigation water.

4. That, according to a report published by the U.S. Geological Survey (Heilweil, V.M. and Freethey, G.W., 1992, Simulation of Ground Water Flow and Water Level Declines that Could Be Caused by Proposed Withdrawals, Navajo Sandstone, Southwestern Utah and Northwestern Arizona, U.S. Geological Survey Water Resources Investigations Report 90-4105, Salt Lake City, Utah), a well of the depth and at the location proposed by the applicant would likely produce from the Navajo Sandstone. Further, said report indicates the East Fork of the Virgin River upstream of Zion National Park and numerous springs within the park occur in an area where the bedrock formation is Navajo Sandstone and the springs at Pipe Spring National Monument issue from the base of the Navajo Sandstone.

5. Further, the report indicates there is a lack of data measurement points within and near Township 43 South, Range 9 West,

Salt Lake Meridian, to demonstrate Navajo Sandstone formation ground water levels and gradients. However, modelling described by the above noted report examined possible regional aquifer structure and hydraulic conditions to investigate ground water levels and gradients in the Navajo Sandstone aquifer. In all scenarios presented, ground water was predicted to occur at a higher elevation in this township and to flow towards the East Fork of the Virgin River and springs within Zion National Park. Further, this modelling exercise simulated the withdrawal of less than half as much water than is proposed by the applicant and results predicted significant drawdowns as far away from the withdrawal site as 20 miles.

6. That, according to data published by the National Park Service (Inglis, Richard, 1990, Water Resources Data of the Pipe Spring National Monument Area, Arizona, Technical Report NPS/NRWRD/NRTR-90/02), the National Park Service well produces from the Navajo Sandstone; and, ground water in the Navajo Sandstone in the vicinity of the well and Pipe Spring National Monument moves from the northwest toward the Monument.

7. That, water in the Navajo Sandstone, if not diverted, could flow into and through Zion National Park and/or Pipe Spring National Monument and thereby contribute a significant amount of water to the flow of the East Fork of the Virgin River and associated springs, and to the National Park Service well and Pipe Spring National Monument springs.

8. That, the diversion proposed by the applicant may impair resources of Zion National Park and/or Pipe Spring National Monument and injure the United States' water rights. Additionally, the diversion proposed by the applicant may reduce the amount of water available at the National Park Service well and thus injure the United States' water right under Arizona law.

9. That, because the resource values of Zion National Park and Pipe Spring National Monument are of national, state, and local importance, impairment of resource values and water rights under State and Federal law would not be in the public interest.

WHEREFORE, the protestant prays that the State Engineer deny water right Application No. 81-3861 (A67411) and schedule a hearing on this matter.

Dated this 16 day of March, 1994.

William R. Hansen

William R. Hansen

United States Department of the Interior
National Park Service
Water Resources Division
1201 Oak Ridge Drive, Suite 250
Fort Collins, CO 80525

Please send an additional copy of all correspondence and notifications to:

Scott Loveless
United States Department of the Interior
Office of the Regional Solicitor
125 South State Street
Salt Lake City, UT 84138

STATE OF COLORADO )
) ss.
COUNTY OF LARIMER )

On the 16th day of March, 1994, personally appeared before me William R. Hansen, the signer of the forgoing protest, dated March 16, 1994, who duly acknowledged to me that he executed the same for and on behalf of the United States Department of the Interior, National Park Service, and acknowledged same to be the act and deed of the United States Department of the Interior, National Park Service.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Lynda Williams
Notary Public
Residing at 424 W. Oak
County of Larimer
State of Colorado

(SEAL)

My Commission Expires:
May 13, 1996

Permit No. .....  Application No. .....

Draft 1 April 1937
Approved by Commissioner of Indian Affairs 1 avand Dam 4/24/37

## APPLICATION FOR A PERMIT

# To Appropriate Public Waters of the State of Arizona

Filed ..... at ..... M.
(Applicant must not fill in the above blanks.)

I, The United States of America, by Frank Pinkley, Superintendent of the Southwestern National Monuments, (Name of Applicant.),

of Coolidge (Postoffice.), County of Yavapai,

State of Arizona, do hereby make application for a permit to appropriate the following described unappropriated waters of the State of Arizona:, subject to all rights which may be vested by reason of the establishment of the Kaibab Indian Reservation.

1. The source of the proposed appropriation is Pipe Springs which consists of Historic Spring (Name of stream or name of reservoir and stream if water is diverted from reservoir.) and Tunnel Spring, and is ....., tributary of (to be determined before filing)

2. The amount of water which the applicant intends to apply to beneficial use is:

For Domestic (Municipal or Domestic.) (by National Park Service) use, 6000 gallons per day.

For Irrigation (Irrigation.) (by National Park Service) use, 2.5 AF/A/annum. (Cubic feet per second, or acre feet per acre per annum.)

For ( Domestic, Irrigation, and Stock (Mining or Stock Watering.) (& Stockmen By Indian Service) use, See rider (Cubic feet per second, or gallons per day.)

For Power (Power.) use, None cubic feet per second.

For ..... use, .....

3. The point of diversion ~~is~~ are located #1, "Historic Spring" N 36°33'20" W 1021 feet from the (State bearing and distance or coordinate distances to section or quarter section corner.) SE corner of Section 17; #2, "Tunnel Spring" N 41°04'48" W 1014 feet from the SE corner of Section 17;

being within the SE¼ of SE¼ (State 40-acre subdivision of U. S. Government survey or projection thereof.) of Sec. 17, T. 40 N (No. N. or S.),

R. 4 W (No. E. or W.), G. & S. R. B. & M., in the County of Mojave.

4. The three main pipe lines (Main ditch, canal or pipe line.) to be a total of 0.37 miles in length, terminating in the SE¼ of SE¼ (State 40-acre subdivision of U. S. Government survey or projection thereof.) of Sec. 17, T. 40 N (No. N. or S.), R. 4 W (No. E. or W.), G. & S. R. B. & M., the proposed location being shown throughout on the accompanying map.

## DESCRIPTION OF WORKS

5. **Diversion Works:** (a) Diversion ~~will be~~ is by gravity, the diverting ~~dam to be~~ tunnels being 40, 60, and 130 feet in ~~height (stream bed to overflow)~~, length ~~long on top~~, and ~~constructed of~~ lined with galvanized (Concrete, earth, brush, etc.) iron pipe.

(b) Description of headgate See rider. (Timber, concrete, etc., number and size of openings.)

(c) If water is to be pumped give general description ..... (Size and type of pump.)

(Size and type of engine or motor to be used, total head water is to be lifted, etc.)

Do not use this form in making application for a permit to construct a reservoir and store water. A special form for this purpose may be obtained from the State Water Commissioner.

**6. Conduit System.** (a) ~~Canal~~, ditch, flume; ~~Width on top (at water line) ..... feet; width at bottom ..... feet; depth of water ..... feet; length ..... feet; grade ..... feet per 1,000 feet; materials of construction~~ Are of variable size and grade, but will carry the full flow of the Historic Spring gradient: (Park Service 17.5 ft. per

(b) Pipe line: Diameter 2 inches; length 1950 ft./ ~~feet;~~ grade ~~..... feet per 1000~~ (Indian Service 18.3 ft. per 1000 feet; total fall from intake to lowest outlet 35 feet; kind galvanized iron. (Stockmen 33.4 ft. per

(Riveted steel, cement, wood-stave, etc.)

NOTE.—If a combination of different sizes or kinds of conduit is to be used, attach extra sheets with complete description, also show location of each clearly on map.

**7. Distributing Works.** ~~Tank or Trough:~~ Material See rider Size .....

(Cross out one.)

Capacity .....

**8. Cost and Construction Schedule.** The estimated cost of the proposed project is $7500.

It is proposed to begin construction within System complete after the approval of this

(Not over 1 year.)

application, to complete construction within System complete thereafter and to completely apply the water to the proposed use 5 years after the ~~beginning of construction.~~ present date.

## DESCRIPTION OF PROPOSED USE

**9. Domestic Use.** Domestic use is proposed as follows: The Pipe Springs National Monument has an annual attendance of 25,000 people and one permanent family.

(Describe nature of use which may include the irrigation of gardens not exceeding one-half acre, stating number of persons and number of domestic stock to be served, etc.)

**10. Municipal Use.** To supply the city of .....

..... County, having a present population of ....., and an

(Name of.)

estimated population of ..... in 19.....

**11. Irrigation Use.** (a) The land to be irrigated has an area of 17.2 acres; is located in Mojave County, Arizona, and is particularly described by legal subdivisions as follows:

(Describe the subdivisions of the township or section the entire area of which it is proposed to irrigate, by the largest possible legal subdivisions, in the table below, inserting the area in the acreage column. In cases of irregular shaped parcels use a separate line to describe each 2½ acre subdivision in which they occur and insert only the area of such subdivision to be irrigated in the acreage column.)

| Tp. | Range | Sec. | SUBDIVISIONS | Number Acres To Be Irrigated |
|---|---|---|---|---|
| 40N | 4W | 17 | SE¼ SE¼ | 17.2 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

(If more space is required, attach separate sheet.)

(b) What is the character of the soil? Fertile sandy loam when irrigated.

(c) What quantity of water is necessary to raise proposed crops? 2.5 AF/A/Annum

(Acre feet per acre per annum.)

(d) Land to be irrigated is owned by The United States of America

(Name of owner.) (If applicant is lessee, etc., so state.)

(e) The irrigation season will begin about March and end about November

(Beginning date each season.) (Closing date each season.)

(f) Has the land to be irrigated any water right or source of water supply other than that herein applied for? No. Describe the nature and amount of any additional supply. The Park Service has no other supply.

**12. Stock Watering Use.** (a) What kind of stock is it proposed to serve? .....

(b) What is the average number of stock it is proposed to serve per annum? .....

(c) What is the maximum number of stock it is proposed to serve? .....

12-1/2. Service to Stockmen and Indian Service in Accordance with an Inter-Departmental Agreement Signed by the Interested Parties June 9, 1924. See rider.

Rider

#2. For Domestic, Irrigation, and Stock Watering (by Indian Service and local stockmen in accordance with an inter-Departmental agreement dated June 9, 1924, and signed by representatives of the Park Service, Indian Service, and local stockmen) 85,000 gallons per day

#5b. Description of headgate: The 40' and 60' tunnels from Historic Spring discharge into small flumes which discharge into two connecting control ponds with an overflow wier and short piece of pipe to a distributing wier with valves for distributing and metering flow. The main pond also has a valve and drainage pipe for additional control of water and release for part of the Park Service irrigation. The 130' tunnel from Tunnel Spring discharges directly into the manhole intake supplying the pipe for the stockmen's use.

#7. Distributing Works: There is no storage on the monument except as previously described ponds retain approximately a one-day flow from the Historic Spring as a control measure in diversion of the water. Ponds are excavated in earth.

#12½. Service to Stockmen and Indian Service in Accordance with an Inter-Departmental Agreement Signed by the Interested Parties June 9, 1924:
(a) Indian Service use by pipe line with point of Park Service distribution at B2 as shown on map, 42,500 gallons per day for domestic use, irrigation, and stock watering. This use is for present population of 89 Indians, and approximately 25 White supervisory personnel and families, and for 3.11 acres of irrigation. These figures can very easily be, and are very likely to be increased during the next five years.

(b) By pipe line with point of Park Service distribution to stockmen at S3 as shown on the map, 42,500 gallons per day, in accordance with the said inter-Departmental agreement of June 9, 1924. This supply is for convenience and use of 13 stockmen, their families, and employees, for use in stock watering and other activities related to the raising of cattle, approximately 3 miles south of Pipe Springs National Monument.

#20.) Statement of Other Claims:
#21.)

The old fort at Pipe Springs, locally called Windsor Castle, was built by Morman stockmen in the pioneer days. Later, the area was included in the Kaibab Indian Reservation. In 1923, the SE¼ SE¼ of Section 17, including the Pipe Springs, was proclaimed a national monument. On June 9, 1924, representatives of the Indian Service, National Park Service, and stockmen, met at Pipe Springs and arranged an inter-Departmental agreement, signed by representatives of each interest, and giving one-third of the spring flow to each.

The following constitute a list of the interested parties:

The Director, National Park Service, Washington, D. C.

The Commissioner, Bureau of Indian Affairs, Washington, D. C.

For the Stockmen:

| | |
|---|---|
| Bullock Brothers, | Cedar City, Utah |
| Leheigh Jones, | Cedar City, Utah |
| John A. Adams, | Cedar City, Utah |
| H. J. Meeks, | Kanab, Utah |
| B. A. Riggs, | Kanab, Utah |
| David H. Esplina, | Orderville, Utah |
| Ed Lamb, | Orderville, Utah |
| E. Foremaster, | St. George, Utah |
| John Schonitz, | St. George, Utah |
| John Finlay, | St. George, Utah |
| Mrs. Andrews, | St. George, Utah |
| Ben Sorenson, | St. George, Utah |
| Heaton Brothers, | Moccasin, Arizona |

Nothing in this statement is intended to change the above mentioned inter-Departmental agreement.

Nothing in this application is intended to reflect adversely on any title to said water, which the Indian Service may have by virtue of the claims and existence of the Kaibab Indian Reservation.

The purpose of this application is to record an existing appropriation and transfer of portions thereof, in accordance with State requirements since 1919. All interests are based on use since the 1860's since Indians, stockmen, and the public have made such use, with the "Windsor Castle" serving as a hotel and station on the Arizona Desert Telegraph line.

## ORDER OF CORRECTION

STATE OF ARIZONA, } ss.
County of Maricopa. }

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion, as follows:

In order to retain its priority, this application must be corrected, completed and refiled in the office of the State Water Commissioner on or before ....., 19.....

WITNESS my hand and seal of office this ..... day of ....., 19.....

.....
*State Water Commissioner.*

---

Application No. ..... Permit No. .....

## PERMIT

STATE OF ARIZONA, } ss.
County of Maricopa. }

This is to certify that I have examined the foregoing application and do hereby approve the same, and grant to the applicant a permit to appropriate the water described therein subject to the following limitations and conditions:

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and shall not exceed .....
.....
.....

The priority of date under this permit is .....

Actual construction work shall begin on or before ....., and shall be prosecuted with reasonable diligence and be completed on or before .....

Complete application of the water to the proposed use shall be made on or before .....

WITNESS may hand and seal of office this ..... day of ....., 19.....

.....
*State Water Commissioner.*

---

**Application No.** .....
**Permit No.** .....

**PERMIT**
**To Appropriate Public Waters of the State of Arizona**

**District No.** .....

This instrument was first received in the office of the State Water Commissioner at Phoenix, Arizona, on the ..... day of ....., 19....., at .....o'clock .....M.

Returned to applicant for correction .....

Corrected application refiled .....

Approved .....

Recorded in Book No. ..... of Applications for Permit at page .....

*State Water Commissioner.*

THE MANUFACTURING STATIONERS INC., PHOENIX, ARIZONA

**13. Power Use.** (a) The maximum amount of water to be used through the penstock is ..... cubic feet per second.

(b) Total amount of power to be developed ..... theoretical horsepower. (Second feet × fall ÷ 8.8.)

(c) Total fall to be utilized ..... feet. (Pressure head.)

(d) The nature of the works by means of which the power is to be developed ..... (Turbine, Pelton wheel, hydraulic ram, etc.)

(e) The works to be located, and the water to be released, in ..... of Sec....., T. ....., R. ....., G. & S. R. B. & M. (40-acre subdivision.) (No. N. or S.) (No. E. or W.)

(f) Is water to be returned to any stream? ..... If so, name stream and describe location of point where returned ..... in the ....., Sec....., T....., R. ....., G. & S. R. B. & M. (Yes or No.) (Name of stream.) (40-acre subdivision.) (No. N. or S.) (No. E. or W.)

(g) The use to which the power is to be applied is ..... (For distribution and sale or private use, etc.)

**14. Mining Use.** The mines to be served are ..... known as the ..... (Placer gold, lode gold, copper, etc.) (Names of claims or name of group.)

located in ....., Sec....., T....., R. ....., G. & S. R. B. & M., and owned by ..... (40-acre subdivision.) (No. N. or S.) (No. E. or W.)

The method of utilizing the water is .....

Will the water be polluted by chemicals or otherwise? ..... (Explain nature of pollution, if any.)

What disposition is made of water after use? ..... (State if stored for reuse. If returned to a stream give name of stream and description of 40-acre tract to which returned.)

## GENERAL

**15.** Are the maps required by the Rules and Regulations filed with Application? Yes (Yes or No.) If not, state specifically the time required for filing same .....

**16.** The proposed point of diversion is on land of The United States of America -- Pipe Springs National Monument. (Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

**17.** The proposed conduit system is on land of The United States of America. (Insert name of owner, or state on Public Domain, National Forest, State Land, etc.)

**18.** The land at the proposed place of use is owned by The United States of America, except that the stockmen pipe their supply from point of delivery (S3 on map) to an area approximately 3

**19.** Post office used by those living near the proposed point of diversion is Moccasin, Arizona (miles away.

**20.** Of the applicant's knowledge, has the water described herein ever been appropriated, claimed or used by others? Yes If so, file a statement herewith furnishing names of former appropriators or users of the water, and supporting applicant's claim that the water is now subject to appropriation. See statement on rider.

**21.** If the source of supply is a stream, state names and addresses of water users from the stream below the proposed point of diversion; or, if the source of supply is other than a stream, furnish the names and addresses of at least three residents of the vicinity familiar with the source of supply and the proposed use of water.

See statement on rider.

.....

*Signature of Applicant.*

Bill
Hansen/FTCOLLINS/NPS
09/20/2011 08:49 AM

To "Paul Christensen" <paul_christensen@nps.gov>
cc "Dan McGlothlin" <dan_mcglothlin@nps.gov>
bcc
Subject Fw: Update on Status of New Long Term NPS-Kaibab band of Paiute Indians Water Agreement

Paul - please have Maria add this new agreement to the PISP docket. Thanks

**********
Bill Hansen, P.H., C.P.E.S.C.
Program Leader, Adjudications and Information Management,
Water Rights Branch, Water Resources Division, National Park Service
(970) 225-3532; cell (970) 215-6511; fax (970) 225-9965
email: bill_hansen@nps.gov
**********

----- Forwarded by Bill Hansen/FTCOLLINS/NPS on 09/20/2011 08:49 AM -----

Bill Jackson
09/19/2011 03:10 PM
EDT

To: "Mark Wondzell" <Mark_Wondzell@nps.gov>, "Bill Hansen" <Bill_Hansen@nps.gov>, "Larry Martin" <Larry_Martin@nps.gov>
cc:
Subject: Fw: Update on Status of New Long Term NPS-Kaibab band of Paiute Indians Water Agreement

Fyi

---

Bill Jackson
National Park Service Water Resources Division
Sent from my BlackBerry Wireless Device
mobile phone: 970-214-5870

John Hiscock

----- Original Message -----
**From:** John Hiscock
**Sent:** 09/16/2011 11:54 AM MST
**To:** John Wessels; Cyd Martin; Jock Whitworth; Malinda Flatray; Kevin Jones; Bill Jackson; Larry Martin; Dave Sharrow
**Subject:** Update on Status of New Long Term NPS-Kaibab band of Paiute Indians Water Agreement

I wanted to take this opportunity to give you an update on the status of the NPS/PISP-Kaibab Band of Paiute Indians water agreement.

Following negotiations, writing, editing, and review by multiple parties since the expiration of the original 1972 water agreement in 1997, including changing Kaibab Paiute Council members and Chairs, tribal attorneys, BIA staff, NPS staff, BIA and NPS Solicitors, and others, a new long term NPS-Kaibab Band water agreement was approved by the Tribal Council at their July, 2011 meeting.

Here is the Tribal Council resolution from that meeting - NPS-KPT H20Agmt KPT Res.pdf

Here is the agreement with my signature and the signature of the Chair of the Kaibab Band -

NPS-KPT H2O Agmt-9-16-11.pdf

The agreement is currently enroute to the Western Regional Director, BIA for their signature (already reviewed and concurred in at an earlier date) and will then be routed to our Contracting/Agreements Officer Malinda Flatray for her signature. This should all be completed in the next couple of weeks.

This has been a long and circuitous process involving many people (and changing people in various roles) over many years. It is a substantial accomplishment. Most importantly, the new agreement assures NPS continued involvement in groundwater aquifer management with the potential for protection or restoration of the springs at the Monument.

Hurrah!

John W. Hiscock
Superintendent - Pipe Spring National Monument
(928)643-7105
FAX (928)643-7583

# Kaibab Band of Paiute Indians

**RESOLUTION OF THE GOVERNING BODY OF THE KAIBAB BAND OF PAIUTE INDIANS**

**K-41-11**
**Cooperative Agreement with National Park Service for Pipe Spring National Monument**

**WHEREAS,** the Kaibab Band of Paiute Indians ("Tribe") is an Indian Tribe as defined under the Indian Reorganization Act of June 18, 1934 as amended and operates and functions in accordance with the terms and conditions of the Kaibab Ordinances and Resolutions; and

**WHEREAS,** the Tribal Council is the recognized governing body responsible and authorized by the constitution to exercise all of the powers possessed by the band; and

**WHEREAS,** on April 13, 1972, the Tribe entered into an agreement with the National Park Service addressing water use by the Tribe and the National Park Service within the exterior boundaries of the Kaibab Indian Reservation and Pipe Spring National Monument, which agreement was amended in March of 1996, and which agreement expired on April 13, 1997, and has been extended on a year-to-year basis since that time; and

**WHEREAS,** the National Park Service seeks the formal concurrence of the Tribe with the attached Cooperative Agreement for water use by the Tribe and the Park Service in order to: (1) permit the expenditure of National Park Service funds on the joint water system outside of Pipe Spring National Monument; (2) allow the continued use of the Tribe's North Calf Pasture water line across Pipe Spring National Monument; (3) and, serve as the basis for continued water use payments from the National Park Service to the Tribe; and

**WHEREAS,** the Bureau of Indian Affairs has reviewed the attached Cooperative Agreement and has approved it and recommended that the Tribe execute it; and

**WHEREAS,** the Tribe has determined that the attached Cooperative Agreement will serve the best interests of the Tribe and its members.

**NOW, THEREFORE, BE IT RESOLVED BY THE TRIBAL COUNCIL OF THE KAIBAB BAND OF PAIUTE INDIANS OF THE KAIBAB INDIAN RESERVATION AS FOLLOWS:**
The Cooperative Agreement with the National Park Service attached hereto is hereby approved; and

Tribal Affairs
HC 65 Box 2
Fredonia, Arizona 86022
Phone (928) 643-7245
Fax (928) 643-7260

**BE IT FINALLY RESOLVED,**

The Chairman is hereby authorized to sign and execute the attached Cooperative Agreement with the National Park Service.

## CERTIFICATION

I hereby certify that the foregoing resolution was regularly adopted by the Kaibab Paiute Tribal Council on **July 21, 2011** at a regular meeting at which a quorum was present with **Favor 5, Abstain 0, Absent 1, Opposed 0,** pursuant to the authority vested in the Kaibab Paiute Tribal Council by Section VI, Section 1 (a) of the Constitution of the Kaibab Band of Paiute Indians ratified by the Tribe on June 20, 1987 and approved by the Secretary of the Interior on July 14, 1987 pursuant to Section 16 of the Act of June 18, 1934.

Manuel Savala, Chairman
Kaibab Paiute Tribal Council

Attest:

DeeAnn Multine, Secretary
Kaibab Paiute Tribal Council



H1510-11-0001

# COOPERATIVE AGREEMENT REGARDING WATER BETWEEN UNITED STATES NATIONAL PARK SERVICE AND THE KAIBAB BAND OF PAIUTE INDIANS

This Agreement, made and entered into this 25th day of July, 2011, between the Kaibab Band of Paiute Indians of the Kaibab Indian Reservation, Arizona, organized pursuant to Section 16 of the Indian Reorganization Act of June 18, 1934 (48 Stat. 984), as amended, hereinafter referred to as the "Tribe," or its interests as "tribal," and the United States National Park Service, hereinafter referred to as the "Service," or "NPS" replaces the Agreement entered into by said Parties on the 13th day of April, 1972, and subsequent amendments and extensions of said agreement.

WITNESSETH:

WHEREAS, under the proclamation establishing Pipe Spring National Monument (43 Stat. 1913) the National Park Service, in its administration of the Monument is, among other things, to allow the Tribe the "privilege of utilizing waters from Pipe Springs for irrigation, stock watering, and other purposes, under regulations to be prescribed by the Secretary of the Interior;" and,

WHEREAS, under the provisions of regulations of the Secretary of the Department of the Interior of 1933, the spring waters of Pipe Springs were divided in equal thirds between the National Park Service, the Kaibab Band of Paiute Indians, and a local cattleman's association.

WHEREAS, under the provisions of the aforementioned 1972 water agreement the Service drilled a well on Kaibab Indian Reservation lands two (2) miles north of Pipe Spring National Monument and constructed a water system to meet the needs of both parties, and the Service has continued to operate said water system to the benefit of the Service and the Tribe, including the replacement of said well in 2007; and,

WHEREAS, at the time of the aforementioned 1972 water agreement, based on a total estimated Pipe Springs flow of 45 gallons per minute in 1933, 1/3 of the 1933 flow of Pipe Springs was estimated to be approximately 15 gallons per minute or 7,884,000 gallons per year, and, therefore, the NPS agreed to provide said amount of water to the Tribe from the new well and water system without charge; and,

WHEREAS, both parties acknowledge that the flow of Pipe Springs has presently decreased to approximately 8 gallons per minute and continues to decrease, and hydrologic research and monitoring indicates that the reason for decrease in spring flow is directly related to pumping from the joint NPS-tribal well associated with the subject agreement, independent tribal wells, and private wells in Moccasin.

WHEREAS, the NPS – tribal partnership regarding water use from the subject well, hydrologic research, and water conservation efforts, and continued enhancement and expansion of such efforts, are acknowledged by both parties to be of great value: and,

WHEREAS, it is deemed advisable to continue an agreement for the use of the waters from Pipe Springs and from the 2007 well so drilled in a manner to meet the needs of both Parties; and,

THEREFORE, in consideration of the premises and or the mutual covenants and agreements hereinafter contained, and the performance thereof by the Parties hereto, the Parties do hereby mutually covenant and agree as follows;

1. It is mutually understood and agreed that this agreement shall become effective on execution thereof and shall extend for a period of twenty-five (25) years, and at the option of the Tribe, may be extended for an additional period of twenty-five (25) years, upon giving notice to the Service at least thirty (30) days prior to the date of such expiration.

2. The "water system" referred to herein (as depicted on Attachment A), is currently defined to include the replacement well and pump station, approved water treatment plant, water storage tank, water lines between the well and pump station and water tank, and main water line running between the water storage tank and Pipe Spring National Monument, including valves, water meters, and T connections to Tribal water supply lines. This water system may be updated according to the provisions of paragraph 18.

3. The Tribe agrees that the Service may have a right-of-way including, but not limited to, roads to the well and water tank, and to other water system lines and equipment, with full rights of ingress and egress during the term of this agreement for the maintenance and use of the water system as described in paragraph 2.

4. The Service agrees to operate, maintain and repair the water system described in paragraph 2 at its sole cost and expense. The Service and the Tribe agree that the Service may shut off water lines for routine maintenance, and in the event of a water line break, leak, or failure of component which threatens health and safety or results in loss of water from the joint water system compromising other water needs of both Parties, especially culinary and fire suppression needs and requirements. In the event the Service finds it necessary to shut off the system or portions thereof, the Service will immediately notify the Tribe so necessary repairs and alternative arrangements for water use can be made.

5. As under the previous agreement, the Tribe agrees to maintain its water supply lines on the extended system, at and beyond the T connections described as part of the water system in paragraph 2, at its sole cost and expense. The Tribe will make every effort to routinely check such water supply lines and quickly make repairs to prevent water loss from the water system. The Tribe shall notify the NPS of leaks on its portion of the system and timeframes for repair of said leaks.

6. The Tribe agrees that the Service may use one-third (1/3) of the total output of water from the springs on Pipe Spring National Monument, allocated to the Tribe by Secretarial Order of 1933 ("REGULATIONS FOR THE DIVISION OF THE WATERS OF PIPE SPRINGS," November 2, 1933), for park purposes so long as this agreement shall remain in force.

7. During the term of this agreement, the Service agrees to furnish the Tribe up to 7,884,000 gallons of water per year from the water system at the sole cost and expense of the

Service and without any charge to the Tribe, in continued recognition of the terms of the original 1972 water agreement.

8. The Tribe agrees to pay the actual cost of production rate for all water used by the Tribe during any one year in excess of 7,884,000 gallons. In the event of this level of usage, the Service will bill the Tribe. The Tribe agrees to make payment to the Service within thirty (30) days from the date of billing.

Cost of production shall be determined when and if necessary, by prorating, between the Tribe and the Service based on the Parties' respective usage of water from the water system, the cost of: (a) electricity, (b) chemicals, (c) maintenance of well, pump, plant and main line with appurtenances, and (d) seven year amortization of the pump. Once initially determined, the cost of production will be re-evaluated as needed at the end of each five (5) year period.

9. Each party shall have independent metering responsibilities. Each party is encouraged to install adequate metering devices to regularly track water use to better enable the location of leaks on the system, and to assure the most efficient conservation of the water resource.

The Service agrees to maintain a meter that will measure water production at the well, and install and maintain meters at other locations to measure total water use at the joint NPS-Kaibab Paiute Band visitor center complex, total Service use on the Pipe Spring National Monument, and Monument residential and maintenance area use as a portion of total Service use.

The Tribe agrees to install and maintain a meter that will measure total regular Tribal use from the system, maintain the meter on the North Calf Pasture line referenced in paragraph 14, and install and maintain a meter that will measure emergency deliveries to Kaibab and Juniper Villages. The Tribe is encouraged to install and maintain meters at other discrete and independent use locations, such as Red Hills Village, the Tribal headquarters building and the Tribal service station to enable the aforementioned maintenance and conservation goals.

Each Party shall make available to the other, upon request, a map and description of meters and metering locations on the system. Each Party shall allow access to its meters related to the system to the other Party.

Each Party agrees to read and record water use data from the meters on the system in its area of responsibility on a monthly basis, and to provide a report containing this data to the other Party within fifteen days of such readings.

10. The Service agrees to pay for the use of water from the well by the Service at the rate of fifty-three dollars ($53.00) per acre foot, payable quarterly. This provision is only applicable to ½ of water used at the joint NPS-Tribe visitor center and cultural museum as agreed in the parties' visitor center agreement, and none of the water used at the NPS leased administrative offices and partnership curatorial storage facility as agreed in the lease and agreement governing those relationships. The Service agrees to calculate its water use as described from the water system on a quarterly basis and make payment to the Tribe within thirty (30) days from the end of each quarter. This charge does not apply to any water used by the Tribe from the well.

If the Tribe exercises its option to extend this agreement for a second twenty-five (25) year period, the Bureau of Indian Affairs will complete an updated appraisal for the charge identified in this paragraph, and the charge for the second twenty-five (25) year period will be negotiated by the Parties and adjusted accordingly.

11. The Service retains the ownership in the water system as constructed by it, but in the event of expiration or termination of this agreement, the Tribe shall be given the right of purchase of the equipment at the then appraised Market value before the Service shall have the right to remove the same from Tribal property.

12. In the event rated production of the well falls below an amount equal to one-third (1/3) of the current output of Pipe Springs, the deficit between such amounts shall be made available to the Tribe from the tribal 1/3 of the Pipe Springs flow if possible.

13. In regard to the stock watering line to North Calf Pasture on the Reservation and fed by the water system and installed by the Tribe in 1996, across Monument and Reservation lands, the following provisions are agreed upon by the Parties:

(a) The Tribe agrees to conduct routine emergency maintenance on the subject water line and its components, including meters, back flow prevention devices, shut-off valves, and a dependable float valve at the water trough(s).
(b) The Tribe agrees to notify the Service of any necessary maintenance work on the line within Pipe Spring National Monument, and to proceed with said maintenance only after obtaining approval from the Service, which approval shall not be unreasonably withheld.
(c) The Service agrees to respond to requests from the Tribe to conduct maintenance work by the Tribe or its representatives within the Monument as expeditiously as possible.
(d) The Tribe agrees to conduct any necessary maintenance pursuant to the same considerations for protection of cultural resources, including Service participation and approvals, agreed to at the time of installation in 1996.
(e) The Tribe agrees to notify the Service of secondary connections to the North Calf Pasture water line proposed in the future, and to ensure that any such connections and supplementary water lines meet the same, or equivalent specifications as the primary line.
(f) The Service agrees to conduct any necessary maintenance on the subject water line and its components within the Monument which is a result of actions of the Service or its invitees.
(g) The Service agrees to regularly record the water meter readings on the subject water line and share said information with the Tribe as requested or necessary.
(h) The Service agrees to immediately inform the Tribe of any necessary maintenance it discovers a need for on the subject water line and its components.

14. The Tribe agrees to limit the use of water from the water system for Kaibab and Juniper Villages to emergency situations. In the event of such emergencies, the Tribe agrees to immediately inform the Service of the increased draw on the water system so operational adjustments can be made to meet the demand as possible. The Tribe agrees to address the emergency situation as soon as possible and within a reasonable period of time.

15. It is mutually agreed that the waters of both the well and Pipe Springs will be economically used with the objective of conserving the same, and obtaining the most feasible use therefrom. In the event of increased development and consequent increased need for use of water from the water system by either Party, the Parties agree to discuss and negotiate the feasibility of such use. It is further mutually agreed by the Parties that they will work together to improve their scientific knowledge base about the geologic and hydrogeologic environment of the local and regional groundwater systems which provide water to area wells and feed the springs at the Monument and Moccasin.

16. The Service shall monitor the natural flow of Pipe Springs in order to provide for park purposes and fulfill obligations specified in the Monument proclamation, the Secretarial Order of 1933, and this agreement.

The Service shall continue to provide spring flow data to the Tribe on a monthly basis.

17. **Facilitation of Joint Expenditures:**

To cover expenses agreed upon by both parties related to operation, maintenance, improvement, relocation, or additional development of joint water systems this agreement authorizes the transfer of NPS funds to the Tribe, or the Tribe's funds to the NPS, as necessary to fulfill the goals and purposes of said agreements in a cost effective and efficient manner

18. **Modification:**

This agreement and related sub-agreements may be modified only by a written instrument executed by the parties.

19. **Liability Provision:**

Any determination of liability on the part of the NPS or the Tribe for any property damage, injury or death, caused by the acts or omissions of respective employees, acting within the scope of their employment, shall be evaluated in accordance with applicable Federal or other law. Nothing in this agreement shall be construed to constitute a waiver of sovereign immunity by the Tribe, the Service or the Bureau of Indian Affairs.

20. **Non-Discrimination:**

All activities pursuant to this agreement shall be in compliance with requirements of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. 2000d et. seq.): Title V, Section 504 of the Rehabilitation Act of 1973 (87 Stat. 394, 29 U.S.C. 794): the Age Discrimination Act of 1975 (89 Stat. 728, 42 U.S.C. 6101 et. seq.); and with all other federal laws and regulations prohibiting discrimination on grounds of race, color, sexual orientation, national origin, disabilities, religion, age or sex.

21. **Anti-Deficiency Act – 31 U.S.C. 1341:**

Nothing contained in this agreement shall be construed as binding the NPS to expend in any one fiscal year any sum in excess of appropriations made by Congress, for the

purposes of this agreement for that fiscal year, or other obligation for the further expenditure of money in excess of such appropriations.

22. **Records:**

The NPS and the Tribe agree to maintain records related to all expenditures made in pursuit of this agreement for a period of three years beyond termination or expiration of the agreement. Records related to this agreement shall be accessible by either party.

23. **Key Officials:**

All actions and communications related to this agreement shall be coordinated by the following key officials for each party, or their successors in title:

a) **For the National Park Service:**

John W. Hiscock
Superintendent
Pipe Spring National Monument
HC 65 Box 5
Fredonia, Arizona 86022
e-mail: PISP_Superintendent@nps.gov
Telephone: (928)643-7105
Facsimile: (928)643-7583

b) **For the Kaibab Band of Paiute Indians:**

Manuel Savala
Chairman
Kaibab Band of Paiute Indians
Tribal Affairs Building
HC 65 Box 2
Pipe Spring, Arizona 86022
e-mail: msavala@kaibabpaiute-nsn.gov
Telephone: (928)643-7245
Facsimile: (928)643-7260

**SIGNATURES**

IN WITNESS HEREOF, the parties have executed this agreement on the date(s) set forth below.

**KAIBAB BAND OF PAIUTE INDIANS**

Signature: _____

Name: Manuel M. Savala

Title: Chairperson

Date: July 25, 2011

**NATIONAL PARK SERVICE**
**PIPE SPRING NATIONAL MONUMENT**

Signature: _____

Name: John W. Hiscock

Title: Superintendent

Date: July 28, 2011

**NATIONAL PARK SERVICE**
**ZION NATIONAL PARK**
**CONTRACTING OFFICER**

Signature: _____

Name: _____

Title: _____

Date: _____

**BUREAU OF INDIAN AFFAIRS**
**WESTERN REGIONAL DIRECTOR**

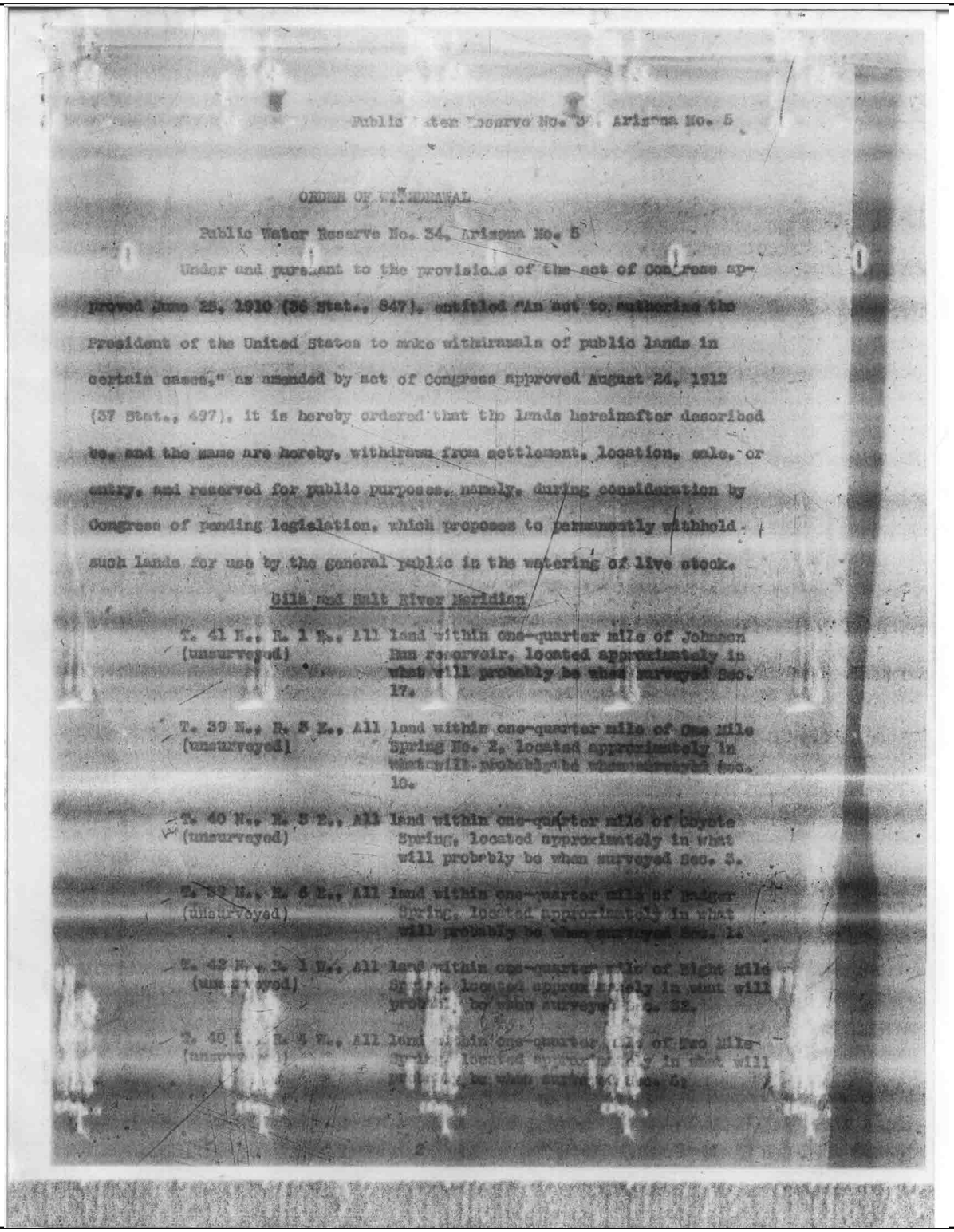
Signature: _____

Name: _____

Title: _____

Date: _____

04-17-1916: Order of withdrawal for AZ public water reserve no. 34 and designation of Gila and Salt River Meridian, PISP NM; sig



Public Water Reserve No. 34, Arizona No. 5

ORDER OF WITHDRAWAL

Public Water Reserve No. 34, Arizona No. 5

Under and pursuant to the provisions of the act of Congress approved June 25, 1910 (36 Stat., 847), entitled "An act to authorize the President of the United States to make withdrawals of public lands in certain cases," as amended by act of Congress approved August 24, 1912 (37 Stat., 497), it is hereby ordered that the lands hereinafter described be, and the same are hereby, withdrawn from settlement, location, sale, or entry, and reserved for public purposes, namely, during consideration by Congress of pending legislation, which proposes to permanently withhold such lands for use by the general public in the watering of live stock.

Gila and Salt River Meridian

T. 41 N., R. 1 W., (unsurveyed) — All land within one-quarter mile of Johnson Run reservoir, located approximately in what will probably be when surveyed Sec. 17.

T. 39 N., R. 3 E., (unsurveyed) — All land within one-quarter mile of One Mile Spring No. 2, located approximately in what will probably be when surveyed Sec. 10.

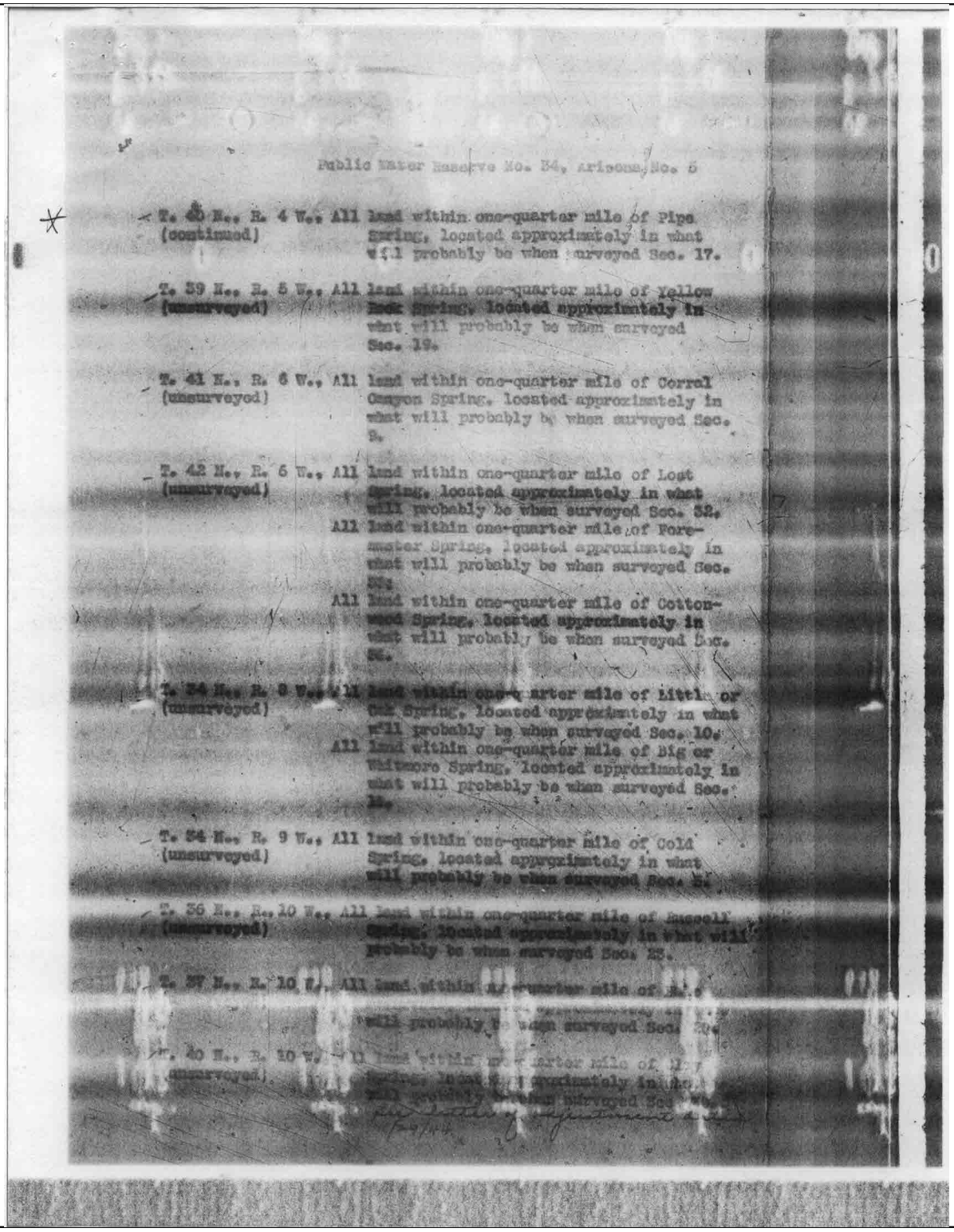
T. 40 N., R. 3 E., (unsurveyed) — All land within one-quarter mile of Coyote Spring, located approximately in what will probably be when surveyed Sec. 3.

T. 39 N., R. 6 E., (unsurveyed) — All land within one-quarter mile of Badger Spring, located approximately in what will probably be when surveyed Sec. 14.

T. 42 N., R. 1 W., (unsurveyed) — All land within one-quarter mile of Eight Mile Spring, located approximately in what will probably be when surveyed Sec. 32.

T. 40 N., R. 4 W., (unsurveyed) — All land within one-quarter mile of Two Mile Spring, located approximately in what will probably be when surveyed Sec. 6.

04-17-1916: Order of withdrawal for AZ public water reserve no. 34 and designation of Gila and Salt River Meridian, PISP NM; sig



Public Water Reserve No. 34, Arizona, No. 5

T. 40 N., R. 4 W., (continued) — All land within one-quarter mile of Pipe Spring, located approximately in what will probably be when surveyed Sec. 17.

T. 39 N., R. 5 W., (unsurveyed) — All land within one-quarter mile of Yellow Rock Spring, located approximately in what will probably be when surveyed Sec. 19.

T. 41 N., R. 6 W., (unsurveyed) — All land within one-quarter mile of Corral Canyon Spring, located approximately in what will probably be when surveyed Sec. 2.

T. 42 N., R. 6 W., (unsurveyed) — All land within one-quarter mile of Lost Spring, located approximately in what will probably be when surveyed Sec. 32.

All land within one-quarter mile of Forebeater Spring, located approximately in what will probably be when surveyed Sec. 33;

All land within one-quarter mile of Cottonwood Spring, located approximately in what will probably be when surveyed Sec. 36.

T. 34 N., R. 8 W., (unsurveyed) — All land within one-quarter mile of Little or Old Spring, located approximately in what will probably be when surveyed Sec. 10.

All land within one-quarter mile of Big or Whitmore Spring, located approximately in what will probably be when surveyed Sec. 11.

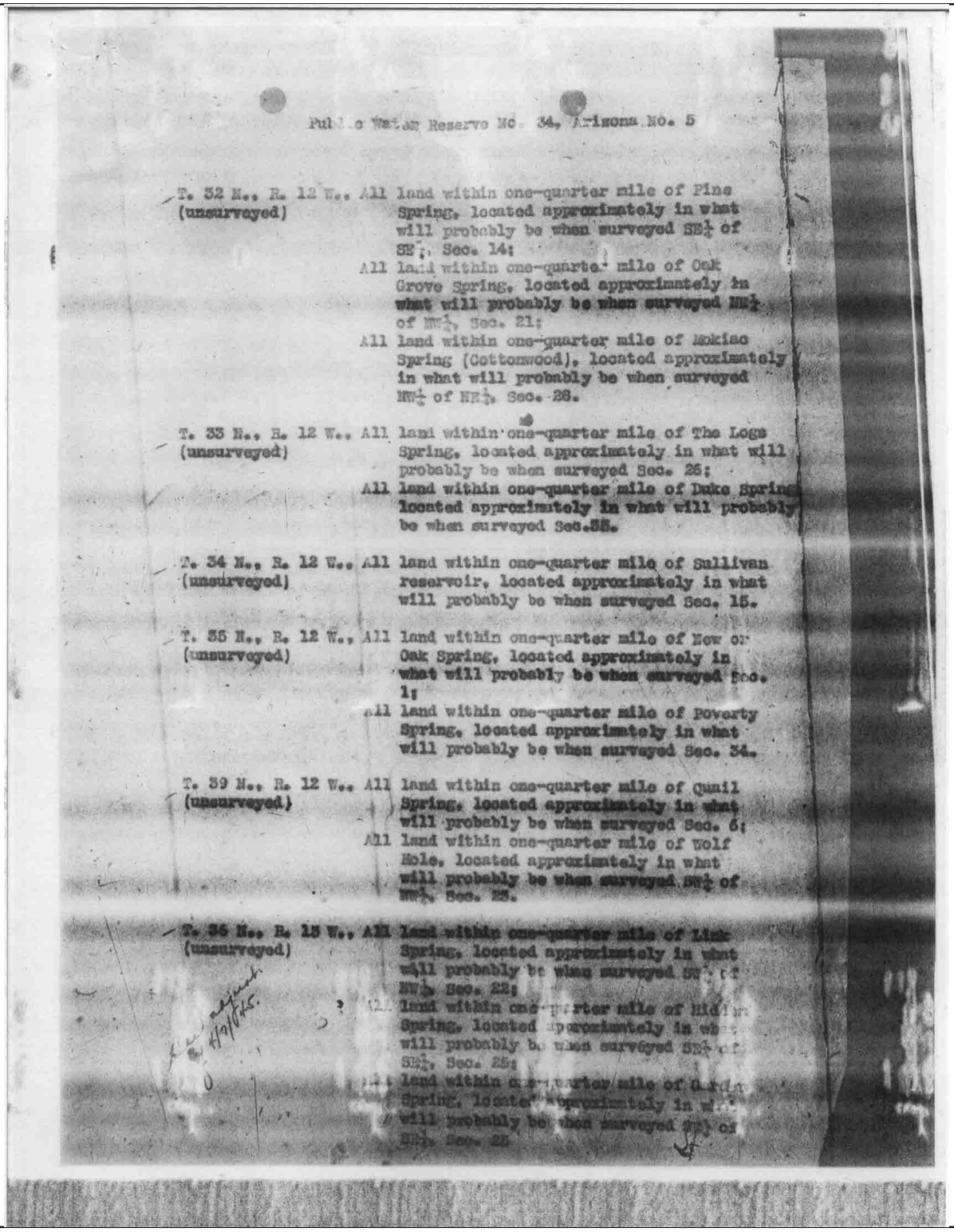
T. 34 N., R. 9 W., (unsurveyed) — All land within one-quarter mile of Cold Spring, located approximately in what will probably be when surveyed Sec. 5.

T. 36 N., R. 10 W., (unsurveyed) — All land within one-quarter mile of Russell Spring, located approximately in what will probably be when surveyed Sec. 22.

T. 37 N., R. 10 W., All land within one-quarter mile of [illegible] will probably be when surveyed Sec. 20.

T. 40 N., R. 10 W., (unsurveyed) — All land within one-quarter mile of [illegible] Spring, located approximately in [illegible] will probably be when surveyed Sec. [illegible]

04-17-1916: Order of withdrawal for AZ public water reserve no. 34 and designation of Gila and Salt River Meridian, PISP NM; sig



Public Water Reserve No. 34, Arizona No. 5

T. 32 N., R. 12 W., (unsurveyed) — All land within one-quarter mile of Pine Spring, located approximately in what will probably be when surveyed SE¼ of SE¼, Sec. 14;
All land within one-quarter mile of Oak Grove Spring, located approximately in what will probably be when surveyed NE¼ of NW¼, Sec. 21;
All land within one-quarter mile of Mokiac Spring (Cottonwood), located approximately in what will probably be when surveyed NW¼ of NE¼, Sec. 28.

T. 33 N., R. 12 W., (unsurveyed) — All land within one-quarter mile of The Logs Spring, located approximately in what will probably be when surveyed Sec. 25;
All land within one-quarter mile of Duke Spring, located approximately in what will probably be when surveyed Sec. 35.

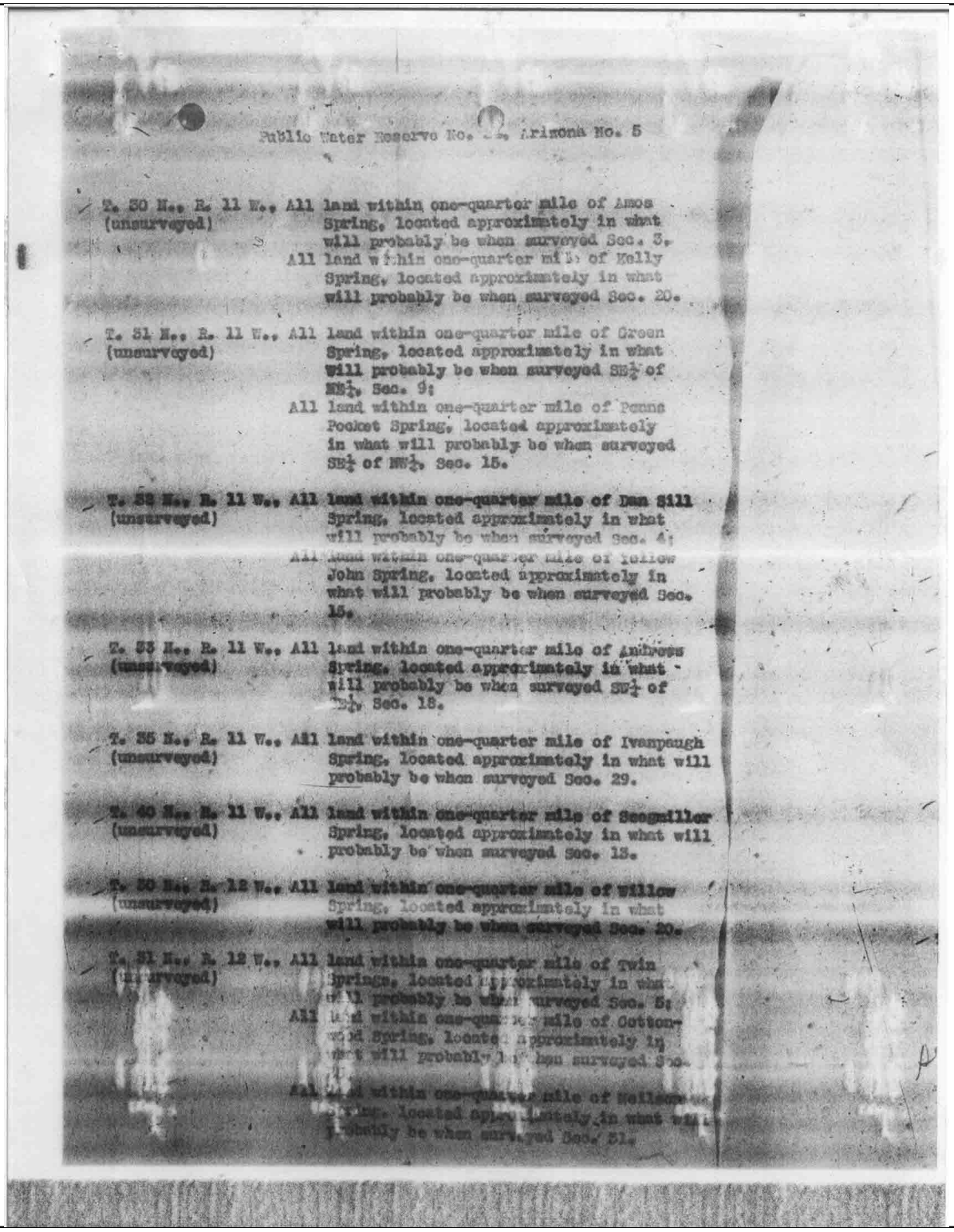
T. 34 N., R. 12 W., (unsurveyed) — All land within one-quarter mile of Sullivan reservoir, located approximately in what will probably be when surveyed Sec. 15.

T. 35 N., R. 12 W., (unsurveyed) — All land within one-quarter mile of New or Oak Spring, located approximately in what will probably be when surveyed Sec. 1;
All land within one-quarter mile of Poverty Spring, located approximately in what will probably be when surveyed Sec. 34.

T. 39 N., R. 12 W., (unsurveyed) — All land within one-quarter mile of Quail Spring, located approximately in what will probably be when surveyed Sec. 6;
All land within one-quarter mile of Wolf Hole, located approximately in what will probably be when surveyed SW¼ of NW¼, Sec. 25.

T. 36 N., R. 13 W., (unsurveyed) — All land within one-quarter mile of Link Spring, located approximately in what will probably be when surveyed SW¼ of NW¼, Sec. 22;
All land within one-quarter mile of Hidden Spring, located approximately in what will probably be when surveyed SE¼ of SE¼, Sec. 25;
All land within one-quarter mile of Davis Spring, located approximately in what will probably be when surveyed SE¼ of SE¼, Sec. 28

04-17-1916: Order of withdrawal for AZ public water reserve no. 34 and designation of Gila and Salt River Meridian, PISP NM; sig



Public Water Reserve No. [illegible], Arizona No. 5

T. 30 N., R. 11 W., (unsurveyed) — All land within one-quarter mile of Amos Spring, located approximately in what will probably be when surveyed Sec. 3.
All land within one-quarter mile of Kelly Spring, located approximately in what will probably be when surveyed Sec. 20.

T. 31 N., R. 11 W., (unsurveyed) — All land within one-quarter mile of Green Spring, located approximately in what will probably be when surveyed SE¼ of NE¼, Sec. 9;
All land within one-quarter mile of Penns Pocket Spring, located approximately in what will probably be when surveyed SE¼ of NW¼, Sec. 15.

T. 32 N., R. 11 W., (unsurveyed) — All land within one-quarter mile of Dan Gill Spring, located approximately in what will probably be when surveyed Sec. 4;
All land within one-quarter mile of Yellow John Spring, located approximately in what will probably be when surveyed Sec. 15.

T. 33 N., R. 11 W., (unsurveyed) — All land within one-quarter mile of Ambrose Spring, located approximately in what will probably be when surveyed SW¼ of [illegible], Sec. 18.

T. 35 N., R. 11 W., (unsurveyed) — All land within one-quarter mile of Ivanpaugh Spring, located approximately in what will probably be when surveyed Sec. 29.

T. 40 N., R. 11 W., (unsurveyed) — All land within one-quarter mile of Seegmiller Spring, located approximately in what will probably be when surveyed Sec. 13.

T. 30 N., R. 12 W., (unsurveyed) — All land within one-quarter mile of Willow Spring, located approximately in what will probably be when surveyed Sec. 20.

T. 31 N., R. 12 W., (unsurveyed) — All land within one-quarter mile of Twin Springs, located approximately in what will probably be when surveyed Sec. 5;
All land within one-quarter mile of Cottonwood Spring, located approximately in what will probably be when surveyed Sec. [illegible].
All land within one-quarter mile of Neilson Spring, located approximately in what will probably be when surveyed Sec. 31.

Public Water Reserve No. 34, Arizona No. 5

T. 36 N., R. 13 W., (unsurveyed) (continued) All land within one-quarter mile of Coin Bed Spring, located approximately in what will probably be when surveyed NW¼ of NW¼ Sec. 26;

All land within one-quarter mile of Rattlesnake Spring, located approximately in what will probably be when surveyed SW¼ of NW¼ Sec. 34.

See Agent. 7 4/7/48

T. 37 N., R. 13 W., (unsurveyed) All land within one-quarter mile of Cane Spring, located approximately in what will probably be when surveyed Sec. 7.

T. 39 N., R. 13 W., (unsurveyed) All land within one-quarter mile of Blackrock Spring, located approximately in what will probably be when surveyed Sec. 8.

T. 40 N., R. 13 W., (unsurveyed) All land within one-quarter mile of Mokiac Spring, located approximately in what will probably be when surveyed Sec. 13.

T. 31 N., R. 14 W., (unsurveyed) All land within one-quarter mile of Joe Spring, located approximately in what will probably be when surveyed Sec. 1.

T. 33 N., R. 14 W., (unsurveyed) All land within one-quarter mile of Snap Spring, located approximately in what will probably be when surveyed Sec. 34.

T. 39 N., R. 14 W., (unsurveyed) All land within one-quarter mile of Pocknm Spring, located approximately in what will probably be when surveyed, Sec. 35.

(Sgd.) WOODROW WILSON

President

17 April 1916.

INTERPRETATION NO. 8

5-31-22

of Public Water Reserve No. 34

It is hereby ordered that so much of the order of withdrawal of April 17, 1916, creating Public Water Reserve No. 34, Arizona, as describes the following unsurveyed lands be construed in conformity with recent surveys accepted by the General Land Office to describe the following tracts:

Gila and Salt River Meridian

That part now reading:

T. 40 N., R. 4 W., All land within one-quarter mile of Pipe Spring, located approximately in what will probably be when surveyed Sec. 17.

Confirms Pipe Springs portion of PWR No. 34

Describes:

T. 40 N., R. 4 W., Sec. 17, S½ of SE¼.

That part now reading:

T. 39 N., R. 5 W., All land within one-quarter mile of Yellow Rock Spring, located approximately in what will probably be when surveyed Sec. 19.

Describes:

T. 39 N., R. 5 W., Sec. 17, SW¼ of SE¼.

(Sgd) E. C. FINNEY

Acting Secretary.

MAY 31 1922

1922.

27 F.R. 6673, July 13 1962

PWR for Pipe Springs revoked

"...any other order...."

[Public Land Order 2720]

[Arizona 031065]

## ARIZONA

### Revoking Public Water Reserves

By virtue of the authority vested in the President by section 1 of the Act of June 25, 1910 (35 Stat. 847; 43 U.S.C. 141), and pursuant to Executive Order No. 10355 of May 26, 1952, it is ordered as follows:

1. The Executive Order of February 20, 1913, creating Public Water Reserve No. 9, Arizona No. 1, as modified by the Executive Order of July 19, 1919, the Executive Order of March 3, 1913, creating Public Water Reserve No. 9, Arizona No. 2, as modified by Executive Order No. 3675 of May 19, 1922, the Executive Order of August 25, 1916, creating Public Water Reserve No. 37, Arizona No. 6, and any other order or orders withdrawing lands for public water reserves or orders amendatory thereof, are hereby revoked so far as they affect the following-described lands:

GILA AND SALT RIVER MERIDIAN

T. 8 N., R. 1 E.,
Sec. 14, W½NW¼, SE¼NW¼, N½SW¼, SE¼SW¼, and W½SE¼;
Sec. 15, NE¼NE¼.
T. 9 N., R. 1 E.,
Sec. 21, SE¼ and SE¼SW¼;
Sec. 28, N½NE¼ and NE¼NW¼.
T. 7 N., R. 2 E.,
Sec. 15, SE¼NE¼.
T. 8 N., R. 2 W.,
Sec. 28, SW¼NE¼ and NW¼SE¼.
T. 6 N., R. 3 E.,
Sec. 13, SE¼SW¼;
Sec. 16, SE¼NE¼;
Sec. 24, NW¼NW¼.
T. 9 N., R. 3 E.,
Sec. 9, E½NW¼.
T. 39 N., R. 3 E. (unsurveyed). All land lying within ¼ mile of South Cove Spring and ¼ mile of North Cove Spring which will be when surveyed, approximately sec. 2.
Sec. 3, SE¼;
Sec. 10, NE¼;
Sec. 11, W½SW¼ and NW¼SE¼.
T. 40 N., R. 3 E.,
Sec. 34, SE¼NE¼ and SE¼. All land within ¼ mile of North and South Cove Spring (unsurveyed).
T. 41 N., R. 3 E.,
Sec. 13, NW¼SW¼.
T. 40 N., R. 8 E.,
Sec. 18, lot 3.
T. 18 N., R. 12 E.,
Sec. 26, W½NW¼ and SE¼NW¼.
T. 1 N., R. 16 E.,
Sec. 30, NW¼NW¼.
T. 9 N., R. 30 E.,
Sec. 6, lots 3, 4, 5, and 6.
T. 8 N., R. 31 E.,
Sec. 11, lots 1, 2, 3, and 4.
T. 15 N., R. 31 E.,
Sec. 18, lot 2.
T. 8 N., R. 1 W.,
Sec. 20, lots 2 and 4.
T. 41 N., R. 1 W.,
T. 42 N., R. 6 W. (unsurveyed). All land within ¼ mile 8-mile Spring which when surveyed will be in approximately sec. 32.
T. 12 N., R. 3 W.,
Sec. 31, S½NE¼ and N½SE¼.
T. 12 N., R. 4 W.,
Sec. 33, S½SE¼.
T. 20 N., R. 4 W.,
Sec. 8, E½, E½W½, and SW¼SW¼.
T. 37 N., R. 4 W.,
Sec. 8, NW¼ (unsurveyed);
Sec. 16, NW¼.
T. 40 N., R. 4 W.,
Sec. 17, S½SE¼.
T. 10 N., R. 5 W.,
Sec. 24, E½SE¼ and SW¼SE¼.
T. 39 N., R. 5 W.,
Sec. 17, SW¼SE¼.
T. 38 N., R. 6 W.,
Sec. 4, lots 1, 2, and 3.
T. 42 N., R. 6 W. (unsurveyed). All land within ¼ mile Lost Spring or when surveyed approximately sec. 32.
T. 35 N., R. 7 W.,
Sec. 33, NW¼.
T. 38 N., R. 7 W. (unsurveyed). All land within ¼ mile Clay Holes which will be located, when surveyed, in approximately NW¼, SW¼NE¼, NE¼SW¼, and NW¼SE¼ sec 5.
T. 41 N., R. 7 W.,
Sec. 3, SE¼ and S½SE¼;
Sec. 7, SE¼SW¼;
Sec. 10, N½N½ and S½NW¼;
Sec. 14, S½NW¼, N½SW¼, and SE¼SW¼;
Sec. 16, SE¼SW¼;
Sec. 23, N½NE¼;
Sec. 24, NW¼NW¼.
T. 13 N., R. 8 W.,
Sec. 20, SE¼SE¼;
Sec. 21, NW¼SW¼;
Sec. 29, NW¼SW¼;
Sec. 30, N½SE¼.
T. 15 N., R. 8 W.,
Sec. 22, NE¼NW¼, SW¼NW¼, and W½SW¼;
Sec. 33, SW¼NW¼.
T. 25 N., R. 8 W. (unsurveyed). All land within ¼ mile of Indian Spring or will be when surveyed approximately sec. 17.
T. 34 N., R. 8 W.,
Sec. 16, SE¼;
Sec. 19, E½NW¼.
T. 13 N., R. 9 W.,
Sec. 10, E½SW¼ and NW¼SE¼;
Sec. 20, W½NW¼ and N½SW¼.
T. 34 N., R. 9 W.,
Sec. 17, NW¼NE¼ and NE¼NW¼.
T. 13 N., R. 10 W.,
Sec. 11, SE¼NW¼ and NW¼NE¼.
T. 36 N., R. 10 W.,
Sec. 5, N½SW¼;
Sec. 6, NE¼SE¼;
Sec. 13, S½NW¼ and N½SW¼;
Sec. 22, SE¼SW¼ and SW¼SE¼;
Sec. 34, SE¼NE¼.
T. 15 N., R. 11 W. (unsurveyed). All land within ¼ mile of Keyser's Spring which will be located, when surveyed, in approximately sec. 31 SW¼NW¼.
T. 29 N., R. 11 W.,
Sec. 23, SW¼NE¼, SE¼NW¼, NE¼SW¼, and NW¼SE¼.

T. 31 N., R. 11 W.,
Sec. 5, [illegible];
Sec. 10, [illegible];
Sec. 23, [illegible] and N½SW¼.
T. 32 N., R. 11 W.,
Sec. 1, [illegible] and W½SW¼;
Sec. 27, W½SW¼.
T. 35 N., R. 11 W.,
Sec. 33, [illegible].
T. 36 N., R. 11 W.,
Sec. 2, N½ (lots 1, 2, and S½NE¼);
Sec. 10, [illegible].
T. 37 N., R. 11 W.,
Sec. 1, lot 4, SW¼NW¼;
Sec. 2, lot 1, SE¼NE¼;
Sec. 13, NE¼;
Sec. 15, SW¼NW¼ and NW¼SW¼.
T. 40 N., R. 11 W. (unsurveyed). All land within ¼ mile Clay Spring or when surveyed will be located in approximately sec. 34. All land within ¼ mile Blake Pond or when surveyed will be located in approximately sec. 12.
T. 30 N., R. 12 W. (unsurveyed). All land within ¼ mile Cottonwood Spring or when surveyed will be approximately sec. 26.
T. 31 N., R. 12 W.,
Sec. 6, S½;
Sec. 17, N½NE¼.
T. 32 N., R. 12 W.,
Sec. 21, SE¼SW¼;
Sec. 24, SE¼.
T. 33 N., R. 12 W.,
Sec. 25, SW¼SW¼;
Sec. 26, E½SW¼ and SE¼SE¼;
Sec. 35, N½NE¼ and NE¼NW¼.
T. 34 N., R. 12 W.,
Sec. 10, W½;
Sec. 18, lot 4.
T. 35 N., R. 12 W.,
Sec. 6, NW¼NW¼ (unsurveyed).
T. 36 N., R. 12 W.,
Sec. 9, E½ and E½W½;
Sec. 31, [illegible].
T. 37 N., R. 12 W.,
Sec. 14, S½SW¼ and SW¼SE¼;
Sec. 23, NW¼NE¼ and NE¼NW¼.
T. 39 N., R. 12 W.,
Sec. 21, S½NW¼ and N½SW¼;
Sec. 24, NW¼NE¼ and SW¼;
Sec. 25, NW¼;
Sec. 26, E½NE¼;
Sec. 30, E½NW¼;
Sec. 33, E½SW¼ and W½SE¼.
T. 40 N., R. 12 W. (unsurveyed). All land within ¼ mile Quail Spring, or when surveyed will be approximately secs. 27, 28, 33, and 34.
T. 30 N., R. 13 W. (unsurveyed). All land within ¼ mile Neilson Spring, or when surveyed will be approximately sec. 14.
T. 31 N., R. 13 W.,
Sec. 7, NE¼NE¼.
T. 32 N., R. 13 W.,
Sec. 22, NE¼.
T. 34 N., R. 13 W.,
Sec. 13, SE¼SE¼.
T. 35 N., R. 13 W.,
Sec. 3, lot 3, SE¼NW¼.
T. 36 N., R. 13 W.,
Sec. 22, E½NE¼;
Sec. 23, W½NW¼;
Sec. 26, SW¼SW¼;
Sec. 35, N½NW¼;
Sec. 36, SE¼SE¼.
T. 37 N., R. 13 W. (unsurveyed). All land within ¼ mile Cane Creek, or when surveyed will be approximately sec. 7.
T. 39 N., R. 13 W.,
Sec. 17, SW¼SW¼;
Sec. 18, SE¼SE¼;
Sec. 19, NE¼NE¼;
Sec. 20, NW¼NW¼.
T. 40 N., R. 13 W. (unsurveyed). All land within ¼ mile Noklac Spring, or when surveyed will be approximately sec. 13.
T. 32 N., R. 14 W.,
Sec. 13, W½NW¼.
T. 38 N., R. 14 W.,
Sec. 15, SE¼NE¼.
T. 26 N., R. 15 W.,
Sec. 30, N½SE¼.
T. 32 N., R. 16 W.,
Sec. 5, SE¼NE¼;
Sec. 7, SE¼NE¼.
T. 26 N., R. 17 W.,
Sec. 23, SE¼SE¼;
Sec. 24, SW¼NW¼ and NW¼SW¼;
Sec. 26, NE¼NE¼.
T. 26 N., R. 18 W.,
Sec. 24, N½S½.
T. 22 N., R. 19 W.,
Sec. 30, NE¼NE¼SW¼.
T. 24 N., R. 19 W.,
Sec. 2, NW¼SW¼.
T. 26 N., R. 19 W. (unsurveyed). All land within ¼ mile Mount Spring or will be when surveyed approximately sec. 21.
T. 21 N., R. 20 W.,
Sec. 2, NW¼SE¼.
T. 3 S., R. 7 W. (unsurveyed). All land within ¼ mile Wolsey's Tank located in what will be, when surveyed, approximately sec. 1.
T. 17 S., R. 7 W. (unsurveyed). All land within ¼ mile of an unnamed spring and located in what will be, when surveyed, approximately SW¼NE¼ sec. 17.
T. 2 S., R. 12 E.,
Sec. 14, SE¼NW¼, SW¼NE¼, NE¼SW¼, and NW¼SE¼;
Sec. 30, SE¼SE¼;
Sec. 31, NE¼NE¼.
T. 20 S., R. 12 E.,
Sec. 33, SE¼SW¼.
T. 21 S., R. 12 E.,
Sec. 4, NE¼NW¼ (lot 3).
T. 4 S., R. 13 E.,
Sec. 28, SE¼SE¼.
T. 5 S., R. 14 E.,
Sec. 18, SW¼SW¼ (lot 4).
T. 3 S., R. 15 E.,
Sec. 11, SW¼SW¼ and E½SE¼;
Sec. 13, W½SW¼.
T. 4 S., R. 15 E.,
Sec. 16, SE¼SW¼;
Sec. 19, lot 1.
T. 22 S., R. 15 E.,
Sec. 15, lots 2, 3, and SE¼NW¼.
T. 3 S., R. 16 E. (unsurveyed). All lands within ¼ mile Yellow Jacket Spring which will be located, when surveyed, in approximately NW¼NW¼ sec. 7.
T. 8 S., R. 16 E.,
Sec. 21, NW¼;
Sec. 29, SE¼SW¼.
T. 18 S., R. 16 E.,
Sec. 26, SW¼NW¼ and SW¼;
Sec. 35, NW¼.
T. 3 S., R. 17 E.,
Sec. 18, SW¼SW¼ (lot 5).
T. 8 S., R. 18 E.,
Sec. 22, SW¼NE¼ and SW¼NW¼.
T. 13 S., R. 19 E.,
Sec. 30 lots 3 and 4.
T. 19 S., R. 19 E.,
Sec. 29, NE¼SE¼.
T. 5 S., R. 20 E.,
Sec. 19, lot 1.
T. 13 S., R. 20 E.,
Sec. 3, SE¼SW¼;
Sec. 10, NW¼NW¼;
Sec. 11, SE¼NE¼;
Sec. 34, S½NE¼, NE¼SW¼, and NW¼SE¼.
T. 12 S., R. 21 E.,
Sec. 19, NW¼NW¼ (lot 1).
T. 12 S., R. 22 E.,
Sec. 5, NW¼NE¼ (lot 1);
Sec. 17, NW¼SE¼.
T. 15 S., R. 22 E.,
Sec. 20, N½SE¼, SE¼SE¼, and NE¼SW¼;
Sec. 30, S½N½;
Sec. 31, NW¼.
T. 5 S., R. 26 E.,
Sec. 27, NW¼NW¼;
Sec. 28, NE¼NE¼.
T. 5 S., R. 27 E.,
Sec. 12, NW¼SE¼;
Sec. 13, NE¼NE¼.
T. 7 S., R. 30 E.,
Sec. 3, SW¼NE¼.
T. 6 S., R. 32 E.,
Sec. 19, SW¼SE¼.

The areas described, including the public, nonpublic, and national forest lands, total in the aggregate approximately 18,212 acres. Some of the public lands are withdrawn for other purposes. The national forest lands are in the Tonto and Coronado National Forests.

2. At 10:00 a.m. on August 14, 1962, the national forest lands shall be open to such forms of disposition as may by law be made of national forest lands.

3. The public lands released from withdrawal by this order are hereby restored to the operation of the public land laws, subject to valid existing rights and equitable claims, the requirements of applicable law, rules and regulations and the provisions of any existing withdrawals provided, that, until 10:00 a.m. on January 7, 1963, the State of Arizona shall have a preferred right of application to select the lands in accordance with subsection (c) of section 2 of the Act of August 27, 1958 (72 Stat. 928; 43 U.S.C. 851, 852). The lands have been open to applications and offers under the mineral leasing laws and to location for metalliferous minerals. They will be open to location for nonmetalliferous minerals under the United States mining laws at 10:00 a.m. on January 7, 1963.

Inquiries concerning the lands should be addressed to the Manager, Land Office, Bureau of Land Management, Phoenix, Arizona.

FRANK P. BRIGGS,
*Assistant Secretary of the Interior.*

JULY 9, 1962.

[F.R. Doc. 62-6828; Filed, July 12, 1962; 8:45 a.m.]

Clifford,

For your information, I made copies for you of the following documents which relate to PWR 34.

1. Order of Withdrawal dated April 17, 1916, signed by Woodrow Wilson.

2. Interpretation of No. 8 of Public Water Reserve No. 34 dated May 31, 1922 signed by E.C. Finney, Acting Secretary.

3. Order of Restoration, Public Water Restoration No. 34 which partially affects PWR No. 34, dated May 31, 1922.

4. Proclamation - 1923 signed by Warren G. Harding on May 31, 1923 - Pipe Spring National Monument.

5. Public Land Order 2720 (Revoking Public Water Reserves), dated July 9, 1962 signed by Frank P. Briggs, Assistant Secretary of the Interior.

6. Federal Register Publication - 27 FR 9918, October 9, 1962 - Correcting PLO 2720.

7. Federal Register Publication - 27 FR 6673, July 13, 1962 - Revoking Public Water Reserves.

Same as No. 5 (PLO 2720)

27 F.R. 9918, October 9, 1962

# Title 43—PUBLIC LANDS: INTERIOR

## Chapter I—Bureau of Land Management, Department of the Interior

### SUBCHAPTER H—GRAZING

[Circular 2090]

### PART 161—THE FEDERAL RANGE CODE FOR GRAZING DISTRICTS

#### Grazing District Advisory Boards

Paragraphs (b) and (c) of § 161.13 are amended to read as follows:

**§ 161.13 Grazing District Advisory Boards.**

* * * * *

(b) *Election; time and place; the general procedures.* All district advisers, except wildlife representatives, shall be elected in the manner provided in this section, and in the General Procedures for Grazing District Advisory Board Elections as approved by the Director, Bureau of Land Management, and published in the FEDERAL REGISTER. An election of district advisers for each grazing district will be held within 90 days after the publication in the FEDERAL REGISTER of the order establishing the grazing district. Thereafter elections shall be held annually by actual polling or by mail, in accordance with the options in the General Procedures for Grazing District Advisory Board Elections.

(c) *Appointment; term of office; removal; vacancies.* Upon receipt of the judges' certificate of returns after conclusion of the election procedure the district manager shall notify the State Director of the results thereof. A person elected as district adviser shall assume office only after he has been appointed by the State Director and has taken the oath of office. Such person shall serve for the fiscal year for which he has been elected. The State Director may remove any district adviser from office because of failure to discharge his duties, loss of any of his qualifications to hold the office, or in the public interest. Upon a vacancy occurring in the office of a district adviser other than a wildlife representative by reason of resignation, removal, disqualification, or otherwise, the board shall recommend the name of a person to fill the vacancy and such recommendation, together with that of the district manager, shall be transmitted to the State Director for consideration. A person appointed to fill a vacancy shall hold office for the remainder of the unexpired term. The wildlife representative will be appointed by the State Director for a term of office that does not exceed a fiscal year.

These amendments shall become effective at the beginning of the 30th calendar day following date of publication in the FEDERAL REGISTER. They are adopted without publication as proposed rule making in order to conform the regulations to the provisions of Executive Order 11007, February 26, 1962, and the President's memorandum of February 9, 1962, dealing with preventing conflicts of interest on the part of advisers and consultants to the Government. Heretofore the regulations authorized a term of office of 3 years for district advisers, whereas the President has prescribed that they shall be appointed annually on a fiscal year basis.

(48 Stat. 1270; 43 U.S.C. 315a)

STEWART L. UDALL,
*Secretary of the Interior.*

OCTOBER 2, 1962.

[F.R. Doc. 62-10022; Filed, Oct. 8, 1962; 8:46 a.m.]

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[Public Land Order 2779]

[Arizona 031065]

[Washington 04236]

## ARIZONA AND WASHINGTON

### Correcting Public Land Order No. 2720 of July 9, 1962 (Revocation of Public Water Reserves), and Public Land Order No. 2731 of July 19, 1962 (Partial Revocation of Power Withdrawals)

Public Land Order No. 2720 of July 9, 1962, appearing as Federal Register Doc. 62-6828 in the issue of July 13, 1962, at Pages 6673-4, is hereby corrected as follows:

The description "T. 42 N., R. 6 W." (18th line of township designations) is corrected to read "T. 42 N., R. 1 W." (a publication error);

The description "T. 25 N., R. 8 W." (33d line of township designations) is corrected to read "T. 25 N., R. 18 W.";

In T. 41 N., R. 7 W., the description "SE¼" following Section 3 is corrected to read "SE¼SW¼";

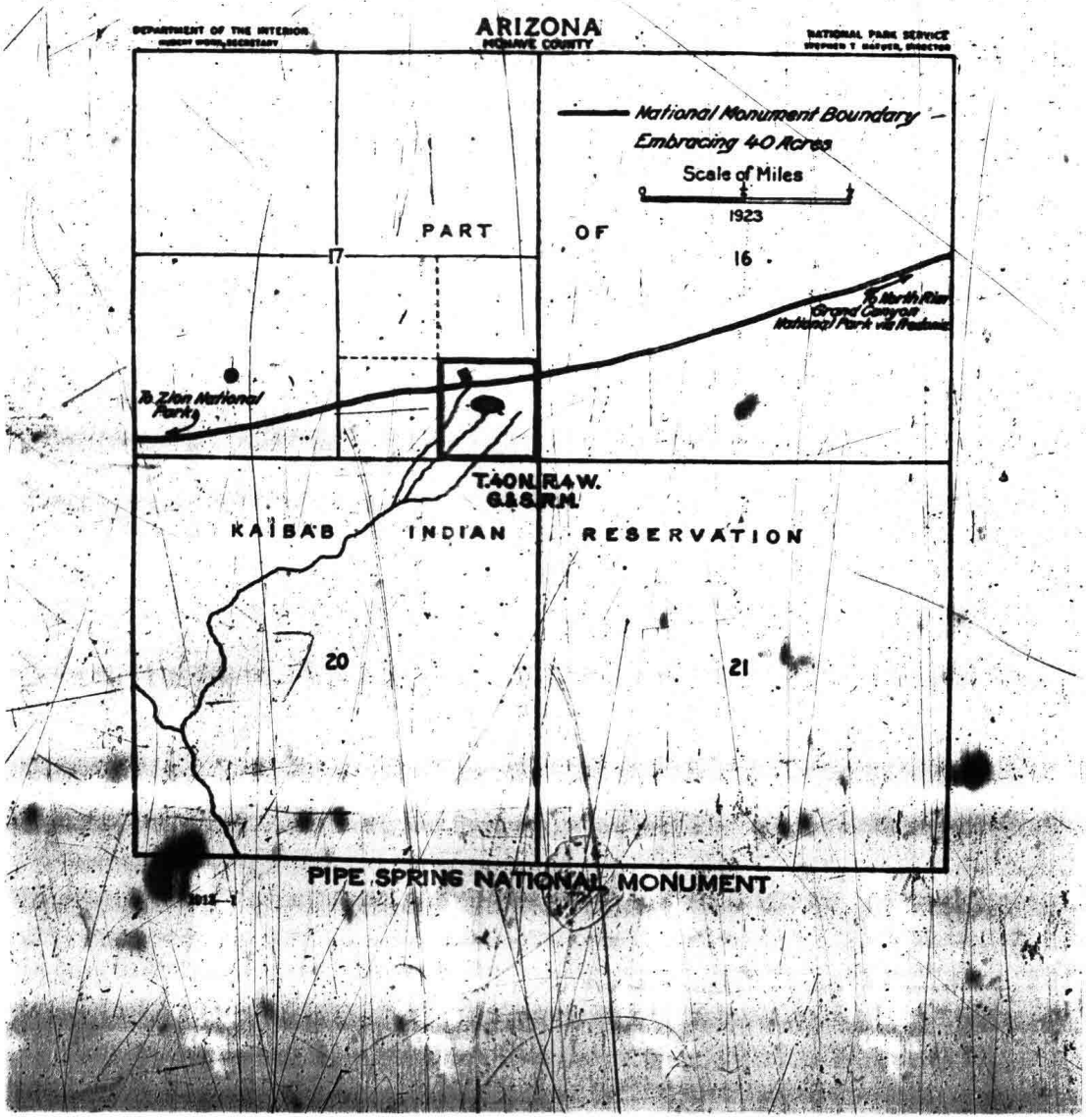
In T. 13 N., R. 10 W., Section 11, the description "NW¼NE¼" is corrected to read "SW¼NE¼".

In Public Land Order No. 2731 of July 19, 1962, appearing as Federal Register Doc. 62-7237 in the issue of July 25, 1962, at Pages 7022-3, the description "sec. 39" appearing in T. 35 N., R. 44 E., is corrected to read "sec. 29".

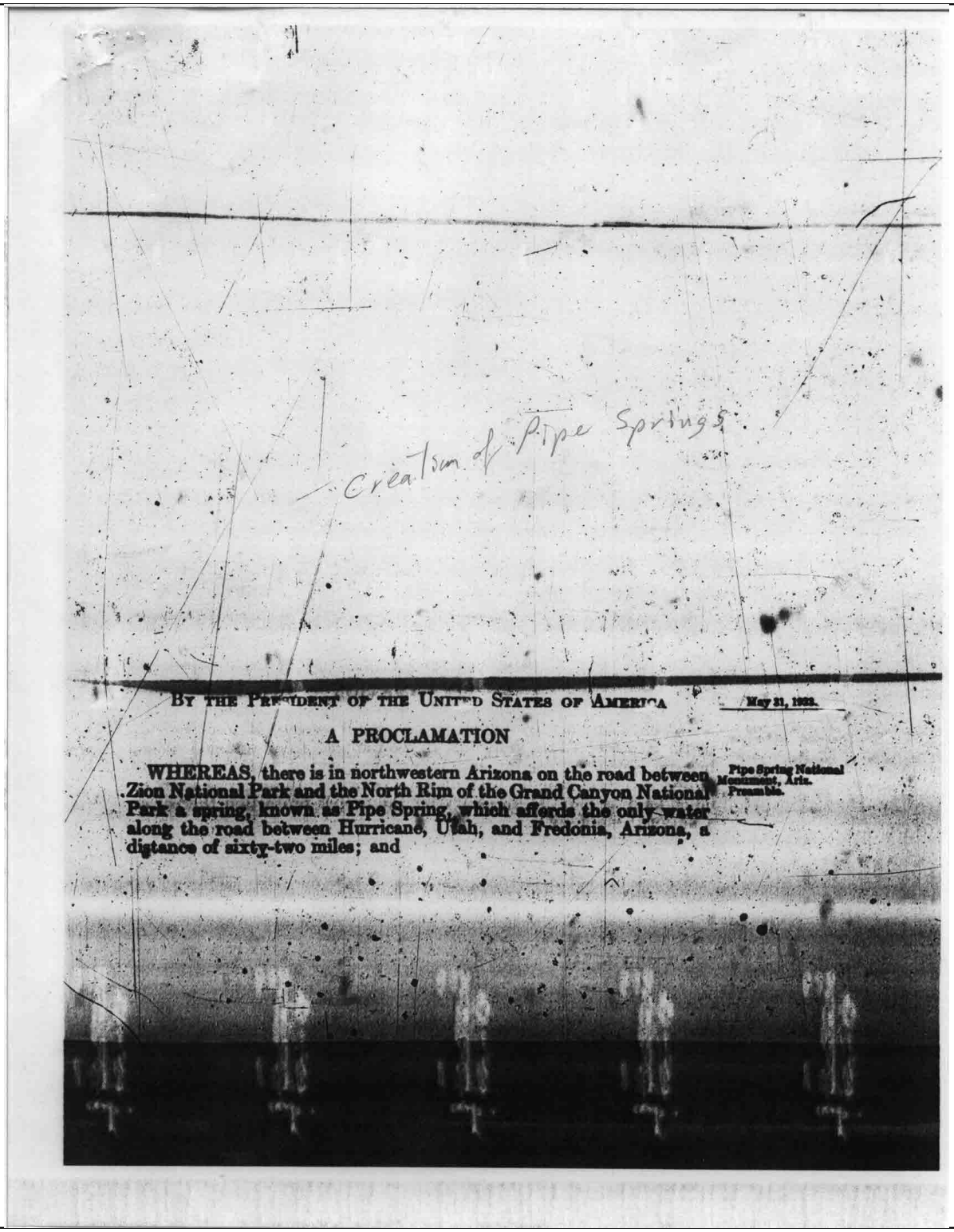
JOHN A. CARVER, Jr.,
*Assistant Secretary of the Interior.*

OCTOBER 3, 1962.

[F.R. Doc. 62-10021; Filed, Oct. 8, 1962; 8:46 a.m.]


DEPARTMENT OF THE INTERIOR
ARIZONA
MOHAVE COUNTY
NATIONAL PARK SERVICE
National Monument Boundary
Embracing 40 Acres
Scale of Miles
1923
PART
OF
17
16
T. Zion National Park
T.40N.,R.4W.
G.&S.R.M.
KAIBAB
INDIAN
RESERVATION
20
21
PIPE SPRING NATIONAL MONUMENT

04-17-1916: Order of withdrawal for AZ public water reserve no. 34 and designation of Gila and Salt River Meridian, PISP NM; sig



Creation of Pipe Springs

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA May 31, 1923.

A PROCLAMATION

Pipe Spring National Monument, Ariz. Preamble.

WHEREAS, there is in northwestern Arizona on the road between Zion National Park and the North Rim of the Grand Canyon National Park a spring, known as Pipe Spring, which affords the only water along the road between Hurricane, Utah, and Fredonia, Arizona, a distance of sixty-two miles; and

WHEREAS, a settlement was made at Pipe Spring in 1863 and there was built a large dwelling place, called "Windsor Castle," with portholes in its walls, which was used as a place of refuge from hostile Indians by the early settlers, and it was also the first station of the Deseret Telegraph in Arizona; and

WHEREAS, it appears that the public good would be promoted by reserving the land on which Pipe Spring and the early dwelling place are located as a National Monument, with as much land as may be necessary for the proper protection thereof, to serve as a memorial of western pioneer life,

National Monument, Arizona.

NOW, THEREFORE, I, Warren G. Harding, President of the United States of America, by virtue of the power in me vested by section two of the act of Congress entitled, "An Act for the Preservation of American Antiquities," approved June 8, 1906 (34 Stat., 225)

Vol. 34, p. 225.

do proclaim that there is hereby reserved, subject to all prior valid claims, and set apart as a National Monument to be known as the Pipe Spring National Monument the lands shown upon the diagram hereto annexed and made a part hereof and more particularly described as follows:

Description.

The southeast quarter of the southeast quarter of section seventeen, township forty north, range four west, Gila and Salt River Base and Meridian.

Reserved from settlement, etc.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any of the features or objects included within the boundaries of this Monument and not to locate or settle upon any of the lands thereof.

Supervision, etc., by Director of National Park Service.

The Director of the National Park Service under the direction of the Secretary of the Interior, shall have the supervision, management and control of this Monument, as provided in the act of Congress entitled, "An Act to establish a National Park Service, and for other purposes," approved August 25, 1916 (39 Stat., 535), as amended June 2, 1920 (41 Stat., 732): Provided that in the administration of this Monument, the Indians of the Kaibab Reservation, shall have the privilege of utilizing waters from Pipe Spring for irrigation, stock watering and other puposes, under regulations to be prescribed by the Secretary of the Interior.

Vol. 39, p. [illegible].

Vol. 41, p. 732.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this thirty-first day of May, in the year of our Lord one thousand nine hundred and twenty-three, and of the Independence of the United States of America the one hundred and forty-seventh.

[SEAL.]

WARREN G HARDING

By the President:

CHARLES E. HUGHES
*Secretary of State.*

04-17-1916: Order of withdrawal for AZ public water reserve no. 34 and designation of Gila and Salt River Meridian, PISP NM; sig

5-31-22

ORDER OF WITHDRAWAL

PUBLIC WATER RESERVATION NO. 27

So much of the orders of withdrawal creating the respective public water reserves as affects the lands hereinafter listed is hereby revoked, and all such lands not otherwise reserved or withdrawn are hereby restored to the public domain and shall become subject to disposition under the laws applicable thereto upon such date and after such notice as may be hereafter determined and announced.

Doesn't affect Pipe Springs

ARIZONA

Gila and Salt River Meridian

Land affected in Public Water Reserve No. 34;

T. 40 N., R. 4 W., All land within one-quarter mile of Two Mile Spring, located approximately in what will probably be when surveyed Sec. 6.

WYOMING

Sixth Principal Meridian

Land affected in Public Water Reserve No. 2;

T. 18 N., R. 89 W., Sec. 30, ~~SW¼~~ of ~~SW¼~~.

May 31

# THE OWNERSHIP OF PIPE SPRING

## A LEGAL AND HISTORICAL BRIEF

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
PIPE SPRING NATIONAL MONUMENT
Moccasin, Arizona 86022

IN REPLY REFER TO:

L54

January 1, 1970

Memorandum

To: General Superintendent, Southern Utah Group

From: Area Manager, Pipe Spring

Subject: The Ownership of Pipe Spring: A Legal and Historical Brief

PARK SERVICE CONTEXT OF PROBLEM.

The necessity of establishing the legal proprietary ownership of Pipe Spring was brought sharply and acutely into focus recently by the developing plans of the Paiute-Kaibab tribe to construct a large Indian Development District of Arizona complex adjacent to Pipe Spring.

The National Park Service had been generally aware of this pending construction for several years. Specifically very little was known of the Indian plans until the construction of a large combination office building and complex headquarters was begun in the Spring of 1969. Subsequent plans, as far as they could be ascertained, called for the construction during the Spring and Summer of 1970 of a twenty unit motel with swimming pool, a curio shop, museum, general store, 10-pad trailer court campground, and a filling station. These plans seemed fluid by N.P.S. standards and are subject to frequent change and modification.

The first official notice of a potential problem of water distribution came when Mr. Karl Gilbert, General Superintendent of the Southern Utah Group, received a letter from the Assistant Director, Bureau of Indian Affairs, Phoenix office informing him of the I.D.D.A. plans. On May 14, 1969, Mr. Gilbert received a telephone call from Al Purchase, Lands Operations Officer, B.I.A., at Keams Canyon, Arizona advising the N.P.S. that the construction of the tribal office building would soon begin.

On July 2, 1969, a meeting was held at Pipe Spring on the water distribution problem which included General Superintendent Karl Gilbert, SOUG staff specialists Joe Davis and Jim Schaack, Bill Fields from the Southwest Regional Office, and the Area Manager from Pipe Spring. The general nature of the water distribution problem and the entire ramifications of the issue were explored.

One of the tentative observations made at this conference was the apparent lack of firm legal ownership of Pipe Spring by the National Park Service. It was obvious also to the N.P.S. conferees that the ultimate needs of the new I.D.D.A. developement would require far more than the one third Indian allotment of the Pipe Spring water. (See Supportive Document no 1) Ultimately this new complex could require all Pipe Spring water. If the Service's legal right to Pipe Spring as full legal proprietary owners was nonexistant preceeding and apart from the Presidential Proclamation making the area a National Monument, (See.S.D. no.2) the Indians could eventually take all the water they needed. Without full establish-

ment by the N.P.S. of prior proprietary legal ownership no acquired water rights as handed down from a long line of previous owners existed. The Indians share of Pipe Spring water would then be ultimately governed by the Supreme Court decision Winters vs. the United States. By this ruling the Indians could go beyond the tri-party division made by Assistant Interior Secretary Oscar L. Chapman in 1933 and claim potentially all of Pipe Spring water. (See S.D. no. 1)

Following this conference the Pipe Spring Area Manager searched the N.P.S. files and other historical material at Pipe Spring. A careful reading of the voluminous files on the subject soon indicated, though quite unbelievably, that the legal proprietary ownership of Pipe Spring had not been finally dealt with at the time that the area was declared a National Monument in 1923 or at any time subsequently.

Robert Olsen, former historian at Pipe Spring had submitted a Research Study Proposal (RSP-PSP-H-1) "Former owners of Pipe Spring, 1870-1890" which had been approved in July of 1966. Historian Olson transferred shortly after this and the formal research was never done. In the course of his tenure at Pipe Spring, Mr. Olsen accomplished much valuable research which helped indirectly in establishing the proper legal owners of Pipe Spring. As a result of this research Mr. Olson published an article entitled "Pipe Spring" in the Journal of Arizona History (Spring, 1965), in which he listed the legal owners of Pipe Spring. (See S.D. no.3 p.13) A reprint of this excellent article is now being sold at Pipe Spring

It was not Mr. Olsen's primary concern to present an historical documented list of Pipe Spring owners. Had he been able to complete the R.S.P. research much valuable legal evidence could have also previously been established. It is possible, however, to adequately establish something historically but yet without sufficient legal basis to withstand scrutiny in a court of proper jurisdiction such as determines ownership and adjudicates water rights.

As the focus of the potential water crisis sharpened it became clear that neither sufficient legal nor historical evidence existed to firmly establish the legal proprietary ownership of the National Park Service to Pipe Spring. It was against the background of this discovery or appraisal that the present Area Manager of Pipe Spring wrote a lengthy memorandum dated July 3, 1969 to General Superintendent Karl Gilbert in which he attempted to analize the problem and articulate the dimensions of the situation from existing Pipe Spring files and historical documents. (See S.D. no. 4) The present narrative will not attempt to replace that memorandum in total. Subsequent research has established much of the previous report. Additional information or corrections will be noted herein when necessary. This narrative supplements but does not supplant that memorandum.

Several days later, on July 8, General Superintendent Karl Gilbert, Pipe Spring Area Manager Raymond Geerdes, Bill Tom local Paiute tribal chairman, and Ferrell Secakuku Assistant Director of the Hopi Indian Development District of Arizona (I.D.D.A.) met at Pipe Spring on the water dis-

tribution matter and the new I.D.D.A. complex. The meeting was amicable. On August 5, however, Mr. C.G. McNiel, Director of the Hopi I.D.D.A. and Ferrel Secakuku visited Pipe Spring. Mr McNiel's attitude was adamant and the issue gave every evidence of "heating up". The following day, Mr. George Easton, Plant Manager B.I.A., appeared and wanted immediate access to Pipe Spring water.

The issue seemed headed for a confrontation. Another general meeting was held on September 11, 1969 at Pipe Spring which was attended by all interested N.P.S. officials from the regional office, the cluster office, and local Pipe Spring personnel. An equally formidable representation was in attendance from the B.I.A., I.D.D.A. and local Paiute tribe. The issue was settled amicably, but temporarily, by mutual agreement to tap the Indian third of the Pipe Spring water from the Indian portion already delivered outside the Monument to a stock pond. The immediate crisis had passed, although it was apparant to the N.P.S. representatives that the Park Service had just "bought a little time". The practical issue of insufficient water at Pipe Spring for the expanding needs of the new I.D.D.A. complex beyond the allotted third did not seem a factor to the Indian represenatives.

The Park Service strategy took two paths. Initial steps were taken to get a test well financed by the N.P.S. to see if an alternate source of water was available. This test well project has been given top priority for the N.P.S. Southwest Region. Presently B.I.A. officials and the local

tribe seems amicable to the idea. The ultimate purpose of the test well would be to secure an alternate water source that could supply the entire I.D.D.A. complex and the culinary needs of the Park Service. Consequently all the Pipe Spring water could be used for natural developement of the oasis like quality of the area.

The second line of N.P.S. strategy was to attempt to determine what additional evidence was available to firmly establish the proprietary ownership of Pipe Spring by the N.P.S. in a court of proper jurisdiction if this were necessary. On July 31, 1969, Mr. Ron Cotton of the Southwest Region N.P.S. submitted a copy of the Pipe Spring Area Manager's memorandum and other pertinent documents to Mr. Gayle E. Manges, Field Solicitor for the Department of the Interior, Sante Fe. Mr. Manges wrote requesting more documents and information from the field. Essentially all the pertinent documents already available had been referred to and summarized. More basic research was clearly indicated.

In the meanwhile several new aspects entered into the situation. The first of these was a serious discussion by all parties of a proposed land exchange which would add more than a section of land to the Monument. The land exchange possibility has since grown in practicality, mutual interest, and feasibility. This new potential certainly increased the positive need for a clear legal ownership definition while increasing the negative potential for conflict if good relations and good position were not maintained. It is easier to remain friendly and gracious from a position of strength.

Unexpectedly, legal assistance became available from within the Park Service. Mr. William L. Mekeel, N.P.S. legal assistant, spent the day at Pipe Spring reviewing water rights, legal ownership matters, and the pending land exchange. Mr. Mckeel expressed a desire and determination to help achieve a coordinated approach to all three issues.

General Superintendent Karl Gilbert then authorized the Area Manager to begin a search of the various county record depositories to see if enough evidence was recorded to establish N.P.S. ownership to Pipe Spring. During the third week in August the Area Manager spent several days in Kingman, Arizona, county seat of Mohave County. The next several months research was sandwiched in with numerous other duties. The Pipe Spring Area Manager made numerous visits to record depositories in St. George, county seat of Washington County, and Kanab, county seat of Kane County, both in Utah. An interesting and involved historical detective hunt began which would include discussion and interviews with numerous indivduals and extensive searches of the legal and historical material on file both at the L.D.S. Church offices and Utah Historical Society in Salt Lake City. The remainder of this paper documents evidence and materials uncovered in this research together with existing information to present the N.P.S. legal and historical case for proprietary ownership of Pipe Spring.

## WHERE WAS PIPE SPRING? OR THE JURISDICTIONAL "NEVER-NEVER" LAND

To properly develope the documented evidence it is necessary first to try to wind ones way through the "never-never" land of historical

confusion that generally placed Pipe Spring during separate periods of ownership in each of two territories or states, and locally in each of three separate counties. Presently Pipe Spring is in Mohave County, State of Arizona. Mohave County's jurisdiction existed from 1883, and the proper documents of Pipe Spring ownership are recorded in the Recorders Office at Kingman from 1895. For any period from 1863 until 1895, before discussing any one year in the history of Pipe Spring, one must reasonably ask, "Where was Pipe Spring that year"?

If what has been written has inadvertently created the illusion that the jurisdictional problem of Pipe Spring ownership was suddenly "home free" after 1883 please be quickly disenchanted. The horizontal confusion of just where Pipe Spring was located geographically was clarified after 1883, but the ownership problem was again obscured in the twentieth century by the vertical issue of where land jurisdiction resided, with the Federal Government or with the State and County. From this most recent frustrating maze Pipe Spring has, hopefully as a result of our recent research, successfully extricated itself. The first problem is the bane of research into Pipe Spring records in the 19th century, the second remains the pain of such research for the 20th.

WASHINGTON COUNTY, UTAH

On January 4, 1856 the citizens of New Harmony, located just south of present day Cedar City, petitioned the "Honorable Council and House of Representatives of the Territory of Utah in General Assembly Convened" for an autonomous county government. The petition was favorably received

and the new government was set up in February, 1856 with John D. Lee, the man designated by Brigham Young as in charge of the settlement, as Probate Judge, Clerk, and Assessor. Lee kept his land transfer records in "Book A, Containing the Records of all transfers or conveyances of land or tenements". (See S.D. no. 5)

Early in 1859 the county seat was moved from New Harmony to Washington City. Lee noted this in his dairy entry of February 26th as follows: (Spelling is Lee's) "Today I delivered up the records of the Probate to my Successor in office, J.D. McCullough, who was appointed by Gov. Comings on account of the removal of the co. seat to Washington city & the law requires the Judge to reside at the Co. seat." Later the county seat was moved to St. George. The old court house in St. George was begun in 1867 and completed in 1870. The county seat has remained in St. George and presently St. George has a new modern courthouse.

KANE COUNTY, UTAH

Kane County was organized at Grafton, presently a ghost town along the Virgin River, on Monday August 1, 1864. In 1884 the joint Washington-Kane County boundaries were adjusted eastward to the present boundary adding the Virgin River Communities to Washington County. Anson P. Winsor, later of Pipe Spring, was the first Judge of Probate. The county seat was still situated in Grafton when A.P. Winsor petitioned the county on March 6, 1871 to grant that "the region of county around Pipe and Moccasin Spring be declared a grazing district". This was duly passed by motion. Later the county seat was shifted briefly to Rockville, and later to

Toquerville. In 1884, after the readjustment of county boundaries with Washington County, the county seat came to rest in Kanab where it has resided ever since.

MOHAVE COUNTY, ARIZONA

Mohave County was one of the four created in the new territory of Arizona on November 8, 1864. The county seat was first at Callville but when that portion of Arizona was given to the new State of Nevada in 1865 the county seat was moved to Mohave City in 1866, and then to Hardyville in 1872. From Hardyville the restless county seat moved to Mineral Park near Kingman in 1373, and finally rested permanently at Kingman with the completion of the railroad in 1887. It remains in Kingman today, about 300 automobile miles from Pipe Spring, and isolated physically by the Grand Canyon.

DID EACH COUNTY HAVE JURISDICTION OVER PIPE SPRING? WHEN?

The answer to the first question asked above for Pipe Spring as related to each of the three named counties is affirmative. Washington and Kane Counties, Utah, and Mohave County, Arizona each had jurisdiction at different periods over Pipe Spring. Only Mohave County retained such jurisdiction once acquired.

The establishment historically and existentially of each jurisdictional period was no mere routine nor academic matter. While some scant published information does exist on the changing boundaries and county seats of the various counties it had to be established by physical research in the dusty archives of each county that some bona fide legal

document or recorded evidence of official concern relating to Pipe Spring existed in the archives. This was not difficult to establish at the Recorder's Office in Kingman for Mohave,County. For the other two counties it meant indiscriminate reading of dusty archives on repeated visits until somewhere, somehow, some concrete physical evidence turned up to show that truly this county held, or acted as though it held, existential jurisdiction over the actual geographical area of Pipe Spring.

JURISDICTION OF WASHINGTON COUNTY, UTAH (1856-1864)

Pipe Spring was under the physical jurisdiction of Washington County, Utah Territory from January 4, 1856 until August 1, 1864. This period included significant events in early Pipe Spring history. In 1858 the missionary party under Jacob Hamblin inadvertently named Pipe Spring by instigating the tradition of the historically famous pipe shooting incident. Sometime in the early 1860's James M.(Doctor) Whitmore built his dugout and started ranching and farming at Pipe Spring.

Concrete evidence of the actual jurisdiction of Washington County was first located indirectly by systematically searching through some dust covered long neglected records in the Kane County Recorder's Office. In the Joint Washington and Kane County Probate Court Record: 1856-1873 I located a copy of a "Land Certificate" dated April 13th, 1863 deeding 160 acres at Pipe Spring to James M. Whitmore. The location of Pipe Spring was given as "Washington County, Territory of Utah". (See S.D. no. 6)

This kind of discovery to a researcher is like the discovering of gold nuggets to a prospector. The document, while only a handwritten

copy, was not "fool's gold", but of tremendous value intrinsically. The "mother lode" would be the "assay tested" original. It had to be in the Washington County records if it still existed. Had it been discovered and claimed? Was it buried in an attic or lost and forgotten under some incidental backwash of history? The Kane County record where I located the copy of the original "Land Certificate" of Pipe Spring consisted of copies of transaction previously subject to Washington County jurisdiction but later transferred to Kane County's jurisdiction. (1873) The Kane County copy of the Pipe Spring "Land Certificate" to James M. Whitmore was included with copies of earlier documents recorded by John D. Lee (See S.D. no. 6) during his tenure as Probate Judge of Washington County when the county seat rested at New Harmony.

Armed with a photocopy of this document I went to the Washington County Recorder's Office at St. George and finally located John D. Lee's Record Book A (See S.D. no. 5) after several days of frustrating search. Recorder's Office personnel were unaware that it existed. Eureka! Here was Lee's original record of land conveyences that he reported surrendering in his diary when the county seat changed from New Harmony to Washington City in 1859. H. Pearce, the Washington County Recorder at Washington City, duly recorded the first Pipe Spring record in the same book. (See S.D. no. 7) This established beyond a doubt that Washington County had jurisdiction over Pipe Spring in the period from 1856 through 1864 when Kane County was organized. To establish the original jurisdiction of Washington County over Pipe Spring at this point in this account it

is necessary to relate in some detail the information on the first recorded legal document of Pipe Spring ownership. This discovery was of great importance both historically and legally. It will be referred to again but not developed at such length in a following section where the legal ownership of Pipe Spring is documented in consecutive order.

JURISDICTION OF KANE COUNTY, UTAH (1864-1883)

The jurisdiction of Pipe Spring came under Kane County as soon as it was organized in 1864. A.P. Winsor, as previously noted was the first Probate Judge. In 1870 Winsor became the first Superintendent in charge of Pipe Spring and "Winsor Castle" and "Winsor Castle Stock Growing Corporation" both received his name.

Concrete evidence of the jurisdiction of Kane County over Pipe Spring was also discovered in the old Probate Court records at Kanab. A.P. Winsor "called" to Pipe Spring in 1870 by President Brigham Young, petitioned Kane County on March 6, 1871 to declare the area around Pipe Spring a "grazing district". In 1878 Winsor Castle Stock Growing Company, then owners of Pipe Spring, paid taxes on 70 acres of land surrounding the spring and on 900 head of cattle and 100 head of horses. (No tax records exist for the 1880s) Kane County Jurisdiction over Pipe Spring continued until 1883 and was exercized during the most important historic period of the area. This included the building of the historic ranch fort and the pioneer cattle ranching period. In 1884 the western part of Kane County including the communities of Springdale, Rockville, and Toquerville went to Washington County.

JURISDICTION OF MOHAVE COUNTY, ARIZONA (1883-Present)

Mohave County, Arizona took over jurisdiction of the Pipe Spring area in 1883 when its boundaries north of the Colorado were extended eastward from longitude 113° 20' to Kanab Wash a distance of about 50 miles from west to east and put much of the Arizona Strip country in the county. At first little was done by Mohave County or the Territory of Arizona to assert any control over the vast and sprawling domain north of the Colorado. A systematic search of the Mohave County Miner published in Kingman from the early 1880s to the present reveals only an occasional reference to the inhabitants of the Mt. Trumbell area. A careful reading of the Canaan Cattle Company minutes on microfilm for the period of the early 1880s reveals an increasing concern that perhaps the company ought to pay taxes or record its property in the records of Mohave County but their is nothing to indicate that this was actually done. The Assessors Records at Kingman are "unavailable" being boxed, crated, and locked in an unused building at the local Airport in Kingman. Historically much of the Arizona Strip in Mohave county remained tied to Utah by history, tradition, and accessibility, While the legal political jurisdiction was definitely in Arizona. In later 1880s and 1890s Arizona law, order, taxes, and records came, after a fashion, to the Strip Country. The first definite indication of legal jurisdiction by Mohave County over Pipe Spring is a Quit-Claim deed on Pipe Spring property from Dan Seegmiller to B.F. Saunders in 1896. From then on all Pipe Spring transactions are properly recorded. The consecutive legal owner-

ship of Pipe Spring recorded from that time to the present will be outlined later in this paper.

THE L.D.S. CHURCH AND THE FEDERAL GOVERNMENT: BACKGROUND FOR PIPE SPRING HISTORY (1857-1917)

It is impossible to properly evaluate Pipe Spring history and ownership without first placing it in the historical context of the times. The historical period of Pipe Spring history in which local, county, territory, or state jurisdiction predominated was generally from 1857 through the creation of the Federal Kaibab Indian Reservation in 1907 and in 1917. The central issue, however, is whether the L.D.S. Church or the Federal Government dominated these local political entities. Pipe Spring history was critically and vitally affected by the broader turns of this larger involvement and relationship. For convenience sake it is possible to place this sixty year span from 1857 to 1917 into three general periods of twenty years, each of which represents one aspect of the changing relationship of the L.D.S. Church and Federal Government. Without considering this relationship any simplistic listing of Pipe Spring owners defies appraisal, eludes understanding, or simply vanishes behind a screen of confusion.

THE VISION OF THE MORMON CORRIDOR: A BACKWARD LOOK

The scope of this report is not primarily concerned with the period of Mormon history prior to 1857. Yet a quick backward look seems valuable. At first glance, 1857 looked like the end of the period of dynamic expansion of the Church. Under Brigham Young the Mormon Kingdom had made steady

progress since the "Saints" first arrived in the Salt Lake Basin some ten years previous. From the shores of Salt Lake the Mormon communities had spread to Utah Lake where Provo was established. From there the "Mormon Corridor" was pushed to the headwaters of the Sevier. Fillmore was founded in 1851 and Parowan and Cedar City a few years later. Brigham Young's vision of the future "State of Deseret" included a corridor to the ocean. Mormon settlements sprang up in Nevada and over Cajon Pass where the town of San Bernardino was founded in 1852, giving easy access to San Diago and the sea. By 1856 over 22,000 Saints lived about the Great Salt Lake or in towns along the Mormon Corridor. Their neat villages, well-irrigated fields, and prosperous industries were fitting tribute to Brigham Young's skill as a colonizer.

THE CRISIS: (1857)

1857 was the year of crisis. The Federal government appointed a non-Mormon to be governor of Utah Territory and dispatched an army of 1,500 men to escort the new officials into Salt Lake City. The Church leaders understandably over-reacted to the government miscalculation by assuming the purpose to be the destruction of the Mormon Church and the death of its leaders. A thousand Mormon militia were hurried east to barricade Echo Canyon. Hard riding Mormon detachments destroyed several supply wagons, drove off cattle, and otherwise delayed the army so that winter camp had to be made on the Green River.

In the meantime the "Mountain Meadows Massacre" occurred. An immigrant train from the bitterly anti-mormon settlements of Missouri and

Arkansas on its way to California was waylaid and destroyed by a detachment of Mormon Militia and Paiute Indians. Seventeen children were spared. Tensions became unbearable when the news leaked out. The Government's miscalculation was answered by a brutal, understandable, but unauthorized crime. The stage was set for a bloody war, a tragic circumstance not only for the Mormon Church, but for the fundamental nature of American government as well. This conflict would have no victor.

Fortunately, Colonel T.L. Kane, an old friend of the Saints was rushed westward. Brigham Young was persuaded to let the Federal army in. The gentile officials were put in charge of the government and the courts. The new officials soon found out that they were running a government without real substance. Utah remained a Mormon Territory during the next twenty years founded, governed, and developed by the Saints, and led by that incomparable colonizer, Brigham Young.

THE FIRST TWENTY YEAR PERIOD:DYNAMIC PERIOD CONTINUES (1857-1877)

The accommodation of L.D.S. Church and Federal Government that occured in 1857 changed the situation tatically not strategically. Gone now was Brigham Young's original vision of a "Mormon Corridor" and the "State of Deseret". What was left was twenty years of his able driving leadership. Time and world enough!

During this period the first visit (1858) of the Mormon missionaries occured, Dr. Whitmore built his dugout, and the historic ranch fort was built, and the pioneer ranching community and ranching enterprize was established.

A consolidation of Church gains occurred on the Mormon frontier. Many new Church enterprises were developed. The transcontinental railroad came through Salt Lake City. When the transcontinental telegraph arrived Brigham Young organized the Deseret Telegraph Company and sent the wire south to St. George. Pipe Spring became the first telegraph station in Arizona. It became a strange and awesome thing to the Paiutes living near Pipe Spring to be told that by touching one of the Deseret Poles they were in physical contact with both far away oceans and that voice signals sometimes clicked over the line from as far away. A temple and tabernacle were built in St. George, Utah's Dixie, and Brigham Young gravitated more to this warmer winter climate.

Brigham Young personally ordered the construction of Pipe Spring ranch fort in the Spring of 1870 to take advantage of the water and abundant grass. He personally took stock in the Winsor Castle Stock Growing Company and held the controlling stock as Trustee in Trust for the Church. His concern included writing specific instruction for branding the Winsor Company cattle at Pipe Spring. He wanted one man designated to do all the branding and he specified that the iron be heated "cheery red with charcoal".

The gains of the Mormon Frontier would have not been possible without his dynamic leadership. With his passing in St. George in 1877 an era was gone and the L.D.S. Church and Federal Government were headed for new confrontations. Onimous signs were appearing before Brigham's death.

THE SECOND TWENTY YEAR PERIOD: RETREAT AND RETRENCHMENT (1877-1897)

Brigham Young's death in 1877 marked the end of an era in Mormon history. John Taylor, senior Apostle in the Council of Twelve, followed Brigham to the Presidency of the L.D.S. Church. Taylor lacked both the executive ability and driving ambition of President Young. The first Federal law prohibiting polygamy had been passed in 1862 but was not vigorously prosecuted. A more stringent law was proposed in 1870 (Cullom Bill) but died in Congressional committee. In 1882 the first Edmunds Act was passed. Prosecutions under the Edmunds Acts were not vigorus for several years. After 1885, reinforced by the Edmunds-Tucker Act in 1887, the prosecution became vigorous. The L.D.S. Church and the Federal Government were headed for a new confrontation.

The Edmunds-Tucker Act threatened to destroy the Church. Not since 1857 had such a crisis existed. The law threatened the Church on two levels. First it threatened the security, freedom, and manuverability of its leaders. Polygamists (men only) were to be disenfranchized. Convictions carried a penalty of 5 years in prison or a $500 fine. As most of the distinguished leaders of the church at that time were involved, eventually about 1000 Church leaders spent time in prison and many lost valuable property since $500 cash was often impossible to obtain. For example, Thomas Chamberlain, president of the United Order in Orderville was arrested, convicted, and sentenced for violation of the Edmunds-Tucker Act. He later raised the money to pay his fine and had his sentence reduced to less than a year. During this general period several of his wives were living at Pipe Spring.

The Church itself was disincorporated and it's property escheated by the Edmunds-Tucker Act. The Church attempted to retain some of it's property by having Stake Presidents or other trustworthy Church leaders take over the Church property as individual owners. This ruse worked only for a short time, for these men, like E.D. Woolley, President of the Kanab Stake and Superintendent of the cattle operation at Pipe Spring in the 1880s and early 1890s, were themselves often hunted and harried men during this period. Indications are that to save a semblence of its vast holdings the Church sometimes made "arrangements" with some cooperating gentiles such as the mysterious and elusive B.F. Saunders who later came to own Pipe Spring. Evidence exists also of the formation of "umbrella type" holding companies in states distant as New York which operated Church enterprises. Few records were kept, and it is certain that even those records that were kept were understandably meant to obscure and confuse. Pipe Spring ownership slid under an aura of confusion and mystery from which it has now, hopefully recently emerged. It has been a source of mystery and frustration, but the inescapable conclusion from the evidence of history reveals that during this period the legal ownership of Pipe Spring either simply vanished, drifted away, dispersed to several claimants, disentregrated to non-legality, or was purposely confused and obscured. Local traditions or legend of ownership exist, but these traditions are most often in error wholly or in part. Only the spirit of the times could account for such a problem existing amongst the most record-keeping and record-conscious people and Church in all of history.

In 1890 the Supreme Court upheld the anti-polygamy laws and thereby limited the bounds of religious practice. President Woodruff who had succeeded President Taylor in 1887 bowed to the inevitable in 1890 soon after the Court's decision, and issued the "Manifesto" which declared his intent to honor the laws of the land and to advise his people to do likewise.

Prosecution under the anti-polygamy laws slackened almost immediately. In several recorded cases after the "Manifesto" a fine of only six cents was passed upon individual defendants being prosecuted. James G. Bleak recorded in his Journal that he plead guilty to two charges under the Edmunds-Tucker Act. After he affirmed to the Judge in Beaver that he accepted the "Manifesto" he was fined six cents and dismissed. That this was a trend and not an isolated case is illustrated again on August 6,1892 when Charles L. Walker appeared before U.S. Commissioner in "gentile" Silver Reef. The Commissioner had a "rougish twinkle in his eye" while fining Walker just six cents for violation of the Edmunds-Tucker law. The Judge had no change for a dime and was told happily to keep the change. The accomodation of the "Manifesto" had taken the sting out of the prosecution of the anti-polygamy laws. President Woodruff did valiant work in bringing his Church back to financial stability. Unprofitable property could now be so acknowledged and sold. In 1895 the Church offered Pipe Spring for sale. In 1896 Utah became a State. The great accomodation had been made. Woodruff had helped his Church make the painful transition from frontier society to the Twentieth Century.

THIRD TWENTY YEAR PERIOD: PRIVATE OWNERSHIP AND CHURCH BUSINESS (1897-1917)

The passing of President Woodruff in 1897 left the Church a vastly changed but flourishing institution accommodated to American laws and society and ready for the Twentieth Century. The Church was guided no longer by Brigham Young's vision of empire. But again viable and strong, the Church was now free to pursue a spiritual rather than temporal kingdom. The next two presidents, Lorenzo Snow and Joseph F. Smith gave steady competent leadership. They were also the last of the pioneer leaders. Heber J. Grant (1918-1945) was the first native born Utahn to occupy the First Presidency. This last twenty year period (1897-1917) settlers in what had been the Mormon frontier had become simply private land owners and felt no longer a vital part of the Church's pioneer movement with friendly local and county officials registering ownership in county court-houses according to territorial laws and friendly neighbors recognizing communal use of water governed by committees recognized by both the Church and local officials. Federal bureaucracy had come to Utah. Now indivduals often found themselves involved with land and water rights disputes with officials representing Federal Indian Reservation, Land Offices, National Forests and Parks. Federal land surveys arrived and most isolated areas were finally mapped for land distribution under the existing Federal land laws. Many individuals who had long established prior land and water usages sanctioned under local laws, church custom, and territorial laws, suddenly found themselves battling for ownership under the new Federal land system and against this baffling Federal bureaucracy. The Church no

longer seemed interested in the pioneer frontier as such and left the individuals to fight these lonely battles for ownership without its aid, while it became increasingly sophisticated in modern business and investment techniques.

It is interesting to note that the National Park Service must now research those past legal battles for Pipe Spring and take up the cause of those pioneer owners in order to establish undisputed proprietary legal rights and protect its right to Pipe Spring land and water from another Federal agency. Perhaps the National Park Service's present utilitarian needs to establish a clear proprietary title will also accomplish an historical justice for these past pioneer individual owners of Pipe Spring who lost their claim on this land because of the changes and accommodations of history beyond their control.

THE LEGAL OWNERSHIP OF PIPE SPRING (1863-1970)

The legal ownership of Pipe Spring has been considered against the immediate urgent National Park Service context which precipitated this study. Subsequently, the problem of legal proprietary ownership was placed into jurisdictional setting by placing the proper county, territorial, or state jurisdiction at the various periods. Finally, the problem was placed into historical context by narration and evaluation of Mormon history as it affected Pipe Spring history in the larger setting and had immense bearing on legal and historical ownership. Having thus established the N.P.S.'s urgent need, having taken the jurisdictional problem out of the "never-never" land, and finally having related Mormon

history to the three general twenty year periods of Pipe Spring ownership we now come to the heart of the matter, the actual listing of consecutive owners of Pipe Spring and supportive documentation of the same.

THE WHITMORE OWNERSHIP (1863-1871)

Tradition has it that the Whitmore family originated in Texas. Dr. James M. Whitmore was living in Salt Lake City when "called" by Brigham Young to be part of the small advance party consisting of Apostles George A. Smith, Erastus Snow, and brethern Horace S. Eldredge, Isaac Stewart, and Robert Golding. They were briefed by Brigham Young and sent to Utah's Dixie to pioneer the St. George settlement.

Soon after coming to St. George (1861) Dr. Whitmore began to run sheep and cattle at Pipe Spring. On April 13, 1863 he received a "Land Certificate" for 160 acres of land around Pipe Spring. (See S.D. no.6 & 7) This Land Certificate was previously referred to in this paper under the section entitled Jurisdiction of Washington County, Utah (1856-1864).

The presence of this legal basis for Whitmore's occupation of the Pipe Spring area had never before been established. It has been assumed by most writers and historians that Whitmore merely had squatted on the land and had developed certain squatter's rights. The legality of Whitmore's original claim was based on a firm land title duly recorded in a court of proper jurisdiction. Ultimately this title rested on the authority of the United States and on powers granted to Utah Territory as a duly constituted territory of the United States. As such the legally constituted Counties of Utah had the authority by Federal law to issue "Land Certificates" for

the establishment of townsites and surrounding "Farming Land" necessary to sustain the townsite. Thus James M. Whitmore was granted "Lot one Block one of Pipe Spring Farming Land Survey" It was reasonable to assume that a townsite and community would develop here. The fact that no town developed here rather than in Kanab or later Fredonia is rather an accident of history rather than something that could have been determined at this time. The Land Certificate to Pipe Spring was issued by the duly constituted county official from the county of actual jurisdiction at the time. Washington County was an actual entity of the Territory of Utah, a territory constituted and established by the laws of Congress and subsequently empowered to issue land certificates for townsites and surrounding farming land as well as other land authority. All this establishes for Dr.Whitmore and subsequent purchasers of his claim, an irrefutably first claim to Pipe Spring ownership.

The discovery of this evidence of original ownership has corrected the actual acreage of land acquired by Whitmore. All previous National Park Service personnel and all previous historians who have ever mentioned the point, including those of national reputation such as Jaunita Brooks and Robert Glass Cleland (See A Mormon Chronicle: The Diaries of John D. Lee; 1848-1876, Vol. 11, p.256) have always mentioned the area of the original land held by Whitmore to be 140 acres. Elizabeth Woolley Jensen, daughter of E.D. "Dee" Woolley, who resided at Pipe Spring as a small girl and who has done much research and written a personal unpublished manuscript

(Pipe Spring Story) wrote that, "Whitmore established squatters rights to 140 acres of the public domain and the water, by building a small dug-out." The fact that the Land Certificate granted Whitmore "One hundred and sixty acres of land" not only corrects a longstanding historical inaccuracy but adds another significant dimension to the Pipe Spring interpretive story.

The fact that the area was 160 acres means that it qualified also under the provisions of the Homestead Act passed in Congress the previous year. (1862) The Homestead Act needed a Federal land survey by the Land Office before one could actually file under its provisions. Such a land survey did not take place until after 1914 in the Pipe Spring area. Dr. Whitmore may have been deliberately fulfilling the Homestead Act's provisions. What this does mean now, however, is that ~~as much~~ inasmuch as the Homestead Act and previous Pre-emption laws, recognized as valid any previous use of the land in accordance with its provisions, Dr. Whitmore and the legal successors of his original claim, have repeatedly satisfied the conditions necessary under the Homestead Act and would fall heir to the land title under its provisions as well as the legitimate claims of proper succession under territorial authority, Either claim would be sufficient to establish legal ownership.

Actual physical proof that Whitmore built a dugout and resided at Pipe Spring exists in the old floor and walls now covered near the metal-photo exhibit at Pipe Spring and in the files of Pipe Spring National Monument. Repeatedly travelers through the area made mention of the dugout

where Whitmore and his herder resided. The fact that other "improvements" of the area were made as satisfaction of the provisions of the Homestead Act are recorded also by many travelers at that time. An example of this is found in Journal History, in the report of May 28, 1865 by St. George Stake President Erastus Snow. Snow reports leaving St. George on the above date with several others and that they:

> held meetings at Toquerville and Virgin City. Leaving the latter place, they traveled by way of Short Creek and Maxwell's ranch to Pipe Springs; having been joined by Bishop Winsor of Grafton and some others. Dr. Whitmore at Pipe Springs has fenced in a substantial manner about eleven acres and these were under cultivation. He has set out about a thousand grape vines together with peach, apple, and other fruits..... He has made good substantial corrals and was milking fifty cows.

There is no question then, legal or historical, that Dr. Whitmore in 1863 had concrete legal ownership of 160 acres of Pipe Spring land under existing Territorial and Federal laws. In addition he had established a valid basis for any lawful heirs or subsequent owners of his rights to have and to hold the said property without any alienation by subsequent claimants under the Homestead Act.

The National Park Service already holds the site of the original Homestead, Homestead Certificate Application 1, issued to Daniel Freemen on May 20, 1862 by the Land Office at Brownville, Nebraska. The site is now Homestead National Monument. (See S.D. no.8) The Pipe Spring homestead site is only a year later in time and westward by many miles in distance. In addition Pipe Spring was the site of ~~last~~ one of the last attempts at dry farming in the homestead pattern under the Homestead Act on the

Arizona Strip in the 1920s and 1930s. A good case can be presented also that it was here that John Wesly Powell formulated his land policy in contradiction to the obvious inadequacies of the Homestead Act. His Report on the Lands of the Arid Region of the United States was released in 1879. An entire new element of interpretation of the land law history at Pipe Spring opens up as a potential. Such an interpretation is "relevant" to today's increasing concern for the Environment and its protection. (S.D.9)

MRS. ELIZEBETH WHITMORE'S OWNERSHIP (1866-1870)

The story of the Whitmore-McIntyre killing by the Navajos and subsequent events involving the Mormon Militia is well told in other places and is not the immediate concern of this paper. The next few years the Mormon Frontier experienced the agonies of Indian depredations during the "Black Hawk War". During this period the Navajos sensing opportunity for plunder also stepped up their raids across the Colorado and raided the Mormon settlements. It was a period of retrenchment for the Mormon Frontier and the "hell for leather" chase as hard riding local militia units under men like Colonel Daniel McArthur and Captain James Andrus tried to outride or cut off the maurauders at the Colorado crossings.

An interesting local legend exists that several years after the killing of Dr. Whitmore some of his relatives came from Texas and demanded the return of the remnants of Dr. Whitmore's cattle from the Winsor Co. Legend has it that they drove the remnants of this herd or its equivalent to the area around Price where the Whitmore Ranch was started. In 1897 one of the Whitmore owners of this ranch in this area had the same initials, J.M., as Dr. J.M. Whitmore of Pipe Spring.

On more solid evidence is the fact that Dr. Whitmore's widow acquired the sole ownership to Pipe Spring. Elizebeth Whitmore became a very influential person in St. George in the decades that followed and held and exchanged much property. The Recorder's records in Washington County in the 1870s, 1880s, and 1890s, contains numerous entries of property sold, purchased, or exchanged in her name. Her holdings eventually also included the purchase of the old Patterson Ranch near Overton, Nevada in 1880. One of the washes leading into the Grand Canyon below Mt. Trumbull is called Whitmore Wash from ranch holdings of this illustrious widow. Perhaps it was her money that enabled her husband's relatives to begin ranching near Price as well. Pearson H. Corbett's Jacob Hamblin reads that in September of 1869 Jacob sold Mrs. Whitmore his Santa Clara home before moving permanently to Kanab. Corbett's account states:

> The previous evening the widow of Dr. Whitmore had been to the home to have the final papers signed. For she had been the first to approach Jacob about buying the home when it was definitely decided that the Hamblins would move. The next morning when they were to leave Mrs. McIntyre, who lived with Mrs. Whitmore, was present to check on the last minute details.

From the numerous real estate and business transactions in her name it is evident that Mrs. Whitmore was wealthy by the standards of the day in her own right beyond any compensation she received from the Pipe Spring transaction which was not finally settled until 1874.

Although the full extent of her holdings are not now known, under the laws of the Territory of Utah she fell heir to all of her husband's property and the clear, undisputed title to 160 acres at Pipe Spring. Tradition has

it that Mrs. Whitmore used the sale of Pipe Spring to to the Winsor Co. to purchase Jacob Hamblin's former home in Santa Clara. This part of the tradition is incorrect. The Hamblin home was purchased in 1867. Mrs. Whitmore was paid in Winsor Co. Stock and not until 1874 was the matter finally settled.

THE WINSOR CASTLE STOCK GROWING COMPANY OWNERSHIP (1870-1879)

The transfer of the property from Mrs. Whitmore to the newly organized Winsor Castle Stock Growing Company is exceedingly involved but irrefutable. Many of the traditional as well as written accounts of this transfer are in error in essential details although valid as far as the transfer and the general amount of compensation. Mr. Robert Olson, former historian at Pipe Spring, did some excellent research into the old Winsor Castle Stock Growing Company, Ledger B, a microfilm copy of which is now at Pipe Spring.

The facts of this transfer that can be documented are as follows. In the spring of 1870 Brigham Young and a group of associates visited Pipe Spring. The decision to build a fortified ranch was made at this time. Brigham Young moved to accomplish the decision with his customary vigor. Anson Perry Winsor was "called" by Brigham Young from Grafton, to serve his "mission" as superintendent for the enterprise. In October, Joseph W. Young arrived to superintend the construction. President Young was still at Pipe Spring in November when John D. Lee passed through from Skutumpah. In a very real sense Pipe Spring was one aspect of the Mormon Frontier

that Brigham Young took a very personal interest in. When President Young wanted a project to move, it moved.

Brigham Young made intermittant visits between Pipe Spring and St. George that summer and fall. After the project was well underway Brigham Young made a concluded "Verbal Agreement" on the purchase of Pipe Spring from Mrs. Whitmore in December of 1870. It is characteristic of President Young that he had made all the arrangements for the construction and organization of the Fort before he personally contacted Mrs. Whitmore. Not that President Young was insensitive to her needs.

Shortly after his visit to Pipe Spring and the decision to build the historic fort Brigham Young returned to Salt Lake and sent Stake President Snow the following telegram which shows his personal concern for the widow. The telegram read:

> Proceed w th the Kanab business, co-operative herding, etc. Have Bro. Winsor go out as soon as convenient and commence putting in grain and other plantings suitable to the soil and climate. Have you arranged matters satisfactorily with Sister Whitmore.....

He would make generous compensation, but as President of the Church wish could be taken as virtual commandment but he used restraint and the personal concern for "Sister Whitmore".

The time that President Young made a "Verbal Agreement" with Mrs. Whitmore can be deduced accurately from an entry in Ledger B. (Winsor Castle Stock Growing Company) which I recently located while reading the microfilm copy of this document in the college library at Cedar City.

Several entries in the accounts ledger (double entry) as of January 1, 1874 are as follows:

> As per verbal agreement with Brigham Young $1000
> was debited to the Whitmore Estate account

This amount later shows up as credit in capital stock in the Winsor Company itself to the Whitmore Account. In addition some $366.64 was paid in cash to Mrs. Whitmore for "3 and 1/16 years interest since Erastus Snow (Stake President St. George) failed to make payment down as soon as "purchase". What is here documented is that some 3 and 1/16 years prior to January 1, 1874 Brigham Young had made a "Verbal Agreement" with Mrs. Whitmore for the purchase of Pipe Spring. This would put the original agreement between President Young and Mrs. Whitmore in December of 1870. Such an agreement has all the force of law when finally consummated by actual value received. The actual ownership was transferred in December of 1870 from Mrs. Whitmore to the Winsor Co. through the person of Brigham Young as Trustee in Trust. The fact that the actual payment was not made for over three years does not weaken the legality of this transfer since interest was duly paid back to the original agreement and was duly accepted by Mrs. Whitmore for the interval involved. The "Bill of Sale" completely fulfilled this contract in every legal aspect. That this "Verbal Agreement" involved the purchase of Pipe Spring ranch is reconfirmed by another cash entry for the same amount (366.64) for the "purchase of the Ranch settlement" Again the January transaction of $1000 was reentered to the account of "J.M. Whitmore, Mrs. Elizebeth Whitmore, Administrator. By amount ($1000

in stock) for Ranch as Bill of Sale for Verbal Agreement with Prisident Brigham Young, Trustee In Trust".

Now all the elements for legal transfer are in. A "Verbal Agreement" in December 1870 that was consummated 3 and 1/16 years later with a payment in stock for $1000 in The Winsor Co. The interest on the $1000 was paid back for over three years to Dec. 1870, the time of the original agreement. In response for this Mrs. Whitmore gave the Winsor Company a "Bill of Sale". This constitutes a legal transaction in any court of law at any time in American History.

Considering that one of the principals was Brigham Young, and the background of Mormon pioneer history at the time, much less than this would have sufficed for any court of the period. It is regrettable but of little consequence that Brigham Young did not go and have the title recorded in the proper county of jurisdiction at this time. Brigham Young's authority was tantamount to law on the Mormon Frontier at that time and he could have gotten a record made of any transaction, legal, quasi-legal, or of doubtful legality. (He would not have) This researcher spent several frustrating days in old records looking for a title of transfer recorded by Brigham Young. It became evident that there was none recorded when all the evidence of the "Verbal Agreement" and consequent " "Bill of Sale" was obtained from the microfilm records of the Winsor Co. Under the historic circumstances none was necessary. The fact that the Whitmores had an uncontested fully recorded original title and that full

irrefutable evidence of transfer by "Bill of Sale" exists is sufficient for any court of proper jurisdiction.

It would be a shame not to bring in an interesting historical speculation at this time. Ample evidence does exist that Mrs. Whitmore was an astute and formidable person herself in business dealings. Perhaps some future historical researcher will give us the final story on an interesting side light of the Whitmore case that has no direct bearing on the legal transfer of Pipe Spring. A little historical conjecture is necessary.

On December 1875 some $300 was transferred to Mrs Whitmore's account from the personal account of Anson P. Winsor. (Winsor Co. Ledger) A month later $10 was also transferred. A year later the $300 was returned to Winsor's Account, but not the $10. The Winsor Co. had been first organized in St. George on January 3, 1873. One of the first transactions of the Company Directors was to credit A.P. Winsor for 31 and 1/2 months of labor (supervision) due him "for service on the Ranch at Settlement". The amount credited was $1921.89.

The Church tithing herd had been collecting at Pipe Spring for several years. A very strong local tradition has it that certain remnants of Whitmore's herd were included in the Winsor Co. herd. Although various Militia units using the old Rock House at Pipe Spring brought their own beef for food and made no report one way or the other as to spotting the Whitmore herd remnants. But the Arizona Strip is a vast place and the

legend persists that some of Whitmore's cattle escaped being driven off by the Navajos. If so, did the astute and hardheaded widow Whitmore demand that she receive this amount from Winsor in lieu of payment for her husband's herd remnant that had been herded with Winsor's stock? The fact that Winsor personally received credit for his cattle, kept separate from the tithing herd by brand, in company stock and had sold and used these cattle for his own purposes previous to the Winsor Company's formation, could account for the payment from Winsor's account directly to Mrs. Whitmore's. Could it also be that in the intervening year some of Mrs. Whitmore's tough gentile Texan relatives, as tradition had it, came to Pipe Spring and gathered without benefit of approval from Winsor, what they considered to be the widows share of Dr. Whitmore's cattle. If so, it would explain why this amount was returned from the Whitmore to the Winsor personal account, but minus the interest. Admittedly this account is circumstantial. But it does explain and account for all the known facts and legends about this incident. Perhaps this conjecture will stimulate interest and some evidence will emerge to substantiate or forever bury this persistent legend.

THE PERIOD OF L.D.S. CHURCH OWNERSHIP OF PIPE SPRING (1879-1895)

The period from 1879 through 1895 is a frustrating maze of contradicting evidence and traditions about who actually owned Pipe Spring. The physical records of ownership simply do not exist in any court of proper records and jurisdiction for this period. Patient research and

examinations of all other known records and evidence does establish concretely and legally that the L.D.S. Church did in fact actually own Pipe Spring during this period. In order to properly establish this it is necessary to examine several other alternative theories to Pipe Spring ownership at this time and to evaluate their merits. These theories have been all advocated wholly or in part by spoken and written tradition. In one theory, the Seegmiller ownership, the theory has become solidly entrenched despite conclusive legal evidence to the contrary. In order to test the validity of each theory, this researcher tried valiantly to establish each case until each in turn proved untenable. The ownership of Pipe Spring by the L.D.S Church during this period became an inevitable conclusion from concrete evidence.

THE POTENTIAL CASE FOR OWNERSHIP BY THE CANAAN CATTLE COMPANY (1879-1895)

In 1879 the Winsor Company was wholly absorbed by the Canaan Cooperative Cattle Company of St. George. The death of Brigham Young, who had personally presided over the board of directors of the Winsor Company uhtil his death in 1877 made such a move inevitable. The Canaan Company had been formed in 1870 under the durable leadership of Erastus Snow who often served in the dual capacity of both Stake President and Chairman of the Canaan Company for many years. From the microfilm copy of the minutes of the Canaan Company January 2, 1879 we read:

> President Snow stated that at the meeting of the stockholders of the Winsor Castle Stock Growing Company held on the 1st (Jan. 1, 1879) the stockholders present voted unanimously to transfer the property of the Winsor Company to the Canaan Cooperative Stock Company upon the basis proposed by the joint committee of the Board.

The above action was then approved by the Canaan Company and the merger was complete. At the January 25, 1879 meeting of the newly merged Canaan Company it was moved that, "Superintendent Pulsipher (last Winsor Co.Supt. Pipe Springs) be instructed to immediately turn over to Supt. Andrus of the Canaan Co. as much room in the building at the Winsor Ranch as he may need."

The Canaan Company gradually sold off many of its holdings but continued in operation until 1895 when B.F. Saunders purchased all the livestock and holdings of the Company. In fact he purchased the company itself.

A very good case indeed could be made that the Pipe Spring property was transferred from the Winsor to the Canaan Co. in the merger in 1879. This was the line of logical development that my research first took. It became increasingly apparent that this theory did not account for all of the facts of the situation. The Pipe Springs property although firmly and irrefutably held by the Winsor Company was not passed on at the time of the merger with the Canaan Co. Irrefutable concrete evidence exists that the Pipe Spring buildings were turned back to the Trustee in Trust of the L.D.S. Church. This evidence will be presented later.

THE "MANY-LIVED" TRADITION OF OWNERSHIP BY DANIEL SEEGMILLER, (1888-1895)

A case could be made today for the ownership of the Pipe Spring property from 1888-1895 by Daniel Seegmiller. This case needs no external proof or evidence, it creates its own tradition, though false, and seems to endure forever. Seegmiller was the brother-in-law of E.D. Woolley who

resided at Pipe Spring intermittently from 1885 to 1895. Both had married daughters of Erastus Snow, President of the St. George Stake, and the Canaan Cooperative Cattle Company.

As far as can be ascertained this tradition began in 1888. The written evidence more recently was originated with a compilation of the Pipe Spring Ward Minutes, Kanab Stake, made in 1930 by Andrew Jensen, Church Historian, for Leonard Heaton. This summary said that:

> Prior to the Government confiscation of Church Property President Woolley had secured Valentine Script on the 20 acres on which Pipe Springs buildings were located and placed the property in the name of Daniel Seegmiller, who disposed of it to Benjamin F. Saunders.

Every Park Service writer or historian who ever wrote on the matter, except former Pipe Spring Historian Robert Olsen, presented the evidence as established fact that Daniel Seegmiller became the owner of Pipe Spring in 1888 after filing on the area with Valentine Scrip. Olsen wrote (S.D. no.3 p.13) that: "In 1888 Pipe Spring and its buildings were sold to B.F. Saunders." This also was in error. Saunder's claim will be considered later.

The truth of the matter is that Daniel Seegmiller did file on the land with "Valentine Scrip" but his application was refused totally, finally, and completely by the Prescott Land Office. In a memorandum from Commissioner Spry of the General Land Office to National Park Service Director Cammerer dated May 23, 1923 (S.D. 10) states that the records of the Land Office "show that on May 3, 1888, Daniel Seegmiller, as assignee, filed application for unsurveyed land to be located with Certificate E-13, issued

to Thomas B. Valentine under the act of April 5, 1872, (17 Stat., 649) known as Valentine Scrip." The application was denied because the land had not yet been surveyed for land distribution. Had the proper survey been made at this time the prior use and development by the previous Pipe Spring owners would have taken precedent. The "Scrip" could be used only on previously unclaimed, undeveloped, or unpre-empted public domain after proper land survey.

An exception would exist if an individual "planted" the Scrip on land that he had himself pre-empted. In such a case his own pre-emption rights would correspond with and not override the Scrip. What the 1872 law really did was to give Land Certificate Script to Civil War veterans who could use it in lieu of actually fulfilling the "roof over head","improvements", and "time on land" provisions of the Homestead, Pre-emption, or Desert Land (later) Acts. This Scrip could be resold by the Veteran for immediate cash. The price rose and fell like the price of a bond as immediate prospects for use were available or unavailable.

Seegmiller did not reside at Pipe Spring either before, during, or after the period that he "planted" the scrip. His attempt was twice dead as no land distribution survey had been made and he did not himself qualify under pre-emption.

It is difficult to place Seegmiller's motives in proper perspective. Judgements of motives are important only to help finally destroy the false conclusions and confusions of the Seegmiller ownership tradition. The

general conclusions that I previously reached (S.D. 4) were in error in one important detail only. B.F. Saunders did not own Pipe Spring at this time and Seegmiller knew who the proper owner was. The L.D.S. Church owned Pipe Spring when Seegmiller filed his Valentine Scrip in the Prescott Land Office. Seegmiller was not, as he wanted posterity to believe, trying to save the Church property from gentile B.F. Saunders, but from his own Church for himself. It is certain that had the Salt Lake City Church leaders sold Pipe Spring to B.F. Saunders at this time they would have certainly opposed such duplicity in every manner and disapproved of any attempt by Seegmiller or anyone to get the property back from Saunders by underhanded methods. The evidence is ample and overwhelming that the Church leaders did not do business this way. As much could not be said for all local churchmen, some who obviously "feathered" their own nests during this period of Church agony. What about the argument that Seegmiller was trying to save Pipe Spring from being "escheated" under the terms of the Edmunds-Tucker Act. This holds little water as well when examined by the actual evidence. All property thus escheated was duly compensated in fair appraisal value. The Church was hard put for cash at this time and sold Pipe Springs to gentile interests immediately in 1895 when it was again legal to do so. Pipe Spring buildings were an economic liability to the Church at this time, (And: even escheatment would have brought hard cash. At any rate the Church ownership of Pipe Spring was well hidden at this time, included in a New York corporation created to

obscure the Church control. So well hidden was Pipe Spring ownership by this device that even with the full present cooperation of the Church Historian and Church Legal Office documentation of this is difficult to find.

At the ~~instance~~ instance of the U.S. Attorney General suits were filed in Salt Lake City on July 30 1887, against the L.D.S. Church and the Perpetual Emigrating Fund Company. In November 1887, United States Marshal Frank H. Dyer was appointed receiver, and took charge of all the real and personal property of the Church. Soon afterwards Marshal Dyer came down to Pipe Spring to receive the Church herd kept at Pipe Spring. Woolley received instructions from the Presiding Bishop's Office in Salt Lake City to have the cattle ready. A disagreement arose between Woolley and Dyer over a fair price for the cattle, and Marshal Dyer returned to Salt Lake City. In the interim the cattle were driven to House Rock Valley. A recent long distance telephone conversation was ~~recently~~ held about this incident with Mr. P.T. Reilly of 3659 Buena Park Drive, North Hollywood, California. Mr. Reilly is the noted author and scholar whose eagerly awaited book on this area will be published soon. Mr. Rielly shed new light on this incident and gave me much helpful information on the personalities, incidents, and background of this entire period. Mr. Reilly, who has studiously researched the entire period, told me that it was B.F. Saunders who drove the cattle to House Rock Valley. At any rate a compromise was agreed upon in Salt Lake and Marshal Dyer never returned for the cattle.

This story is important and has bearing on several facets of the Pipe Spring ownership situation. It was after the compromise agreement in Salt Lake City and after Marshal Dyer's visit that Seegmiller filed on the Pipe Spring property. According to records of the entire proceedings it was never a matter of concern by the Marshal whether the Church owned Pipe Spring itself. The Church's ownership was hid in a New York Holding Co.. If Marshal Dyer knew of the Church's ownership personally he never made a legal or actual issue of it. But Seegmiller had his "bogeyman" and his brother-in-law Woolley could control the way the matter was entered in the Pipe Spring Ward and local Stake minutes.

If Seegmiller were sincerely trying to keep the Pipe Spring property safe for the L.D.S. Church why then did he later Quit-Claim an entirely bogus Pipe Spring claim to B.F. Saunders for $2,500 in 1995 after all Church property had been returned and there was no longer any need to hide ownership. Should not theChurch have received this $2,500? This can only be interpreted in terms of personal gain and questionable ethics of selling something he knew he did not own or had not obtained title to. There is nothing personal in this judgement of Seegmiller. Had he sold the Scrip only it could have had some intrinsic value on some other land, but never at Pipe Spring. I am not in a position to judge specifically for trying to steal Pipe Spring from his own Church, or for selling with malice and foreknowledge a fraudulent ownership to B.F. Saunders, or distorting history by persisting in the legend that he did this for noble

purposes. For none of this does my judgement constitute a court of proper jurisdiction. I do judge him and accuse him of deliberately clouding the title of Pipe Spring which later caused serious problems for Charles Heaton, and subsequently for the United States National Park Service, in order to cover his ignoble act.

The Legend of Seegmiller's ownership and "noble" purposes dies hard. The opinion of the late Judge Dilworth Woolley (S.D.4) concerning Seegmiller, his uncle, was noted in the previous memorandum. The late Judge's opinion of Seegmiller has been supported since by other "old timers" who also knew Seegmiller.

I recently interviewed at length an old gentleman who called himself "the oldest living resident in Kane County". He is certainly a candidate for the best physically preserved and mentally alert candidate. Mr. Ed. Lamb is now 89 years old and was born in 1880. His father Edwin Lamb worked for Seegmiller for many years as foreman under Seegmiller's supervision of the Church herd in House Rock Valley. When Seegmiller was fired by Tony Ivins, Edwin Lamb was put in charge. (S.D. 11) Mr. Lamb was eager to relate his interesting experience of the period, and more will be obtained later. Mr. Lamb is a gentleman and was reluctant to give any but positive remembrances. When the purpose of the interview and the intent of the research was understood he gave his opinion addressed to that purpose. Mr. Lamb said that it was the general understanding at the time that Seegmiller and Woolley succeeded in getting a "rake-off" on the sale

of Pipe Spring that should have gone to the Church.

In another recent interview with Merle V. Adams ("Cowhide") in Kanab other corraborating evidence came to light. Mr. Adams' father was the John Quincy Adams (yes, a descendant) who worked at Pipe Spring at various periods during the last years of the Winsor Company ownership and later under Woolley. Mr. Merle Adams's father knew Woolley, Seegmiller and Saunders personally, and related many accounts to his son. Merle himself knew both Woolley and Seegmiller and spent most of his life working or owning cattle in House Rock Valley and other areas. Mr. Adams illustrated this with an account handed down by his father.

Anthony W. Ivins was a close friend of Mr. Adams' grandfather. He was also the manager and overseer of the Church cattle investments for the Church Holding Co. under John W. Young, a position that required him to be, like Caesar's wife, "above suspicion". Only by such absolute integrity could the Church's property be protected during the ~~ensuing~~ treatment period. He was a faithful steward as indicated by his history. He was appointed overseer of all Church cattle interests under John Young in 1887. In 1890 he become Mayor of St. George and in 1891 Superintendent of the Santa Clara Indian Farm. In 1908 he received the high honor of membership in the Council of Twelve, proof enough of his faithfulness.

Although he fired Seegmiller from the House Rock operations he only "admonished" Woolley for similar shortcomings. It is worthy of note that he remained close to B.F. Saunders, purchasing the Parashant Ranch from

him which he later resold to Preston Nutter. Mr. Ivins came to Pipe Spring to check on the Church's cattle operations. While at Pine Spring for several days many young heifers came in to drink branded D E instead of the Church's brand K on the left rib. Mr. Adam's father was present and later related the account to his son Merle. In the recent interview Merle "Cowhide" related the incident as follows:

> After watching the heifers branded D E arrive for several days Mr. Ivins asked, "Brother Woolley, why are all those heifers branded D E instead of with the Church brand?" Brother Woolley sucked in his breath as was his own peculiar habit and stammered, "That means Daniel and Edwin (Daniel Seegmiller and Edwin D. Woolley). We took 500 heifers and branded them with our brand." "But isn't that stealing from the Church, Brother Woolley" Ivins, asked, To this Woolley replied, "No, not stealing Brother Ivins, just manipulating."

The full partnership of Woolley and Seegmiller in both legitimate and shady business deals can not be separated. They were brothers-in-law and were sons-in law of Erastus Snow. Together they bought out the upper Kanab ranch from the Canaan Company. Their relationship is given definite evidence in Preston Woolley Parkinson's new (1967) monumental (1114 pages) book, The Utah Woolley Family. Parkinson quotes one of Woolley's daughters as follows:

> Father formed a business partnership with Daniel Seegmiller very much like the United Order in which they labored very successfully for more than 25 years.

It is impossible then to seperate Woolley and Seegmiller in setting the record straight. It is not without regret that this is necessary to do for the truth of history as well as necessary in the correction of the

ownership record. In Seegmiller's case I have little regret. Woolley should be judged more positively in the larger context of his many able accomplishments for his Church and as a frontier leader. Perhaps Seegmiller had his redeeming qualities and accomplishments also, but as regards the Pipe Spring ownership and cattle operation I must concur with P.T. Reilly, who termed Woolley and Seegmiller "the biggest crooks in the country." In a large context my overall historical judgement of Woolley is much higher and better.

WHO WAS B.F. SAUNDERS?

One theory of Pipe Spring ownership which must be considered is the theory that B.F. Saunders owned Pipe Spring after 1888. Former Pipe Spring Historian Robert Olsen, whose research abilities I respect highly, concluded that "In 1888 Pipe Spring and its buildings were sold to B.F. Saunders." (See S.D. 3) A reprint of this excellent article is now being sold at the Pipe Spring visitor contact station. It is not possible that anyone, without deliberately setting out on the research task as is now necessary, could demolish the Seegmiller theory of ownership and establish the correct Pipe Spring ownership.

A great deal is owed to Mr. Olson for the amount of excellent research that he has done on Pipe Spring history. I sensed that he was on the right track when I sent in the previous memorandum (S.D. 4) initiating this subsequent research. In the first part of this research I accepted the B.F. Saunders theory of Pipe Spring ownership in 1888 as well. A later telephone conversation with Mr. Olson revealed that his B.F. Saunders

theory of ownership in 1888 rested on "tradition" and certain "instincts" that the Seegmiller theory was wrong. At first I had built quite a substantial case on Mr. Saunders ownership by 1883. After several additional false starts I shattered my own B.F. Saunders theory, but in its wreck all was not lost, and from the crumbled stones of both the Seegmiller and Saunders theories the solid edifice of truth began to emerge. Mr. Saunders did not become legal owner of Pipe Spring until 1895. He then promptly turned around and sold it.

None the less, Mr. Saunders enters prominently into the Pipe Spring story during this period. A biographical sketch of the information available would be very helpful. There is very little that is written about Saunders, yet it is safe to say that he was one of the most important men in the Southern Utah-Northern Arizona area for the period from about 1883 until his death in 1910 (1909?). Perhaps one of the reasons so little is known about him is that he was a "gentile" in "Mormon Country" and consequently was not entered into any records kept by the Church. Although he sometimes clashed with local Mormon leaders, he more often accommodated well and there is little doubt in my mind that some kind of an "understanding" or "gentlemen's" agreement existed on a "sub rosa" basis between Saunders and certain high Church officials in the Presiding Bishop's Office in Salt Lake which both parties honored scrupulously and by which Saunders was treated well in return for protecting the Church's interests.

Saunders name appears with increasing frequency in the 1880s, 1890s, and 1900s in the old land transfer records at St. George and Kingman. Yet these were only two counties and territories in which his far flung activities were involved. He had interests in Colorado, Nevada, Wyoming and other parts of the West. During the Alaskan Gold Rush Saunders sent Mr. Edgar Clark his "right hand man" to Alaska to look over the grazing possibilities. Truly he was an authentic Cattle Baron, whose existance and career could only have taken place during the closing of the great American frontier, in the last two decades of the 19th and first decade of the 20th centuries.

One can reconstruct some kind of image of the man by appraising all his widespread and aggressive business activities. Yet it is in interviewing old timers that one can reconstruct a more personal picture. In an interview over a year ago with the late Judge Dilworth Woolley of Kanti (S.D. 4) the late Judge recalled a trip to Salt Lake City in about 1889, when he was about nine years old, with his Father and Uncle Dan (Daniel Seegmiller). He vividly pictured Saunders as sitting massive and formidable behind a huge old fashioned desk in his office in Salt Lake City. Ed Lamb who was born the same year as Judge Woolley, the two were close friends in early youth, recalled B.F. Saunders in a recent interview ~~in~~ in Kanab as Saunders came and went on his ranch inspections on the House Rock Range, at V.T. Park on the Kaibab, and on the Pipe Spring range. Mr. Lamb's father, Edwin, had worked for Seegmiller as a paid foreman

running the Church herd in House Rock Valley. Young Ed (now 89) worked for B.F. Saunders, as well as subsequent owners. Mr. Lamb gives the picture of Saunders as an impressive looking cattle baron who had an earthy bulldog look somehow combined with an aristocratic bearing, altogether a massive man physically and influentially.

Perhaps the most complete picture of Saunders as a man and his activities was obtained in a recent interview with Mr. Saunders M. Clark of Cedar City who is employed by the Utah Fish and Game Department. Mr. Clark is a namesake of B.F. Saunders because Saunders Clark's father, Edgar L. Clark, worked as B.F. Saunders "right hand man" from 1889 until Saunders death in 1910 (1909?) Edgar Clark was named administrator of Saunder's estate. As Saunder's "right hand man" he was sent all over the West buying and selling cattle and sheep for Saunders, and was the one Saunders sent to Alaska during the Gold Rush to determine if Alaska had grazing potential for cattle to be raised and sold to the hungary miners.

A recent telephone conversation with the noted author P.T. Reilly greatly added to my general knowledge of Saunders. Mr. Reilly followed with more information in an informative letter. (S.D. 11) Perhaps the picture of this elusive cattle "colossus" will be brought into sharper focus when Mr. Reilly's new book comes out. It contains a chapter devoted to Saunders.

THE B.F. SAUNDERS CASE FOR OWNERSHIP (1888-1896)

A linear ownership case can be made for the ownership of Pipe Spring by B.F. Saunders directly acquiring the rights of the Canaan Company.

Stated in an oversimplified manner the ownership of Pipe Spring by the Winsor Co.,,was logically (it was not) transferred to the Canaan Company, at mergers. Saunders later became Canaan Co's "sole stockholder". From this logical course it could be reasonably (though falsely) deduced that Saunders became owner of Pipe Spring via acquiring all the Canaan and ipso facto the Winsor claims. This simplistic theory, was vigorously pursued down all its labyrinthine passages. This theory appealing in essence, but false in the main important detail. The Canaan Company did not pass on Pipe Spring, because the Church owned it. The theory, however, certainly helps fortify Saunders ownership at a later period. Just as in ancient Rome all roads led to Rome, so in Pipe Spring ownership all roads lead eventually to B.F. Saunders. It is our intention to enter Rome on the "Via Appia", the only regal (or legal) entrance.

The first record of Mr. Saunder's activities is taken from the Jan. 22, 1883 minutes of the Canaan Co.. President Snow told the directors that, "B.F. Saunders desires to buy stock and if circumstances were right favorable, to buy into the Company." One wonders what causal relationship this offer of Mr. Saunders to the Canaan directors in St. George had with the recent passage of the Edmunds Act, and under what circumstances could Saunders, as a Gentile, hope to be allowed into the Company?

The Board refused to sell him capital stock in the Company at that meeting, but did agree to sell him 500 head of Company grazing stock. Saunders paid for the cattle and offered to buy the Parashont Ranch located

between Mt. Trumbull and the Grand Canyon. Erastus Snow who was then serving in the dual capacity of St.George Stake President and Canaan Co. Chairman, left quickly for Salt Lake City, presumably to confer with the Presiding Bishop or others. He shortly wired the Company Directors to sell the ranch (Parashont) to Saunders. One may reasonably assume that Mr. Saunders had a previous arrangement with the Salt Lake Churchmen. The Company then sold the cattle on the Parashont to Saunders.

The activities and records of the company simply vanish after this action. A Report of The Assets and Liabilities of Canaan Cooperative Stock Company, dated November 3, 1883 and the minutes of the final meeting the board and stockholders held in Salt Lake City in October 1895 are among the St. George Temple papers at the Church Historian's Library in Salt Lake City. No other company records are available from 1883 to 1895. The last meeting on October 1, 1895 records the sale of all Canaan Company assets; that is, the Company itself, to B.F. Saunders. One can readily surmise the reason for the submergence of the Company from 1883 to 1895. During the period of submergence of the Company B.F. Saunders emerges hovering mysteriously, and apparently omnipresently, in the background.

The definitive answer will probably never be known, but must be judged against the larger background of the clash of the L/D.S. Church and the Federal government as previously discussed. The facts are that the Company "submerged". The inescapable conclusion is that B.F. Saunders

"emerged" with some kind of mutual "understanding" with the Presiding Bishops Office to cooperate with the Church in hiding its assets and get some flexibility for its threatened possessions. While this gave the Church some potential protection and cover it undoubtedly helped Saunders build his cattle empire also. This was a "marriage of convenience" most certainly, but an arrangement both practical and useful to which neither party appears to have been unfaithful. (S.D. 11) In the end this "Gentlemen's Agreement", as was Brigham Young's "Verbal Agreement" with Mrs. Whitmore, appears to have been scrupulously honored by both parties.

To the end of his life Saunder's friendship and goodwill with the Church officials in Salt Lake City remained intact although he become more and more at odds with some local leaders. His retained influence with the Salt Lake Presiding Bishop's Office and his increasing controversy with locals can be seen in the letter of introduction for Robert Walton and the subsequent correspondence. (S.D. 12)

Mr. Walton, a sheepherder had a complaint against James S. Emet who was leasing Lee's Ferry from the Church at this time. To the diligent research of Mr. P,T. Reilly (S.D. 11) we owe the account soon to be published in his new book of how Saunders later brought Emet into court over other matters involving Saunder's Bar Z holdings.

Mr. Saunders died on July 26, 1910 (or 1909) (The first date geven by Saunders Clark, the second by P.T. Reilly). He was respected and esteemed by the Church leaders until his death. Considering the bitterness of the times this was a rare achievement and honors both parties.

It is true that B.F. Saunders did not have the title of Pipe Spring until 1895, but he apparently had something which he held as highly, the sacred word of those whose word was as good as any title. Mr. P.T. Reilly concurred in this judgement in his recent letter. "Your opinion of his (Saunders) sub rosa operation for the Church agrees with my knowledge of his operations." It would seem that Saunders had this word for at least a decade before 1895 when he got a title to Pipe Spring.

THE L.D.S. CHURCH, LEGAL OWNERS OF PIPE SPRING (1879-1896)

The actual legal ownership of the Pipe Spring buildings did not stay with the Canaan Company after their merger with the Winsor Co.. This is amply clear from numerous entries in the minutes of Canaan Board of Directors. On Dec. 31, 1879 the Company directors made a charge to the account of the Trustee in Trust (John Taylor since Brigham Young's death) in favor of the Company's Ranch Improvements Account for:

> Improvements which were made since company purchased Ranch (Pipe Spring) from you and which are now charged to you in consequence of your taking back the property.

Previously on January 2, 1873 the Winsor Company had credited the account of the Trustee-in Trust (then Brigham Young) with $10,000 as payment for the Ranch buildings that had been constructed by a work mission of the Church. On November 15, 1879 the combined Canaan Company had reversed this transaction and given the Pipe Spring buildings back to the Church (Trustee in Trust). At the next meeting (Dec. 31, 1879) the Company directors approved paying the Trustee in Trust for rent of the Pipe Spring Ranch from July 1 through December 31, 1879.

The Company directors were all good churchmen, but they were also hard headed businessmen and the rent seemed high. Consequently at the November 24, 1879 meeting of the stockholders:

> President Snow stated that he had written to John Taylor, Trustee in Trust saying that the company would not feel justified in retaining possession of the Pipe Ranch after January 1, 1780 on a rental of more than $250 a year.

At the December 31st meeting Snow had Taylor's reply sent back from Salt Lake over the Deseret Telegraph which read:

> Your proposition Winsor Castle rent accepted.
> Compliments of season to yourself and family.
>
> John Taylor

From the above exchange of information from the combined (now Canaan) Co. minutes it is precisely clear that after Brigham Young's death the Pipe Spring ranch buildings, built as a Church work mission enterprise were given back to the L.D.S. Church as represented by the Church legal person and head, Trustee in Trust John Taylor. It is also clear that rent was paid for these buildings by the Canaan Company to the Trustee in Trust.

At the January 30, 1879 meeting of the Canaan directors President Snow left no doubt about the matter in any form when he had recorded that:

> The company has not purchased the Pipe Spring Ranch, but is merely using it (renting) for the time being.

Even this rental agreement with the Trustee in Trust was to be soon abrogated. During the January 5, 1881 meeting the Company directors voted to:

> Notify Trustee in Trust that Pipe Spring no longer of service and asking him to send someone to take charge of it.

At this time Charles Pulsipher had just vacated to James Andrus the new Canaan foreman. The Company minutes of January 25 had instructed Pulsipher to give Andrus the room he needed. Pulsipher moved soon afterwards to Sink Valley. Andrus a romantic figure could not leave the open country he first entered as Captain of militia after the Whitmore killing. He was a dashing hard riding courageous leader of men and he loved the cattle business. He stayed with the company until 1895. In 1904, together with Andrew Sorensen and Charles F. Foster, Andrus purchased the Canaan Home Ranch (several miles west of present Colorado City) from the Canaan Co., B.F. Saunders "sole stock holder".

There was no question of continued occupancy of the Pipe Spring buildings. In response to the notification of the Trustee in Trust by the Company that the Ranch would no longer be needed the Church soon rented out the ranch again.

Elizebeth Woolley Jensen furnishes information on this in her unpublished manuscript on Pipe Spring. She states:

> By 1880 the policy of the church in the management of the cattle ranch in northern Arizona was to lease it to interested cattlemen who would use it as an investment and care for the Church Tithing cattle. Joseph Gurnsey Brown of Kanab took advantage of this opportunity and in 1881 purchased the lease of Pipe Springs of the church, with the understanding that he would "take care of the Church cattle as if they were his own".

The period of the Brown lease lasted about four years and the family returned to Kanab at the close of 1885. Not much is known in Pipe Spring records presently about this family and its story at Pipe Spring. Perhaps

one of the bonus benifits of this report will be the stimulation of additional study on some of these historically neglected families. Presently a great deal is known about the Woolley occupancy. A greater balance would be desireable.

Elizebeth Woolley Jensen spent much of her young girlhood at Pipe Spring and later graduated from the University at Logan. She was her father's secretary (E.D. "Dee" Woolley) for several years. She brings the Church's policy on renting Pipe Spring sharply into focus. In writing this account she had access to her Father's papers and to the counsel of two able brothers who were attorneys. She writes:

> The church adopted the policy of having the Stake Presidents or other trust-worthy men take charge of church properties lying within their ecclesisatical jurisdictions. This made it necessary for father (E.D. Woolley) to spend much of his time during this period at Pipe Ranch. Looking after the thousands of church cattle together with the care and up-keep of the land and the buildings, was no small responsibility, At the suggestion of Erastus Snow, father had in 1883 shared the lease with J.G. Brown, and when the latter had returned to Kanab in the winter of 1885-1886 father took over the lease. This made a very good arrangement for caring for two herds. Erastus Snow was president of the Canaan Cooperative Stock Company. It will be remembered also that he was father's father-in-law.

From the period of the Woolley, occupancy until the property was sold finally to B.F. Saunders the buildings, corrals, and property were in continuous use by members of the Woolley, Chamberlain, and numerious plural families. Mrs. Jensen calls Pipe Spring the "Woolley Lambing Ground" during this period. There is ample evidence in local histories and in Pipe Spring files to support continued occupancy during this entire period when the buildings were leased from the Church.

The Church through its Trustee in Trust, as outlined previously, retained ownership of the Pipe Spring buildings. From 1879 until 1887 there is a clear pattern of contractual leases with individuals. Woolley at first "shared" the lease with J.W. Brown. One wonders to what extent this was forced on Brown by local Stake Presidents. (Snow-St. George, Wooley-Kanab)

The death of John Taylor on July 25, 1887 and the suit for escheatment of Church property filed July 30, 1887 coming in less than a week profoundly affected the Church's business operations. Taylor had had personal knowledge of Pipe Spring ownership and lease arrangements as can be seen by the telegram to Erastus Snow quoted above. His death and the escheatment proceeding were hard blows to the Church.

Church strategy in defense of its vast holdings against the Edmunds-Tucker Act took three courses. Leonard J. Arrington in Great Basin Kingdom describes the three methods used in protecting its property by the Church. "First, continue for the time being Brigham Young's policy of asking certain members of the Church to hold property on a secret trust in order to avoid possible forfeiture to the government." "Second, Church officials proceeded to organize separate nonprofit associations to hold certain real and personal property which belonged to the church." "Third,...., church authorities determined to transfer by outright sale or by trust assignments to individuals, real and personal property which was held in the name of the church trustee-in-trust. and would otherwise be forfeited by the government."

The later general course of action was the one followed for Pipe Spring. Arrington again gives us the background information as follows:

> Coincident with the transferral of the tithing to the Stake Associations most of the livestock on the church ranches at Star Valley, Wyoming; Oxford, Idaho, and Pipe Springs, Arizona, was sold to Mormon Capitalists and semi-public livestock associations. Approximately 3,000 horses and cattle were sold in this way, some of them in such a way as to suggest that the "sale" was merely the assignment of trust.

It was clearly understood by the parties concerned that this property was to be utilized "in trust" for the Church. Over a dozen various devices, holding companies, and "trust" arrangements were worked out which included almost all of the Church's holdings and properties. A telephone conversation with Mrs. Della Dye, Research Librarian at the Utah State Historical Society library in Salt Lake, confirmed that this account of Pipe Spring was corroborated by testimony reported in the Deseret News May 1, 1888., and February 6,7, 1889.

The Legal position of Trustee in Trust was abolished by the Edmunds-Tucker Act. The Presiding Bishop was appointed by the General Conference to hold these dispersed properties in trust for the Church.

The specific arrangement made for Pipe Spring by the Church could have completely baffled me at this point without the able research of P.T. Reilly coming to my aid. A holding company, the Kaibab Land and Cattle Company, was formed under the laws of New York by John W. Young which took under its umbrella the Pipe Spring Ranch, the Church grazing herds in House Rock, Kaibab and the Arizona Strip, and controlled all the assets and pro-

perties of the Canaan Cooperative Co.. This is from Mr. Reilly's recent letter:

> After John W. Young formed the Kaibab Land and Cattle Co. (under laws of N.Y.) Aug. 22, 1887, he hocked it to the Knickerbocker Trust Co. for $200,000 to finance the English Mission. Snow's sons-in-law Dan Seegmiller and Dee Woolley were foreman and background man respectively, but were stealing the outfit blind. When the church wised up, A.W. Ivins was sent over to take charge and the mortgage was transferred to Canaan, Grant & Co, SLC bankers. Ivins says he found the place in a very poor condition, back taxes, stock depleted, etc. Ivins redeemed the mortgage (he immediately fired Seegmiller and replaced him with Ed Lamb, father of Edward T. Lamb of Mt. Carmel).

It wasn't necessary at this time for anyone to own the range, that was free and open. The record is clear that the Canaan Company turned the Pipe Spring Ranch buildings back to the Church in 1819. The Church in turn leased it under regular agreements to differert individuals until 1887. From 1887 until the sale of Pipe Spring to B.F. Saunders in 1895 the Church ran Pipe Spring indirectly through the "unbrella" holding company (Kaibab Land & Cattle Co.). The line of authority for Pipe Spring after 1887 went from President Woodruff to the Presiding Bishop, thence to John W. Young, president of the holding company to A.W. Ivins who supervised Seegmiller at House Rock and Woolley at Pipe Spring. Woolley operated in and out (mostly out) of Pipe Spring under this arrangement from 1887 to 1895, but the Woolley families, with numerous others lived continuously at Pipe Spring during this period.

Ivins fired Seegmiller from supervising the Church operation at House Rock soon afterwards. Seegmiller was a great lover of blooded horses and

was supervising the Church horse herd at House Rock. The late Judge (Dilworth) Woolley recalls hating "Uncle Dan" (Seegmiller) every mile of the way back from Salt Lake to House Rock because he was forced to ride a blooded stallion that Seegmiller had acquired from the George Cannon ranch. Ivins discovered that Seegmiller was building up his own blooded horse herd at the expense of the Church. In addition, knowledge of Seegmiller's "duplicity" in filing the "Valentine Scrip" without John W. Young's approval may have been a factor.

The ownership of Pipe Spring had never become an issue in the escheatment proceedings as we have previously ascertained. Congress enacted and President Cleveland duly signed an act in October of 1893 returning the escheated property to the Church. Immediate steps began to be taken to press for Statehood. Utah became a State in 1896. After 1895 the Church could openly own or sell such property that had proven unprofitable.

B.F. SAUNDERS ACQUIRES LEGAL OWNERSHIP OF PIPE SPRING (1896)

It was against this more favorable background that the Canaan Company resurfaced as a legal entity separate from the holding company and in its meeting of October 1, 1895 voted to sell all company livestock and properties--- buildings, corrals, watering troughs, fences, and other improvements to B.F. Saunders. The Kaibab Land and Cattle Co soon sold its House Rock and Kaibab operations. This property underwent several transactions before it was sold in its entirety to B.F. Saunders in 1899 (S.D. 11)

But what about the Pipe Spring buildings? Saunders, through acquisition of the Canaan holdings in 1895 and the Kaibab Cattle Holding Company in 1899, now controlled everything from House Rock Valley westward to the Canaan Home ranch west of Pipe Springs and south below Mt. Trumbull at Parashont. Did these transactions include Pipe Springs itself? Had the Church returned Pipe Spring to the Canaan Company before the 1895 sale?

No records seemed available to clear up this frustrating mystery until the Church Legal Office came up with a document much to the point. (S.D.13) A telegram was sent from E.D. Woolley to President Woodruff with a petition signed by many people of the Kanab Stake asking to buy Pipe Spring for the Kanab Stake. The telegram, dated June 17,1895 read as follows:

> To President Woodruff
> Sale of Pipe Springs to Cattle Syndicate (B.F. Saunders) means serious loss to the people of our stake; if it must be sold the people of the Stake wish to buy. See letter of the people
>
> E.D. Woolley

Here we have conclusive concrete evidence that the Church still owned Pipe Spring on June 7, 1895. Equally evident is the fact that Seegmiller did not own Pipe Spring at this time. It also establishes the fact that B.F. Saunders was just now about to acquire ownership of Pipe Spring for the first time. It is reasonably conclusive from the dates of the telegram (June 7, 1895) and the sale of all Canaan property (Oct. 1, 1895) to B.F. Saunders that the Church was throwing Pipe Spring into the lot. The record of this meeting (Church Library, Salt Lake City) shows that Saunders merely

paid $10 a head for all cattle and horses born before 1895. Everything else--- buildings, corrals, fences, watering troughs, ranch buildings, line shacks---- all "improvements" were "thrown in free"!! This is why no legal transfer of recorded property took place. This saved the Church the embarrassment of "blowing the cover" used so effectively during the escheatment proceedings. Saunders paid a good price in hard cash for all livestock with the understanding that all buildings including Pipe Spring was part of the bargain.

The Church was honoring its "gentlemen's agreement" to Saunders who had kept his part of the bargain in good faith. How else could one account for the fact that President Woodruff turned down an urgent request from a Stake President backed by signatures from a large number of local church members, and sold Pipe Spring to a "gentile". Those historians who have sometimes accused the Church in the past (19th Century) of having a double standard of honor in its dealings with gentiles should note this remarkable proof to the contrary.

Saunders kept the Pipe Spring property about a year. As all roads led to Rome, now all possible lines of ownership led to B.F. Saunders. Saunders bought off the phony ownership claim to Pipe Spring of Daniel Seegmiller on July 23, 1893 although a man of Saunder's business acumen would have undoubtedly checked out Seegmiller's claim filed at the Land Office in Prescott. Certainly Saunders knew that he wasn't buying a "true bill" when he paid Seegmiller $2,500 for a Quit-Claim to Pipe Spring. He did inherit

the "Valentine Scrip" and duly passed this along to subsequent owners all of which are duly and properly recorded in the Mohave County Recorder's Office at Kingman. The reason why Saunders paid off Seegmiller now becomes abundently clear. Woolley's telegram was sent on June 7, 1895. Saunders paid Seegmiller, Woolley's partner and Brother-in-law, $2,500 for the Quit-Claim deed for Pipe Spring recorded by Saunders in Kingman on July 23. On September 7 Daniel and Artimesia Snow Seegmiller duly "acknowledged the execution" of the Quit-Claim deed Saunders had recorded on July 23. On October 1, the Canaan Company approved the deal to Saunders. On December 5 Saunders recorded the deed at Kingman.

Saunders was no slouch in business. He had to placate both Seegmiller and Woolley. In buying out Seegmiller's phony claim he got Seegmiller off his back and Woolley off of Woodruff's back. This was no doubt well worth the $2,500 to Saunders.

This clearly explains several things including the lack of any Quit-Claim deed from the Church to Saunders for Pipe Spring. Saunders now had all the claims ever held for Pipe Spring. The Seegmiller "claim" had been purchased. Saunders was now the "sole owner and stock holder" of the Canaan Company and had acquired any residual rights they still might have possessed for the property. The telegram Woolley sent Woodruff was ignored by Woodruff. The people of Kanab Stake did not acquire Pipe Springs. The agreement between Saunders and the Church continued to be a "gentlemen's agreement" with no records kept. The $2,500 Saunders paid to Seegmiller (Woolley's partner)

was undoubtedly a mutually agreed upon placation of Woolley and Seegmiller. This $2,500 should have gone from Seegmiller to the Kanab Stake or to the Presiding Bishop's Office. But Seegmiller (Woolley) apparently used this for their own purposes. Hence the persistant reports from the "Old timers" that Woolley and Seegmiller got a "rake off" from the sale of Pipe Spring that should have gone to the Church. Perhaps all of the details may never be in.

The ownership record is now an unbroken line from the Whitmores, to Brigham Young, to the Winsor Company, back to the L.D.S. Church, and finally, uncontestably it came to B.F. Saunders as registered in the court-house records of Mohave County at Kingman. From Saunders in regular ownership sequence (all records registered) to the National Park Service. The line of ownership thus far has been established as continuous and unbroken. One weakness exists however, there exists no official or legal record anywhere of conveyance from the L.D.S. Church to B.F.Saunders. I am certain that the Church would happily cooperate with us in any manner necessary to remedy this. Perhaps it is possible for the Church to Quit-Claim Pipe Spring to Saunders "ex-post-facto", or to the National Park Service presently, as the undisputed acquirers of all Saunders and previous and subsequent owners rights. Perhaps Mr. William L. Mekeel can properly advise us on this matter so that proper action can be taken immediately. Perhaps no such action is necessary.

THE PIPE SPRING OWNERS AS REGISTERED IN MOHAVE COUNTY, ARIZONA (1895-PRESENT)

The following list of transfers of Pipe Spring property are all listed legally and properly in the Mohave County Recorder's Office at Kingman, Arizona. They constitute an unbroken legal record of ownership from B.F. Saunders to the present. These documents speak for themselves and need no commentary as such. They will merely be listed in consecutive order with the proper reference to supporting documents inclosed with this report. The Pipe Spring records listed in the Mohave County Recorder's Office are:

1. Quit-Claim Deed. Daniel and Artimesia S. Seegmiller, grantors, to Benjamin F.Saunders, grantee, excuted July 23, 1895, recorded December 5, 1895, Book 12, page 1, (See S.D. 14)

2. Quit-Claim Deed. Benjamin F. Saunders and Tracy E. Saunders, grantors to David Bullock and Lehi Jones, grantees, excuted December 2, 1895, and recorded on January 1, 1896, Book 12, page 35. (See S.D 15)

3. Quit Claim Deed. David and Alice Bulloch and Lehi W. and Henrietta E. Jones, grantors, to A.D. Findlay, grantee, executed November 3, 1902, recorded December 20, 1902. Book 6, pages 124, 125. (See S.D. 16)

4. Quit Claim Deed. A.D. Findlay and S.E. Findlay (wife) grantors to Pipe Spring Land and Livestock Company, grantee, executed December 31, 1920. recorded, February 8, 1921. Book 30, pages 317, 318. (S.D.17)

5. Quit-Claim Deed. Pipe Springs Land & Livestock Company, grantor to Charles C. Heaton, grantee, excuted December 18, 1920, recorded February 8, 1921. (See S.D. 18)

6. Quit-Claim Deed. Charles Heaton, grantor, to the United States of America, grantee, executed April 28, 1924, recorded, September 29, 1924. Book 33, page 520. (See S.D. 19)

The background of Charles Heaton's difficulties in securing proper title and his subsequent attempt to use the "Valentine Scrip" have been thoroughly and adequately discussed in the previous memorandum a copy of which is attached.(See S.D. 4).

The fact that an unbroken line of owners has been proven to exist from Dr. J.M. Whitmore negates any problem that he or his grantee the N.P.S. may have with a legal proper title. The initial creation of the present Kaibab Indian Reservation in 1907, including the Pipe Spring portion, and the remainder in 1917 merely places the legal unchallenged owner in 1907 as A.D. Findlay. As full proprietor of Pipe Spring Mr. Findlay's land could not be alienated from him or any water or other rights deprived him in any way by the Reservation Proclamation. As the legal owner his rights precluded and override by being prior to both the 1907 and 1917 Reservation withdrawals.

In a certain sense the Presidential Proclamation setting Pipe Spring aside as a National Monument (See S.D. 2) was not properly valid until the Quit- Claim Deed was granted by Charles Heaton to the United States in 1924. Presidential proclamations creating National Monuments under the Antiquities Act of 1906 are valid only from when created from unappropriated Public Domain, or as a reclassification of land already administered by agencies of the Federal Government other than the General Land Office (Now B.L.M.). In a strictly narrow legal sense the Presidential Proclamation at the time tried to reclasify land that no Federal agency properly controlled or owned. When the title passed from Charles Heaton to the United States it took away the quasi-legality of the Presidential Proclamation. In no case did the Bureau of Indian Affairs ever own or administer any part of the 40 acres of land containing the Pipe Spring

buildings. Therefore, in no case, can Winters vs The United States have applicability.

I believe that this report properly substantiates both the historic and legal claims of the National Park Service to Pipe Spring. Perhaps Mr. William L. Mckeel can now assist us in having our land and water rights properly established. As full legal proprietary owners of Pipe Spring, with the source and flow of water (natural) wholly within our boundaries, the only other legal claim on any of our water is the allotment granted to the Cattlemen. (See S.D. 20) That is now, never has been, and should never be an issue.

Under Arizona law it is not necessary to establish water rights on land legally owned if both the source and the flow are (natural) are within the private boundaries. It may be important as well as historically satisfying here to redord that in addition we have another claim on the Pipe Spring water. On May 4,1874 an account in the Ledger of the Winsor Company records the following:

> To Live Stock account. 1 horse paid Indian Chief as charge for Pipe Spring. $40

Brigham Young, Winsor Co. President, paid a Paiute Chief a horse worth forty dollars for payment of the water from Pipe Spring. The original cost of Manhatten Island was less and no one has ever challenged the legality of the exchange. Residual rights to Pipe Spring not passed back to the Church went along the line of succession as developed above and have accrued to Pipe Spring present owners as well.

Mr. Mckeel, hopefully, will advise and assist us in securing a Quit-Claim Deed from the L.D.S. Church as previously suggested either ex-post-facto to B.F. Saunders or presently to the National Park Service. Perhaps this is not needed legally, but it might be historically satisfying. As the only National Park Service Area directly related to Mormon History and the Mormon Frontier the L.D.S. Church has and retains a vital interest and as such is our friend and ally.

Raymond J. Geerdes

Raymond J. Geerdes

INDEX OF SUPPORTIVE DOCUMENTS

THE OWNERSHIP OF PIPE SPRING: A LEGAL AND HISTORICAL BRIEF

The following index of supportive documents are referred to at various points in the paper by notation in the body of the text as follows: (S.D. 1) When references appear it usually means that the point is either documented, elaborated upon, or that valuable background information is contained in the Supportive Document. It is assumed that the Supportive Documents will be read in their entirety as they provide much in depth background to the text narrative. It should also be noted that the twenty Supportive Documents are referred to in the singular. Each numbered document may have only one or several other corraborating documents behind each numbered tab. In this case the other documents are supplemental to the first attached to each numbered tab. The documents are listed as follows:

1. REGULATIONS FOR THE DIVISION OF THE WATERS OF PIPE SPRING, by Assistant Secretary of the Interior Oscar L. Chapman, November 2, 1933.
2. PRESIDENTIAL PROCLAMATION CREATING PIPE SPRING NATIONAL MONUMENT, by President Warren G. Harding, May 31, 1923.
3. PIPE SPRING, by Robert W. Olsen Jr., (Spring) 1965.
4. "MEMORANDUM","Some general thoughts on water distribution, Pipe Spring", by Raymond J. Geerdes, July 3, 1969.
5. BOOK A: RECORDS OF WASHINGTON COUNTY, UTAH TERRITORY, by John D. Lee,1856
6. COPY: ORIGINAL WHITMORE "LAND CERTIFICATE",Copy of handwritten copy, by H. Pearce. Washington County Recorder, April 13, 1863.

7. ORIGINAL WHITMORE "LAND CERTIFICATE", copy of original, same as above.

8. HOMESTEAD NATIONAL MONUMENT, by National Park Service, 1969.

9. INTERPRETERS NEWSLETTER, by Ron Greenberg, November, 1969.

10. MEMORANDUM TO N.P.S. DIRECTOR CAMMERER, from General Land Office Commissioner Spry, May 23, 1923.

11. LETTER TO RAYMOND J. GEERDES, from P.T. Reilly, February 11, 1970.

12. LEE'S FERRY PAPERS. Including LETTER TO PRESIDING BISHOP W.B. PRESTON, from B.F. Saunders, January 1, 1903. The subsequent correspondence constitutes an important group of consecutive legal documents. Although some of these letters are not specifically related to the Pipe Spring ownership story they do give indirect background that is important. Since these letters should be kept together I have included them here. Copies of these copies from the Church Historian's Library in Salt Lake should be supplied to the Glen Canyon Superintendent.

13. DESERET TELEGRAM TO PRESIDENT WOODRUFF, from E.D. Woolley, June 7, 1895.

14. QUIT-CLAIM DEED. Daniel and Artimesia S. Seegmiller, grantors, to Benjamin F. Saunders, grantee, excuted July 23, 1895, recorded December 5, 1895, Book 12, page 1. (And additional background documents.)

15. QUIT-CLAIM DEED. Benjamin F. Saunders and Tracy E. Saunders, grantors to David Bullock and Lehi Jones, grantees, executed December 2, 1895, and recorded on January 1, 1896, Book 12, page 35. (And additional background documents.)

16. QUIT-CLAIM DEED. David and Alice Bulloch and Lehi W. and Henrietta E. Jones, grantors, to A.D. Findlay, grantee, executed November 3, 1902, recorded December 20, 1902. Book 6, pages 124, 125. (And additional account.)

17. QUIT-CLAIM DEED. A.D. Findlay and S.E. Findlay (wife) grantors to Pipe Spring Land and Livestock Company, grantee, executed December 31, 1920. recorded, February 8, 1921. Book 30, pages 317, 318. (and additional background documents)

18. QUIT-CLAIM DEED, Pipe Springs Land & Livestock Company, grantor to Charles C. Heaton, grantee, executed December 18, 1920, recorded February 8,1921.

19. QUIT-CLAIM DEED. Charles Heaton, grantor, to the United States of America, grantee, executed April 28, 1924, recorded, September 29, 1924. Book 33, page 520. (And additional background documents which help interpret Charles Heaton's attempt to secure title through filing the Valentine Scrip. A discussion of this is found in supportive document number 4.)

20. MEMORANDUM OF AGREEMENT ON CATTLEMEN'S SHARE OF PIPE SPRING WATER, signed by Bureau of Indian Affairs, National Park Service, and cattlemen representatives. June 8, 1924.

REGULATIONS FOR THE DIVISION OF THE
WATERS OF PIPE SPRINGS

November 2, 1933

Pursuant to authority vested in me by Presidential Proclamation of May 21, 1933, the following regulations are prescribed governing the distribution of the waters of Pipe Springs for irrigation, stock watering, and other purposes:

1. The waters of the Springs shall be divided equally, one-third to the Pipe Springs National Monument, one-third to the Indians of the Kaibab Indian Reservation, and one-third to the stockmen represented by a memorandum agreement signed June 9, 1924, by representatives of the respective interests.

2. In order to accurately divide the waters, there shall be installed recognized recording water meters at each of the three springs, from which the water supply for the respective parties is derived, and of the combined flow of such springs each of the respective parties shall be entitled to receive for their respective uses one-third of such quantity of water. The diversion and use of water before it empties into reservoirs now constructed on the Monument shall be charged against the one-third share of the total flow to the party receiving such quantity of water. In order to prevent dispute among the respective interests relative to their not receiving their total share of the water, there shall be installed similar water meters at the respective points of outlets through which water to the respective parties is being carried to their points of use.

3. The cost, including installation, maintenance, repairs and replacements of the meters shall be borne equally by the respective interests.

4. Failure on the part of the respective interests to pay for their share of the cost of the meters, their maintenance, repairs and replacements, shall be grounds for refusal of delivery of water to the parties so delinquent.

5. The respective interests involved shall have the right to inspect at any time the records of the division of the waters, but no tampering or interference with the meters shall be permitted. Should it appear at any time that any or all such meters after having been installed are not properly functioning, the matter, through proper channels, shall be submitted to the Director of the Park Service and the Commissioner of Indian Affairs, which Services shall have the meters inspected and if such inspection warrants, appropriate adjustments shall be made promptly.

6. Nothing herein shall be construed as in any way affecting or determining the respective water rights of the parties herein referred to. The right is reserved to modify, amend or change these regulations as conditions may warrant.

(SGD) OSCAR L. CHAPMAN
Assistant Secretary

PIPE SPRING NATIONAL MONUMENT
(ARIZONA)

## By the President of the United States of America

# A Proclamation

WHEREAS, there is in northwestern Arizona on the road between Zion National Park and the North Rim of the Grand Canyon National Park a spring, known as Pipe Spring, which affords the only water along the road between Hurricane, Utah, and Fredonia, Arizona, a distance of sixty-two miles; and

WHEREAS, a settlement was made at Pipe Spring in 1863 and there was built a large dwelling place, called "Windsor Castle," with portholes in its walls, which was used as a place of refuge from hostile Indians by the early settlers, and it was also the first station of the Deseret Telegraph in Arizona; and

WHEREAS, it appears that the public good would be promoted by reserving the land on which Pipe Spring and the early dwelling place are located as a National Monument, with as much land as may be necessary for the proper protection thereof, to serve as a memorial of western pioneer life,

NOW, THEREFORE, I, Warren G. Harding, President of the United States of America, by virtue of the power in me vested by section two of the act of Congress entitled, "An Act for the Preservation of American Antiquities," approved June 8, 1906 (34 Stat., 225) do proclaim that there is hereby reserved, subject to all prior valid claims, and set apart as a National Monument to be known as the Pipe Spring National Monument the lands shown upon the diagram hereto annexed and made a part hereof and more particularly described as follows:

The southeast quarter of the southeast quarter of section seventeen, township forty north, range four west, Gila and Salt River Base and Meridian.

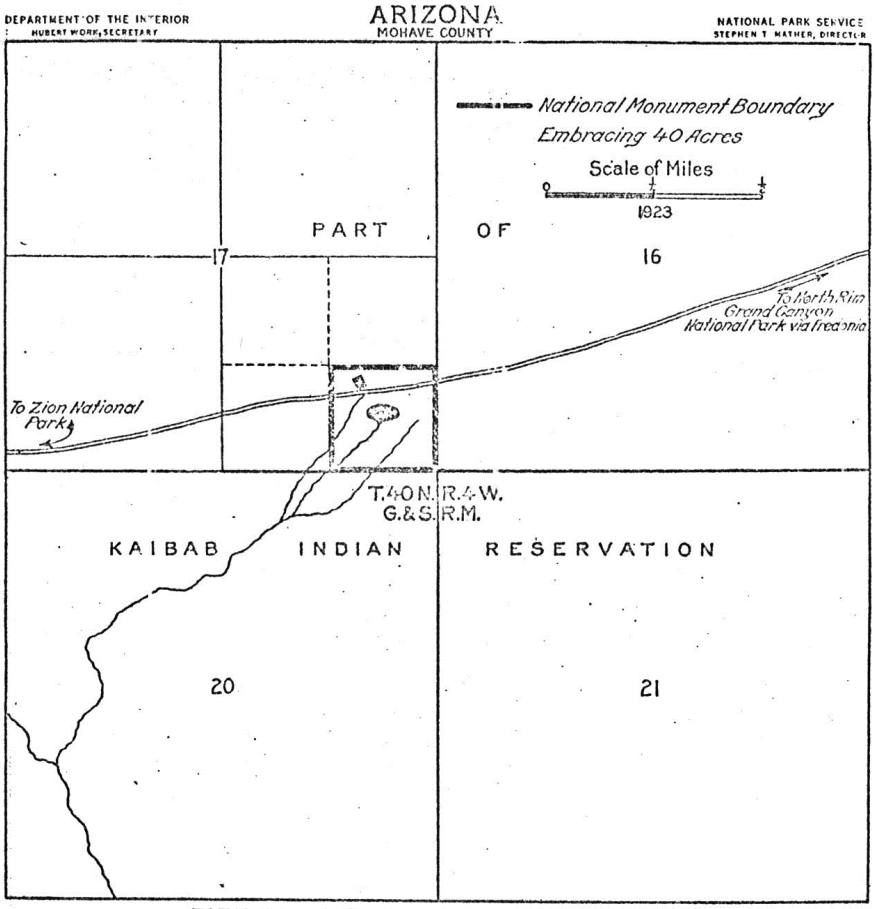
Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any of the features or objects included within the boundaries of this Monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service under the direction of the Secretary of the Interior, shall have the supervision, management and control of this Monument, as provided in the act of Congress entitled, "An Act to establish a National Park Service, and for other purposes," approved August 25, 1916 (39 Stat., 535), as amended June 2, 1920 (41 Stat., 732): Provided, that in the administration of this Monument, the Indians of the Kaibab Reservation, shall have the privilege of utilizing waters from Pipe Spring for irrigation, stock watering and other purposes, under regulations to be prescribed by the Secretary of the Interior.

**In Witness Whereof,** I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this thirty-first day of May, in the year of our Lord one thousand nine hundred and twenty-three, and of the Independence of the United States of America the one hundred and forty-seventh.

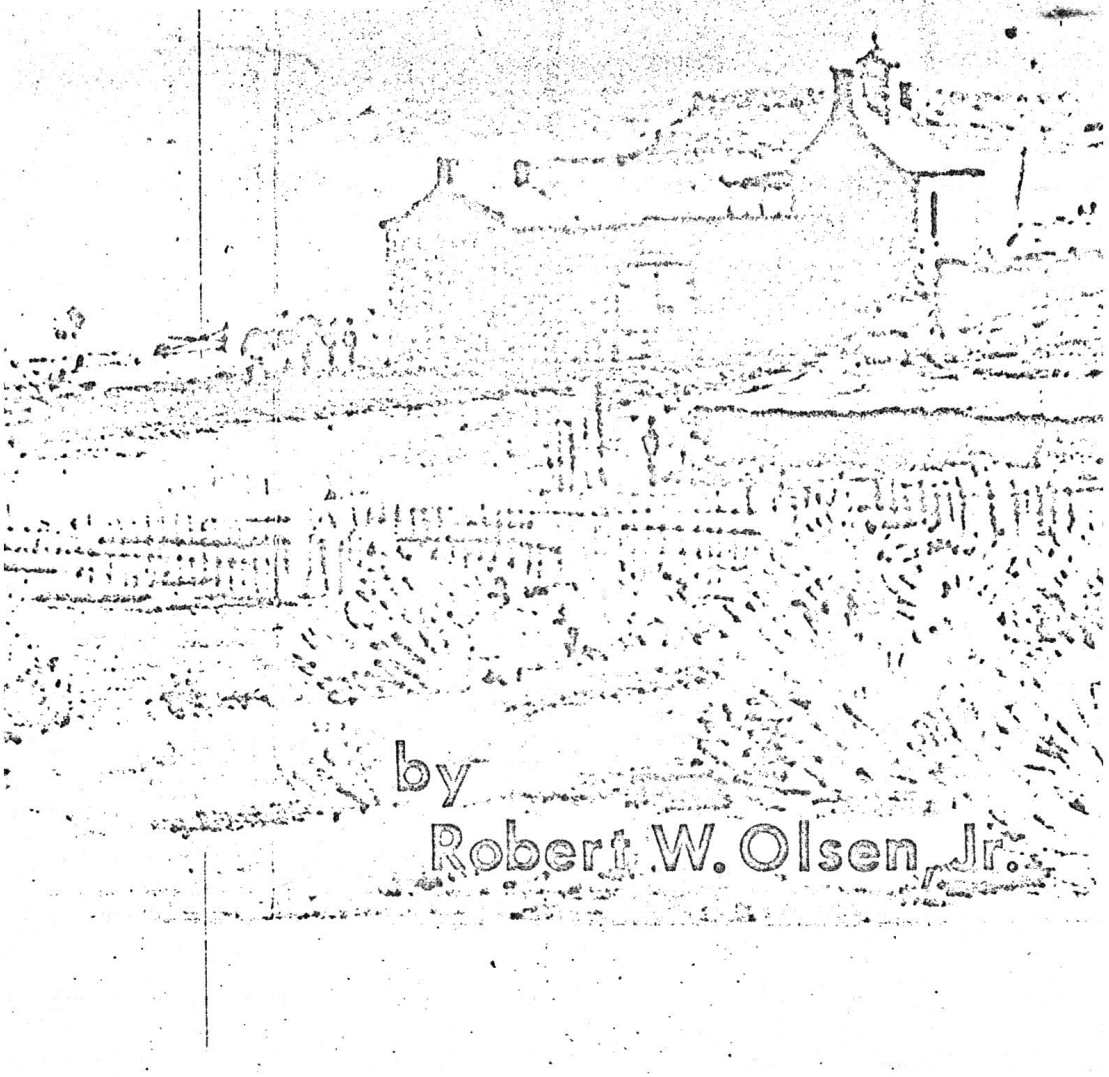
[SEAL.]




PIPE SPRING NATIONAL MONUMENT

00-00-0000: pipe spring cover sheet by robert w. olsen, jr.

# PIPE SPRING



by

Robert W. Olsen Jr.

uld provide living accommodations for those who were to

: was appointed by Brigham Young to collect stock, by pur-
ng contributions, from the older communities to the west.
was paid $1,200 a year. The Winsor Castle Stock Growing
at St. George on January 3, 1873. The total subscription
vhich $10,000 was put by the Church in trust of President
Another $2,300 was subscribed by Young on his own. Win-
amounted to $3,000. The maximum capital stock figure
),000. Shares sold for $25.

was in existence for twenty years. Six months before its
between three and four hundred cattle on the range. In
mon practice, they were primarily milch cows; around one
were milked daily. But within a short time the combination
s industry, the nutritious gramma grass, well-watered by the
snow, and the termination of Navajo raiding caused these
e. A cheese factory was installed in the bottom floor of the
fort and produced between sixty and seventy pounds a day.
lized spring water which was channeled into the wing from
ı to the cattle troughs.

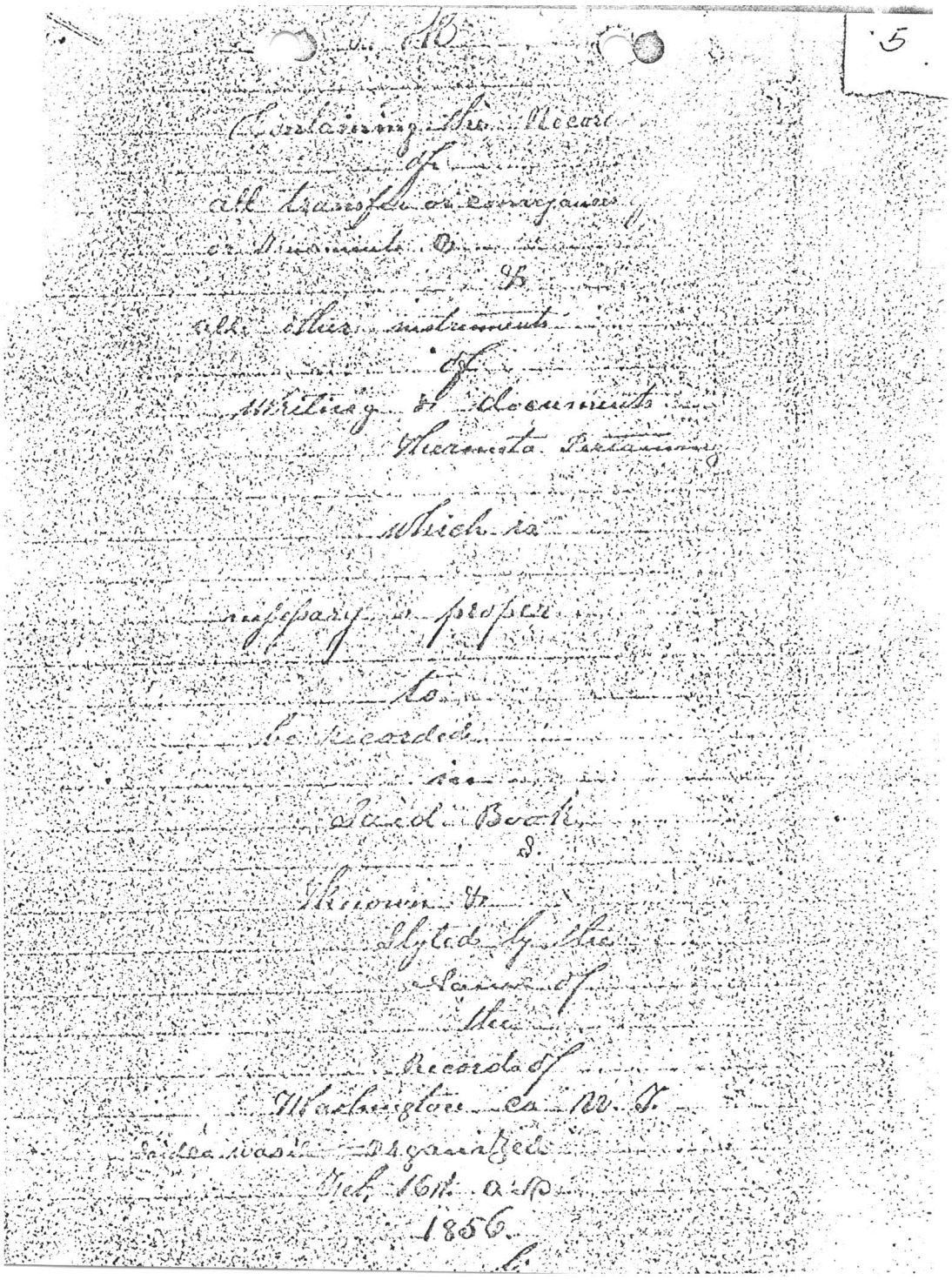
15, 1871, a telegraph station — the first one in the Arizona
et up at Winsor Castle, as the fort at Pipe Spring was be-
ed. The line, the Deseret Telegraph, was owned by the
uth from Salt Lake City. A branch line ran through Rock-
on Canyon), to Pipe Spring, and on to Kanab. Thus the
ipe Spring to St. George could be bridged in minutes
s the herd of the Winsor Castle Co. grew, so did the entire
lence, heretofore penetrated only by the commotion of occa-
ravelers, was broken more often by sounds of work. Con-
ıcreased. Hewers, sawyers, and carpenters found little idle-
ıily, his four-man crew, and his single hired-woman set an
y and perseverance. Everyone worked.

its formation, Winsor's company listed its property as fol-
l churn, 1 milk strainer, 63 milk pans, 1 forty pound brass
u, 2 cheese presses and hoops, and miscellaneous cheese-

making equipment. There were also 102 steel bars and drills and several hammers and stone-working tools. The investment of labor and money paid off. In 1874 Winsor's personal assets included 1,306 pounds of butter and cheese valued at $367.46. During the same year he credited the Southern Utah Tithing Office (St. George) with 3,344 pounds at $992.25. Of first importance was the cattle herd — the beef supply. In January of 1873, when the company was founded, Winsor listed 478 head valued at $11,631. By the middle of July the figures had grown to 605 head at $14,631. This increase probably was due to spring calving; and that of the next September (to 679) could have reflected tithing collections. Stock dividends were high: June, 1874, 40%, 1875, 30%. In 1876 the return was a modest 10%.

In 1879 the Winsor Castle Stock Growing Co. was absorbed by the Canaan Cooperative Stock Co. of St. George. The animals listed by Charles Pulsipher, who replaced Winsor as superintendent, were: 43 bulls, 6 oxen, 2 yearling bulls, 644 steers of from one to five years, 1,185 cows, 211 steer calves, 158 heifer calves. The total: 2,269 head worth $44,601. There were also 162 horses valued at $9,493. In 1888 Pipe Spring and its buildings were sold to B. F. Saunders. Seven years later Saunders was bought out by the partners David Bullock and Lehi Jones. Of the purchase Bullock wrote to his wife in December, 1895: "I had a long talk to Saunders about Pipe Spring — he told me if I would go out and see it he thought I would buy it." There are he stated, "about five thousands dollars worth of improvements on the place — they are two large buildings two story with five rooms in each and quite a number of small buildings." In addition, there was a hay field and "all kinds of fruit trees and a fish pond." With these holdings could be included quite a few fences and corrals. Bullock and Jones sold out to A. D. Findley in 1901; and Findley's interests were taken over by Jonathan Heaton and Sons in 1906. Later, Charles Heaton and his associate Stephen Mather had enough foresight to want Pipe Spring included in the newly-created National Park system. It became a National Monument by proclamation of President Harding in 1923.

The Monument today contains all of its early-day structures: the Whitmore dugout, the house built by the Utah Militia, the buildings credited to Anson Winsor, and the house where the Powell survey party stayed in the spring of 1872. Through the wisdom of the Department of the Interior, visitors to Pipe



Containing the Record
of
all Transfers or Conveyances
or Mortgages &
&
all other instruments
of
Writing & Documents
Required & Permitted
which
is
necessary & proper
to
be Recorded
in
and for
Bucks
County
Known as the
Law
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Begun and
Feb 16th A.D.
1856.

Book A

Containing the Records

of

all transfers or conveyances of land

or tenements.

&

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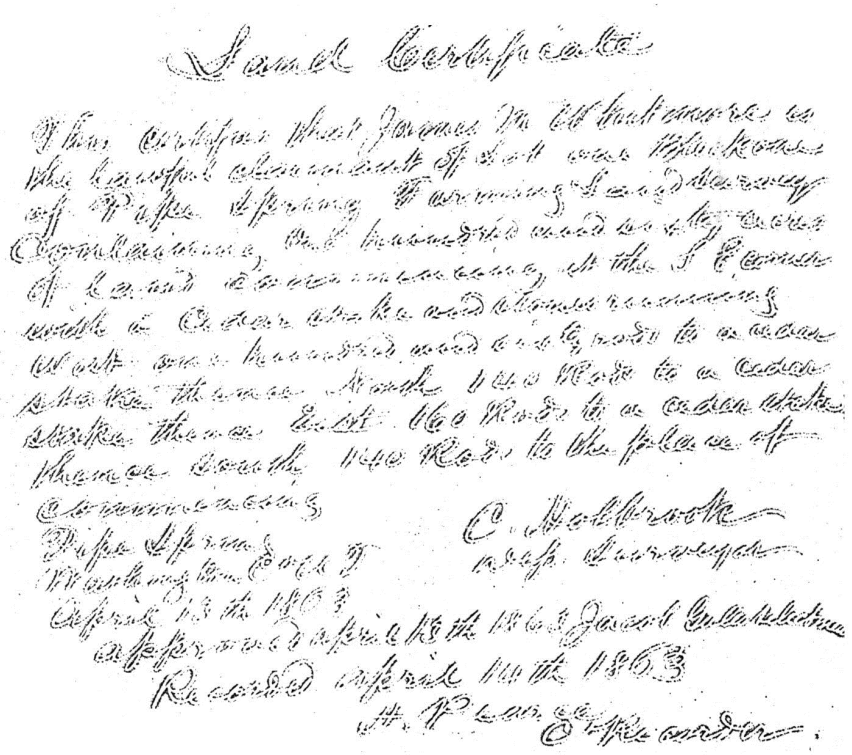
Feb. 16th a.m.

1856

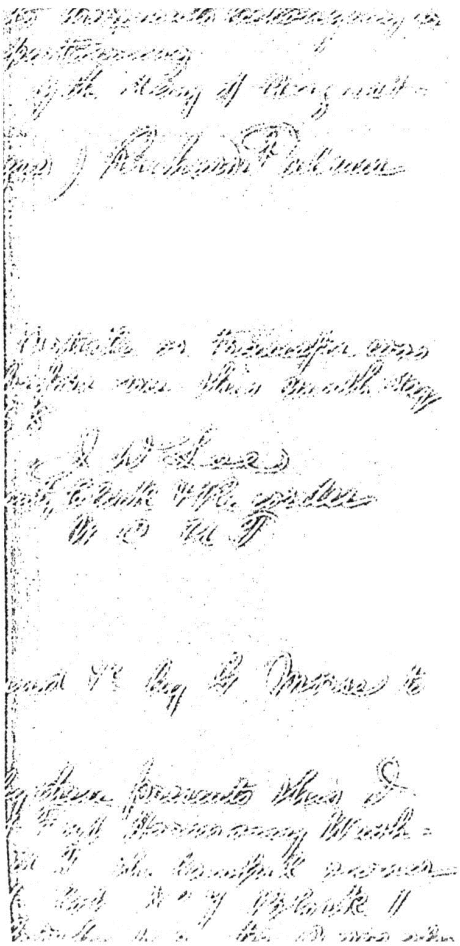
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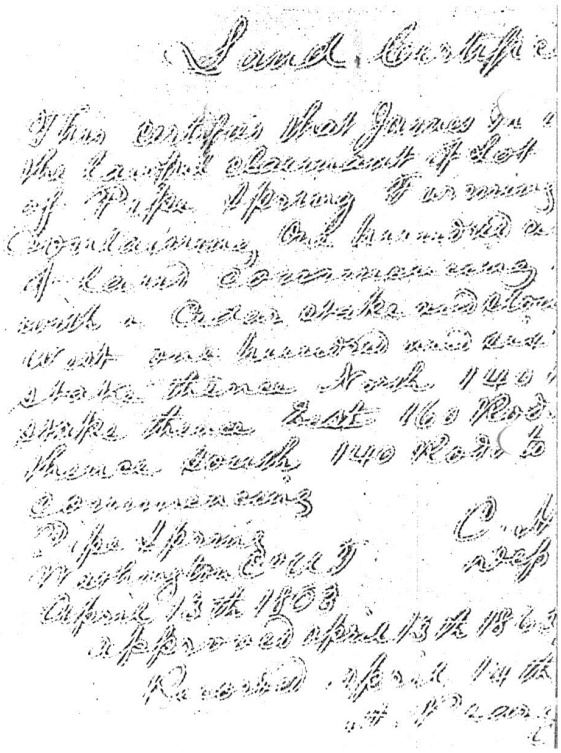
John D. Lee

00-00-0000: sand certificate



J.D Lee





Joint Washington and Kane County
County Probate Court Record
Est 23, 1856 to Aug 30, 1873

4

Certificate ... Whereas ... claimant ... farming land ... commencing ... cedar stakes ... 160 Rods ... cedar ... thence ... 160 Rods ... thence ... 160 Rods ... South 140 Rods to the place of beginning ... Recorded April 14th 1863 ...

Approved April 13th 1863 ... Jacob Gates Chairman

Recorded April 14th 1863 ... H. Crane

"Territory of Utah ... Be it known to all persons that I William Clayton Recorder of Deeds in and for the County of St. George ... Washington, Territory of Utah, do hereby certify that ... the town of St. George Block No. 1 St. George City Plat ... containing one hundred and twenty eight rods together with the ... dwelling house and ... thereunto belonging ... in accordance with ... the laws of Utah ... Given under my hand and seal of office ... this 14th day of April A.D. 1863 ... William B. Clayton

8

AREA ENVIRONMENTAL
MANAGEMENT SPECIALIST

## ADMINISTRATION

Homestead National Monument of America is administered by the National Park Service, U.S. Department of the Interior. A superintendent, whose address is Beatrice, Nebr. 68310, is in immediate charge.

## AMERICA'S NATURAL RESOURCES

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources." The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States — now and in the future.

*Text by L. Clifford Soubier*

*Scratchboard Illustrations by John D. Andrews*

*Published by the Homestead Historical Association*

*A Visit to*

# HOMESTEAD NATIONAL MONUMENT



# THE UNITED STATES OF AMERICA,

To all to whom these presents shall come, Greeting:

Whereas, there has been deposited in the General Land Office of the United States a CERTIFICATE of the REGISTER OF THE LAND OFFICE at [illegible], whereby it appears that pursuant to the Act of Congress approved 20th May, 1862, "To secure Homesteads to actual Settlers on the public domain," and the acts supplemental thereto, the claim of Daniel Freeman has been duly and duly assumed in conformity to law for the South half of the North West quarter and the North East quarter of the North West quarter and the South East quarter of the North West quarter of Range five East in the District of Lincoln formerly Nebraska Territory Containing One Hundred and Sixty acres

according to the Official Plat of the survey of the said Land returned to the GENERAL LAND OFFICE by the SURVEYOR GENERAL

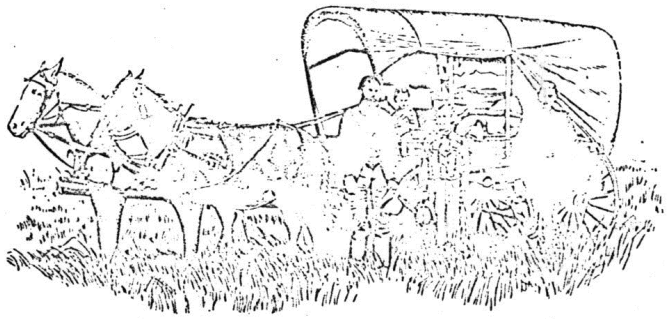
Now know ye, That there is therefore granted by the UNITED STATES unto the said Daniel Freeman the tract of Land above described: To Have and to Hold the said tract of Land, with the appurtenances thereof, unto the said Daniel Freeman and to his heirs and assigns forever.

In testimony whereof, I, Ulysses S. Grant, President of the United States of America, have caused these Letters to be made Patent, and the Seal of the General Land Office to be hereunto affixed.

Given under my hand at the City of Washington, the first day of September in the year of our Lord one thousand eight hundred and sixty nine and of the INDEPENDENCE OF THE UNITED STATES the ninety fourth

By the President: U. S. Grant

by [illegible] Secy.



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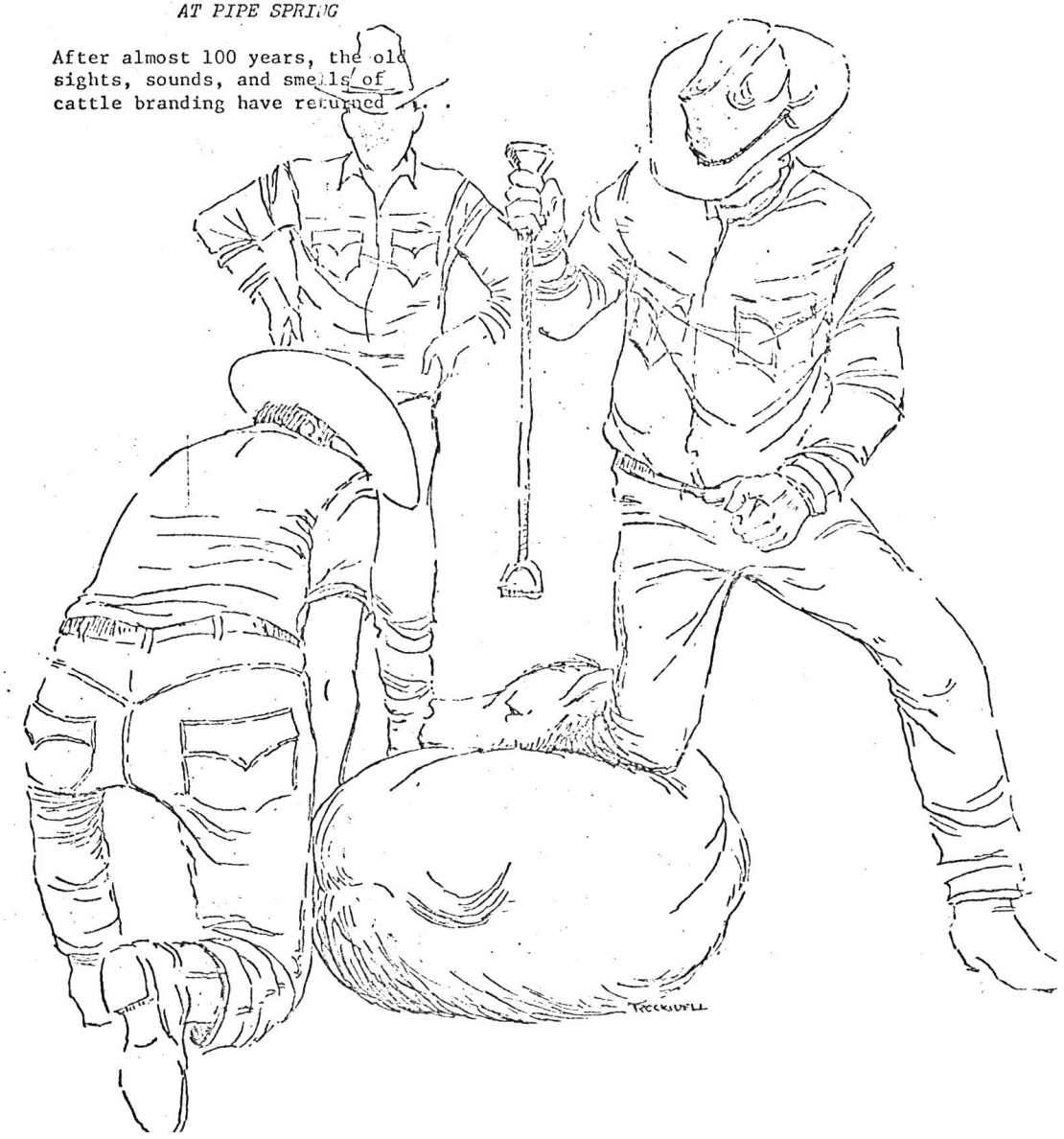
# NPS Interpreters Newsletter

Published in the Washington Office of the National Park Service for all NPS people concerned with Interpretation and Visitor Services.

Number 12 November 1969

*CATTLE ARE BACK AT PIPE SPRING*

After almost 100 years, the old sights, sounds, and smells of cattle branding have returned . . .



Nearly 100 years have passed since Mormon pioneers first built Pipe Spring as a fortified cattle ranch, taking advantage of the spring water and the vast ranges of the Arizona Strip. Pipe Spring saw many brandings from the early 1870's until 1923 when it became a National Monument. On May 3, 24, and 30, visitors to the Monument had a truly unique experience.

The cattle graze on ranges in the local Paiute Reservation and on Bureau of Land Management territory of the Arizona Strip. In the spring the cattle are rounded up and brought to holding pastures nearby. On certain days (advertised in local newspapers) they are brought to the Monument and placed in corrals for branding.

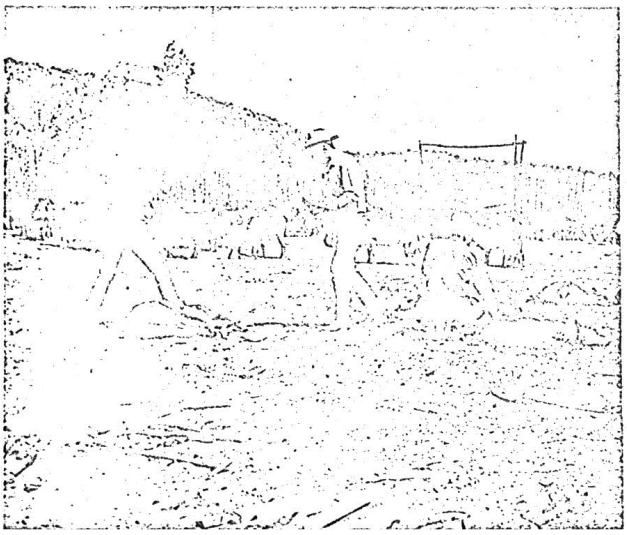
Although Pipe Spring was on the southern flank of the Mormon frontier, Brigham Young, Trustee in Trust for his church at Salt Lake, was personally and intimately involved in the affairs of the ranch. When the Windsor Castle Stock Growing Company was organized at Pipe Spring in the early 1870's, Young was the president of the board of directors and held personal stock in the corporation.

The church brand at that time was a large "C" just left of a 3-1/2" circle enclosing a cross. Young's instructions were that only one man do the branding with irons heated "cherry red" with a charcoal fire. The 60,000 gallons of spring water took care of the needs of the pioneers and thousands of range cattle. The tall abundant grass on the Arizona Strip was the "best stock range in Utah, recorded a young militiaman in the late 1860's.

The corrals at Pipe Spring were built during the winter months. Neighborhood Youth Corps boys collected the materials for the restoration. They gathered wire and fencing during a storm near the Grand Canyon; they got posts through Bureau of Land Management permit; and quaking aspen poles for horizontal rails were obtained by Forest Service permit. Some historic stockades came from local ranchers. The historic meadow was completely fenced for grazing at the Monument.

Branding has been very successful. However, it's only part of the whole idea of interpreting Pipe Spring as a living ranch. There are chickens, ducks, and geese that roam the area and swim in the ponds holding carp similar to those of the pioneer days. And gardens and orchards have been replanted to the way they were in the last quarter of the 19th century.

--Ray Geerdes
Historian



*Southwest Region's Special Assistant for Environmental Awareness Bill Brown likes Pete Shedd's approach to environmental interpretation ("Relevant Interpretation--Cliche or Challenge?," Issue No. 11). He asked Ray Geerdes to apply Pete's ideas to interpretation at Pipe Spring. The following essay is the result.*

*PIPE SPRING, PEOPLE, AND POWELL*

Behind the historic stone ranch fort at Pipe Spring National Monument a trail leads along the old Ox-boat trail over the Vermillion Cliff. Nearly a century ago young Mormon boys drove oxen, yoked to large slabs of Navajo limestone, along the lower part of this trail. Below, their elders patiently shaped the stones and placed them in the walls of the formidable ranch fort.

Down below is the "Arizona Strip," a haunting, vast area that stretches away until it falls off into the Colorado River, explored by John Wesley Powell 100 years ago. This year, the year of the Powell Centennial, the Colorado is once again Powell's River. But in a bigger way the vast 12,000 square miles of Arizona Strip is Powell's Plain.

Looking down from the trail built by the Neighborhood Youth Corps above Pipe Spring, the land looks green, just as it looked in 1869, the year Powell descended the Colorado. A young Utah militia rider, chasing marauding Navajos at that time, wrote "This is the best stock range in this Southern Country. (The country) west from here 30 miles or more is a sea of grass, and running northeast from here thirty miles the same." When the militia officer rode the Strip in 1869, the grass brushed the belly of his horse. Were he to make the same ride today, sagebrush, cresote bushes, tumbleweed, and other harsh and semi-desert exotics would cut his horse's belly to shreds. A hundred years can bring much change. The cattle that grazed the Strip from the 1860's until World War I were at one with the grass and the water at Pipe Spring. By 1914 sheep had become as valuable as cattle. In four years the grass began to die. The droughts of 1919, 1924, and 1928 dried up the roots exposed by the sharp hooves of sheep. The cattle vanished when the grass died, and the sheep were lost during the depression. The Taylor Grazing Act of 1934, setting aside as much as 142 million acres of land for grazing, marked the passing of an era. Wire barbs were now added to thistle and exotic brush and the gentle belly massages of the high grass were no more. Winds swept the exposed earth and the red sands and shales of the Strip washed northward to the Virgin and southward to the Colorado.

Look below you again. Look down past the metal photo sign with the quote from the Utah militiaman. There, like a single square in a green checkerboard, is a seven-acre plot of restored native prairie. The blue grama, Indian rice, sand drop seed and other native grasses struggle for life. The other day I rode my horse through the restored grass. The grass brushed against the horse's belly and I sang with joy.

We hacked and tore at the cresote, thistles, and tumbleweed, as we sweated in the hot Arizona sun. We tore the soil loose and sowed the native seed. Then the reseeded ground sprang green life in the spring. Our joy was short lived when the wind blew the razor-sharp sand and cut down our new life. Then we made channels for precious spring water to flow on the land. We went up the cliffs, to the top of the ridge, to get large tuffs of native grass to transplant to hold the soil as the water caressed the native seed. Now grass is growing in patches, just as thick and tall and beautiful as before.

The Mormon pioneers were driven into the Strip by their gentle, passionate zeal. The grass on the Strip was there, the water from the spring was there, and the inner determination to build Zion in this wilderness was there, too. They used the water and land with the same communal harmony as they farmed in the Salt Lake Basin and the valleys of Utah. They knew

well that the land ded the water and that the amount of water available limited and determined the use of the land. The stone ranch fort rose over the spring and the cattle grazed the land and drank from the spring. In their fierce determination to build their Zion, the Mormons imposed their will on the environment. But they preserved, not destroyed. They changed their environment and were changed by it.

John Wesley Powell understood the Mormons well. This year we celebrated the 100th anniversary of his Colorado River adventure. But long after his heroic river exploration is placed in its proper perspective in history, Powell's proposals for the use of the land, water and other resources will stand as his monument. Between those proposals and today's policy is the great American tragedy of the Homestead Act.

In December 1871 and January 1872, the Powell party was running the Kanab Base Line survey. They stayed with Bishop Anson P. Sinsor at Pipe Spring off and on for several months. In 1933, CCC boys, working at Pipe Spring, discovered a pyramid of rocks high on the Vermillion Cliff directly behind Pipe Spring National Monument. It contained a canister with the original survey notes of Powell's party. They had been undisturbed all those years. Today, that can and survey notes are part of a Powell exhibit in the visitor contact station at Pipe Spring. But as Christopher Wren commented in another context at another time about another great man, "If you wish to see his monument, look around you."

Powell's monument is Pipe Spring and the Arizona Strip. From the pyramid of rocks which hid the survey can one can look down across the Strip. Perhaps here, more than in any other area, Powell's mind could make quick comparisons to the high plains country of the American West. Already, in the early 1870's, the relentless checkerboard of 160-acre homesteads were chopping up the plains country and inching across the 100-meridian. E year as Powell returned east he coul see the homesteads pushing west into the semi-arid land without regard to water supply or communal needs. The contrast to what he saw in the Kanab-Pipe Spring area was striking. On the bluff at Pipe Spring the Arizona Strip rolled away treeless, windswept, and covered with native grass and "antelope thick as rabbits."

The fort had been at Pipe Spring two years when Powell, seeking additional funds to continue his survey, warned Congress:

> *About two-fifths of the entire area of the United States has a climate so arid that agriculture cannot be pursued without irrigation. When all the waters running in the streams found in this region are conducted on the land, there will be but a small portion of the country redeemed . . . .*



.ell's concern grew and in 1879 he pub-.shed his Report on the Lands of the Arid Region of the United States, which called for a classification of western public lands based on capability. Powell proposed that a grazing farm have at least 2,560 acres instead of the 160 and there had to be communal use of the water.

Powell's hope did not become law. Sitting on the Vermillion Cliff, above Pipe Spring, one can envision 100 years of triumph and tragedy. The tragedy is the 50 or more abandoned homesteads that can be seen scattered over the Strip. To sense the tragedy that haunts these buildings, drive across the Strip toward Grand Canyon National Monument and Tuweep Valley. Old cars and broken machinery fill the yards. Smelly bits of oily harnesses hang grotesquely in the barns. Hinges squeak. The kitchen door opens, but there's no one inside. Pass through the kitchen and step over the debris left by cowboys who rode fence lines. Go into the living room and sit in the old chair. Why did they leave all their furniture? Who is that pretty, smiling woman in the picture that hangs above the framed motto "God Bless Our Home"? In the bedroom old blankets are still on the mattress on the old bedstead. As I stood in front of the bed an image came to mind of that pretty girl in the picture, now older and careworn, clinging in desperate loneliness to her husband at the dark end of another day of tears and sweat. Suddenly the atmosphere became unbearable and I had to flee the lonely place. I drove down the dirt lane and a dust devil swirled around the yard and darted suddenly through the kitchen door, into the bedroom, and out the bedroom window.

As you drive back to Pipe Spring and think about John Wesley Powell and the Mormon pioneers who built the ranch fort, perhaps you can find triumph in this tragedy. In the old fort is a living ranch, and last spring and summer calves were branded in the restored corrals. Pretty Mormon girls in long pioneer dresses guide visitors through the ranch fort. A new ranch lives--with the old sights, sounds, and smells. And, on the trail above the fort, one can look down and see native grass growing tall enough to caress the bellies of horses.

A guest at the ranch might hear the bawl of a calf during branding, the defiant crow of a rooster at dawn, or the hiss of an angry goose. Perhaps here the visitor is reminded of an age when people were at one with the land and sky. What thoughts can these visitors take back to their world of polluted water and air and desecrated land? And what has the soft nuzzle of a colt or the bawl of a calf got to do with decaying environment?

*We've noticed a couple of instances in which people who were interested in broad-scale museum work had applied for positions as Museum Specialists in the GS-1016 series. To date in the Park Service our Museum Specialists are highly skilled conservators who work almost entirely at restoring specimens or they work in the field of collections management. The broad-scale museum profession is classified as Curator, GS-1015. If you are interested in museum jobs in WASO or in the Regional Offices and if you do not have a specialized skill in design, exhibit construction, or the like, apply for the Curator, GS-1015 series. Most interpreters can qualify for that series. It embraces such activities as exhibit planning, preservation of specimens, and exhibit preparation. These are not official breakdowns, but if you are only interested in one phase rather than the whole thing, put down something like "Curator (planning)" or write up at greater length what your interests are.*

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COPY

DEPARTMENT OF THE INTERIOR

Commissioner of the General Land Office

Washington

May 23, 1923

MEMORANDUM FOR MR. CAMMERER

I am returning herewith the copy of a letter to Mr. Mather from Mr. Heber J. Grant, President of the Church of Jesus Christ of Latter Day Saints, which you transmitted May 18, 1923, relative to the Pipe Springs property in Arizona.

The records of the office show that on May 3, 1888, Daniel Seegmiller, as assignee, filed application for unsurveyed land to be located with Certificate E-13, issued to Thomas B. Valentine under the act of April 5, 1872 (17 Stat., 649), known as "Valentine scrip."

Part of the twp. was withdrawn by Secretary, October 16, 1907, for use of Kaibab and other Indians, including this land, [illegible] 1907. All land within ¼ mile of Pipe Spring, located in Sec. 17, in this twp., was withdrawn by Executive Order April 17, 1916; Public Water Reserve No. 34. Adjusted by interpretation by Secretary May 31, 1922-494, to the S½ SE¼ said Sec. 17.

Twp. withdrawn by Executive Order July 17, 1917, for Kaibab Indians.

Plat of twp. approved February 15, 1916, filed in the local office September 8, 1917.

March 3, 1920, Chas. C. Heaton and Pipe Spring L. S. Co. filed application to locate the Valentine scrip on the SE¼ SE¼ Sec. 17 in said township.

Letter "K" JWB April 15, 1920, held the application for rejection, for conflict with the withdrawals and for other reasons. The evidence of assignment from Daniel Seegmiller to the applicants was not sufficient.

December 10, 1920, the record was transmitted to the Secretary on appeal, and has not since been returned.

The tract books of this office fail to show any filings or entries covering Sec. 17, T. 40 N., R. 4 W., Arizona, other than the application filed by Chas. C. Heaton and Pipe Spring L. S. Co.

For your information, I may state that the Jonathan Heaton mentioned in your memorandum has no direct interest in the Pipe Springs property in Arizona, within the Kaibab Indian Reservation, but is the father of Charles C., Fred C., Christopher C., Edward and Sterling Heaton, who asked that certain lands described below be eliminated from the Kaibab Indian Reservation, which was temporarily withdrawn by the Department October 16, 1907, and permanently established by Executive Order No. 2667, dated July 17, 1917.

T. 40 N., R 4 W., Sec. 4, $N\frac{1}{2}$ $NW\frac{1}{4}$
Sec. 5, $N\frac{1}{2}$ $NE\frac{1}{4}$, $N\frac{1}{2}$ $NW\frac{1}{4}$,

T. 41 N., R 5 W., Sec. 35, $SE\frac{1}{4}$
Sec. 36, $SW\frac{1}{4}$ $SE\frac{1}{4}$

T. 41 N., R 4 W., Sec. 28, $SW\frac{1}{4}$ $SE\frac{1}{4}$, $S\frac{1}{2}$ $SW\frac{1}{4}$, $NW\frac{1}{4}$ $SW\frac{1}{4}$
Sec. 29, $S\frac{1}{2}$, $S\frac{1}{2}$ $N\frac{1}{2}$
Sec. 30, $SE\frac{1}{4}$
Sec. 31, $NE\frac{1}{4}$, $S\frac{1}{2}$
Sec. 32, all,
Sec. 33, $W\frac{1}{2}$ $NE\frac{1}{4}$, $NW\frac{1}{4}$ $SE\frac{1}{4}$, $W\frac{1}{2}$.

The Executive Order in question contained the proviso; "That this order shall not affect any existing legal rights of any person to any of the lands described therein."

This office having held that such of the claimants as were qualified to make entry at the date of the first withdrawal and had maintained settlement since that time and had the right to make homestead entry on the lands settled upon prior to the original withdrawal of 1907, the following entries were made:

048707, by Charles C. Heaton, covering the SW¼ NE¼, N½ SE¼, NE¼ SW¼ Sec. 31, T. 41 N, R. 4 W., on which final certificate issued February 16, 1920.

048708, by Lucy E. Heaton for E½ NE¼ Sec. 31, S½ NW¼, Sec. 32, T. 41 N., R. 4 W., on which patent No. 891967 was issued January 2, 1923.

048709, by Fred C. Heaton, for N½ SW¼, NW¼ SW¼, SW¼ SW¼, Sec. 32, T. 41 N., R. 4 W., on which patent No. 891977 was issued January 2, 1923.

A protest having been filed by the Commissioner of Indian Affairs against the allowance of 8 or 10 acres within the entry of Charles C. Heaton, cultivation by the Indians for many years being claimed, it was held that patent could be issued to Charles C. Heaton provided he filed an agreement that the application and final certificate be amended by excepting from the N½ SE¼ Sec. 31, T. 41 N., R. 4 W., that part shown to have been occupied and cultivated by the Indians.

Mr. Heaton appealed from this action and the papers are now before the Department, having been sent thereto February 5, 1923.

On February 5, 1923, this Office declined to make recommendation in the matter of restoring the other lands claimed by members of the Heaton family and others, if any, in 1907, on the ground that, being in an Indian Reservation, the matter was under the control of the Commissioner of Indian Affairs, the legal rights possessed by such persons being protected by the Executive Order of withdrawal.

(signd) William Spry
Commissioner

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3659 Buena Park Drive
No. Hollywood, California
February 11, 1970

Mr. Raymond J. Geerdes
Pipe Spring National Monument
Moccasin, Arizona 86022

Dear Mr. Geerdes

It was a pleasure to receive your call this morning, the first one I have ever had from Pipe Spring. Its motivation disturbed me somewhat and I'll do what I can to aid your case. Naturally what you told me will be kept confidential.

I would appreciate it if you kept the detail I give you under wraps until my book is out. [redacted]

So much for that. It seems to me that a Xerox of Preston Nutter's statement of water acquisitions from B. F. Saunders would help your case. Nutter also bought Ivins' Mohave Ranch in 1896.

Saunders is something of a mystery man. Your opinion of his sub rosa operation for the church agrees with my knowledge of his operations. I think he tithed but I can't prove it. Many non-Mormon firms doing business in Utah do so. He lived at Second and Virginia Avenues in SLC when he died July 26, 1909. The news of his death was mentioned in the Deseret News of that day and it was rare for a non-Mormon to be mentioned there at all except in conflict with Mormons. The Salt Lake Tribune gave his death a big spread on July 27, and it was mentioned also in the Evening Telegram.

Mrs. Saunders died in SLC in 1900. Both she and Mr. Saunders were buried in St. Joseph, Mo.

Saunders was very close to Amandus Frank Kuehner of SLC (LDS) and thru this family met Charlie Dimmick (non-Mormon). That Kuehner was a man of influence is suggested by the fact that he got Dimmick a job working on the LDS Temple in SLC - probably the only non-Mormon on the job.

I have not ascertained the position of Edgar L. Clark as a churchman but his appointment as primary agent for Saunders could have been suggested by the church. Clark made some big deals for BF and

thought so well of him that he named his son after him (Saunders M. Clark, the man you met).

An engineer of SLC, S. T. Brackon, made a map of Bar Z holdings but it ended two miles east of Pipe Spring. It is my thought that Brackon also could have made maps of the Parashont and Canaan properties while Saunders owned them. The engineer undoubtedly is dead but some other engineer might have purchased his good will and just could have Brackon's files. Most engineers keep prints of their jobs even tho the owner takes the tracing.

Saunders sold Canaan in the spring of 1904, after buying it Oct. 1, 1895. Saunders bought Parashont April 18, 1883, and sold it to A. W. Ivins who in turn sold to Preston Nutter. It seems that as the range was depleted, Saunders continued to move east.

After John W. Young formed the Kaibab Land and Cattle Co. (under laws of N.Y.) Aug. 22, 1887, he hocked it to the Knickerbocker Trust Co. for $200,000 to finance the English Mission. Snow's sons-in-law Dan Seegmiller and Dee Woolley were foreman and background man respectively, but were stealing the outfit blind. When the church wised up, A. W. Ivins was sent over to take charge and the mortgage was transferred to Cannon, Grant & Co, SLC bankers. Ivins says he found the place in a very poor condition, back taxes, stock depleted, etc. Ivins redeemed the mortgage (he immediately fired Seegmiller and replaced him with Ed Lamb, father of Edward T. Lamb of Mt. Carmel), and the outfit was sold to John M. Murdock and A. L. Fotheringham of Beaver. Murdock quit-claimed to Ebenezer Gillies Nov. 29, 1897, and on Feb. 24, 1899, Fotheringham and Gillies sold to T. S. Kingsberg, for B. F. Saunders and Ora Haley - quit-claimed on Aug. 5, 1899. Saunders kept the brands OUO - VT - JWY - but named the outfit Bar Z.

Saunders' Bar Z allegedly was stolen blind by Emett, the trouble starting prior to 1905. The case was extended to April 11, 1907 with a verdict of "not guilty". Saunders & Haley sold Bar Z to the E. J. Marshall Co. of Los Angeles (who kept the brand but were known as the Grand Canyon Cattle Co) on Dec. 2, 1907. Then Saunders died July 26, 1909.

The deed of the Kaibab Land & Cattle Co. says the range included the top of the Kaibab and I have found little record of the sale of Cane Beds or Pipe. Cane Beds was used as a horse range up to the time of the sale to Marshall and Sam Beal was taking care of the place for Bar Z to about 1914. Sam killed the man there in February 1913. I have searched the early records at Kanab to 1875 and found nothing there. What I have related is on file at Flagstaff and you can get photostats if needed. I can also give you exact books and pages but they rarely mention Pipe, not being in Coconino County.

Hy Roundy killed Dan Seegmiller July 18, 1899

I just looked in my folder on "deeds" and find that Bk 33 of Deeds, Coconino Co. p.321, gives the exact legal of what Haley & Saunders sold to the G.C.C.Co on Dec. 2, 1907. It not only includes all of House Rock, to Soap Creek, the Kaibab, but goes west to "Cannon (sic) Reservoir" (Canaan?) about 15 miles to state line of Utah and 10 miles from Pipe Spring. Also mentioned, p.326, is that Hyrum Shumway quit-claimed to BFS the Rosecrans, Canebed, and VT Ranches.

Sorry I didn't organize this stuff better but I just put it down as I thought of it. I hope you were able to talk to Cowhide Adams in private but he is not inhibited by the churchmen and is pretty blunt. It might pay to talk to Ed. T. Lamb at Mt. Carmel. He lives in a two-storywhite house on the right going north, almost across from the old schoolhouse. Have you talked to A. Karl Larson of 212S 200E, St. George? A. P. Winsor III was alive in Enterprise in 1968, he was 89. His phone was area code 801 - 878-2379.

I have an item from the St. George Union of July 26, 1878:
"...the Winsor Herd is spread over a section of country 90 miles long by 60 wide, ..." - which would include range from Canaan to the O.U.O.

I am sure that the best bet is the tie-in between BFS and the LDS Church and this would be in the Historian's Office in SLC. If you visit them be sure to contact Earl Olsen but I doubt that you can get it going in cold. By all means stay away from A. W. Lund if you do risk it. I'll probably be there in the spring so let me handle it.

If you can get me a print or copy-negative of the photo of E. D. Woolley in his Utah Territorial Militia days with his feet wrapped in rags, I'd be quite happy.

I don't know when I'll get to Pipe but I'll stop by next time I'm close.

Sincerely yours,

P. T. Reilly

02-13-1970: letter to pipe spring national monument from p.t. reilly regarding transferred the church ranches and livestock at star v

'32[illegible] MR Dpt.

3659 Jena Park Drive.
No. Hollywood, Calif. 91604
February 13, 1970

Mr. Raymond Geerdes
Pipe Spring Nat'l Monument
Moccasin, Arizona 86022

Dear Mr. Geerdes:

In my rambling detail of Feb.11 I was too involved in my own work to recall all the material that could help you, hence this follow-up.

You might give Robert O. Dalton, librarian at Dixie College, a call and see if he has three issues of the Deseret News, otherwise your best bet would be Provo (BYU) or S.L.C. The issues are May 1, 1888, Feb. 6 and 7, 1889.

Prior to the passing of the Edmunds-Tucker Act, the trustee-in-trust "sold" or transferred the church ranches and livestock at Star Valley, Wyoming; Oxford, Idaho; and Pipe Spring, Ariz. The Deseret News issues quoted are supposed to refer to their assignments of trust.

Since no record of this transfer is on file at Kingman or Flagstaff, it could be at Prescott and I have not searched there. Coconino County was created out of Yavapai County about 1890 and they might have thought Pipe was in Yavapai, even tho Mohave is one of the four original counties created Nov. 8, 1864.

It would be rather pointless to have transferred ownership and not made it a matter of public record, so it must be on file somewhere.

I have studied the records of Coconino County transcribed from Yavapai, but I did not think to look for a similar book at Kingman and I do not know the evolution of Arizona county boundaries beyond the fact that there has been confusion until the actual survey. The first county seat of Mohave County was Callville, certainly a Mormon dominated choice. Callville was dead by 1869 and the county seat went in turn to Mineral City and Hardyville before Kingman fell heir.

I hope this information is helpful.

Sincerely yours,

P. T. Reilly

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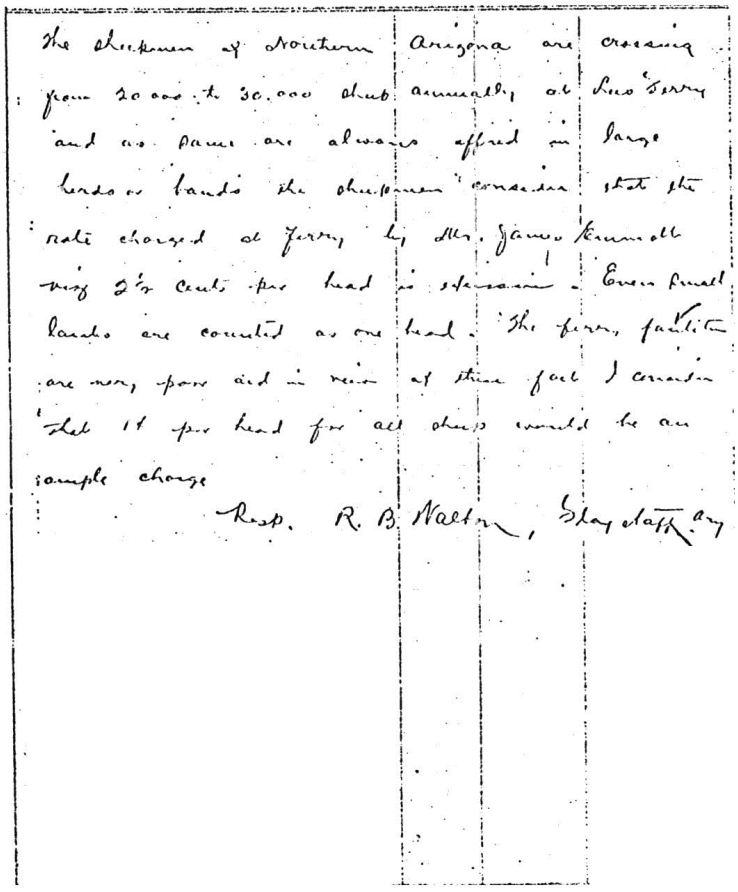
B. F. SAUNDERS,
LIVE STOCK

SALT LAKE CITY, UTAH, June 1st 190

Bishop W.B. Preston
city

Dear Sir
This will introduce Mr Robert B. Walker of Flagstaff arizona, Mr Walker will explain his business with you, trust you will be able to do something for him,

Yours Truly
B.F. Saunders



The sheepmen of Northern Arizona are crossing from 20 000 to 30,000 sheep annually at Lees Ferry and as none are always offered in large herds or bands the sheepmen consider that the rate charged at Ferry by Mr. James Emmett viz 2½ cents per head is steep. Even small bands are counted as one head. The ferry facilities are very poor and in view of this fact I consider that 1¢ per head for all sheep would be an ample charge

Respt. R. B. Walton, Staff Ary

STAKE PRESIDENCY
KANAB STAKE OF ZION

JOEL H. JOHNSON, 2ND COUNSELOR

JAN 22 1906 PRESIDENT'S OFFICE

Mr Concerning E. F.

Kanab, Utah, January 16th. 1906

Pres. Jos. F. Smith,

Salt Lake City, Utah.

Dear Brother,-

Yours of Januafy 10th. containing the letter from Mr.B.F.Saunders and Mr.R.B.Walton was duly received and we called Brother Emetts attention to the Post Script of your letter where you aske to hear from him. He will give you a general outline of his work and meth ods at the Ferry which we can fully indorse, as we are famaliaf with his work and he has consulted with us on any and all expenses and improvement made while he has had the Ferry. At the expiration of the first five years of the lease he came to us to see if there was any change wanted, but we knew of no reason why he should not continue under the lease that he had had formally, and we know no reasons now why he should not continue

Now so far as the charges of excessive fare we do not think that it is at all out of the way. While the Ferry is situated about 100 miles from here you can readily see tha t material and supplies would be very expen- sive by the time they are hauled in wagons that distance and over such roads. And you asked us for suggestions on the complaints that have come to you from Mr. Saunders thru Mr. Walton . We feel that Brother Emett is doing as well as any body we could get , and as some of the sheep men expressed themselves when approached to sign the complaint, that a man that would take his family and isolate himself as far from civilization as Lees Ferry instead of being complained of should have a pension.

Your Brethern in the Gospel,

Joel H. Johnson

Kanab, Kane ,Utah. Jan. 16th./06.

Pres. Jos. F. Smith(Trustee and Trust)

Salt Lake City, Utah.

Dear Brother,-

President Woolley hascalled my attention to a Post Script to a letter written to him January 10th. stating that you would like to hear from me in relation to the property at Lees Ferry which I have occupied since Dec.1st.,1896. I have been on the property subject to a lease of that date which required me to pay for the use of the property $ 100.00 per annum and it was to be paid in improvements on the property . The house at the time I received it was a six-roomed,unfinished ;since then I have sealed it with lumber and papered part of it .I have put up outside fences around the entire farm ,there being no fences when I took the place.I have also subfenced it for my convenience.

In addition to what the Church has done I have spent$600.00 in building a road from the lower Ferry to the upper one and perhaps $150.00 on this side. The country is subject to extreme washouts which makes road repairing very expensive.We are situated in the mouth of a box canyon which has a drainage of about a hundred miles and tremendous

torrents come down every season which takes out our dams and washes away our ditches ,and being the only ones on the stream we have all this expen se to keep up ;andit has been impossible,at all times,to save our crops. But we are improving our ditches by cutting channels thru rock points that project into the stream.So our ditch is very much improved.

During this time I have lost two large ferry boats and five or six skiffs ,valued at about $40.oo each.The ferry boats cost in the neigh bor-hood of $400.oo each. When I fi rst came here the Ferry boats had been rowed across during Bro. Johnson's twenty years occupancy of the place.For the last seven years I have been crossing the boats with cable with ropes and men.The excessive high water of last spring brot down the drift wood and caught the cable and broke it loose from it's moorings,bur ying it in the quick sand which is a total loss. As soon as the water r receded so it was possible to get across with skiffs I replased the cable at my own expense at the cost of about $300.oo . Since then I have been running the boat with an endless rope and horse power. I devised the plan and got the necessary machinery from old mowing machines that had been worn out and left on the place from the time John D. Lee occupiedit to th present time. The present system thatwe have puts the facalities of the

y much better than it has ever been in it'

s

J.F.S. No. 2.

history.

President Woolley called my attention to a letter from Mr. Walton of Flagstaf complaining that the charges for crossing sheep were excessive , the charge being 2I/2 cents per head .Iwill state that Brother Johnsons price for crossing sheep before I took the Ferry was 3 cents per head.Bro. Johnsons prices for crossing teams for team and wagon was ~~$3.00~~ $3.00, for doubl team and wagon $3.75. I have kept the same prices, but will state that ther nothing like the amount of travel in later years that there was formerly; with the exception of what sheepthat have crossed there has been very little travel, and this is only the second year that we have had the sheep. I would like to say furthur that when I crossed ~~the~~ Mr. Waltons sheep we did it in an incredibly short time and he expressed himself very well pleased with the treatment he had received

I will state that there is a movement on foot to try and get me removed from the Ferry, and the sheepmen that have crossed sheep there in the last two years have been approached to sign a complaint of excessive charges and incompetent service, which they all refused to do, except Mr. Walton; expressing themselves that they were perfectly satisfyed both wit the treatment and the fees and had no complaint to make. This move was par

ly brot about by an interview I gave the Deseret News last August in Salt Lake City in relation to the Indian agent chatging the sheepmen fifty cents per onehundred head for each day that they were crossing the Indian Reservation,which was over the only road that can be traveled and the one that was built and maintained by tha pioneers.And on the behalf of the sheepmen I have circulated in Coconino Co.,Arizona a petition asking the department to grant a right of way two miles wide following the old pioneers road across the reservation,and it has been universally signed . I now have the same petition circulating in Kane,Iron andGarfield Countiesin Utah. This move may have reflected somewhat on the local Indian agent and he is after me a little.I foresaw some of their plans and made a desert entry of eighty acres which covers all of the cultivatod land and the premises belonging to the Trustee and Trust,which there was no title to.

Hoping I have been sufficiently plain

I remain

Your Brother,

Daniel T. Ellis

RECEIVED
NOV
22

Kanab, Utah. Nov. 18, 1906.

Pres: Jos. F. Smith, Trustee and Trust,

Salt, Lake City, Utah.

Dear Brother:

Brother J.S. Emmitt, who has been living at the Lees Ferry for the past ten years, is here and desires me to inquire if you will sell the Ferry and interests to him and at what price. There are some improvements Bro. Emmitt desires to make if he owns the property that he would not feel justified in doing otherwise.

It seems to me that the object for which the Ferry was originally purchased by the Church has been filled.

An answer at your earliest convenience will be greatly appreciated.

Sincerely your Brother in the Gospel,

E. D. Woolley

12-16-1896: memorandum to pres. wilford woodruff from  regarding selling of the ferry

BOWMAN & COMPANY, Incorporated.

—DEALERS IN—

General Merchandise, Boots, Shoes, Dry Goods,

NOTIONS, HARDWARE, AGRICULTURAL IMPLEMENTS, FLOUR, GRAIN, COWBOY & SHEEP-MEN'S SUPPLIES.

Kanab, Kane Co., Utah, Dec. 16th, 1896.

Pres. Wilford Woodruff?

Salt Lake city, Utah.

Dear Brother :-

Brother Warren M. Johnson selected Bro. Chamberlain and we went to the Ferry and looked over the ground and improvements, and valued the same at $6500.00. As you will remember our talk, you were to deduct the original $3000.00 paid for the property and Bro. Johnson was to receive the balance to assist him in buying a home. If you will be kind enough to send an order on this Stake we can manage to settle with Bro. Johnson without drawing on the cash. Bro. Johnson is still bedfast but we confidently expect that he will be able to move about again, but not in the near future.

I enclose the deed and also the lease of the property to Bro. James S.emett.

Very Respectfully,

Your Brethern,

E. D. Woolley

Thos. Chamberlain

13

BLANK A.

# THE DESERET TELEGRAPH COMPANY.

| SENT BY | REC'D BY | CHECK |
|---|---|---|
| WS | WR | 34 collect CB. |

Received at President's Office, Salt Lake City, at 2.46 p. m. June 7 1895

Dated, Kanab, 7.

To President Woodruff -

Sale of Pipe Springs to Cattle syndic means serious loss to the people of our Stake; if it must be sold, the people of the Stake wish to buy. See letter by the people.

E. D. Woolley.

LINES TO ALL PRINCIPAL POINTS IN UTAH, PIOCH[illegible]ADA, AND PARIS, IDAHO

14 14

QUIT CLAIM DEED.

Daniel Seegmiller and Artimesia S. Seegmiller grantors of Upper Kanab Utah, hereby convey and quit claim to Benjamin F. Saunders, grantee, of Salt Lake City, Utah, for the sum of Two Thousand Five Hundred Dollars, the following described tract of land in Mohave County, Territory of Arizona. The tract of land known as the Pipe Spring Survey as described in plat of survey made by John M. Macfarland December 3rd., and 4th., 1886, and more particularly described as follows, to-wit:

Beginning at a pine tree at the South West Corner of said survey and running thence North eighty rods thence east eighty rods, thence South eighty rods thence West, eighty rods to the South West Corner the place of beginning, and containing forty acres of land, be the same more or less, together with all the corrals, buildings, improvements, and appurtenances thereto appertaining.

Witness, the hands of said Grantors this twenty third day of July A.D. 1895.

Signed in the Presence of
Franklin B. Woolley.

DANIEL SEEGMILLER,
ARTIMESIA SNOW SEEGMILLER.

TERRITORY OF ARIZONA, )
) SS.
County of Kane, )

On this Seventh day of September 1895 personally appeared before me Daniel Seegmiller and Arlemesia Snow Seegmiller the signors of the above instrument who duly acknowledged to me that they executed the same.

(SEAL)

Joel H. Johnson,
County Clerk, Kane Co.,
By Jos. E. Robinson,
Deputy.

(Recorded) QUIT CLAIM DEED

Endorsed) QUIT CLAIM DEED.

DANIEL SEEGMILLER,
ARTEMESIA SNOW SEEGMILLER,
Grantors,
TO
BENJAMIN F. SAUNDERS,
Grantee.

Dated July 25, 1895.

Recorded at Request of B.F.Saunders, Dec. 5th, A.D. 1895 at 11 A.M. Book 12 of Deeds at page "1"

L. O. Cowan,
Recorder, Mohave County.

QUIT-CLAIM DEED.

Benjamin F. Saunders and Tacy E. Saunders his wife, Grantors, of Salt Lake City, County of Salt Lake, Territory of Utah, hereby hereby quit-claim to David Bullock and Lehi W. Jones of Cedar City, Iron County, Territory of Utah, Grantees, for the sum of Thirty two hundred & fifty Dollars, the following described tract of land in Mohave County, Territory of Arizona; the tract of land known as the Pipe Spring Survey as described in plat of survey made by John H. McFarlane, December 3rd., & 4th., 1886, and more particularly described as follows, to-wit:

Beginning at a Pine tree at the south west corner of said survey and running thence north eighty rods; thence east eighty rods, thence south eighty rods, thence west eighty rods to the South-west corner, the place of beginning; containing forth acres be the same more or less, together with all the corrals, buildings, improvements, and appurtenances thereunto appertaining.

Witness the hands of said Grantors this second day of December, A.D. one thousand eight hundred and ninety five.

Signed in Presence of
Geo. B. Brastow,

BENJAMIN F. SAUNDERS,
TACY E. SAUNDERS.

TERRITORY OF UTAH, )
) SS.
County of Salt Lake,)

On the second day of December A.D. one thousand eight hundred and ninety-five, personally appeared before me, Benjamin F. Saunders and Tacy E. Saunders, the signers of the above instrument, who duly acknowledged to me that they executed the same.

(Notarial Seal.)

Geo. B. Brastow,
Notary Public.

My Commission Expires
Feby. 4th., 1897.

(ENDORSED)
QUIT--CLAIM DEED.
Benjamin F. Saunders,
Tacy E. Saunders,
TO
David Bulloch,
Lehi W. Jones,

Recorded at the Request of Lehi Jones, Jan 1st., A.D. 1896, at 10 minutes past 11 o'clock A.M. Book 12 of Deeds at page 35

L. O. COWAN,
Recorder, Mohave County.

6

The buyin of the Pipe Spring ranch and c tle took place on or about November 15, 1895, and happened in rather an accidental way. David Dunn Bulloch had heard a lot about the Pipe Spring cattle ranch. However, he never expected to own it. But here is his story that was copied from a letter in his own handwriting to his wife Sarah:

He had two children, a son and a daughter attending school in Salt Lake City and staying with his wife Sarah Ann. He had gone to the city on business and to visit these members of his family. The morning he left the city to return home, he was a little late, and missed the train. He always said it was a blessing in disguise.

When he got on the train the next morning he found himself in the company of Benjamin Franklin Saunders, (B.F. Saunders) and Charles Ahlstrom, Sr. The latter having a carload of rams that he had brought from the east. "They were just the kind I had been wanting to get, and I bought fifteen head.

I also had a long talk with Saunders about Pipe Springs. He told me that if I would go out and see it, he thot I would want to buy it. So I went and looked it over, and I think it is the finest ranch I ever seen for livestock, and it is a very pretty place. There is about $5,000 worth of improvement on the place. There is two large buildings, one a two-story with five rooms in, and a number of small buildings, a hay field, and all kinds of apricot and plum trees, a fish pond, I think the fish are carp. There is a number of corals, t best I ever seen on a ranch. So I bought it, and I think I got a bargain. I paid thirty-two hundred and fifty dollars. He let me have it two-hundred and fifty dollars less than what he wanted at first. I have let the Jones boys have a half interest. They only wanted a fourth interest, but I told them if they wouldn't take a half, I would keep it myself. Wm. Ford and Henry Leigh came to see if I would let them have an interest in it and quite a number more would like an

interest, but I do not like to have too many partners. But I think there is feed for ten times as many cattle as I have got to take there. I am going to start in the morning to gather the cattle and horses and take them down there. It will take us two or three weeks. I will be glad when I get them there. It will be a comfort to handle cattle there to what it is here." (Quoted from his letter written to his wife Sarah Ann on Sunday, December 1, 1895.)

Plus buying the ranch of Saunders, Uncle Rob Will Bulloch, son of David D. and age 89 yrs. on July 29th, 1963, tells me they bought 800 more or less head of cattle from Saunders, that run out in Spring Valley, Nevada called the Cleveland Ranch, and he was to deliver them to the Pipe Spring Ranch at $11.00 per head, that was calves and all kinds. Robb Will says his father had about 1,000 head of cattle and Jones as near as he can remember had six or eight hundred head that they turned loose on the ranch. Then they each bought one or more wherever they could locate cattle for sale, and with their increase of calves in the spring, they ran about 5,000 head or more on the Bull Rush and Pipe Spring range, but they could run on public domain in those days. They would drive to Milford when they made their sales each fall.

They also bought sheep of Saunders and ran them out on the desert west of Cedar City and on Cedar Mountain in the summer. When they sold out their ranch and cattle to A. D. Findlay, they still owned 40 acres on water at Short Creek and still run cattle. The herd was known as the T. J. Cattle Co.

Scribe: Mrs. David C. Bulloch
142 West College Avenue
Cedar City, Utah

(David C. Bulloch was the son of David D. Bulloch)

15

No.

# Quit-Claim Deed.

Benjamin F. Saunders
Tacy E. Saunders
TO
David Bulloch
Lehi M. Jones

RECORDED AT THE REQUEST OF
Lehi Jones
Jack ict
A. D. 1896
at 10 minutes past 11 o'clock A M.,
in Book 12 of Deeds,
page 30.
L. Q. Conrad
Recorder Mohave County.

20 Co., Salt Lake.

# Quit-Claim Deed.

Benjamin F. Saunders and Tacy E. Saunders his wife

grantors

of Salt Lake city, County of Salt Lake, Territory of Utah, hereby Quit-Claim to David Bullock and Reli W. Jones of Cedar city Iron County Territory of Utah grantees

for the sum of Thirty two hundred & fifty DOLLARS:

the following described tract of land in Kolob County, Territory of ~~Utah~~ Arizona. The tract of land known as the Pipe Spring survey as described in plat of survey made by John W. W. Farlane December 3rd & 4th 1886 and more particularly described as follows to wit Beginning at a Pine tree at the south west Corner of said survey and running thence north eighty rods thence east eighty rods thence South eighty rods thence west eighty rods to the South west corner the place of begining containing forty acres be the same more or less. together with all the roads buildings improvements and appurtenances thereunto appertaining.

Witness the hands of said grantors, this Second day of December, A. D. one thousand eight hundred and ninety-five

Signed in Presence of

R. T. Bracken

Benjamin F. Saunders

Tacy E. Saunders.

State of Utah )
) ss.
County of Iron )

Before me. John Chatterley.....
a notary public in and for said county, on this day personally appeared David Rulloch and his wife Alice Rulloch, Lehi W. Jones and his wife Henrietta Jones, known to me to be the persons whose names are subscribed to the foregoing instrument, and acknowledged to me that they executed the same for the purpose and consideration therein expressed.

Given under my hand and seal of office, this twenty fourth day of May, A.D. 1897.

My commission expires August 13th, 1900.
John Chatterley.
Notary Public.

Know all men by these presents,that we,David Rulloch and wife Alice Rulloch,Lehi W.Jones and wife Henrietta Jones,of Cedar City, Iron County,State of Utah.for and in consideration of five thousand dollars,to us in hand paid by the Pipe Springs Cattle Company,a Corporation of the State of Utah,have granted,sold,and conveyed,and by these presents do grant,sell,and convey unto the said Pipe Springs Cattle Company,of the State of Utah,with its principal office in Salt Lake City,all that certain tract of land and premises described as follows,to wit: The tract of land known as the Pipe Spring survey as described in plat of survey made by John M.McFarlane,December 3rd and 4th,1886,and more particularly described as follows,to wit: Beginning at a pine tree at the southwest corner of said survey and running thence north eighty rods;thence east eighty rods;thence south eighty rods;thence west eighty rods to the southwest corner, the place of beginning,containing forty acres be the same more or

less, together with all the corrals, buildings, improvements and appurtenances thereunto appertaining, situated in Mohave County, Arizona.

To have and to hold the above described premises, together with all and singular the rights and appurtenances thereto in any wise belonging, unto the said Pipe Springs Cattle Company, its successors and assigns, against every person whomsoever, lawfully claiming or to claim the same, or any part thereof.

Witness our hands this twenty-fourth day of May, A.D. 1897.

Signed and delivered

in presence of

Myron D. Keighley
John Chatterley

David Bullock
Alice Bullock
Levi V. Jones
Henriette L. Jones

16

Quit Claim Deed

[illegible]: That we, David Bulloch, and Alice B. Bulloch, his wife, and Lehi W. Jones, and Henrietta L. Jones, his wife, all of Cedar City, in the County of Iron and State of Utah, for and in consideration of Four Thousand (4,000) Dollars to us in hand paid by A. D. Findlay of Kanab in Kane County, and State aforesaid, have granted sold and conveyed, and by these present do grant, sell and convey unto the said A. D. Findlay all that certain tract of land, premises and property situated in Mohave County, Arizona Territory, to-wit:

The tract of land known as the Pine Springs Survey as described in plat of made by John M. Macfarlane, December 3rd., and 4th., 1886, and more particularly described as follows, to-wit:

Beginning at a pine tree at the Southwest corner of said survey, and running thence North eighty rods; thence East eighty rods; thence South eighty rods; thence west eighty rods to the Southwest corner, the place of beginning, containing forty acres, be the same more or less; Together with all corralls, buildings and improvements and appurtenances thereunto appertaining. To have and to hold the above described premises, together with all and singular the rights and appurtenances thereunto in anywise belonging, unto the said A.D. Findlay, his heirs and assigns forever.

WITNESS OUR HANDS this 3rd day of November A.D. One Thousand Nine Hundred and Two.

Signed in the Presence of
LENORA C. DALLEY,
MAYHEW H. DALLEY,

DAVID BULLOCH,
ALICE B. BULLOCH,
LEHI W. JONES,
HENRIETTA L. JONES,

STATE OF UTAH, )
) ss
County of Iron, )

On this 3rd day of November A.D. 1902, before me, Lenora C. Dalley, a Notary Public in and for said Iron County, personally appeared David Bulloch and Alice B. Bulloch, his wife, and Lehi W. Jones and Henrietta L. Jones, his wife, known to me to be the persons whose names are subscribed to the foregoing instrument, who duly acknowledged to me that they, each of them, executed the same for the purposes and consideration therein expressed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at my office in Cedar City, Iron County, State of Utah, the day and year in this certificate first above written.

(NOTARIAL SEAL.) LENORA C. DALLEY,
Notary Public, Iron County, Utah.
(My Commission Expires March 20th, 1903.)

Filed and Recorded at request of A. D. Findlay, Dec. 20th., A.D. 1902, at 10 minutes past 10 o'clock A.M. in Book 6, Pages 124 - and 125, of Miscellaneous Records of Mohave County, Arizona Territory.

JNO. P. FEENY,
County Recorder.

# The Sale of Pipe Springs to A. D. Findlay

The sale of the Lehi W. Jones and David D. Bulloch cattle herd and the Pipe Spring and Bull Rush Ranches situated in Mohave County, Arizona, to A. D. Findlay was made January 23, 1901.

Said band of cattle numbering between 1,200 and 1,300 head were sold at $22.50 per head for all classes of cattle. The above named cattle carried the following brands:

 known as the Frying Pan brand and  quarter circle on the left hip. The sum paid for said cattle was $20,000.00 and was divided and made in three payments, paying $10,000.00 on signing of the contract, balance on October 15th and December 15th, 1901.

The Pipe Springs ranch, together with the house, stove, furniture, all lumber and fencing and all hay machinery was sold for $4,000.00. The Bull Rush ranch was to be conveyed to A. D. Findlay for the actual cost paid by the first party in securing title to the property.

It was agreed that Findlay would deliver to David D. Bulloch and Lehi W. Jones, that herd of sheep known as the Heart Herd and numbering between two and three thousand head at the price of $2.25 per head, as part payment for the above named properties, and giving his note payable one or before one year from date of settlement at 8% interest.

They owned forty acres or more in and around Pipe Spring watering places, but in those days they could run on Public Domain which took in a lot of acres.

Scribe: Mrs. David C. Bulloch (Wife of David D. Bulloch's son)
142 West College Avenue
Cedar City, Utah

02-08-1921: quit claim deed

17

17

QUIT CLAIM DEED

A. B. WINDLAY, and
C. L. WINDLAY, his wife

TO

PIPE SPRINGS HAY & LIVE STOCK COMPANY,
a Corporation.

Recorded 8th day of Feb. A.D. 1921.
at 9 A.m., Book "30" of Deeds
Pages 317 - 318, Dated 31st day of
December, 1920.

Consideration: $1.00

Convey, remise, release and quit-claim:

The following described real estate situated in the County of Mohave, and State of Arizona, to-wit:-

The tract of land known as the Pipe Springs Survey as described in plat of survey made by John H. Macfarlane December 3rd and 4th, 1886, and more particularly described as follows, to-wit:-

Beginning at a pine tree at the southwest corner of said survey, and running thence north eighty rods; thence east eighty rods, thence south eighty rods, thence west eighty rods to the southwest corner, the place of beginning, which has been found to be upon official survey the southeast quarter of the southeast quarter (SE¼SE¼) of Section seventeen (17), Township forty (40) north of range four (4) west G. & S.R.M., containing forty (40) acres; together with all corrals, buildings, improvements and appurtenances thereunto appertaining.

This Deed is intended to, and does hereby, replace that certain former Deed executed by and between the parties hereto for the said above described tract, together with all improvements thereon, which former Deed has been either lost or destroyed and, apparently, never became a matter of record in the office of the County Recorder of Mohave County, Arizona.

Signatures: A. D. FINDLAY, (SEAL.)
S. E. FINDLAY, (SEAL.)

Acknowledged in Los Angeles, County State of California,
31st day of December, A.D. 1920, before a Notary Public.
(Notarial Seal.)

Copy 1607

Kanab, Utah January 2" x1909. t-

At a special meeting of the members of the Jonathan Heaton and lled
partnership, duly and regularly called, at which said meeting all
bers of said copartnership were present, the following motion was
Jno Heaton and seconded by Fred C Heaton es
o was unanimously adopted:
solved by the members of the Jonathan Heaton and Sons, a copart-
nsisting of Jonathan Heaton, William Heaton, Israel Heaton, y
Junius Heaton, Jonathan Heaton Jr., Charles Heaton, and Fred C.
t whereas said Copartnership, together with divers other parties,
to A. D. Findlay of Kanab, Kane County, Utah, in the sum of
Thousand Five Hundred Fifty Three 13 Dollars ($5953 13/100)
is evidenced by that certain promissory note for said amount
nuary 2" A.D. 1909, payable one year after date,
st at the rate of Eight (8) per cent per annum, interest
l-annually, principal and interest payable at Kanab, Utah, and to
payment of the said note as therein provided, that it is for the
sts of the said copartnership to join in a mortgage with the

other parties interested therein to said A. D. Findlay for said sum of $59,563.13, and to duly execute and deliver to said A. D. Findlay said mortgage to the following described tracts of land, easements, and property rights, located and situated in Mohave County, Arizona Territory:

All of that certain parcel of land commonly known as and called the Pipe Spring Ranch together with all improvements, water rights and appurtenances; also all of that certain parcel of land commonly known as and called the Findlay Lower Reservoir, together with all improvements, water rights, privileges, and appurtenances; also,

To further mortgage and transfer, together with said other parties interested therein, by good and sufficient chattel mortgage, and in the usual form thereof, and to duly execute, verify and deliver said chattel mortgage to said A. D. Findlay, the following described personal property and cattle

Seven Hundred and Fifty head of range cattle branded T on right ribs, and marked with a crop and mortice in right ear and two slits in left ear; also, two hundred and fifty head of range cattle branded and marked as follows, to-wit: 7V on right ribs and same 7V on left ribs, marked, part with upper cut in right and under cut in left ears, and part crop and two slits in right and two slits in left ear.

Also, Three Thousand and Four Hundred Head of range cattle branded and marked as follows: to-wit: Part branded 19 on left thigh and left hip and part branded 9 on left hip and left thigh, and marked crop off left ear; together with all the increase of all of said cattle, which said cattle are now being ranged and grazed in Northern Arizona and Southern Utah.

FURTHER RESOLVED, that Jonathan Heaton, the manager of said Jonathan Heaton and Sons copartnership, be, and he is hereby authorized to execute

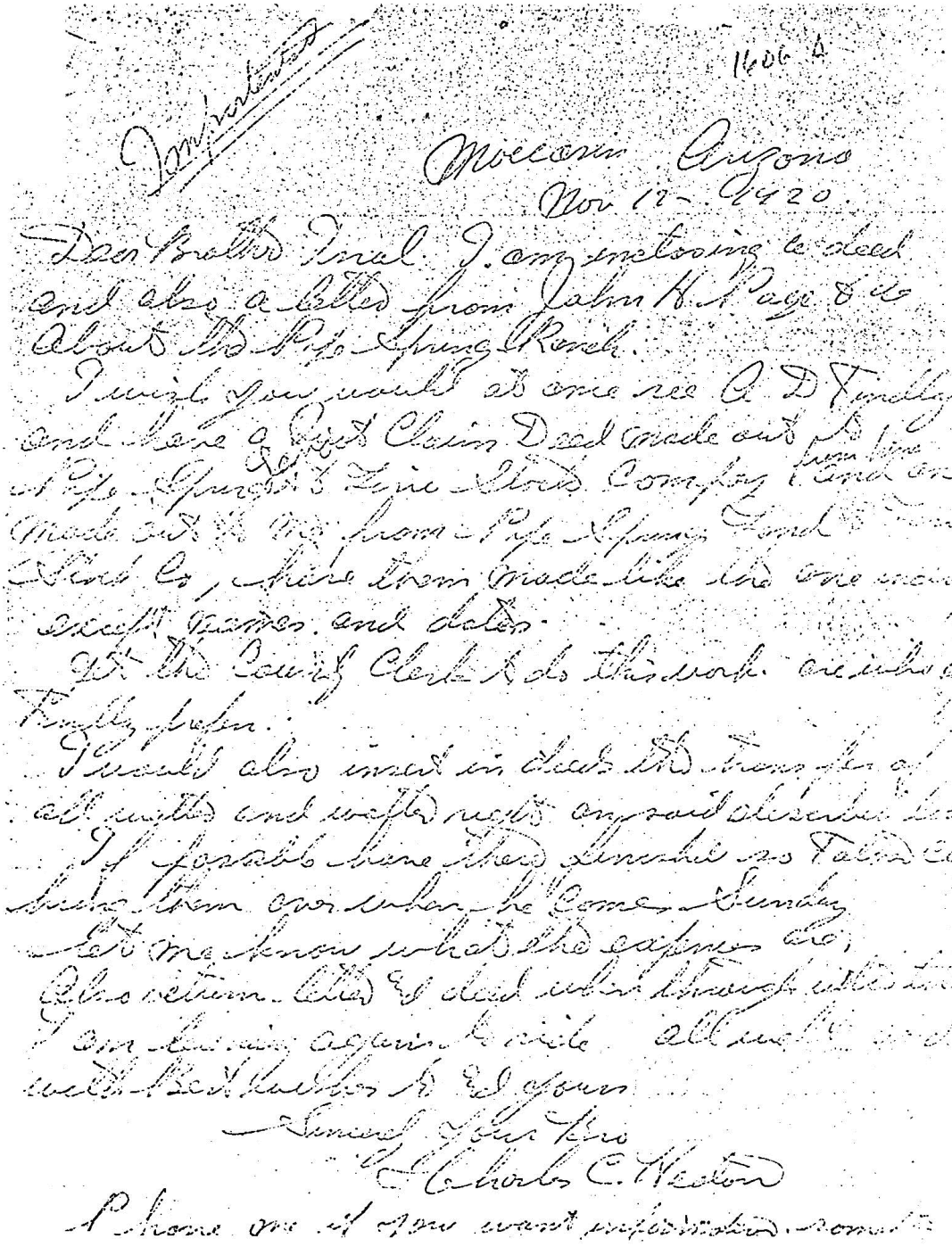
in due and legal manner and form each of said mortgages above mentioned and to sign the name of said Jonathan Heaton and Sons thereto as and for the act and deed of said copartnership.

State of Utah )
)ss.
County of Kane)

I hereby certify that the foregoing is a full, true and complete copy of a resolution duly passed by the members of the Jonathan Heaton and Sons copartnership at a meeting of the members of said copartnership on the 2" day of January A.D. 1909 at Kanab County of Kane, State of Utah, as the same appears in the minutes of said meeting and in and upon the records of said copartnership.

In witness whereof I have hereunto set my hand this 2" day of Jan A.D. 1909.

Jonathan Heaton
Secretary.



Duplicate

1406 A

Mohave Arizona
Nov 17 1920.

Dear Brother Neal. I am inclosing herein deed and also a bill from John H. Page & Co about the Pyle Spring Ranch.

I might say would at one time A D Tindall and Mose Lyle Claim Deed made out to Pyle Spring & Live Stock Company from him and Mose Lyle from Pyle Spring Land & Live Stock Co, there from Wade like the one inclosed. Names and dates.

Yr Bro County Clerk Asks this work. Credits on Tindall Debt.

I would also insert in deed the Temple of all water and water rights appurtenant thereto. I forgot this when I made out deed for Tindall Co. Send them over under the Same Stamp.

Let me know what the expense is, Also return deed and bill when done with them. I am leaving again & will also be at Needles & El Centro

Yours Truly
Charles C. Wilson

Phone me if you want anything more.

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QUIT-CLAIM DEED.

PINE SPRINGS LAND & LIVE STOCK COMPANY, A Corporation,

TO

CHARLES C. HEATON,

Recorded 8th day of Feb. 1921. at 9 A.m., Book "30" of Deeds, Pages "315-316", Dated 18th day of December, A.D. 1920.

Consideration: $5,000.00

Remise, release and quit-claim

All the right, title interest claim and demand which the said party of the first part has in and to the following described real estate situated in the County of Mohave and State of Arizona to-wit:

The tract of land known as the Pine Springs Survey as described in plat of survey made by John H. Macfarlane December 3rd and 4th, 1886, and more particularly described as follows, to-wit: Beginning at a pine tree at the southwest corner of said survey, and running thence north eighty rods; thence east eighty rods; thence south eighty rods; thence west eighty rods to the southwest corner, the place of beginning, which has been found to be upon official survey the southeast quarter of the southeast quarter (SE¼SE¼) of Section seventeen (17), Township forty (40) north of Range four (4) west, G. & S.R.M., containing forty (40) acres; together with all corrals, buildings, improvements and appurtenances thereunto appertaining

10-30-1920: letter to moccasin, arizona from  regarding abstract of title

John H. Paige & [illegible]
PUBLIC LAND SPECIALISTS
GUARANTEED SCRIP
STATE LANDS
SUITE 215 NOLL BUILDING
P. O. BOX 117
Phoenix, Arizona

October 30, 1920.

Mr. Charles C. Heaton,
Moccasin, Arizona,

Dear Mr. Heaton:-

We have now received the abstract of title from the Mohave County Recorder's office as to the Pipe Springs Ranch, and same shows the following deeds, three in number:-

Quit claim deed, Daniel Seegmiller and Artemesia Snow Seegmiller to Benjamin F. Saunders, dated July 23, 1895.

Quit claim deed, Benjamin F. Saunders and Tacy E. Saunders to David Bulloch and Lehi W. Jones, dated December 2, 1895.

Grant deed, David Bulloch and Alice B. Bulloch and Lehi W. Jones and Henrietta L. Jones to A. D. Findlay, dated November 3, 1903.

Thus the record brings the title down to A. D. Findlay, whom you stated in your letter of October 8 conveyed to the Pipe Springs Cattle Company and it was this deed which was ~~destroyed by fire eight years ago~~ lost. We believe that it will now be possible for you to secure a new deed from Mr. Findlay and wife. Please advise us in regard to this matter when we will prepare and send you proper form, and will also send you further form for deed from the company to yourself or to whoever now actually owns said 40-acre tract, as to which please also advise.

Yours very truly,

JOHN H. PAIGE COMPANY,

By John H. Paige

P/C

(Corporate Seal.) Signatures:

Attest:

Christopher C. Heaton,
Secretary.

PIPE SPRINGS LAND & LIVE STOCK COMPANY, (SEAL.)

By Jonathan Heaton, (SEAL.)
President.

Acknowledged in Kane County State of Utah,
18th day of December, A.D. 1920, before a Notary Public.
(NOTARIAL SEAL.)

3

19

Quit-Claim Deed.

For and in consideration of the sum of four thousand dollars, the receipt of which is hereby acknowledged, I quit-claim to the United States of America all my interest in the following tract of real estate: The Southeast quarter of the southeast quarter of section seventeen, township forty north, range four west, Gila and Salt River Base and Meridian.



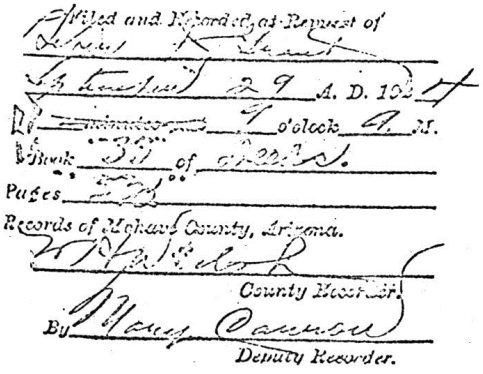
Solomon C Keeton

State of Utah, :
: ss.
County of Kane :

Before me John W. Glover
a Notary Public
on this day personally appeared Charles C. Heaton, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.

Given under my hand and seal of office this 28th day of April A. D. 1924.

John W. Glover
Notary Public



Filed and Recorded at Request of
[illegible]
in Book 29 A. D. 1924
at 9 minutes past 9 o'clock A. M.
Book 31 of [illegible]
Pages 228
Records of Mohave County, Arizona.
[illegible]
County Recorder.
By Mary Cannon
Deputy Recorder.

Withdrawal of Pending Application.

A. 484

Phoenix 04807 April 28-1924.

I hereby withdraw the application filed in the Prescott, Arizona, land office on May 3, 1888, by Daniel Seegmiller to locate Valentine scrip certificate No. E-13 (Prescott No.3), and the application of myself and the Pipe Springs Land and Live Stock Company to conform said location to the SW. 1/4 SW. 1/4, Sec 17, T. 40 N., R. 4 W., G. & S.R.M.

Charles Heaton

Witnesses to signature:

Jno. W. Glazier
Zona Seegmiller,

Filed and Recorded at Request of Heber J. Grant September 29th A.D.1924, at 9 O'clock A.M. in Book 15 of Miscellaneous Records at page 12 Records of Mohave County, Arizona.

W.H.Welsh
County Recorder.

By Mary Carrow,
Deputy Recorder.

10-23-1924: letter to the director of the national park service from secretary regarding quit claim deed

THE SECRETARY OF THE INTERIOR
WASHINGTON OCT 23 1924

The Director of the

National Park Service.

My dear Mr. Director:

Under date of October 15, 1924, you forwarded a quit-claim deed executed by Charles C. Heaton in favor of the United States, covering the SE.¼ SE.¼, Sec. 17, T. 40 N., R. 4 W., G. & S. R. M., within the limits of the Pipe Springs National Monument, Arizona. The funds for the purchase of the interest of Mr. Heaton in the tract were raised by donation.

The deed is hereby accepted, under the authority conferred by the act of June 5, 1920 (41 Stat. 917). The deed and abstract of title are herewith.

The Commissioner of the General Land Office has been directed to return to Mr. Heaton, Moccasin, Arizona, Valentine scrip certificate No. E-13 (Prescott No. 3), which Daniel Seegmiller, on May 3, 1888, applied to locate upon the tract, then unsurveyed.

Very truly yours,

Hubert Work

Secretary.

Inclosure No. 10510

Letter from:

C. A. Engle
Supervising Engineer
Department of the Interior
United States Indian Irrigation Service
Blackfoot, Idaho

May 13, 1924

Subject: Complying with Office telegraphic instructions of April 8, 1924. Engle visited the Kaibab Indian Reservation on Apirl 27 and 28 and investigated condition affecting the establishment of a proposed public watering place near Pipe Springs.

Letter to:

Commissioner of Indian Affairs
Thru W. M. M&H Reed, Chief Engineer
United States Indian Service
Washington, D. C.

5 Page letter, with drawing of plat of Pipe Spring

Letter was photocopied and could not be reproduced by Xerox Process.

3/11/1970 Jeff

10-20-1933: letter to president grant from acting custodian regarding history of pipe springs

Oct. 20, 1933

President Heber J. Grant
Salt Lake City, Utah

Dear President Grant,

I am the custodian of Pipe Springs National Monument and in gathering up some of the interesting history of this place I would like to get from you the names of those that contributed to the purchase of Old Pipe Spring so that it could become a National Monument. Also the amount of cash money each gave.

What I want to do with this material is to get the picture of each contributor to gether with the amount he gave and put them on an old platter drank that I have here. So we are trying to fix things up so that the visitors will go away from here favorable impression of our Pioneers and what they had to go through. One of the men that are trying to preserve such for the future.

I am wondering if you could right me to where I might obtain one of the old telegraph instruments that was used in 1871 or there about.

Thanking you in advance for your trouble

Sincerely Yours

[signature]
Acting Custodian

05-07-1926: letter to moccasin arizona from  regarding daniel seogmilher's estate

Robert S. Burns
ATTORNEY-AT-LAW
NEWHOUSE BUILDING
SALT LAKE CITY, UTAH
P. O. BOX 1788

May 7, 1926.

Mr. Jonathon Heaton,
Moccasin, Ariz.

Dear Mr. Heaton:

In behalf of Mr. Lafayette Hancheti and Heber J. Grant and others, I am endeavoring to straighten out the title to the Valentine scrip which is to be placed in the name of Bankers Trust Company, as trustee, for the purpose of selling the same and distributing the proceeds of such sale to the original subscribers to the fund which was raised for the purpose of purchasing Pipe Springs from you, and transferring it to the United States Government. As you are aware, the abstract of title of this scrip does not show a satisfactory conveyance from Daniel Seegmiller to yourself and we are now preparing to have an administrator re-appointed of Daniel Seegmiller's estate for the purpose of having such a conveyance executed. We are endeavoring to have Mr. William W. Seegmiller consent to act as such administrator. However, before he will grant his consent, he wants to be assured that the course we are taking is being taken with your consent and for this reason, I ask you to write me stating that it is satisfactory to you that such administrator be appointed for Daniel Seegmiller's estate for the purpose of having a conveyance executed conveying the Valentine scrip from Daniel Seegmiller's estate to Bankers Trust Company, as Trustee.

Assuring you that your immediate attention in this matter will facilitate things, I am,

Yours very truly,

Robert S. Burns

RSB/HMB

10-30-1933: letter to moccasin arizona from president grant regarding list of those who contributed to purchase of pipe springs

CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
HEBER J. GRANT, PRESIDENT
SALT LAKE CITY, UTAH

October 30, 1933

Mr. Leonard Heaton,
Moccasin,
Arizona.

Dear Brother Heaton:-

Answering your letter of October 20th.

I am enclosing list of those who contributed to purchase Pipe Springs as a national monument. Some of them have passed away, as you will notice.

By the way, we have secured a return from what is known as the Valentine scrip that could be planted on ranches. We originally paid for this ranch and the scrip was with the hands of Lafayette Hanchett and we had hoped to sell it and return the contributions made by the different people.

Sincerely yours,

J. G. Grant

Enclosure.

Obtained for th purchase of the PIPE SPRINGS RANCH, and names of the contributors:

| | | |
|---|---|---|
| S. R. Inch---------- | $100.00 | |
| J. William Knight---------- | 100.00 | |
| Russell L. Tracy---------- | 50.00 | |
| William R. Wallace---------- | 100.00 | |
| Thomas Kearns---------- | 100.00 | |
| Herbert S. Auerbach---------- | 100.00 | |
| E.O.Howard---------- | 100.00 | |
| Lafayette Honchett---------- | 100.00 | |
| L.S.Cates---------- | 100.00 | |
| William W. Armstrong---------- | 100.00 | |
| John C. Howard---------- | 100.00 | |
| J.M. and M.S.Browning---------- | 300.00 | |
| G.M.Whitmore---------- | 150.00 | |
| Stephen T. Mather---------- | 500.00 | |
| Heber J. Grant---------- | 250.00 | |
| William H. McIntyre---------- | 100.00 | |
| Church of Jesus Christ of Latter-day Saints---- | 1000.00 | |
| Union Pacific System---------- | 1000.00 | $4,250.00 |
| Interest accrued to Mch.10,1925---------- | | 293.11 |
| | | $4,543.11 |

20

COPY

KAIBAB

Moccasin, Arizona, June 9, 1924

MEMORANDUM

At a conference held upon the ground at Pipe Springs, located on the Kaibab Indian Reservation, at which representatives of the National Park Service, of the cattlemen's organization, of Mr. Heaton (claimant of the Pipe Springs), Mr. Jones of the Cedar City, Dr. Farrow and Mr. Reed were present.

The object of this meeting was to arrive at a satisfactory arrangement concerning the use of water from Pipe Springs by the aforesaid association of cattlemen. It was the consensus of opinion and practically agreed upon by those present as being a fair and just solution of the situation that the cattlemen had the acknowledgement of all parties present to an ownership of one-third the waters from these springs and since a permit exists over the adjacent portion of the Indian reserve that they have the right to conduct water to and upon any portion of the land covered by permit during the life of that permit and at the expiration of the permit, if said permit is not renewed, to conduct the water off the reservation.

Frank Pinkley
Supt. Southeastern Monuments

E. A. Farrow
Supt.

Charles C. Heaton, Cattleman

W. H. Reed, Chief Engineer

Randall L. Jones, Citizen

07-15-1969: memorandum to regional director, southwest region from general superintendent, southern utah regarding water matt

Southern Utah Group
1552 West 200 North
P. O. Box 749
Cedar City, Utah 84720

L54

July 15, 1969

Memorandum

To: Regional Director, Southwest Region

From: General Superintendent, Southern Utah Group

Subject: Water Matters, Pipe Spring

Enclosed is a copy of a memorandum to me from Supervisory Historian Geerdes, Pipe Spring. I believe it deserves careful reading and special consideration.

Historian Geerdes has covered facts pertinent to the ownership of the Pipe Spring water that may shed new light on the picture. Please have Bill Fields review them, and, perhaps refer them to Field Solicitor Manges for consideration.

At this time there is no reason to believe that the Kaibab-Paiute Tribe will challenge the present water agreement. However, there is an indication that the Local Council may be pushed by the IDDA (Indian Development District of Arizona), an organization which apparently is not too greatly concerned with previous "white man" agreements.

SIGNED

Karl T. Gilbert

In duplicate

Enclosure

cc:
Supv. Historian Geerdes, Pipe Spring

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Pipe Spring National Monument
Moccasin, Arizona 86022

IN REPLY REFER TO:

L54

July 3, 1969

Memorandum

To: General Superintendent, Southern Utah Group

From: Supervisory Historian, Pipe Spring

Subject: Some general thoughts on water distribution, Pipe Spring

Your visit of yesterday in company with Joe Davis, Jim Schaack of the Southern Utah Group staff, and Bill Fields, Civil Engineer, Southwest Regional Office, on the above subject was very helpful in clarifying the issue involved.

I have spent the morning reading everything in our files on the matter. After reading the files and reflecting on the general situation which was covered yesterday, my thinking has solidified a little. I would like to share some tentative thoughts on the matter.

I followed Bill Fields thinking on all matters except the basic jurisdiction. Here he confused me and I think I have found the reason why. In the exchange of letters between Acting Director Demaray and Joseph E. Taylor, National Park Service Attorney of Land Acquisitions and Regulations, in April and May of 1937, the problems of such ownership comes to light. This exchange of letters was based on the previous search of the General Land Office records as recorded in the memorandum of May 23, 1923 from William Spry, then Commissioner of the General Land Office. The records are very sketchy, and show that Daniel Seegmiller tried to file on the land with "Valentine Scrip"; his application being duly refused. Significantly, the memorandum reports that "The tract books of this Office fail to show any filings or entries covering Sec. 17, T. 40 N., R4W, other than the application filed by Charles C. Heaton and the Pipe Spring LS Co." In Demaray's letter to Joseph Taylor, May 21, 1937, he mentions Charles C. Heaton's attempt to file on the land, claiming Seegmiller's assignment of scrip.

The whole has fallen into place for me now. The truth is that the original ownership of the 40 acres of Pipe Spring was first included in the 140 acres claimed by Dr. Whitmore. After Whitmore was killed, the Mormon Church purchased the area from his widow, and soon the Windsor Castle Stock Growing Company was organized, with Brigham Young owning stock and the LDS Church having the major interests. This organization was duly incorporated under the laws of Utah. The records

of this ownership would not be in the General Land Office records, but in the County Recorder's office of proper jurisdiction at that time, since the area was then considered in Utah. If this claim was not legitimate, then every piece of land occupied in Utah prior to general surveys for filing under the Homestead Act (1862) and the Deseret Land Act (1877), are invalid. The use of the area at that time and continuous occupation thereafter would qualify either the provision of the Homestead, Preemption, or Deseret Land Act. The Powell Survey party had visited Pipe Spring and left original survey notes which are now in our possession. An actual survey was made by John M. MacFarlane on December 3rd and 4th of 1886. This was done prior to the sale of Pipe Spring by the LDS Church to private owners. This divesting of Church property was going on all over Utah at the time as the great issues of the Federal Government's enforcement of Anti-polygamy laws were being fought out. The Church was forced to give up most of its incorporated property. The LDS Church sold the Pipe Spring property to B.F. Saunders of Salt Lake City in 1888.

Now enters the "character" Daniel Seegmiller, who tried to get in on the act by going to the U. S. Land Office and filing on the Pipe Spring property using the Valentine Scrip. Seegmiller might have gotten away with this were it not for the fact that the Scrip became valid only after a General Land Office Survey, which did not take place until 1916. However, the true legal owner at this time was, and remained, B. F. Saunders. Edwin Dilworth Wooley, Utah Territorial Manager and President of the Kanab Stake of the LDS Church, was the last manager of Pipe Spring. When B. F. Saunders bought the Pipe Spring area, he continued to hire E. D. Wooley as the ranch foreman.

Wooley continued to reside at Pipe Spring. Dan Seegmiller was the brother-in-law of Wooley, both having married daughters of Erastus Snow. Dan was placed in charge of the Church herd at House Rock Valley (horses). Somewhere in this lonely area and out on the Arizona Strip he decided to pull a smooth little deal by filing, in some manner or another, on various water locations in the Arizona Strip. While supposedly continuing to work for B. F. Saunders, and helping his brother-in-law at Pipe Spring occasionally, Seegmiller thought he could pull the rug out from B. F. Saunders' legitimate claim by filing through the General Land Office as if no previous title or use existed.

Last Fall, while taking a GSA vehicle back to Salt Lake City, I stopped in and spent several hours with Judge Dilworth Wooley, son of E. D. Wooley, the last foreman for the Church operation at Pipe Spring, and the first foreman for the private owners under B. F. Saunders. Judge Wooley was a small boy in the 1880's and we have

a picture of him holding a lariat in front of the Fort. He recalled many incidents about his boyhood at Pipe Spring. He recalled taking a trip with his father and Uncle Dan (Seegmiller) to Salt Lake to meet the new owner, B. F. Saunders. Judge Wooley frankly termed his Uncle Dan a "rascal", and said that he disliked him very much. This doesn't mean or prove underhanded intentions in taking the Pipe Spring land away from the legitimate purchaser, but it is pretty trustworthy evidence about the character of Seegmiller since Judge Wooley of Manti, Utah is a highly respected individual.

The intentions of Seegmiller become apparent in the fact that after filing the Valentine Scrip in an attempt to take the property away from B. F. Saunders, he succeeded in confusing the title issue enough so that Saunders was forced to pay Seegmiller off in lieu of a Quit Claim Deed, (Daniel and Artemesia Snow Seegmiller to Benjamin F. Saunders, dated July 23, 1895). The reason was clear: Saunders was trying to sell his property and he wanted a clear title. In effect, Saunders had bought the Pipe Spring property twice; the first being the purchase of the only legitimate claim title of the Church Corporation in 1888, and the second to buy Seegmiller off his back in 1895. When Saunders and his wife Tracy gave David Bullock and Lehi Jones of Cedar City a Quit Claim Deed, dated December 2, 1895, they had a legitimate, complete, unclouded title with all rights and appurtenances thereunto (including water).

Under Arizona law it was not necessary for a land owner to file for water rights if the source and the flow were both confined to his boundaries. He owned all the water except for any prior valid claim through "the beneficial use and prior rights clause" of the Arizona Water Code.

Bullock and Jones conveyed the title of the Pipe Spring holding to the Pipe Spring Cattle Company, with headquarters at Salt Lake City, on May 24th, 1897. Presumably Bullock and Jones were the chief stockholders of this Company, for on November 3, 1903, the title to Pipe Spring was conveyed by them to A. D. Findlay. On the 13th of April, 1907 the Pipe Springs Land and Livestock Company was incorporated by filing papers with the Clerk of Kane County (Kanab). Findlay was apparently the chief stockholder of this new Company.

On January 2, 1909 Jonathon Heaton and sons, (William, Israel, Ira, Junius, Jonathon, Jr., Charles Heaton, and Fred) purchased the Pipe Spring tracts, together with water rights, from A. D. Findlay. Findlay held a mortgage on the property. Even though the mortgage was finally paid, nothing was done about getting the title signed over from A. D. Findlay to the Heatons.

On October 16, 1907, part of the Township which included Section 17, surrounding Pipe Spring, was withdrawn from the Public Domain for use of the Kaibab Indians. Any such withdrawal of public land could in no way alienate the rights or privileges of existing private owners. The Pipe Spring owners had made continuous use of Pipe Spring buildings, springs, corrals, etc., since the early 1870's. The withdrawal encompassed, but did not include, the Pipe Spring land. This 40 acres had been private land for about 40 years. In addition to being privately owned, Pipe Spring had been a public watering place for travelers and cattle since the same period. In order not to block cattlemen from coming in off the open range and watering their cattle, all land within 1/4 mile of Pipe Spring was declared a Public Water Reserve in 1916. This executive order had a positive and negative aspect. Positively, it acknowledged the continuous "beneficial" use of area cattlemen and their subsequent right to have free access to the water at the spring. Negatively, it could do and did nothing to impede the existing private ownership that had been established since the early 1870's. In addition, it implied negatively that the Indians did not have any "prior" or "exclusive" right to the water, per se,; that is, as Indians above and beyond the public usage. Nor could the Indians prevent access to the water. This order was adjusted by the Interior Secretary on May 31, 1922 to include the entire SE½ SE¼ of Sec. 17. This added another 40 acres to the area, and included the so-called "Findlay Ponds", just west of the Monument. Previously, on July 17, 1917, the entire Township was withdrawn for the Kaibab Indians. This additional withdrawal could not alienate private lands such as Pipe Spring, or the Public Water Reserve No. 34 either, since the existence to this was confirmed both before and after the 1917 withdrawal..

In the meanwhile, the Heatons became alarmed over their property rights and their water rights. Although they had not gotten a title from A. D. Findlay after their mortgage was paid they had a clear right to an unclouded title. Here the Valentine Scrip entered in to cloud the issue. Instead of first of all pressing for a deed from Findlay, Charles Heaton, acting for his brothers, brought out the Valentine Scrip that had been handed down from Seegmiller to Saunders to Bullock and Jones to Findlay, and then to the Heatons. Although Seegmiller's manipulation of the Scrip was for personal gain, the Scrip had been purchased from owner to owner in good faith, alongwith the proper deed, as a sort of "you can have this, too" proposition. Although the long land use, with proper recorded titles in the County seat which established unquestionable private ownership by any State, Territory, or Federal pre-emption, Homestead, or Deseret Land Claim Act was enough validity for any claim, the Valentine Scrip could be legitimately used once a General Land Survey had been completed. The General Land Survey

was completed for the area and Township finally in 1916 and filed in the local Land Office on September 8, 1917. Undoubtedly Findlay had passed along the Scrip to the Heatons when the sale was made, but kept the deeds until such time as the mortgage was paid.

It is understandable then, that the Heaton's used the tool in hand, and filed on their own land with the Valentine Scrip. Charles filed an application on the SE¼ SE¼, Sec. 17 of said Township, the 40 acres of Pipe Spring National Monument. His application was turned down because it conflicted with the "withdrawals" and "other reasons". The "other reasons" undoubtedly was the obvious fact that with the buildings and improvements on the land, someone must have acquired ownership, if by nothing else as being squatters. But the Heatons were not squatters. Also, the rejection stated that "evidence of assignment from Daniel Seegmiller to the applicants was not sufficient". Seegmiller's maneuverings now came home to roost on the innocent.

Now we have the absurdity that the Heatons were not granted title to their legitimate claim to Pipe Spring area because somebody (themselves) already owned it. Several months after his Valentine Scrip application to the Land Office had been filed in March 3, 1920, Charles Heaton tried to do what strategically he should have done first. In a letter, dated November 20, 1920 to his brother, Israel, Charles wrote, "I wish you would at once see A. D. Findlay and have a Quit Claim Deed made out to Pipe Spring Land and Livestock Company from him, and one made out to me from him from Pipe Spring Land and Livestock Company." Just to see what was uppermost on his mind he added, "I would also insert in the deed the transfer of all water on said described land."

One can understand how the Heaton's tried to establish their legitimate claim to Pipe Spring, first through the General Land Office. One need only be aware of the role that the Federal Government had then recently played in Utah by forcing itself over local custom, Territorial, and State law to understand this psychology. The Heatons had an unrefutable claim, or conversely, A. D. Findlay had, who held the deed duly registered in Mohave County seat at Kingman. By the time Charles Heaton came to secure the deeds from Findlay, the Indian Reservation withdrawals had been completed and the General Land Office could duck the issue by saying it was now a matter for the Commissioner of Indian Affairs. There is no question that Findlay had, and the Heatons were entitled to, a full and legal title and deed. But, they had neglected to demand a deed from Findlay, and Kingman was 300 miles away. They first tried the Valentine Scrip. If no one had ever lived at Pipe Spring, and the area was still public land, then it was duly withdrawn under the order establishing the reservation in 1917. If the land had been occupied, developments made, then the Heatons could not have gotten

title from the General Land Office because somebody already owned the land. Since the Reservation withdrawal did not affect such ownership, they would be prevented from acquiring ownership because somebody already owned the area. One can understand Charles' frame of mind when Steve Mather drove up the road, stopped at Pipe Spring, fell in love with the place, and bought it for a mere $5,000. Charles executed a Quit Claim Deed to the United States on April 28, 1924, and withdrew his application. Warren Harding issued the Proclamation making Pipe Spring a National Monument on May 31, 1923. Almost a year before the land was actually deeded to the Government.

Perhaps there was "reason enough in the will of Caesar" to over-ride this "minor" matter, since the Proclamation created its own legality, but justice was not done to the Heatons and the National Park Service inherited needlessly a clouded title. A clouded title then, means a clouded water situation today.

## HISTORY OF THE WATER DIVISION AT PIPE SPRING

### The Cattlemen"s Agreement (1924)

The first agreement over water at Pipe Spring was the agreement between the National Park Service, the Indian Service, and the local cattlemen, that it was a "fair and just solution of the situation that the cattlemen had the acknowledgement of all parties present to an ownership of one-third the waters from these springs". This agreement was reached in a conference at Pipe Spring on June 9, 1924.

### Department of the Interior Solicitor's Opinion (1931)

In May of 1931 the Department Solicitor gave an opinion on water division which arose out of the question of the Custodian using water for personal purposes in lieu of a salary.

The Solicitor's opinion confined itself to the above narrow issue. It decided against the right of the Custodian to use water for his own purposes. It made no attempt to consider water rights, per se. It went no farther than the Presidential Proclamation for its basic authority, refusing to consider in this connection either the broader issue of acquired rights by the Park Service or possible inherent rights of the Indian Service.

### The Indian Service Gradually reinterprets the Solicitor's opinion (1931-1933)

The Solicitor's opinion narrowly confined itself to the question of the Custodian using the water for personal purposes. This was disallowed.

The Indian Service soon "upped the ante". In a reply to Senator Reed Smoot, Commissioner of Indian Affairs C. J. Rhodes denied the right of the Park Service to use the Pipe Spring water for "beautification of the grounds of Pipe Spring".

He interpreted the Presidential Proclamation as proof "that the Indians were given a priority in use of the water." This was a considerable "upping of the ante", and he stated the Indian Service position in concluding that he "must insist upon the use of the water from the spring for the Indian Lands".

In reply to this new interpretation, Acting Director Arno B. Cammerer of the Park Service wrote the Commissioner of Indian Affairs that the Solicitor's interpretation concerned "only the waters heretofore used by the Custodian of Pipe Spring National Monument for personal farming operations." He contended that the right to use the water for public purposes or Monument purposes was not in issue. To this Assistant Commissioner of Indian Affairs J. Henry Scattergood replied in the extreme negative. His view of the ultimate ownership of all of Pipe Spring water was made clear in the conclusion of his reply that the Indian Service could not "consistently make any further concession of water rights of these Indians". In other words, the Indians owned all the water, but concessions had been made to cattlemen and to the Park Service for minimal water needs.

The Indian Service pushed the Park Service right back to the wall on the matter and National Park Service Director Horace Albright sent the following telegram to Leonard Heaton, Acting Custodian. The telegram was dated February 24, 1933 and read: "Indian Service demands early transfer of surplus water of Pipe Spring to Indians. Please make arrangements for this immediately."

To this capitulation Boss Frank Pinkley commented in a letter to Leonard Heaton, dated March 11, 1933, as follows:

> "I am of the opinion that the State laws covering the usage and appropriation of water should govern in that case at Pipe Spring(s) and so wrote the Washington Office when the matter was under discussion. I was overruled in it and we can do nothing but follow out the orders of our superiors. We will deliver the water to the Indians and then try to get the Director to come to Pipe and go into the legality of the original usage and the rights we acquired when we acquired the title."

Pinkley, who was close to the situation, hit the nail right on the head. The issue of the Park Service's full and complete rights, long established before any reservation was contemplated or any Indian use made, was not brought in and the Indian Service go away with claiming basically all the water with "concessions" on a minimal basis to the Park Service and cattlemen.

Division of Pipe Spring Water into thirds by the Secretary of Interior's Office (1933)

Apparently Albright had some serious second thoughts on the developments. In a cautious minimal statement of a great problem, he wrote the Commissioner of Indian Affairs on April 27, 1933 that he was now "fearful, however, that the matter of having enough water to the National Park Service for the preservation of the vegetation and trees at the Monument headquarters is not sufficiently covered to avoid future misunderstandings and I feel that your Service would not wish any unnecessary action taken that would cause the Monument area, which is now planted, to go back to a barren desert."

As a result of this serious concern Assistant Secretary Oscar L. Chapman issued the regulations of November 2, 1933 which divided the water in equal thirds between the Stockmen, Indians, and Park Service.

This is the basic agreement that the area has been operating under since. It answered the fears about the Monument becoming a desert at that time; it did not answer the basic question of who really owned Pipe Spring water. The Indian Service continued to claim this basic right and does so at the present time.

Developments from the 1933 division to the recent present

Although the tri-party division at least minimally assured the Park Service that the area would not presently become a desert, it left the basic question of residual ownership hanging in the air. An excellent comprehensive and penetrating study of the entire situation was made by Robert H. Rose, Assistant Superintendent, Southwestern Monuments, on September 19, 1933.

On page 23 of this report, Rose gets to the crux of the matter. He concludes that the transferring of land from private citizens to the United States binds the government to respect, under Arizona Water Law, all rights of previous beneficial usage. Rose comes to the point as follows: "It seems that Cattlemen have a right to one-third of the water and the National Park Service the remainder. If there is some surplus, then the Indian Service could use it for the Indians as stated in the Presidential Proclamation."

In the various exchange of letters between Associate Park Service Director A. E. Demaray and "Boss" Frank Pinkley, the Southwest Monument Superintendent, to Joseph Taylor, Attorney National Park Service, Branch of Land Acquisition and Regulation, over possible filing of water rights for the Park Service in April and May of 1937, the issue came into blurred perspective once again. The Park Service was apparently having serious after-thoughts on the water situation and sought Mr. Taylor's advice on whether or not to file on its own water at Pipe Spring.

It is extremely unfortunate that the Park Service did not once and for all really do what it was fully legally entitled to do and establish its legal proprietary claim that it acquired from the long succession of private ownership.

The Indian Service had "upped their ante" again and were claiming all rights of water under the ruling of Winters vs. the United States which said in effect, that the Indians owned all the water not in private ownership prior to the establishment of the reservation. This exchange of letters again went no further than the failure of Seegmiller to obtain title from the United States and assumed pathetically that the Park Service had no real land claim prior to 1923. In Taylor's April 7 reply to Demaray's letter of March 26 (1933), this lack of elementary knowledge of Pipe Spring history and physical characteristics was appalling. Taylor states that "the information available to me upon the subject out here is 'not definite'." Further he states that they are not "familiar with the physical characteristics of this area". Perhaps this honest admission accounts for Taylor's being "at a loss to account for the reference to private holdings. Assuming, for the purpose of discussion, that there were private holdings such as to include the area around the springs, I can't see how the creation of an Indian Reservation farther down could affect rights acquired in the waters of the springs."

This was precisely the situation. Taylor went on to say that if such private holdings existed and had existed then the rights acquired would be under Arizona law and not Federal law. The Park Service would then own all the water, subject to such prior beneficial usage (cattlemen) that State law allowed. The Indian Service would "have to acquire its rights just like anyone else would have to, and the decision of Winters vs. the United States would not be applicable under the facts."

Demaray's reply to this was a dreary recitation of the Seegmiller affair and Charles Heaton's failure to get ownership from the United States by using the Valentine Scrip. It would appear that if there

were no professionals available to the Park Service to get this matter straightened out, that at least the Associate Director would have a better resource to the history of Pipe Spring than to say in reply that "as a matter of local reputation, the tract (Pipe Spring) was owned and occupied by persons claiming title for years."

Developments in relation to Federal claims to Colorado River Water (1957)

The next burst of official energy on the Pipe Spring water came in connection with the division of the Colorado River water between Arizona and California in 1957 and 1958. In connection with establishing legal water rights for each of the National Park areas in Arizona that could possibly claim a share of the Colorado River Drainage, it appears that all or most of the remaining legal documents heretofore neglected in the Mohave County Recorder's office were properly obtained. In a Certificate to accompany the Pipe Spring Docket in the Arizona vs. California controversy on Colorado River waters dated April 29, 1958, Assistant Director Price of the National Park Service testified that the following documents on establishing the Pipe Spring water ;claim were full, true, and literal examplification of the following documents, copies of which are now in the Pipe Spring files:

1. Letter of acceptance for the United States by the Secretary of the Interior, dated October 23, 1924.

2. Quit Claim Deed of April 28, 1924, to the United States from Charles C. Heaton.

3. Recorder's Certificate dated March 17, 1921.

4. Copy of County record of Quit Claim Deed of December 18, 1920, to Charles Heaton from Pipe Springs Land and Livestock Company.

5. Copy of County record of Quit Claim Deed of December 31, 1920, to Pipe Spring Land and Livestock Company from A. D. and S. E. Findlay.

6. Recorder's Certificate of October 28, 1920.

7. Quit Claim Deed of July 23, 1895, to Benjamin F. Saunders from Daniel Seegmiller and Artimesia S. Seegmiller.

8. Quit Claim Deed of December 2, 1895, to David Bullock and Lehi Jones from Benjamin F. and Tracy E. Saunders.

9. Deed of November 3, 1902, to A. D. Findlay from David Bullock, Alice E. Bullock, Lehi W. Jones, and Henrietta L. Jones.

10. Third Supplemental Abstract.

11. Withdrawal of pending Application No. Phoenix 94807 by Charles Heaton, dated April 28, 1924.

12. County Record of Quit Claim Deed of April 28, 1924, to the United States from Charles C. Heaton.

13. Second Supplemental abstract.

So it appears that in connection with a purely secondary matter, as far as Pipe Spring was concerned, all the necessary legal documentation to establish exclusive rights of ownership, along with water rights, were finally obtained. Nothing was done, however, to contest the basic problem of who really legally owned the Pipe Spring water since the tri-party agreement was apparently working sufficiently well and there did not seem to be any reason to rock the boat.

The Recent Plan of the Kaibab-Paiute Tribe for Development near Pipe Spring.

The present water situation has been made acute by the plans of the Kaibab-Paiute tribe to construct a tribal office building in calendar 1969 opposite Pipe Spring. In addition, before the summer of 1970, a 20-unit motel, curio shop, museum, general store, 10-pad trailer court, and campground are planned for construction. The first consideration of the Tribe was to get the water from the culinary system of Pipe Spring.

More recently, July 7, 1969 Bill Tom, Tribal Chairman, expressed a strong willingness to consider the construction of a well.

Some Tentative Conslusions on the Pipe Spring Water Situation.

Without stirring up any controversy, I firmly believe that it is the Park Service's duty to get the title situation straightened out so that it is established beyond a doubt that our claim to the area can be legally undisputed prior to the Reservation, and therefore exclusive as to water rights, except for the one-third legally owed to the ranchers. This title search and establishment need involve only ourselves. We owe it to any future controversy and to the integrity of the history of the area to get this shadow eliminated. This could be done by Pipe Spring personnel going to the County Seat at Kingman and getting and recording the necessary data.

We should, above all, honor the water arrangement with the ranchers and assure them of our every intention to do so. They are our strongest allies. Their established beneficial usage to the water, which is recognized by Arizona law, is only really valid against the legitimate heirs of the private title of the Pipe Spring property. If we have a solid undisputed title and water rights, then they do also since their rights are but a lien or obligation against ours. They are and will be our staunch friendly allies. Besides the right established under Arizona law, there is the 1924 agreement giving them one-third of the water, subsequently honored by the tri-party arrangement of 1933.

We should assure the Indians that we do not want to go back in any way on the one-third division that was made in 1933. However, it is obvious from an amateur appraisal of the situation that the eventual needs of the new development far exceeds the one-third allowed them. At that time then Pipe Spring also would be hard pressed to maintain its water needs and its oasis-like character with even a close partition of water. This critical usage would come during the summer months, of course. In short, there is simply not enough water for our growing needs and their new plans.

Also, we are already furnishing them their share of the water which, as good neighbors, we can adjust to greater quantity or lesser quantity to keep the stock tank full. It is seriously questioned whether the new development, as such, calls for any water at all other than that which they may wish to divert from the prior use of the stock watering tank. This is in no way a "prior" use. If we succumb to this new usage now, we do so at serious peril of the integrity of the National Park area. In addition, the problem may become acute when they utilize their third to the full, and then some aggressive type in the BIA or IDDA decide to go after a larger share. The failure to establish our real lega title puts us in a precarious position here.

SIGNED

Raymond J. Geerdes

STATE OF ARIZONA. :
: SS.
COUNTY OF MOHAVE. :

I, MARY E. CARROW, Recorder of the County of Mohave, State of Arizona, do hereby certify that I have compared the foregoing copy of

QUIT CLAIM DEED:

CHARLES C. HEATON, to UNITED STATES OF AMERICA. Dated April 28th- A.D.1924 Recorded September 29th- A.D.1924 in Book "33" of Deeds at page "52" Records of Mohave County, Arizona.

And of the endorsement thereupon with the original records of the same on file in this office, and that the same are correct transcripts therefrom and of the whole of said original records.

WITNESS my hand and the seal of said office this 16th day of June, A.D. 1937.

(Sgd.) Mary E. Carrow.
Mary E. Carrow, Recorder
Mohave County, State of Arizona.

(SEAL)

Pipe Springs 16

16

10-23-1924: letter to the director of the national park service from secretary regarding quit claim deed

Pipe Springs

THE SECRETARY OF THE INTERIOR
WASHINGTON OCT 23 1924

The Director of the

National Park Service.

My dear Mr. Director:

Under date of October 15, 1924, you forwarded a quit-claim deed executed by Charles C. Heaton in favor of the United States, covering the SE.¼ SE.¼, Sec. 17, T. 40 N., R. 4 W., G. & S. R. M., within the limits of the Pipe Springs National Monument, Arizona. The funds for the purchase of the interest of Mr. Heaton in the tract were raised by donation.

The deed is hereby accepted, under the authority conferred by the act of June 5, 1920 (41 Stat., 917). The deed and abstract of title are herewith.

The Commissioner of the General Land Office has been directed to return to Mr. Heaton, Moccasin, Arizona, Valentine scrip certificate No. E-13 (Prescott No. 3), which Daniel Seegmiller, on May 3, 1888, applied to locate upon the tract, then unsurveyed.

Very truly yours,

Hubert Work

Secretary.

Inclosure No. 10510

7

Withdrawal of Pending Application.

A. 484

Phoenix 04807 April 28-1924.

I hereby withdraw the application filed in the Prescott, Arizona, land office on May 3, 1888, by Daniel Seegmiller to locate Valentine scrip certificate No. E-13 (Prescott No.3), and the application of myself and the Pipe Springs Land and Live Stock Company to conform said location to the SE. 1/4 SE. 1/4, Sec 17, T. 40 N., R. 4 W., G. & S.R.M.

Charles Heaton

Witnesses to signature:

Jno. W. Glazier
Zona Seegmiller,

Filed and Recorded at Request of Heber J. Grant September 29th A.D.1924, at 9 O'clock A.M. in Book 16 of Miscellaneous Records at page 12 Records of Mohave County, Arizona.

W.H.Welsh
County Recorder.

By Mary Carrow,
Deputy Recorder.

8

Quit-Claim Deed.

For and in consideration of the sum of four thousand dollars, the receipt of which is hereby acknowledged, I quit-claim to the United States of America all my interest in the following tract of real estate: The southeast quarter of the southeast quarter of section seventeen, township forty north, range four west, Gila and Salt River Base and Meridian.




Charles C Heaton

State of ~~Arizona~~ Utah, :
: ss.
County of Kane :

Before me John W. Glazier
a Notary Public
on this day personally appeared Charles C. Heaton, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.

Given under my hand and seal of office this 28th day of April A. D. 1924.

Jno W Glazier
Notary Public

2

EXEMPT
COPIED

Filed and Recorded at Request of
A. W. K. Grant
September 29 A. D. 1911
~~minutes~~ 9 o'clock A. M.
Book 33 of Deeds.
Pages 522
Records of Mohave County, Arizona.
A. W. Polk
County Recorder.
By Mary Cannon
Deputy Recorder.

'E SPRING NATIONAL MONUMEN
(ARIZONA)

## By the President of the United States of America

# A Proclamation

WHEREAS, there is in northwestern Arizona on the road between Zion National Park and the North Rim of the Grand Canyon National Park a spring, known as Pipe Spring, which affords the only water along the road between Hurricane, Utah, and Fredonia, Arizona, a distance of sixty-two miles; and

WHEREAS, a settlement was made at Pipe Spring in 1863 and there was built a large dwelling place, called "Windsor Castle," with portholes in its walls, which was used as a place of refuge from hostile Indians by the early settlers, and it was also the first station of the Deseret Telegraph in Arizona; and

WHEREAS, it appears that the public good would be promoted by reserving the land on which Pipe Spring and the early dwelling place are located as a National Monument, with as much land as may be necessary for the proper protection thereof, to serve as a memorial of western pioneer life,

NOW, THEREFORE, I, Warren G. Harding, President of the United States of America, by virtue of the power in me vested by section two of the act of Congress entitled, "An Act for the Preservation of American Antiquities," approved June 8, 1906 (34 Stat., 225) do proclaim that there is hereby reserved, subject to all prior valid claims, and set apart as a National Monument to be known as the Pipe Spring National Monument the lands shown upon the diagram hereto annexed and made a part hereof and more particularly described as follows:

The southeast quarter of the southeast quarter of section seventeen, township forty north, range four west, Gila and Salt River Base and Meridian.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any of the features or objects included within the boundaries of this Monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service under the direction of the Secretary of the Interior, shall have the supervision, management and control of this Monument, as provided in the act of Congress entitled, "An Act to establish a National Park Service, and for other purposes," approved August 25, 1916 (39 Stat., 535), as amended June 2, 1920 (41 Stat., 732): Provided, that in the administration of this Monument, the Indians of the Kaibab Reservation, shall have the privilege of utilizing waters from Pipe Spring for irrigation, stock watering and other purposes, under regulations to be prescribed by the Secretary of the Interior.

**In Witness Whereof,** I have hereunto set my hand and caused the seal of the United States to be affixed.

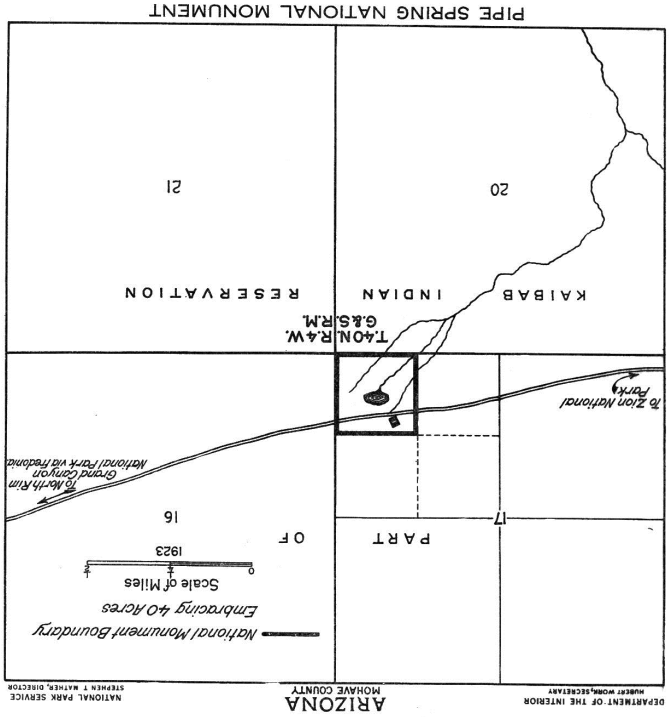
DONE at the City of Washington this thirty-first day of May, in the year of our Lord one thousand nine hundred and twenty-three, [SEAL.] and of the Independence of the United States of America the one hundred and forty-seventh.

WARREN G HARDING

By the President:
CHARLES E. HUGHES
*Secretary of State.*

[No. 1663.]

00-00-0000: topographic map of part of kaibab indian reservation



D-1

COPY

DEPARTMENT OF THE INTERIOR

Commissioner of the General Land Office

Washington

May 23, 1923.

MEMORANDUM FOR MR. CAMMERER.

I am returning herewith the copy of a letter to Mr. Mather from Mr. Heber J. Grant, President of the Church of Jesus Christ of Latter Day Saints, which you transmitted May 18, 1923, relative to the Pipe Springs property in Arizona.

The records of this office show that on May 3, 1888, Daniel Seegmiller, as assignee, filed application for unsurveyed land to be located with Certificate E-13, issued to Thomas B. Valentine under the act of April 5, 1872 (17 Stat., 649), known as "Valentine scrip."

Part of the twp. was withdrawn by Secretary, October 16, 1907, for use of Kaibab and other Indians, including this land,

All land within $\frac{1}{4}$ mile of Pipe Spring, located in Sec. 17, in this twp., was withdrawn by Executive Order April 17, 1916; Public Water Reserve No. 34. Adjusted by interpretation by Secretary May 31, 1922-494, to the $S\frac{1}{2}$ $SE\frac{1}{4}$ said Sec. 17.

Twp. withdrawn by Executive Order July 17, 1917, for Kaibab Indians.

Plat of twp. approved February 15, 1916, filed in the local office September 8, 1917.

March 3, 1920, Chas. C. Heaton and Pipe Spring L. S. Co. filed application to locate the Valentine scrip on the $SE\frac{1}{4}$ $SE\frac{1}{4}$ Sec. 17 in said township.

Letter "K" JWB April 15, 1920, held the application for rejection, for conflict with the withdrawals and for other reasons. The evidence of assignment from Daniel Seegmiller to the applicants was not sufficient.

December 10, 1920, the record was transmitted to the Secretary on appeal, and has not since been returned.

The tract books of this office fail to show any filings or entries covering Sec. 17, T. 40 N., R. 4 W., Arizona, other than the application filed by Chas. C. Heaton and Pipe Spring L. S. Co.

For your information, I may state that the Jonathan Heaton mentioned in your memorandum has no direct interest in the Pipe Springs property in Arizona, within the Kaibab Indian Reservation, but is the father of Charles C., Fred C., Christopher C., Edward and Sterling Heaton, who asked that certain lands described below be eliminated from the Kaibab Indian Reservation, which was temporarily withdrawn by the Department October 16, 1907, and permanently established by Executive Order No. 2667, dated July 17, 1917.

T. 40 N., R 4 W., Sec. 4, $N\frac{1}{2}$ $NW\frac{1}{4}$,
Sec. 5, $N\frac{1}{2}$ $NE\frac{1}{4}$, $N\frac{1}{2}$ $NW\frac{1}{4}$,

T. 41 N., R 5 W., Sec. 35, $SE\frac{1}{4}$,
Sec. 36, $SW\frac{1}{4}$ $SE\frac{1}{4}$.

T. 41 N., R 4 W., Sec. 28, $SW\frac{1}{4}$ $SE\frac{1}{4}$, $S\frac{1}{2}$ $SW\frac{1}{4}$, $NW\frac{1}{4}$ $SW\frac{1}{4}$,
Sec. 29, $S\frac{1}{2}$, $S\frac{1}{2}$ $N\frac{1}{2}$,
Sec. 30, $SE\frac{1}{4}$,
Sec. 31, $NE\frac{1}{4}$, $S\frac{1}{2}$,
Sec. 32, all,
Sec. 33, $W\frac{1}{2}$ $NE\frac{1}{4}$, $NW\frac{1}{4}$ $SE\frac{1}{4}$, $W\frac{1}{2}$.

The Executive Order in question contained the proviso; "That this

order shall not affect any existing legal rights of any person to any of the lands described therein."

This office having held that such of the claimants as were qualified to make entry at the date of the first withdrawal and had maintained settlement since that time and had the right to make homestead entry on the lands settled upon prior to the original withdrawal of 1907, the following entries were made:

048707, by Charles C. Heaton, covering the SW¼ NE¼, N½ SE¼, NE¼ SW¼ Sec. 31, T. 41 N., R. 4 W., on which final certificate issued February 16, 1920.

048708, by Lucy E. Heaton for E½ NE¼ Sec. 31, S½ NW¼, Sec. 32, T. 41 N., R 4 W., on which patent No. 891976 was issued January 2, 1923.

048709, by Fred C. Heaton, for N½ SW¼, NW¼ SW¼, SW¼ SW¼, Sec. 32, T. 41 N., R 4 W., on which patent No. 891977 was issued January 2, 1923.

A protest having been filed by the Commissioner of Indian Affairs against the allowance of 8 or 10 acres within the entry of Charles C. Heaton, cultivation by the Indians for many years being claimed, it was held that patent could be issued to Charles C. Heaton provided he filed an agreement that the application and final certificate be amended by excepting from the N½ SE¼ Sec. 31, T. 41 N., R. 4 W., that part shown to have been occupied and cultivated by the Indians.

Mr. Heaton appealed from this action and the papers are now before the Department, having been sent thereto February 5, 1923.

On February 5, 1923, this office declined to make recommendation in

the matter of restoring the other lands claimed by members of the Heaton family and others, if any, in 1907, on the ground that, being in an Indian Reservation, the matter was under the control of the Commissioner of Indian Affairs, the legal rights possessed by such persons being protected by the Executive Order of withdrawal.

(signed) William Spry,
Commissioner.

12-31-1920: release and quit-claim

TO

Recorded 7th day of Feb. A.D. 1921.
at 9 A.m., Book "30" of Deeds
Pages 317 - 318 , Dated 31st day of
December, 1920.

Consideration: $1.00
Convey, remise, release and quit-claim

The following described real estate situated in the County of Mohave, and State of Arizona, to-wit:-

The tract of land known as the Pine Springs Survey as described in plat of survey made by John M. Macfarlane December 3rd and 4th, 1886, and more particularly described as follows, to-wit:-

Beginning at a pine tree at the southwest corner of said survey, and running thence north eighty rods; thence east eighty rods, thence south eighty rods, thence west eighty rods to the southwest corner, the place of beginning, which has been found to be upon official survey the southeast quarter of the southeast quarter (SE¼SE¼) of Section seventeen (17), Township forty (40) north of range four (4) west G. & S.R.M., containing forty (40) acres; together with all corrals, buildings, improvements and appurtenances thereunto appertaining.

This Deed is intended to, and does hereby, replace that certain former Deed executed by and between the parties hereto for the said above described tract, together with all improvements thereon, which former Deed has been either lost or destroyed and, apparently, never became a matter of record in the office of the County Recorder of Mohave County, Arizona.

Signatures: A. D. FINDLAY, (SEAL.)
S. E. FINDLAY, (SEAL.)

Acknowledged in Los Angeles, County State of California,
31st day of December, A.D. 1920, before a Notary Public.
(Notarial Seal.)

12-18-1920: release and quit-claim

A Corporation,

**TO**

[illegible] C. HEATON,

Recorded [illegible]th day of [illegible]. 1 921.
at 9 [illegible].m., Book "30" of Deeds,
Pages "315-316", Dated 18th day of
December, A.D. 1 920.

Consideration: $5,000.00
Release, release and quit-claim

All the right, title interest claim and demand which the said party of the first part has in and to the following described real estate situated in the County of Mohave and State of Arizona to-wit:

The tract of land known as the Pipe Springs Survey as described in plat of survey made by John H. Macfarlane December 3rd and 4th, 1886, and more particularly described as follows, to-wit: Beginning at a pine tree at the southwest corner of said survey, and running thence north eighty rods; thence east eighty rods; thence south eighty rods; thence west eighty rods to the southwest corner, the place of beginning, which has been found to be upon official survey the southeast quarter of the southeast quarter (SE¼SE¼) of Section seventeen (17), Township forty (40) north of Range four (4) west, G. & S.R.M., containing forty (40) acres; together with all corrals, buildings, improvements and appurtenances thereunto appertaining.

(Corporate Seal.)

Attest:

Christopher C. Heaton,
Secretary.

Signatures:

PIPE SPRINGS LAND & LIVE STOCK COMPANY, (SEAL.)

By Jonathan Heaton, (SEAL.)
President.

**Acknowledged in** Kane **County** State of Utah,
18th **day of** December, A.D. 1 920, **before** a Notary Public.
(NOTARIAL SEAL.)

12-20-1902: deed of the tract of land known as the pipe springs survey

KNOW ALL MEN BY THESE PRESENTS: That we, David Bulloch, and Alice B. Bulloch, his wife, and Lehi W. Jones, and Henrietta L. Jones, his wife, all of Cedar City, in the County of Iron and State of Utah, for and in consideration of Four Thousand (4,000) Dollars to us in hand paid by A. D. Findlay of Kanab in Kane County, and State aforesaid, have granted sold and conveyed, and by these present do grant, sell and convey unto the said A. D. Findlay all that certain tract of land, premises and property situated in Mohave County, Arizona Territory, to-wit:

The tract of land known as the Pipe Springs Survey as described in plat of made by John M. Macfarlane, December 3rd., and 4th., 1886, and more particularly described as follows, to-wit:

Beginning at a pine tree at the Southwest corner of said survey, and running thence North eighty rods; thence East eighty rods; thence South eighty rods; thence west eighty rods to the Southwest corner, the place of beginning, containing forty acres, be the same more or less; Together with all corralls, buildings and improvements and appurtenances thereunto appertaining. To have and to hold the above described premises, together with all and singular the rights and appurtenances thereunto in anywise belonging, unto the said A.D. Findlay, his heirs and assigns forever.

WITNESS OUR HANDS this 3rd day of November A.D. One Thousand Nine Hundred and Two.

Signed in the Presence of
LENORA C. DALLEY,
MAYHEW H. DALLEY,

DAVID BULLOCH,
ALICE B. BULLOCH,
LEHI W. JONES,
HENRIETTA L. JONES.

STATE OF UTAH, )
) ss
County of Iron, )

On this 3rd day of November A.D. 1902, before me, Lenora C. Dalley, a Notary Public in and for said Iron County, personally appeared David Bulloch and Alice B. Bulloch, his wife, and Lehi W. Jones and Henrietta L. Jones, his wife, known to me to be the persons whose names are subscribed to the foregoing instrument, who duly acknowledged to me that they, each of them, executed the same for the purposes and consideration therein expressed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at my office in Cedar City, Iron County, State of Utah, the day and year in this certificate first above written.

(NOTARIAL SEAL.) LENORA C. DALLEY,
Notary Public, Iron County, Utah.
(My Commission Expires March 20th, 1903.)

Filed and Recorded at request of A. D. Findlay, Dec. 20th., A.D. 1902, at 10 minutes past 10 o'clock A.M. in Book 6, Pages 124 - and 125, of Miscellaneous Records of Mohave County, Arizona Territory.

JNO. P. FEENY,
County Recorder.

7

QUIT-CLAIM DEED.

Benjamin F. Saunders and Tacy E. Saunders his wife, Grantors, of Salt Lake City, County of Salt Lake, Territory of Utah, hereby hereby quit-claim to David Bulloch and Lehi W. Jones of Cedar City, Iron County, Territory of Utah, Grantees, for the sum of Thirty two hundred & fifty Dollars, the following described tract of land in Mohave County, Territory of Arizona; the tract of land known as the Pipe Spring Survey as described in plat of survey made by John H. McFarlane, December 3rd., & 4th., 1886, and more particularly described as follows, to-wit:

Beginning at a Pine tree at the south west corner of said survey and running thence north eighty rods; thence east eighty rods, thence south eighty rods, thence west eighty rods to the South-west corner, the place of beginning; containing forth acres be the same more or less, together with all the corrals, buildings, improvements, and appurtenances thereunto appertaining.

Witness the hands of said Grantors this second day of December, A.D. one thousand eight hundred and ninety five.

Signed in Presence of
Geo. B. Brastow,

BENJAMIN F. SAUNDERS,
TACY E. SAUNDERS.

TERRITORY OF UTAH, )
) SS.
County of Salt Lake, )

On the second day of December A.D. one thousand eight hundred and ninety-five, personally appeared before me, Benjamin F. Saunders and Tacy E. Saunders, the signers of the above instrument, who duly acknowledged to me that they executed the same.

(Notarial Seal.)

Geo. B. Brastow,
Notary Public.

My Commission Expires
Feby. 4th., 1897.

(ENDORSED)
QUIT--CLAIM DEED.
Benjamin F. Saunders,
Tacy E. Saunders,
TO
David Bulloch,
Lehi W. Jones,

Recorded at the Request of Lehi Jones, Jan 1st., A.D. 1896, at 10 minutes past 11 o'clock A.M. Book 12 of Deeds at page 35

L. O. COWAN,
Recorder, Mohave County.

QUIT CLAIM DEED.

Daniel Seegmiller and Artimesia S. Seegmiller grantors of Uper Kanab Utah, hereby convey and quit claim to Benjamin F. Saunders, grantee, of Salt Lake City, Utah, for the sum of Two Thousand Five Hundred Dollars, the following described tract of land in Mohave County, Territory of Arizona. The tract of land known as the Pipe Spring Survey as described in plat of survey made by John M. Macfarland December 3rd., and 4th., 1886, and more particularly described as follows, to-wit:

Beginning at a pine tree at the South West Corner of said survey and running thence North eighty rods thence east eighty rods, thence South eighty rods thence West, eighty rods to the South West Corner the place of beginning, and containing forty acres of land, be the same more or less, together with all the corrals, buildings, improvements, and appurtenances thereto appertaining.

Witness, the hands of said Grantors this twenty third day of July A.D. 1895.

Signed in the Presence of
Franklin B. Woolley.

DANIEL SEEGMILLER,
ARTIMESIA SNOW SEEGMILLER.

TERRITORY OF ARIZONA, )
) ss.
County of Kane, )

On this Seventh day of September 1895 personally appeared before me Daniel Seegmiller and Arle mesia Snow Seegmiller the signors of the above instrument who duly acknowledged to me that they executed the same.

(SEAL)

Joel H. Johnson,
County Clerk, Kane Co.,
By Jos. E. Robinson,
Deputy.

(Endorsed) QUIT CLAIM DEED.

DANIEL SEEGMILLER,
ARTIMESIA SNOW SEEGMILLER,
Grantors,
TO
BENJAMIN F. SAUNDERS,
Grantee.

Dated July 23, 1895.

Recorded at Request of B.F.Saunders, Dec. 5th, A.D. 1895 at 11 A.M. Book 12 of Deeds at page "1"

L. O. Cowan,
Recorder, Mohave County.

00-00-0000: Letter to Bureau of Indian Affairs concerning cooperative agreement regarding NPS maintained water system

United States Department of the Interior

NATIONAL PARK SERVICE
Pipe Spring National Monument
HC 65 Box 5
406 N. Pipe Spring Road
Fredonia, AZ 86022-9600

L54 (PISP)

Ms. Kathy Wilson
MS 420
Bureau of Indian Affairs Regional Office
P.O. Box 10
Phoenix, AZ 85001

Dear Ms. Wilson:

Thank you for the opportunity to meet with you and the Kaibab Band of Paiute Indians yesterday to make further headway on framing a new cooperative agreement regarding the National Park Service (NPS) operated and maintained water system on the Kaibab Paiute Reservation.

I have rewritten paragraph 8 of the draft agreement as follows:

> Each party shall have independent metering responsibilities. Each party is encouraged to install adequate metering devices to regularly track water use and consequently, better enable the location of leaks on the system, and the most efficient conservation of the water resource.
>
> The Service agrees to maintain a meter that will measure water production at the well, and install and maintain meters at other locations to measure total water use at the joint NPS-Kaibab Band visitor center complex, total NPS use on the Monument, and Monument residential use as a portion of total NPS use.
>
> The Tribe agrees to install and maintain a meter that will measure total regular tribal use from the system, maintain the meter on the North Calf Pasture line referenced in paragraph 13, and install and maintain a meter that will measure emergency deliveries to Kaibab and Juniper Villages. Furthermore, the Tribe is encouraged to install and maintain meters at other use locations, such as Red Hills Village, the tribal headquarters building, and the tribal service station, to enable the aforementioned maintenance and conservation goals.
>
> Each party shall make available to the other, upon request, a map and description of meters and metering locations on the system. Each party shall allow access to its meters related to the system to the other party.
>
> Each party agrees to read and record water use data from the meters on the system in its area of responsibility on a quarterly or more frequent basis, and to provide a report containing this data to the other party at the end of each calendar year.

I believe this rewrite captures what we discussed in the meeting.

TAKE PRIDE IN AMERICA

I have also reviewed NPS policy regarding delegated authority for signature of such agreements. As Superintendent of the Monument, I have general signature authority for the agreement. As the agreement involves the regular transfer of funds from the NPS to the Tribe, and the possibility of transfer of funds from the Tribe to the NPS, the cooperative agreement will also require the signature of our Contracting Officer, Malinda Flatray, at Zion National Park. Consequently, please add an additional signature line labeled as follows:

NATIONAL PARK SERVICE
ZION NATIONAL PARK

By: _____ _____
Malinda Flatray, Contracting Officer Date

We look forward to seeing the water rate appraisal and your revised final draft as soon as possible. At that time, I will forward the final draft to our Solicitor, Kevin Jones, for additional review and a memorandum indicating approval from his office. With his approval and no need for additional changes, and concurrence regarding the rate to be charged the NPS, we will be ready to execute the agreement.

Thank you for your participation in the formulation of this important continuing agreement between the NPS and the Tribe.

Sincerely,

John W. Hiscock
Superintendent

cc:
Carmen Bradley, Chairperson, Kaibab Band of Paiute Indians
Kevin Jones, DOI Solicitor
Malinda Flatray, Contracting Officer, ZION

TAKE PRIDE® IN AMERICA

09-23-2004: Fax regarding BIA appraisal of NPS well water value



National Park Service
U.S. Department of the Interior

Pipe Spring
National Monument

HC 65 Box 5
406 North Pipe Spring Road
Fredonia, Arizona 86022

928-643-7105 phone
928-643-7583 fax

# Pipe Spring National Monument

To: Chuck Pettee
Fax number: 970-225-9865
From: John Hiscock
Date: 9/23/04
Pages to follow: 4
Subject: BIA Appraisal of NPS Well Water Value

Comments:

Under 1972 agreement w/ Tribe we pay $33/acre ft. for NPS use.

We of course pay all costs of production (elect., maint., operations, treatment & BIA appraisal does not appear to take this into account.

What might you have on pure value of water in west?

Thanks!

EXPERIENCE YOUR AMERICA™
The National Park Service cares for special places saved by the American people so that all may experience our heritage.

# TELEFAX

BUREAU OF INDIAN AFFAIRS
WESTERN REGIONAL OFFICE
Branch of Land and Water Resources, MS 420/430
P.O. Box 10
Phoenix, AZ 85001

TELEPHONE NO.: (602 379-6789 * FAX NO.: (602) 379-6835

DATE: 8/6/04

Number of Pages (Including Cover Sheet): 4

TO: John Hescock

LOCATION: _____

FAX NO.: _____

FROM: Charlie

TITLE: _____

DEPARTMENT: _____

TELEPHONE NO.: _____

MESSAGE: The Appraisal Report
Thanks for your para. & Langage.

*IRRIGATION* *WATER RIGHTS* SAFETY OF DAMS* *LAND*

PHOENIX AREA OFFICE KAIBAB INDIAN RESERVATION

# MARKET ANALYSIS

## EVALUATION OF THE WELL HEAD RATE FOR WELL WATER WATER DELIVERED BY THE PAIUTE TRIBE TO NATIONAL PARK SERVICE PIPE SPRINGS NATIONAL MONUMENT

**PURPOSE:**

To determine if the rate of $33 per acre foot of well water, that has been paid in the past by the National Park Service, is current Fair Market rent. The water is delivered from well B(40-4) 5cdd about 2 miles North of Pipe Spring National Monument. This report has been prepared at the request of the Phoenix Area Office Area Director. Anyone else is an unintended user of this report.

**SCOPE:**

The Evaluation is used for in-house exchanges of information and meets the minimum standards for a Market Analysis under Standards 4 and 5 of the Uniform Standards of Professional Appraisal Practice (USPAP). This Evaluation is an investigation of the well water market in an attempt to determine an indicated well head rate (value of water at the well site). The rate expressed here is based on local and regional market conditions. The Evaluation is appropriate since information is available as to the cost of domestic or culinary water (water that can be used for human consumption) at the well site. **Two different rental rates will be indicated in the conclusion. It is not known which party is responsible for the payment of electricity charges, if the tribe is responsible an additional $35 to $50 should be added on to the rental value of the well site. If the National Park Sevice is paying for the electricity the electric charges should not be added to the per acre foot charges (see conclusion).**

**LOCATION OF THE WELL SITE:**

The well is located 2 miles north of the Pipe Spring National Monument on the Kaibab Indian Reservation in Northern Arizona or 18 miles West of Fredonia, Arizona. Colorado City which is located on the line between Utah and Arizona is located about 14 miles to the Northwest. The well site is reached by taking paved Highway 389 approximately 15 miles west from Highway Alt. 89 at Fredonia. At Pipe Spring Monument go North towards Moccasin two miles to the subject well.

**DATE OF INSPECTION:**

Due to road conditions the subject was not physically inspected. Location was determined by information received from Tribal Administrator Angelita Bullets of the Kaibab Band of Paiute Indians Tribal office at Pipe Springs, Arizona.

**MARKET DESCRIPTION:**

The lessee, National Park Service, uses the water from this well for supplying it's Pipe Springs National Monument visitors center with culinary water. The National Park Service under agreement with the Paiute Tribe originally drilled this well back in 1972. Water is delivered by buried pipe to the visitors station at Pipe Springs National Monument.

**EXTENT OF THE EVALUATION PROCESS:**

The PAO Appraisal staff has contacted various water sources including City Engineers, Irrigation Districts and water bottlers to assist in evaluating the cost of an acre foot of water. The evaluation consisted of determining what the cost of the water would be delivered at the well head.

**THIS EVALUATION IS BASED ON RECENT DATA AND SUPPORTING MATERIAL ON FILE IN THE PHOENIX AREA OFFICE (PAO), APPRAISAL SECTION.**

**EVALUATION:**

A market search for comparable companies who deliver water at well sites was made. The previous lease was based on a per acre foot of delivered water and this report will use the same basis of comparison. An acre foot of water as defined in the second edition of THE DICTIONARY OF REAL ESTATE APPRAISAL states "A VOLUME OF WATER EQUAL TO THE AMOUNT REQUIRED TO COVER ONE ACRE OF LAND TO A DEPTH OF ONE FOOT; EQUAL TO 325,850 GALLONS OR 43,560 CUBIC FEET OF WATER". Three of the sources of information, namely the City of Kanab public works manager Mr. Keith McCalister and Cloyd Chamberlin at Kaneco Products in Kanab, Utah were interviewed January 7 and 8, 1998 and Chris Sanquigi of Arctic Ice and Water, a privately owned company, in Apache Junction, Arizona was interviewed on February 12, 1998. The balance of the information was obtained from files located in the Phoenix Area Office. Even though this information is older the information still remains consistent with the newer information developed in January and February 1998.

Water King in Parker, Arizona, a privately owned business, in 1992 purchased water from the city at $0.0003 ~~cents~~ per gallon for the first 5,000 gallons and $0.0001 ~~cents~~ per gallon for any amount over 5,000 gallons. This breaks down to $32.58 to $97.74 ~~cents~~ acre foot. After purchasing the water they purified the water by reverse osmosis and sell it retail for $0.25 ~~cents~~ per gallon.

$33.59/AF if use their rate structure

Arctic Ice and water, a privately owned company, located in Mesa, Arizona pumps water from a 900' deep well, with water being pulled from 700'. The raw product cost at the well head is $0.0002 ~~cents~~ per gallon or $65.16 per acre foot (this includes $2.50 per acre foot payable to the state for . The withdrawing of a natural asset). The water is then sold 2000 gallon tanks at ~~.10 cents~~ $0.001 per gallon. This information was obtained from Chris Sanguigi on February 12, 1998 in Apache Junction, Arizona.

On January 7, 1998 I interviewed Cloyd Chamberlin of Kaneco Products in Kanab, Utah. Mr. Chamberlin (telephone numbers 435-644-2977 or 435-644-2371) is the Manager of the Kaibab Irrigation Water District. For one acre foot of irrigation water an individual must purchase 2 shares at $200 per share or a total of $400.00. This would give him the right to receive 1 acre foot of irrigation water per year. After the initial year his cost would be $14.50 per share or $29.00 per 1 acre foot of water. The $29.00 is for maintenance and upkeep of equipment.

On January 8, 1998 I interviewed Mr. Keith McCalister who is the Public Works Manager of the City of Kanab, Utah. He said that the raw water cost per 1,000 gallons was about $0.12 ~~cents~~. This indicates about per $39.12 per acre foot.

**CONCLUSION:**

In reviewing and analyzing the above information, it is concluded that an appropriate rental, per acre foot, should be in the range of $45 to $60 if the National Park Service is paying for the electricity to the well. If the tribe is paying for the electricity the annual rent should reflect this fact and the overall rental rate should be $75 to $110 (See Scope of Appraisal page #1).

**RECOMMENDED THAT $45 TO $60 PER ACRE FOOT, WOULD BE SUFFICIENT COMPENSATION FOR WATER USE, IF THE NATIONAL PARK SERVICE IS PAYING ELECTRIC CHARGES. IF THE TRIBE IS PAYING THE ELECTRIC CHARGES A FAIR ANNUAL RENT WOULD BE $75 TO $110 PER ACRE FOOT.**

February 23, 1998
DATE

Patrick J. Murphy, Appraiser

4-7-98
APPROVED

Gabriel D. Sneezy, MSA, MFLA
Area Chief Appraiser
Certified General Appraiser
Arizona #30482

**THIS IS NOT AN APPRAISAL REPORT. IT DOES NOT CONTAIN THE DOCUMENTATION REQUIRED IN AN APPROVED APPRAISAL REPORT.**

Author: John Hiscock at NP-PISP
Date: 09/16/1999 10:21 AM
Priority: Normal
TO: Ron Everhart at NP-DENVER
CC: Don Falvey at NP-ZION, Chuck Pettee at NP-WASO-WR, Dan Kimball at NP-WASO-WR
Subject: Kaibab Paiute Water Agreement

Ron:

Did get to speak with Don this morning on letter to the Tribe. I'm attaching, just FYI the copy finally sent to Tribe.

It was a conversation with Tribal Chair Carmen Bradley, the other day that motivated this. I asked her the status of the Tribe's review of the now, 2.5 yr. old draft replacement agreement. She informed me that the draft was now with the Tribe's new attornies and she wasn't sure when they would be done reviewing and advising on it. I told her that we needed some sort of concurrence in continuing to operate (and spend govt. funds) under the provisions of the old agreement in the interim. She suggested an indeterminate interim extension as opposed to the three month extensions we have been trying to keep in place. Given our poor negotiating position there is no problem with extensions while we wait (extensions may actually be some of the better news we could receive).

One other important bit of news that came from our conversation. She said that the Tribe's new attornies are proposing to look into the bigger water picture at PISP. Not only looking at water agreement with its exchange of NPS utility sytem maint. for use of the Tribe's 1/3 of spring flow, but looking at the underlying basis of NPS and tribal water rights. This proposition, of course, opens a pandoras box of complicated and unclear issues. (I get the definite impression that this is the attornies proposal, and not necessarily at the Tribe's request, however the Tribe is acquiescing in the path the attornies are following.)

John

_____ Forward Header _____

Subject: Kaibab Paiute Water Agreement
Author: John Hiscock at NP-PISP
Date: 9/15/1999 4:42 PM

If at all possible, I need your immediate review of the attached letter. I've promised such a letter to Chairperson Bradley by 9:00 am Thursday morning. If I don't hear from you I will proceed with the attached, or slightly modified version, BUT, I'd love to have your input, or concurrence.

John

L54 (PISP)

September 15, 1999

Ms. Carmen M. Bradley
Chairwoman
Kaibab Band of Paiute Indians
Tribal Affairs Building
HC 65 Box 2
Pipe Spring, Arizona 86022

Dear Ms. Bradley:

We hereby request the Tribe's concurrence in an updated interim extension of the water agreement of April 13, 1972, and supplementary amendment of March 1996 (copies attached). As you are aware, the National Park Service (NPS) and the Tribe have concurred in previous interim extensions of the agreement, since its expiration on April 13, 1997, while the Tribe and its advisors are reviewing a mutually rewritten, suggested replacement agreement (copy attached). The previous interim extensions have been for three months at a time. We are amenable to another three month extension, or agreement to an indeterminate extension subject to end automatically upon adoption of a new, replacement, agreement between the NPS and Kaibab Paiute Tribe.

The NPS must have formal concurrence in an ongoing extension in the provisions of the old agreement, or a new agreement, in place, in order to: (1) legitimize the expenditure of National Park Service funds on the joint water system outside of Pipe

Spring National Monument; and (2) allow the continued use of the Tribe's Calf Pasture water line across Pipe Spring National Monument, which was only authorized pursuant to the existence of the old agreement. The investment which the National Park Service makes on a both a routine and as needed basis to the water system that benefits the Tribe and the Monument, was detailed in our former letter of July 15, 1997 (copy attached).

We would certainly prefer adoption of a new agreement - as previously suggested, or modified by mutual consent. We request and encourage the Tribe to expedite its associates' ongoing review of the suggested agreement. Again, however, in the interim, we request the Tribe's concurrence in an extension of the terms of the old agreement.

John W. Hiscock
Superintendent

AGREEMENT

THIS AGREEMENT, made and entered into this 13th day of April 1972, between the Kaibab Band of Paiute Indians of the Kaibab Reservation, Arizona, organized pursuant to Section 16 of the Indian Reorganization Act of June 18, 1934 (48 Stat. 984), as amended, hereinafter referred to as the "Tribe," and the United States National Park Service, hereinafter referred to as the "Service."

W I T N E S S E T H :

WHEREAS, the waters of Pipe Springs within the boundary of Pipe Springs National Monument are now being used by both of the parties hereto under previous agreement; and

WHEREAS, increased needs of both parties have been given consideration, and with the permission of the Tribe the Service has drilled a well on tribal lands two miles north of Pipe Springs National Monument; and

WHEREAS, it is deemed advisable to enter into an agreement for the use of the waters from Pipe Springs and from the well so drilled in a manner to meet the needs of both parties,

NOW, THEREFORE, in consideration of the premises and of the mutual covenants and agreements hereinafter contained, and the performance thereof by the parties hereto, the parties do hereby mutually covenant and agree as follows:

1. It is mutually understood and agreed that this contract shall become effective on execution thereof and shall extend for a period of twenty-five years (25) and, at the option of the Tribe, may be extended for an additional period of twenty-five (25) years, upon giving notice to that effect to the other party to this agreement at least thirty (30) days prior to the date of such expiration.

2. The Service agrees to construct a water system which shall include a pump station, approved water treatment plant, an adequate water storage tank and a six inch water line or larger from the tank to Pipe Springs National Monument; the Service further agrees to provide Ts and water meters at five locations for service to tribal facilities, The locations of such Ts shall be determined by further agreement of the parties hereto. The Tribe agrees that the Service may have a right of way with full

rights of ingress and egress during the term of this agreement for the construction, maintenance and use of the water system as described on the attached plat which is marked Exhibit "A" and by reference made a part of this agreement.

3. The Service agrees to operate, maintain and repair the water system constructed as aforesaid at its sole cost and expense.

4. The Tribe agrees that the Service may use the present one-third of the output of water of Pipe Springs now being used by the Tribe so long as this agreement shall remain in force, except as hereinafter provided in paragraph No. 12 and 14.

5. The Service agrees that in lieu of the waters of Pipe Springs to which the Tribe has hereby granted exclusive use to the Service, the Service will furnish to the Tribe 7,884,000 gallons of water per year from the water system constructed pursuant to the terms of this agreement at the sole cost and expense of the Service and without any charge to the Tribe.

6. The Tribe agrees to pay the actual cost of production rate for all water used by the Tribe during any one year in excess of the amount to be furnished to the Tribe without cost as stated in the preceding paragraph. Cost of production shall be determined by prorating the cost of (a) electricity, (b) chemicals, (c) maintenance of pump, plant and main line with appurtenances, and (d) seven year amortization of the pump. The cost of production will be re-evaluated at the end of each two year period.

7. The Service retains the ownership in the water system as constructed by it, but in the event of termination of this agreement, the Tribe shall be given the right of purchase of the equipment at the then appraised market value before the Service shall have the right to remove the same from tribal property.

8. It is mutually agreed that the waters of both the well and Pipe Springs will be economically used with the objective of conserving the same, and obtaining the most feasible use therefrom. Water from the well shall not be used for commercial agriculture. In the event rated production of the well becomes less than 15 gallons per minutes, the deficit of the amount agreed to be furnished by the Service to the Tribe shall be made available to the Tribe from Pipe Springs.

9. The Service agrees to meter all water and annually bill the Tribe for water in excess of the specified amount as hereinbefore provided.

10. The Service agrees to pay a rental charge for the use of water from the well by the Service at the rate of $33 per acre foot, payable annually. The rental charge does not apply to any water used by the Tribe from the well.

11. The Parties each agree to make prompt payment upon receipt of billing from the other party.

12. The Service agrees that it will maintain the pool now constituting a part of the Pipe Springs Monument attraction and in the event water used by the Service from Pipe Springs is less than the output of said Springs, the Service agrees to make the excess water available to the Tribe through the Tribe's present line and storage system.

13. The Tribe at its own cost and expense may install a pipeline connecting the water well lines with the Kaibab Village system for emergency purposes only.

14. The Tribe would like to retain one gallon per minute flow from Pipe Springs for Livestock purposes which the Tribe will install at their own expenses.

KAIBAB BAND OF PAIUTE INDIANS
OF THE KAIBAB RESERVATION, ARIZONA

By Bill Dom
Tribal Chairman

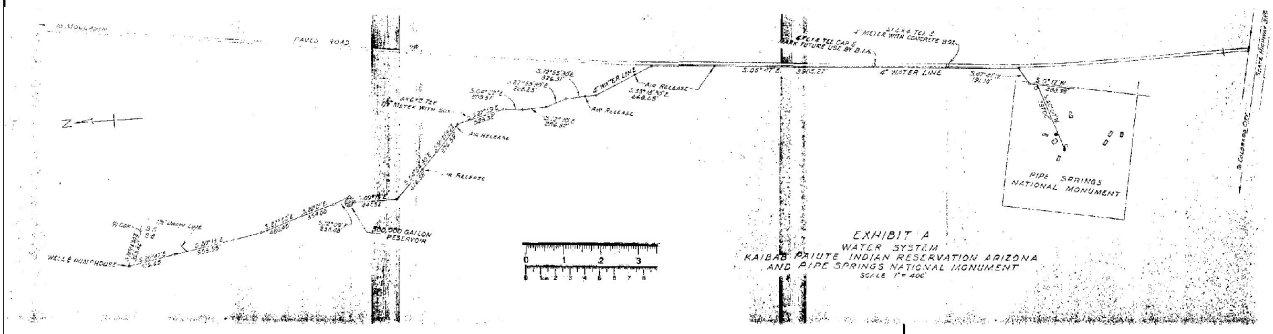
NATIONAL PARK SERVICE

By Frank J. Kowalski
Regional Director

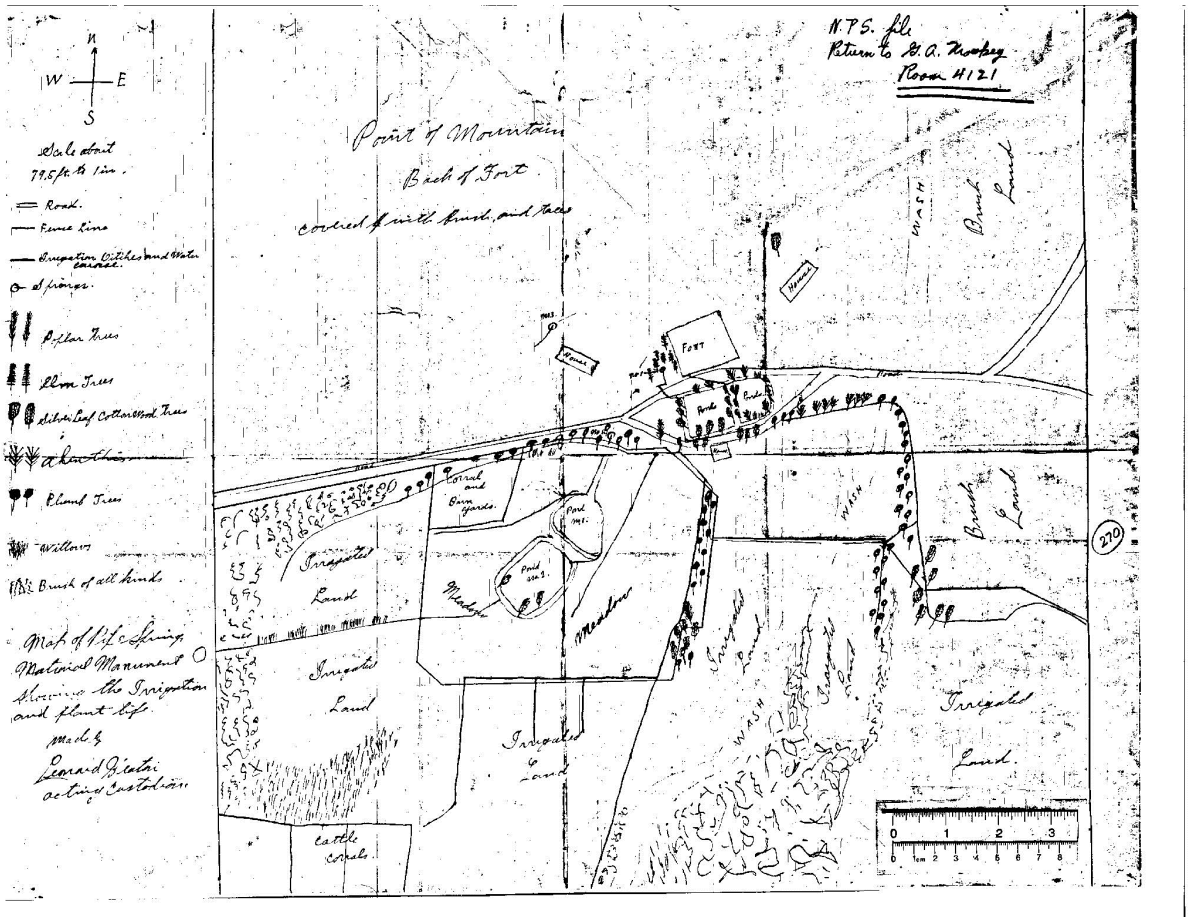
APPROVED:

D. M. Stalder
acting Superintendent, Hopi Indian Agency
Bureau of Indian Affairs

00-00-0000: map of the water system - kaibab paiute indian reservation and pisp



00-00-0000: sketch map of the irrigation and plant life at pisp



C O P Y

# REGULATIONS FOR THE DIVISION OF THE WATERS OF PIPE SPRINGS

November 2, 1933.

Pursuant to authority vested in me by Presidential Proclamation of May 31, 1933, the following regulations are prescribed governing the distribution of the waters of Pipe Springs for irrigation, stock watering, and other purposes:

1. The waters of the Springs shall be divided equally, one-third to the Pipe Springs National Monument, one-third to the Indians of the Kaibab Indian Reservation, and one-third to the stockmen represented by a memorandum agreement signed June 9, 1924, by representatives of the respective interests.

2. In order to accurately divide the waters, there shall be installed recognized recording water meters at each of the three springs, from which the water supply for the respective parties is derived, and of the combined flow of such springs each of the respective parties shall be entitled to receive for their respective uses one-third of such quantity of water. The diversion and use of water before it empties into reservoirs now constructed on the Monument shall be charged against the one-third share of the total flow to the party receiving such quantity of water. In order to prevent dispute among the respective interests relative to their not receiving their total share of the water, there shall be installed similar water meters at the respective points of outlets through which water to the respective parties is being carried to their point of use.

3. The cost, including installation, maintenance, repairs and replacements of the meters shall be borne equally by the respective interests.

4. Failure on the part of the respective interests to pay for their share of the cost of the meters, their maintenance, repairs and replacements, shall be grounds for refusal of delivery of water to the parties so delinquent.

5. The respective interests involved shall have the right to inspect at any time the records of the division of the water, but no tampering or interference with the meters shall be permitted. Should it appear at any time that any or all such meters after having been installed are not properly functioning, the matter, through proper channels, shall be submitted to the Director of the Park Service and the Commissioner of Indian Affairs, which Services shall have the meters inspected and if such inspection warrants, appropriate adjustments shall be made promptly.

6. Nothing herein shall be construed as in any way affecting or determining the respective water rights of the parties herein referred to. The right is reserved to modify, amend or change these regulations as conditions may warrant.

(SGD) OSCAR L. CHAPMAN
Assistant Secretary.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
PIPE SPRING NATIONAL MONUMENT
MOCCASIN, ARIZONA

Mr. Demaray
Mr. Albright
Jean
To note

NATIONAL PARK SERVICE
RECEIVED
NOV 11 1932
OFFICE OF THE DIRECTOR

Nov. 7, 1932

Mr. Horace M. Albright Director.
National Park Service.
Washington ?, D.C.

Dear Sir.

The map that I am sending of this Monument is not accurate but you can get an idea of how the land lays here from it.

There is more trees and brush on the place by about three times but they are located as indicated on the map. and all are along the irrigation ditches, It will also be seen that the Meadow is about one third of all the land irrigated. I have found that it is impossable to get the water over all tha land in the summer , when the hot winds blow from the west, and keep the cropes comming as they should , It takes about 18 days to run the water over all the land . and that is just letting it get thru . There is about 12acers of irrigated land .

Before going furtner I might state that when the place was made a Monument Charles C. Heaton, then owner with his brothers, reserved one third of all the waters of Pipe Springs for the cattle men to water their cattle and as yet there has been no devision made of that water. The reason for that is that I have turned some water into their pond and if the water got low I let some more down keeping them in water when they needed it.

I think now that the Indian Service is claiming part of the water the cattle men will demand their water and have a devision made,

Then a problem arises as to where they will get the water, as the map shows there are three springs on the Monument No. 1 , here by the Fort , No. 2 in the meadow about onefifth as muchas No.1 and No.3 that is back on the hill a short distense, but is of no value for irrigation or stock watering as it only runs down the hill about 10 yds. and dries up. If the water is devided so that the the cattlemen takes the water from spring No.2 and part of No. 1 the two ponds in the meadow will go dry , as now all the water that goes in the cattle runs throu these two ponds,

To get at the amount of water that will be required to take care of the trees and meadow and other shrubbery I am baseing my estamite on the experence that I have had in irrigating the land the past six years, . Figureing the meadow and trees as they are at about one third of the irrigated land and taking 14 days as a reasionable length of time for plants to go with out suffering for water in this country during the summer, most men will say that 10 days is long enough, The Monument should have at least 4½ days of the water dureing the 14 days , then ther comes another question will after the cattle men get their part will there be enough to fill the hill as above.

I have also been wondering about the other two thirds of the

00-00-0000: letter to nps from acting custodian regarding suggestion to grow plant life on irrigated land

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
PIPE SPRING NATIONAL MONUMENT
MOCCASIN, ARIZONA

No.2

irrigated land that has been plowed, some of it will turn to sand dumes if nothing is put on it and the rest will go to thistles and cuckle burs and I sugest that we get some thing growing on it as planting it back to its native state of brush and seder trees if we cant keep the water to make further imprivements in trees and meadows for the benifit of the pubpic and turests.

I can hardly content my self to see the Indians get the water as they have not been making use of the water that is on the resrervation. About 2½ miles to the east there is a stream of water that is larger than all the water combined at Pipe Springs , It seemes to me that there was a selfish motive conected with the writing of the proclamation.

Sincerly yours
Leonard Heaton
Acting Custodian

16

06-09-1924: memorandum to  from  regarding satisfactory arrangement concerning the use of water from pipe springs

B-7

KAIBAB

Moccasin, Arizona, June 9, 1924.

Memorandum.

At a conference held upon the ground at Pipe Springs, located on the Kaibab Indian Reservation, at which representatives of the National Park Service, of the cattlemen's organization, of Mr. Heaton (claimant of the Pipe Springs), Mr. Jones of the Cedar City , Dr. Farrow and Mr. Reed were present.

The object of this meeting was to arrive at a satisfactory arrangement concerning the use of water from Pipe Springs by the aforesaid association of cattlemen. It was the concensus of opinion and practically agreed upon by those present as being a fair and just solution of the situation that the cattlemen had the acknowledgement of all parties pesent to an ownership of one-third the waters from these springs and since a permit exists over the adjacent portion of the Indian reserve that they have the right to conduct water to and upon any portion of the land covered by permit during the life of that permit and at the expiration of the permit, if said permit is not renewed, to conduct the water off the reservation.

Signed Frank Pinkley Supt. Southwestern Monuments
E. T. Farrow
Charles L. Heaton
Reed
Randall L. Jones

The above is a photostat copy of a duplicate original loaned by Superintendent Heaton, Pine Springs National Monument. The document bears original signatures and was reproduced at my request May 1, 1957.

John E. Kell
Regional Chief of Lands

May 2, 1957
Date

W K Copy

COPY COPY COPY

MEMORANDUM ON PIPE SPRINGS

On September 7th, 1923 Mr. Mather and party were at Piep Srpings, Arizona, where they conferred with several members of the Heaton family. The following notes were made in the presence of Mr. Mather and the Heatons and were read back to them and approved.

It is understood that one-third of the water supply was disposed of on August 26th, 1920 to cattle men of Kane, Washington and Iron Counties. The water was to be taken from the Tunnel Spring first.

The Heatons will let the place go for $5,000.

The Heatons will donate towards the purchase price the sum of $500 provided the people of Kane and Washington Counties will donate $500. If the $500 is not raised from the Counties the Heatons will stand the whole $1,000.

It is understood if the script is sold the Heatons will get proportionate shares to the amount they have donated.

F.P.F.

Copies to

Director Mather
Assistant Director Cammerer
Field Assistant Albright
Mr. Farquhar

COPY COPY COPY

Also Lee Canell Report 1/1/58
42 pp

United States Department of the Interior
NATIONAL PARK SERVICE
Zion National Park
Springdale, UT 84767-1099

November 2, 1999

IN REPLY REFER TO:
L54 (PISP)

Memorandum

To: Superintendent, Pipe Spring National Monument

From: Hydrologist, Zion National Park

Subject: Addition and Removal of Water from Main Spring and Spring Room Spring

On October 7, 1999 Terry Strong and I investigated the response of Main Spring and Spring Room Spring to the removal and addition of water. This was a follow up to the meeting on September 28 and was intended to help evaluate various means of returning flow to the Spring Room and Main Spring.

All elevations are reported from the notch of the weir at Main Spring. Stage heights are from metal staff gauges set in the pools.

The initial elevations of Main Spring and Spring Room Spring were -.77 and -.75 feet below the elevation of the weir respectively. This is essentially identical within the accuracy of our survey. By the day following the tests, water levels had returned to -.77 and -.76 feet below the weir respectively.

**Pumping Water Spring Pools (See Table 1 and Figure 1)**

Water was pumped from Main Spring lowering the pool to a level of –1.45 feet. Over a period of 2 hours, the water level gradually recovered about ½ foot. This recharge represented a flow into the pool of 0.7 to 0.9 gpm and declined to 0.2 gpm near the end of the observation period.

In the 20 minutes following the lowering of the Main Spring Pool, the water level in Spring Room Spring dropped 0.04 feet. The water level in Spring Room Spring was then lowered 0.3 feet by pumping. It to recovered, relatively rapidly at first (inflow to the cistern at roughly 0.7 gpm), then stopping about 0.1 foot below the initial level.

While both spring pools showed the ability to recover, the rates were so low that neither would be a practical source for pumping water into the spring room, at least at their current depths.

**Adding Water to Main Spring (See Table 2 and Figure 2)**

Water was added to Main Spring at a rate of 5 gpm using a hose attached to the potable water supply. The water level rose relatively quickly at first then tapered toward a constant elevation about 0.13 feet above the weir notch in a little over an hour. When the water level rose to about 0.2 below the weir, water was observed seeping into the stone lined ditch below the pool and trickling into the wooden trough.

Seepage from the Main Spring Pool was minimal at first with the volume increasing at roughly 3.5 – 5.9 gpm. This rate decreased as the depth increased, falling to less than 0.3 gpm as the water topped the weir.

The Spring Room Spring remained constant initially, then began a slow steady rise when the Main Spring Pool rose above about 0.40 feet below the weir. The volume of water in the cistern increased at a rate of 0.1 to 0.3 gpm.

Though a hydrologic connection was demonstrated between Main Spring and the Spring Room Spring, the rate of water transmission was very low. There is a substantial amount of seepage loss out of the Main Spring pool, particularly when it is near full, and because of this, flow measurements at the weir and trough understate the actual discharge.

**Adding Water to Spring Room Spring (See Table 3 and Figure 3)**

Water was added to the Spring Room Spring cistern at a rate of 5 gpm and after 33 minutes of observation increased to 10 gpm. Water level in the cistern rose rapidly initially, though the change in the volume of water was always less than 5 gpm. The rate of rise decreased leveling off after 16 minutes where a steady rate of discharge into the Spring Room was measured at 1.60 gpm. This was at a water surface elevation of 0.13 feet above the weir notch.

When the flow rate was increased to 10 gpm, the water level quickly rose to 0.21 feet and remained constant for 10 minutes. Flow into the Spring Room at this time was 4.25 gpm and appeared constant though only one series of measurements was taken.

During this period, the Main Spring Pool continued to gradually decrease leveling off at –0.22 feet

Adding water to the Spring Room Cistern was effective in producing water flow in the Spring Room, though there was seepage loss. The percentage of water lost to seepage decreased when the flow into the cistern was increased from 5 to 10 gpm. Some of the seepage is probably going to the Main Spring, and some to recharging the ground around the springs. Other possible destinations for the seepage loss are shallow water that would be tapped by vegetation, or following fractures to Tunnel Spring. It is possible that the ground surrounding Spring Room Spring might eventually become more saturated and reduce the seepage loss, though I doubt there would be a substantial reduction, and this could aggravate the recurring moisture problems in the historic structure.

**Conclusions.** If water is piped from another source to the Spring Room, it should probably be piped directly to the spring room to avoid substantial seepage loss. Any water in excess of that needed in the Spring Room could be discharged in Main Spring where it could maintain the wetland there, and flow into the pools and beyond to be used for irrigation.

Attachments (6)

cc: PISP – Strong, Bornemeier
ZION – Bradybaugh, Burns, Ferris, Files
WRD – Pettee, Larry Martin, Inglis

Table 1

| Time | Main Spring | | | Spring Room Spring | | | Notes |
|---|---|---|---|---|---|---|---|
| | Stage | Elevation from Weir | Ch. In GPM | Stage | Elevation from Weir | Ch. In GPM | |
| | 0.88 | -0.77 | | 7.20 | -0.75 | | Initial Conditions |
| | | | | | | | Water pumped out of Main Spring |
| 0:00:00 | 0.20 | -1.45 | | 7.18 | -0.77 | | |
| 0:02:00 | 0.24 | -1.41 | 2.40 | | | | |
| 0:04:00 | 0.25 | -1.40 | 0.60 | | | | |
| 0:06:00 | 0.27 | -1.38 | 1.20 | | | | |
| 0:10:00 | 0.30 | -1.35 | 0.90 | | | | |
| 0:15:00 | 0.33 | -1.32 | 0.70 | | | | |
| 0:20:00 | 0.36 | -1.29 | 0.70 | 7.16 | -0.79 | -0.03 | |
| | | | | | | | Pumping out Spring Room Spring from 22:40 to 24:00 |
| 0:24:40 | | | | 6.95 | -1.00 | | |
| 0:26:00 | 0.39 | -1.26 | 0.58 | | | | |
| 0:28:00 | | | | 7.04 | -0.91 | 0.73 | |
| 0:32:00 | | | | 7.07 | -0.88 | 0.24 | |
| 0:34:00 | 0.43 | -1.22 | 0.59 | | | | |
| 0:40:00 | 0.45 | -1.20 | 0.30 | | | | |
| 0:43:00 | | | | 7.08 | -0.87 | 0.03 | |
| 0:50:00 | 0.48 | -1.17 | 0.35 | | | | |
| 0:55:00 | | | | 7.08 | -0.87 | 0.00 | |
| 1:04:00 | | | | 7.08 | -0.87 | 0.00 | |
| 1:07:00 | 0.54 | -1.11 | 0.41 | | | | |
| 1:17:00 | 0.56 | -1.09 | 0.23 | | | | |
| 1:43:00 | 0.61 | -1.04 | 0.22 | | | | |
| 1:45:00 | | | | 7.08 | -0.87 | 0.00 | |
| 2:00:00 | 0.64 | -1.01 | 0.21 | | | | |
| 2:02:00 | | | | 7.08 | -0.87 | 0.00 | |

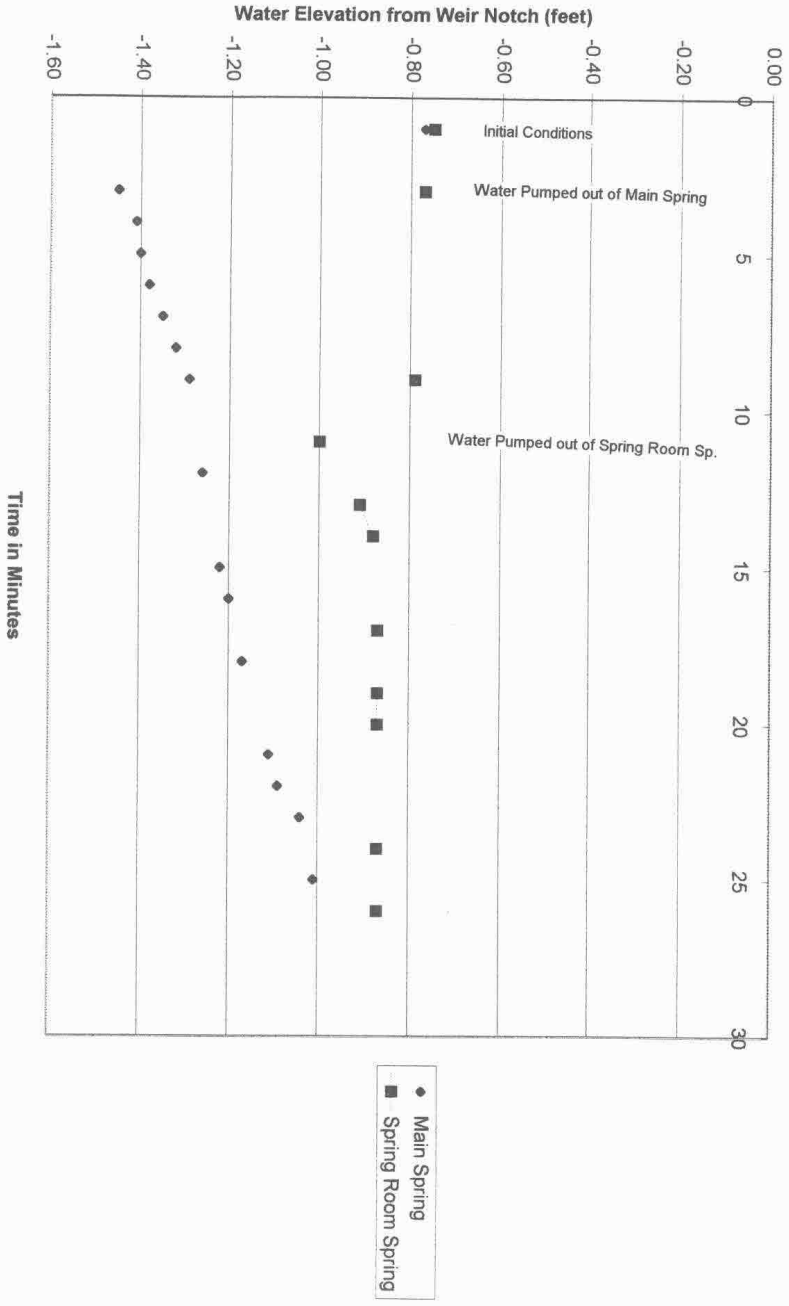



Figure 1. **Response of Main Spring and Spring Room Spring to Removal of Water**

Table 2

| Time | Main Spring | | | Spring Room Spring | | | Notes |
|---|---|---|---|---|---|---|---|
| | Stage | Elevation from Weir | Ch. In GPM | Stage | Elevation from Weir | Ch. in GPM | |
| :00:00 | 0.64 | -1.11 | | | | | Begin filling Main Spring at a rate of 5 gpm (5ga;/58.5 sec) |
| :01:00 | 0.70 | -0.95 | 7.00 | | | | |
| :02:00 | 0.75 | -0.90 | 5.90 | | | | |
| :03:00 | 0.80 | -0.85 | 5.90 | | | | |
| :04:00 | 0.85 | -0.80 | 5.90 | | | | |
| :05:00 | 0.90 | -0.75 | 5.90 | | | | |
| :05:30 | | | | 7.08 | -0.87 | | |
| :06:00 | 0.94 | -0.72 | 4.70 | | | | |
| :07:00 | 0.99 | -0.66 | 5.90 | | | | |
| :08:00 | 1.02 | -0.63 | 3.50 | 7.08 | -0.87 | 0.00 | |
| :09:00 | 1.06 | -0.59 | 4.70 | | | | |
| :10:00 | 1.09 | -0.56 | 3.50 | | | | |
| :12:00 | 1.13 | -0.52 | 2.40 | 7.08 | -0.87 | 0.00 | |
| :13:00 | 1.16 | -0.49 | 1.80 | | | | |
| :15:00 | 1.20 | -0.45 | 2.40 | | | | |
| :16:00 | | | | 7.10 | -0.85 | 0.16 | |
| :17:00 | 1.23 | -0.42 | 1.80 | | | | |
| :19:00 | 1.26 | -0.39 | 1.80 | | | | |
| :20:00 | | | | 7.14 | -0.81 | 0.33 | |
| :21:00 | 1.30 | -0.35 | 2.40 | | | | |
| :22:00 | | | | 7.14 | -0.81 | 0.00 | |
| :24:00 | 1.34 | -0.31 | 1.60 | | | | |
| :26:00 | | | | 7.18 | -0.77 | 0.33 | |
| :28:00 | 1.40 | -0.25 | 1.20 | | | | |
| :30:00 | | | | 7.20 | -0.75 | 0.16 | |
| :32:00 | 1.44 | -0.21 | 1.20 | | | | |
| :34:00 | | | | 7.24 | -0.71 | 0.33 | |
| :36:00 | 1.48 | -0.17 | 1.20 | | | | |
| :38:00 | | | | 7.27 | -0.68 | 0.24 | Water starting to flow into rock lined channel below Main Spring |
| :40:00 | 1.52 | -0.13 | 1.20 | | | | |
| :42:00 | | | | 7.30 | -0.65 | 0.24 | |
| :44:00 | 1.55 | -0.10 | 0.90 | | | | |
| :46:00 | | | | 7.33 | -0.62 | 0.24 | |
| :48:00 | 1.58 | -0.07 | 0.90 | | | | |
| :50:00 | | | | 7.36 | -0.59 | 0.24 | |
| :52:00 | 1.60 | -0.05 | 0.60 | | | | |
| :54:00 | | | | 7.38 | -0.57 | 0.16 | |
| :56:00 | 1.61 | -0.04 | 0.30 | | | | |
| :58:00 | | | | 7.40 | -0.55 | 0.16 | |
| :60:00 | 1.63 | -0.02 | 0.60 | | | | |
| :62:00 | | | | 7.42 | -0.53 | 0.16 | |
| :64:00 | 1.64 | -0.01 | 0.30 | | | | |
| :67:30 | 1.65 | 0.00 | 0.30 | | | | Water at weir notch |
| :70:00 | | | | 7.47 | -0.48 | 0.20 | |
| :72:00 | 1.65 | 0.00 | 0.00 | | | | |
| :76:00 | 1.66 | 0.01 | 0.30 | 7.50 | -0.45 | 0.16 | |
| :80:00 | 1.67 | 0.02 | 0.30 | | | | |
| :82:00 | | | | 7.52 | -0.43 | 0.10 | |
| :86:00 | 1.68 | 0.03 | 0.20 | | | | |
| :88:00 | | | | 7.54 | -0.41 | 0.10 | |
| :95:00 | | | | 7.56 | -0.39 | 0.09 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| :96:00 | 1.69 | 0.04 | 0.10 | | | | |
| :97:00 | | 0.05 | | | | | |
| :100:00 | | | | 7.58 | -0.37 | 0.13 | |
| :103:00 | 1.70 | 0.05 | 0.20 | | | | End |

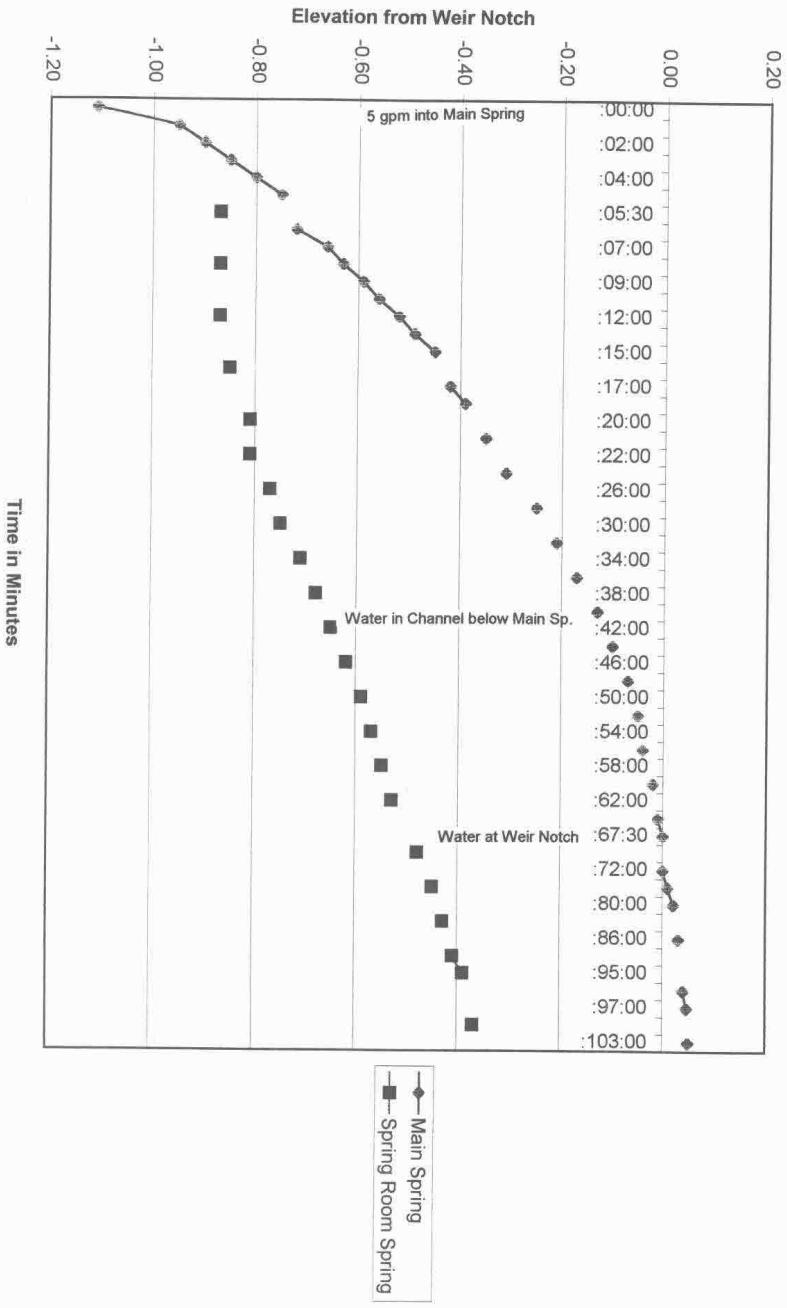



Figure 2 **Response of Main spring and Spring Room Spring to 5 gpm Added to Main Spring**

Table 3

| Time | Main Spring | | | Spring Room Spring | | | Notes |
|---|---|---|---|---|---|---|---|
| | Stage (feet) | Elevation from Weir (feet) | Change in pool (GPM) | Stage (feet) | Elevation from Weir (feet) | Change in pool (GPM) | |
| 0:00:00 | 1.69 | 0.05 | | 7.58 | -0.37 | | Begin 5 gpm into Spring Room Spring |
| 0:01:00 | | | | 7.69 | -0.26 | 3.60 | |
| 0:02:00 | | | | 7.77 | -0.18 | 2.60 | |
| 0:03:00 | | | | 7.82 | -0.13 | 1.60 | |
| 0:04:00 | | | | 7.87 | -0.08 | 1.60 | |
| 0:05:00 | | | | 7.90 | -0.05 | 1.00 | |
| 0:05:30 | | | | 7.93 | -0.02 | | Water level reaches bottom of pipe in Spring Room Spring. Elevation is 0.016 feet below weir notch in Main Spring. Elevation -0.016 ft from Weir Notch |
| 0:06:00 | | | | 7.95 | 0.00 | 1.60 | |
| 0:07:00 | 1.56 | -0.09 | -2.20 | 7.97 | 0.02 | 0.70 | |
| 0:08:00 | | | | 7.99 | 0.04 | 0.70 | |
| 0:09:00 | | | | 8.01 | 0.06 | 0.70 | |
| 0:10:00 | 1.53 | -0.12 | -1.20 | 8.02 | 0.07 | 0.30 | |
| 0:11:00 | | | | 8.04 | 0.09 | 0.30 | |
| 0:11:46 | | | | | | | Flow startes in Spring Room |
| 0:12:00 | | | | 8.05 | 0.10 | 0.30 | |
| 0:13:00 | | | | 8.06 | 0.11 | 0.30 | |
| 0:14:00 | | | | 8.07 | 0.12 | 0.30 | |
| 0:16:00 | | | | 8.08 | 0.13 | 0.20 | |
| 0:17:00 | 1.48 | -0.17 | -0.80 | 8.08 | 0.13 | 0.00 | |
| 0:21:00 | 1.47 | -0.18 | -0.30 | 8.08 | 0.13 | 0.00 | |
| 0:23:00 | | | | 8.08 | 0.13 | 0.00 | |
| 0:33:00 | 1.45 | -0.20 | -0.10 | 8.08 | 0.13 | 0.00 | Discharge in Spring Room is 1.60 gpm |
| 0:34:00 | 1.44 | -0.21 | | | | | Begin adding 10 gpm to Spring Room Spring |
| 0:37:00 | | | | 8.14 | 0.19 | | |
| 0:38:00 | | | | 8.16 | 0.21 | | |
| 0:40:00 | | | | 8.16 | 0.21 | | |
| 0:41:30 | 1.43 | -0.22 | | | | | |
| 0:45:00 | 1.43 | -0.22 | | | | | |
| 0:47:00 | | | | 8.16 | 0.21 | | Flow in Spring Room 4.25 gpm. |

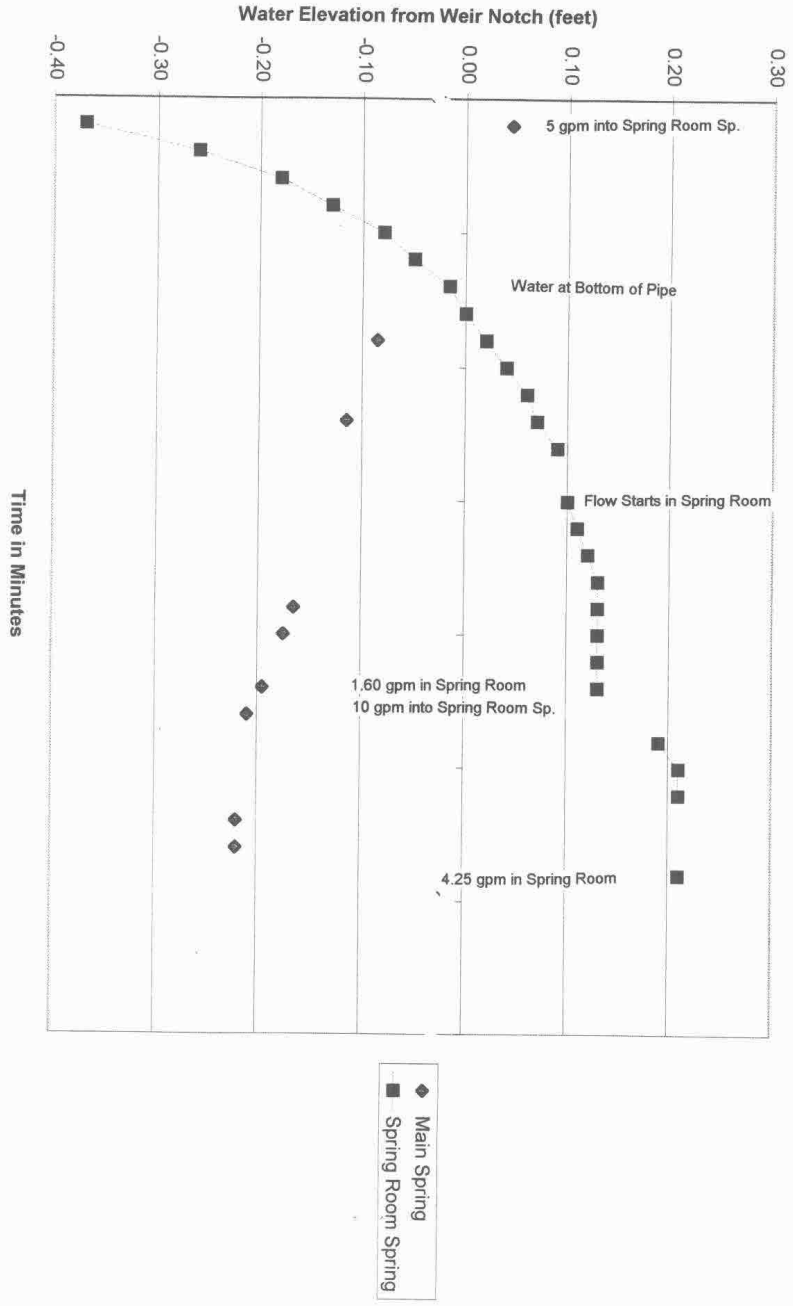



Figure 3. Response to the Addition of 5 and 10 gpm to Spring Room Spring

# WATER RESOURCES DATA OF THE PIPE SPRING NATIONAL MONUMENT AREA, ARIZONA, 1977-1989

Richard Inglis

Technical Report NPS/NRWRD/NRTR-90/02

October 1990

**U.S. Department of Interior • National Park Service**

Water Resources Division • 301 S. Howes Street • Fort Collins, Colorado 80521

## ABSTRACT

The National Park Service is conducting a water resources study at Pipe Spring NM (PISP) for the purpose of evaluating spring flow trends. Ground water and spring flow data collected at PISP and vicinity from 1977-1989 indicate that total spring flow has steadily declined, while 2 and 4 miles outside of the Monument, respectively, ground water levels and spring flow appear to remain stable. While it is not possible to rule out regional ground water depletions as the cause of declining spring flows, two factors suggest that local physical changes in spring characteristics may account for at least part of the recent trends observed in spring flows at PISP. First, of the four springs which comprise Pipe Spring, two are experiencing significant declines in yield, one appears to remain stable and one--the most up-gradient of the four springs, is actually experiencing a gradual increase in yield. Secondly, a new monitoring well completed in 1989, suggests that the aquifer supplying Pipe Spring is artesian, whereas the aquifer 2 miles up-gradient is reported to be unconfined. While it is suspected that ground water at each location is a single aquifer, it has not been possible to document regional aquifer declines or to demonstrate the nature of the interconnection. By continuing the monitoring project, with the addition of the new monitoring well, information necessary for substantive management recommendations will be available.

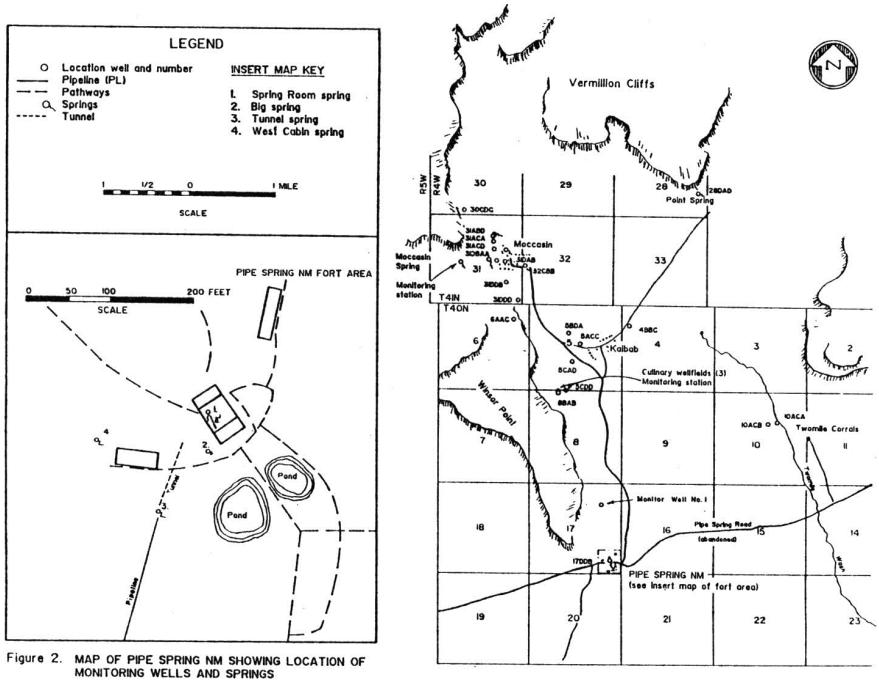



Figure 2. MAP OF PIPE SPRING NM SHOWING LOCATION OF MONITORING WELLS AND SPRINGS

Continuing for 1 year, the monitoring program may permit a relationship to be determined between the current trend in combined spring flows at the Monument and the current trend in water level in the Culinary Well Field. If such a relationship is determined, then a description of what has happended in the past can likely be reconstructed. This information will allow management to focus its efforts to protect spring flows at PISP.

Monitor Well No. 1. Likely causes may be changes in the primary or secondary porosity in the aquifer supplying the springs. This essentially eliminates outside factors causing the spring flow decline.

(2) Affected - If water level fluctuation in Monitor Well No. 1 correlates with water levels in the Culinary Well Field than the probable cause of spring flow decline is from the lowering of water levels in the well field. An example of this scenario is water level trends of the well field, Monitor Well No. 1 and total spring flow in the monument all decrease. The different trends of the individual springs may be due to a complex interaction of increased piezometric head in the aquifer and physical changes near individual springs.

(3) Inconclusive - If water levels in Monitor Well No. 1 fluctuate without correlation to either spring flow at PISP or water levels in the Culinary Well Field then the primary cause of spring flow decline cannot be determined with the available information. An example of this case would be an increase in spring flow in the monument, no change in water levels in Monitor Well No. 1 and a decrease in water levels in the Culinary Well Field. Further investigation of ground water use in the PISP area and the installation of other monitoring wells may be necessary.

The additional ground water levels should be gathered and analyzed to determine one of three possible scenarios of water levels in the aquifer supplying the springs in the monument. Assumptions for analysis of the three scenarios are based on: (1) at least one additional year of water level records from Monitor Well No. 1, (2) no major change precipitation in the recharge area, (3) no alteration in ground water use, (4) the total flow of spring flow at PISP represents trend in the aquifer of concern, (5) Monitor Well No. 1 is representative of the confined aquifer, (6) Culinary Well No. 1 is indicative of water levels in the Culinary Well Field, and (7) there is similar pumping regime in the same season 1 year apart.

If results of 1 year data collection indicate other cause(s), as presented above, regional ground water information should be collected. To achieve a regional understanding of the ground water system and trends, the investigation would require monitoring ground water levels and uses surrounding the monument. This regional monitoring network would need multiple observation wells, drilled in a phased-in sequence and pumping data supplied from ground water users in the basin. The number of monitoring wells would be based on the information learned from each site. This is to utilize information gained from each well to provide local ground water flow directions which are presently perceived to be north-south, but have not been verified. The ground water gradient and direction of flow would be triangulated from water levels in the monitoring wells.

The initial recommendation to collect data for 1 year will require servicing the data recorders in Monitor Well No. 1 and NPS Culinary Well located on Tribal lands. It is also recommended the raingage and data recorder at Moccasin Spring be removed and that water level measurements at Moccasin Spring be recorded every 3 months for the duration of the project. Data collection efforts should continue at the four springs in the monument.

flow of West Cabin Spring may be less affected by historical manipulation at the fort due to its more remote location. Adequate information now exists to develop a conceptual model of ground water levels along the Sevier Fault (Figure 8). The diagram depicts a cross-section of the PISP area showing approximate elevation of the water levels at each monitoring site. The dash line indicates piezometric surface which is equal to the water table where the aquifer is unconfined (in the area of the Culinary Well Field). Although there is relatively little decline in water levels in the Culinary Well Field since these wells were drilled, the water table remains above the elevation of Pipe Springs. The diagram shows the new monitoring well as artesian. The confined aquifer and the piezometric head at the well are shown above the elevation of the springs in the monument. It is believed that the unconfined aquifer and the confined aquifer are connected and that they share the same recharge zone.

The springs in the monument are likely supplied by a confined aquifer with individual "connections" (primary and secondary porosity of the rock formations near the spring opening) to the aquifer. Artesian spring flow is controlled by piezometric head, the transmissivity and storativity of the confining strata, and the physical characteristics of the "connection" through the confining strata (the secondary porosity of the caprock). The flow rate of the topographicly highest spring in the monument (West Cabin Spring) has been increasing while flow rates of the middle elevation springs (Big and Spring Room Springs) have been declining and flow rate of the lowest elevation spring (Tunnel Spring) has been unaffected. The "connection" of the middle elevation springs may have been affected by construction of the tunnel, installation of the cistern and/or foundation drains in and around the fort, however, the timing of these events do not coincide with the begining of the decline of the spring flows.

Drawdown from pumping in the Culinary Well Field has lowered the water table less than 10 ft in the vicinity of the culinary wells, however, it is unknown if pumping and the associated cone of depression has lowered the piezometric surface at the new monitoring well. Based on the above concept of the ground water system, effects of current pumping in the Culinary Well Field should be observed in Monitor Well No. 1 without the local affects of manipulation near the spring openings.

## RECOMMENDATIONS

Data, as acquired and analyzed to date are inconclusive as to the possible effects of ground water withdrawal from north of the monument. To determine if pumping at the Culinary Well Field is affected the spring flows PISP, it is recommended, initially, to record 1 year of water levels in the new observation well north of PISP. Three scenarios are presented below to compare water level fluctuations in the monitoring well, spring flows at PISP, and water levels at the Culinary Well Field.

(1) Unaffected - If water level fluctuation in Monitor Well No. 1 correlates favorably with water levels at PISP and not with the water levels in the Culinary Well Field, then pumping at the well field can be eliminated as a cause of the spring flow decline. The cause of spring flow decline is site specific within the Monument. A clear example of this scenario would be observing no change in the trend of water levels the well field, and upwards trend in both spring flow in the monument and water levels in

09-02-1986: memorandum to chief, water rights branch from hydrologist, water rights branch regarding spring flow decline

September 2, 1986

L54 (479)
RMR/PISP

Memorandum

To: Chief, Water Rights Branch
Water Resources Division

From: Hydrologist, Water Rights Branch
Hydrologist, Water Services Branch
Water Resources Division

Subject: Spring Flow Decline - PISP - Scoping Report

Attached please find a Scoping Report covering the technical, management and water right aspects of declining flow at the springs located at Pipe Spring NM. This document is intended to provide management with the information it needs to select an approach to determine the cause of the flow decline so that appropriate actions may be taken by management to protect the site's unique resource values.

The authors stand ready to provide explanation or additional assistance if either you or management have questions relative to the above.

Owen Williams

Owen R. Williams

Donald C. Barrett

Donald C. Barrett

FNP:Williams/Barrett:cs:9/2/86:221-5341:owen.cs

# An Evaluation of the Decline in Spring Flow at Pipe Spring NM

by

Donald C. Barrett and
Owen R. Williams [1/]

## I. EXECUTIVE SUMMARY

An analysis of water rights, the management situation, and available physical data was performed to assess the decline in spring flow at Pipe Spring National Monument (NM). Initial examination reveals that the decline is real and likely to be the result of man-caused changes in the delivery of ground water to the collective springs at the monument as opposed to natural variations in precipitation. Further, at the present rate of decline it is anticipated that spring flow will cease by the mid 1990s.

A review of the status of the water rights was completed and is presented in summary form. Three parties have recognized rights to pro rata use of the production of the combined flow at Pipe Spring but only the interests of the cattlemen have been registered with the State of Arizona.

A suitable course of action for management is unclear at this time due to the lack of certain data. Therefore, a set of alternatives for the correction of this deficiency was developed and is presented with a recommended alternative identified.

## II. INTRODUCTION

Since 1977, the yield of the springs at Pipe Spring NM has experienced a decline of, on the average, two gallons per minute per year. If this rate of decline continues, the springs will cease to flow by the mid 1990s.

The continued flow of the springs is essential to monument purposes. The springs are the reason for the historic settlement at this location. They provide water for the monument's living history gardens, interpretation of the pioneer way of life, and for local cattlemen who have a right to one-third of the collective spring flows for livestock watering. This latter activity has been practiced for over 100 years.

Other regional water sources such as Moccasin Spring are exhibiting a decline in water quality and, possibly, flow. While they may be part of the same bedrock structure and aquifer as Pipe Spring, the Sevier fault and Navajo Sandstone, the specific cause of the decline in spring flow is unknown.

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[1/] Hydrologists, Water Services Branch and Water Rights Branch respectively, Water Resources Division, National Park Service, Federal Building, Room 335, 301 S. Howes Street, Fort Collins, Colorado 80521.

Until the cause of the spring flow decline is ascertained, reasonable strategies for protecting monument resources cannot be developed and other users of the water must function in an environment of uncertainty. However, the determination of such cause will remain a matter of conjecture until a better understanding of the hydrology of the system is at hand. It is the objective of the Water Rights Branch to develop a set of approaches for assessing the nature of the ground water delivery system. From this set of alternatives, management may select one approach for implementation. Once implemented, it is reasoned that the information produced can be used to develop a strategy to arrest the decline in spring flow.

In the following report we first evaluate existing information to provide an overview of the physical and legal aspects of the water resource at Pipe Spring NM. Second, we examine the management situation and finally, we present a set of management alternatives for consideration.

## III. OVERVIEW OF WATER RESOURCES AT PIPE SPRING NM & SURROUNDING WATERSHED

### Geology and Geography

Pipe Spring NM is situated in an area known as the Arizona strip, located in the northwestern part of the Colorado Plateau Province, in north central Arizona. The dominant topographic features of the area -- plateaus, cliffs, and canyons -- are marked by strongly contrasting colors. The rugged Vermillion Cliffs, a striking example, are visible northwest and northeast of the monument. Light yellowish-tan or gray Shinarump conglomerate is exposed in parallel cliffs to the south and northeast.

Formations exposed in the immediate area of the monument and north to Moccasin belong to the Triassic and Jurassic Systems. The generalized section is presented in Table 1 and Figure 1.

These sedimentary formations generally dip less than two degrees NE, but dips may steepen to nearly 10 degrees adjacent to major structures where they are displaced downward to the west. The steeply dipping Sevier fault which passes just east of Pipe Spring NM is such an example extending slightly east of north for 150 miles into the central Mountain and Valley province of Utah. North of the monument the fault divides into two main branches which rejoin eight miles to the north in Sand Canyon at the Utah border (see Figures 2 and 3). The Sevier Fault divides the area roughly north to south into the Kanab Plateau on the east and the Uinkaret Plateau to the west (see Figure 4). Displacement on the fault at the monument is estimated to be between 1850 and 2380 feet (Gregory, 1950, p. 147).

### Geohydrology

The springs for which the monument is named, issue from the Sevier fault, a normal fault contact between the Navajo Sandstone on the west in the down thrown block and the Moenkopi formation to the east (Gregory 1950, p. 197). Here the basal Navajo Sandstone abuts against the impervious (gypsiferous) Shnabkaib member of the Moenkopi formation. Water absorbed by outcrops of porous Navajo Sandstone and underlying beds percolates down the dip slope

Table 1. General Section - Vicinity of Pipe Spring NM
(modified from Gregory, 1950)

| SYSTEM | GROUP | FORMATION | CHARACTER | THICKNESS |
|---|---|---|---|---|
| | | Navajo Sandstone | Lt. pinkish white & buff cross-bedded sandstone | 1200' |
| Jurassic | Glen Canyon Gp. | ---------Local unconformity---------- | | |
| | | Kayenta formation | Maroon, coarse-grained sandstone, conglomerate with some dense limestone and shale in thin, irregular beds. | 118' |
| | | Wingate Sandstone | White to reddish-brown massive sandstone, jointed, cross-bedded | 0-402' |
| | | ----------Unconformity---------- | | |
| | | Chinle formation | Red, brown & buff sandstone with some limestone near top, with prominent sandstone ledge in middle and brightly variegated shale, & sandstone with fossil wood in lower half | 1,460' |
| Triassic | | Shinarump conglomerate | Light gray to yellow tan coarse-grained sandstone conglomerate with fossil wood. | 100' |
| | | Moenkopi formation | Brown, red and yellowish thin-bedded gypsiferous and calcareous sandstone with fossiliferous marine limestone | 1,500' |

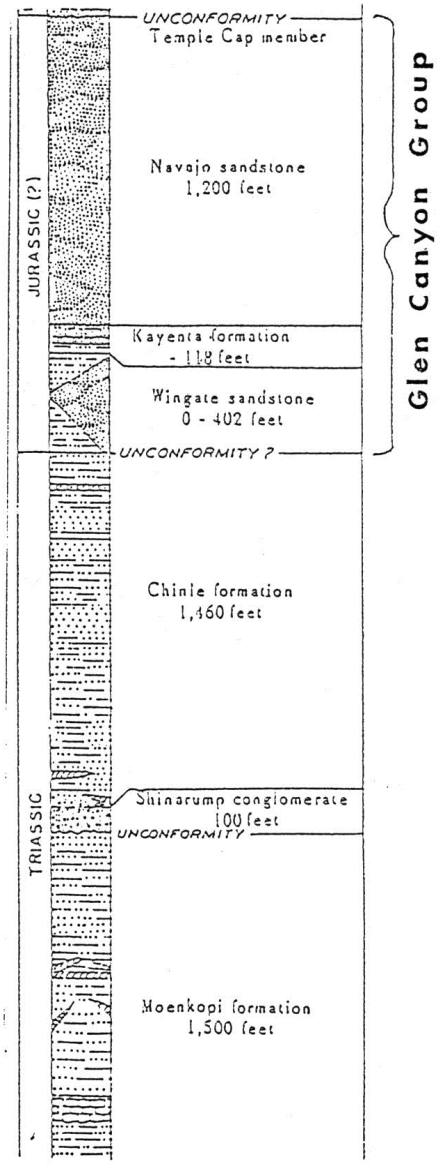



**Figure 1.** General Geologic Section - Vicinity of Pipe Spring N.M.
(modified after Gregory, 1950)

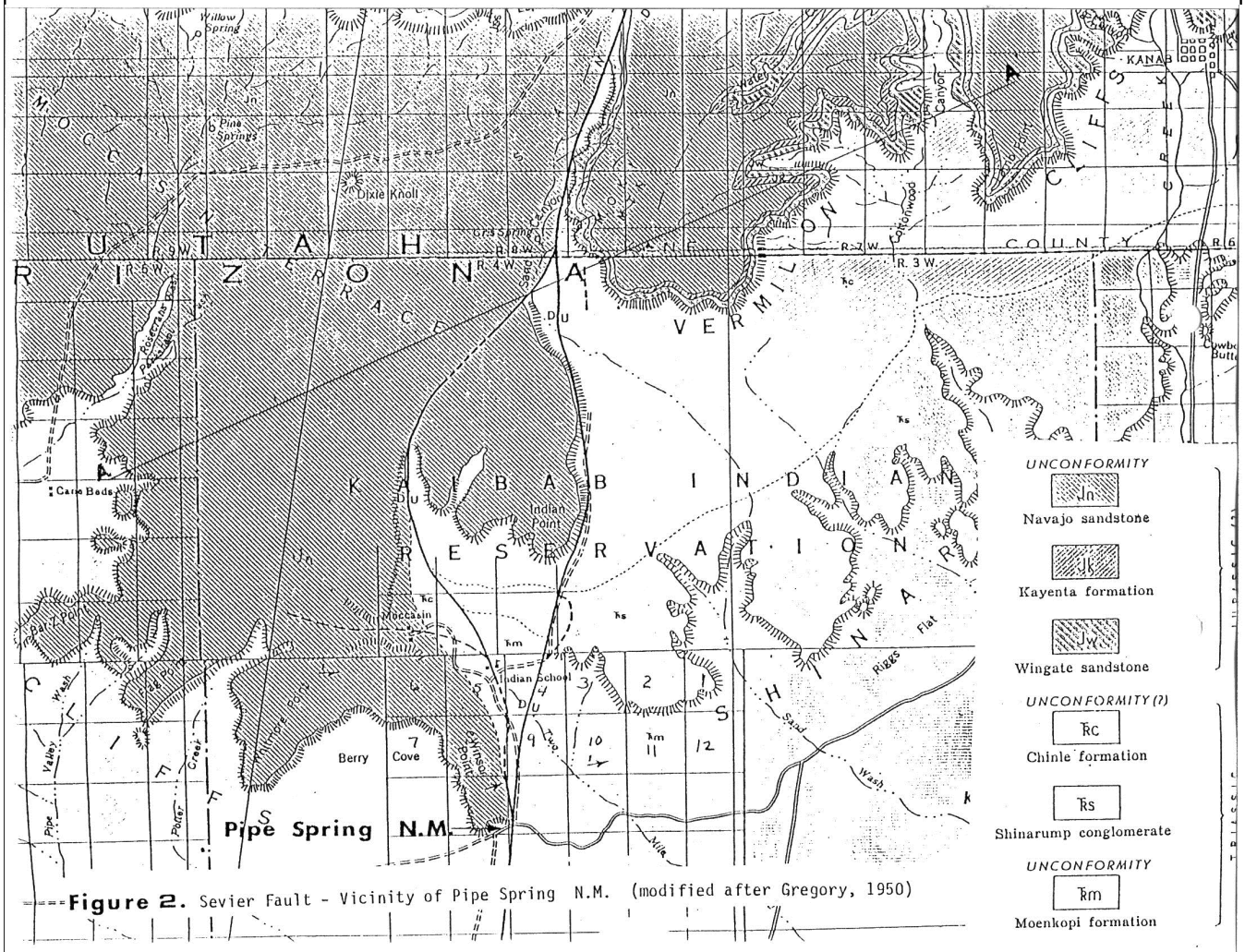



**Figure 2.** Sevier Fault - Vicinity of Pipe Spring N.M. (modified after Gregory, 1950)

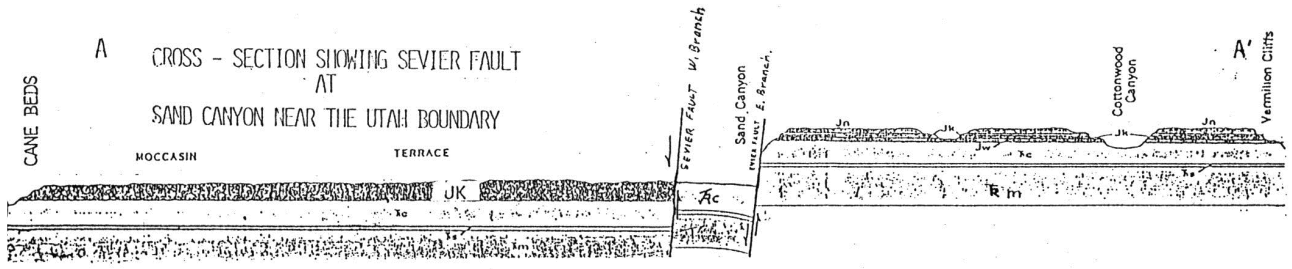



**Figure 3.** Geologic Cross Section - Vicinity of Pipe Spring N.M. (modified after Gregory, 1950)

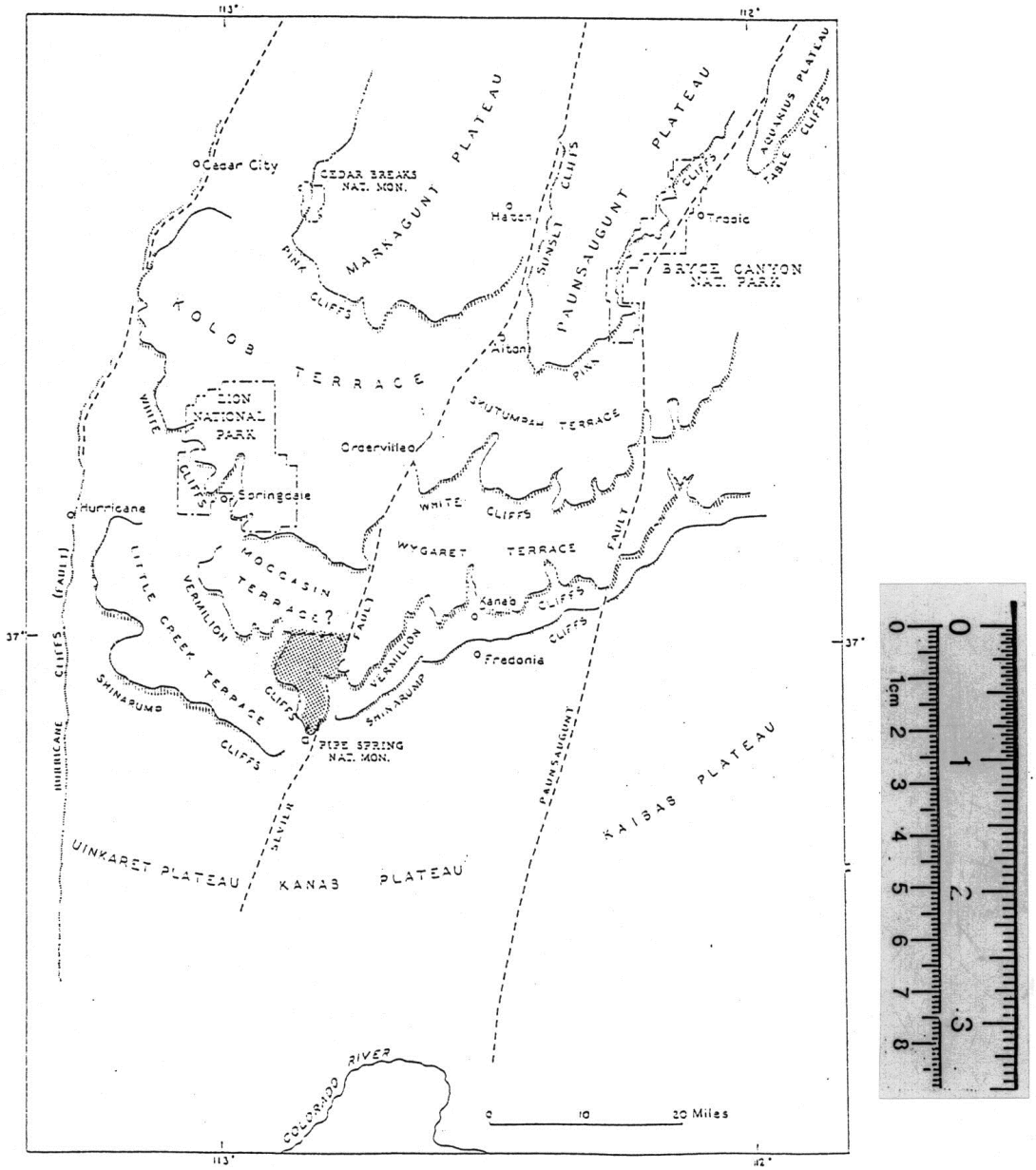



**Figure 4.** Sketch map of Zion Park Region Physiography (with potential recharge area shaded) (modified after Gregory, 1950)

until its further progress is interrupted by impervious beds of the Moenkopi formation, raised to this level by the Sevier fault. The fault plane facilitates upward movement of excess water which has become impounded against the impervious Moenkopi formation to form springs along the fault.

## Aquifers

In the Kaibab Paiute Indian Reservation surrounding Pipe Spring NM, the principal sources of ground water are the fractured sandstone beds in the consolidated sedimentary rock units and, to a lesser degree, in the unconsolidated surficial deposits along the intermittent streams.

Surficial deposits range in thickness from a thin veneer to 100 feet or more. They mainly consist of silt, sand and clay. Irrigation wells in the alluvium in the Short Creek and Cane Beds area (see Figure 2) may yield up to 200 gallons per minute, but in the rest of the Kanab area permeability is usually low (Levings and Farrar, 1979). Where the deposits are thick enough, wells may yield modest amounts of poor quality water (Specific Conductance = 1500-2700 micromhos/cm)(USDI, BIA, 1976).

The greatest water producing consolidated sedimentary aquifer in the region is the Navajo Sandstone formation which crops out north and northwest of the monument in the Moccasin Mountains. Within the Kaibab Paiute Indian Reservation the thickness of the Navajo Sandstone may attain 1200 feet, consisting of fine-grained eolian sand with conspicuous cross-bedding. It is especially jointed and fractured along the west branch of the Sevier fault where well yields may exceed 250 gallons per minute. In unfractured areas, however, well yields may be quite small. Water quality is suitable for domestic use and irrigation.

The Kayenta and Wingate formations crop out along the flanks of the Moccasin Mountains and primarily consist of sandstone and siltstone. No wells are known to have been completed in either formation in the Kaibab Paiute Indian Reservation area, but the potential exists for the production of small amounts of water from these formations.

Of the two Chinle members, only the lower Shinarump conglomerate may yield appreciable amounts of water. However, the sulfate concentration generally exceeds U.S. Public Health Service standards for domestic water supply and the high sodium adsorption ratio (SAR) frequently renders the water unsuitable for irrigation.

Of the five Moenkopi members occurring in the reservation area, only one, the upper member, produces water, but in small quantities and of poor quality.

In summary, only the intensely fractured Navajo Sandstone yields water of adequate quality and quantity for both domestic and irrigation uses. Furthermore, according to a USDI/BIA (1976) study of the hydrology of the Kaibab Paiute Indian Reservation, large-scale pumping of ground water from the fractured Navajo Sandstone along the west side of the Sevier fault near Moccasin can be expected to decrease the flow of the springs in the area.

## Recharge

The natural absorption of rain water and snowmelt by the Navajo Sandstone and formations above it contributes to the recharge of the aquifer along the west side of the Sevier fault contact. Recharge also occurs from seepage losses of streams in areas where elevations exceed 5000 feet. Cordova (1981) estimated the average annual volume of ground water recharge in the Upper Kanab Creek basin as 25,000 acre-feet using a base flow to precipitation ratio of 0.04.

## Discharge

Ground water along the Sevier fault generally moves from the recharge areas in the highlands of southern Utah to the areas of natural discharge in northern Arizona. The general southward gradient of the potentiometric surface is indicated by the higher water surface elevations of wells to the north as compared to wells in the same formation in the south. Seepage into streams such as Two Mile Wash at Moccasin is probably the principal means of ground water discharge. Some seepage into alluvial aquifers occurs before being discharged as surface flow. Additional loss of ground water through evapotranspiration takes place in areas with phreatophyte growth where the ground water is near the land surface. Springs, wells, and subsurface outflow account for the remainder of the loss.

Spring flow throughout the area has been reported to be declining. It has been suggested that seismic activity during the 1950s may have caused the reduction in flow. However, subsurface outflow has probably not changed greatly in the past 30 years. Well use, on the other hand, has increased in the past 10 years (Garkane Power, 1986). There has been an overall increase in well use in this area. This trend is especially noticeable if one studies records from 40 or more years before the development of the modern water well and modern pumping systems.

## Precipitation

In the Upper Virgin River and Kanab Creek basins annual precipitation, based on U.S. Weather Bureau data for Utah for the 1931-60 period, averages about 2 million acre-feet. Of this, about 1,375,000 acre-feet falls in the upper Virgin River basin and the remainder falls in the upper Kanab Creek basin. Most of this precipitation is consumed as evapotranspiration and sublimation at or near the place of fall leaving little to reach streams or to seep into rocks to enter the ground water system.

The amount of precipitation in southwestern Utah is minimal and is characterized by great annual and seasonal variations in place and time. In general, the influence of elevation is apparent but not consistent. Between 1903 and 1937, Kanab, at an elevation of 4,925 feet, had a mean annual precipitation of 14.5 inches with a range of 7.29 to 20.70 inches. Springdale (elevation 4,048 feet) had a mean of about 15.5 inches and a range of 7.98 to 20.78 inches for the same period. Because of its topographic setting, Springdale receives more precipitation than Kanab, even though Kanab is almost 900 feet higher in elevation.

At all stations in southwestern Utah, June is the driest month and February or March the wettest. However, the other months fit into no recognizable pattern. The complexity of the annual distribution of precipitation is enhanced by a sparse data collection network resulting in a poor understanding of the temporal and spatial distribution of precipitation.

The deficiencies of existing meteorological data are mentioned in the Gregory (1950, p. 31) report where it is stated that "The meteorological stations in the Zion Park region show no consistent wet and dry cycles. The records of precipitation are unsuited for general climatic studies. They are brief and fragmentary and lack other features needed for the recognition of climatic cycles. Their lack of accord with the long records at Fort Defiance...Los Angeles and Salt Lake remains to be explained."

## Surface Water - Runoff

Most of the discharge of Kanab Creek and the Virgin River is derived from snowmelt. Estimates of total mean annual runoff from the upper Kanab Creek basin into Arizona are on the order of 50,000 acre-feet (Moore, 1968).

These streams can also receive significant flow from torrential summer rains. In Kanab Creek basin, instantaneous peak discharges of several hundred to more than 1,000 cu.ft./sec. have been commonly recorded as the result of summer cloudbursts. However, ground water seepage is generally regarded as the main source of flow for perennial streams during the low-flow periods of the dry summer months. In the Virgin River, at USGS site (C-41-10)22bc, it is estimated that ground water contributes as much as 43 percent of the average annual discharge.

## Surface Water - Quality

Dissolved-solids concentrations in the surface waters of most streams in the Kaibab Paiute Reservation area are generally less than 1,000 mg/l during both high- and low-flow periods. Moreover, the dissolved-solids concentrations in the headwaters of Kanab Creek are less than 250 mg/l but have been found to exceed 500 mg/l in the lower reaches of the streams during low-flow periods. The water quality of springs in the Arizona Strip area adjacent to Pipe Spring NM is shown in Figure 5 using pattern diagrams (USDI/BIA, 1976).

## Water Development and Use at Pipe Spring NM

The water resources at Pipe Spring NM consist of five springs or seeps in the SE 1/4 of Sec. 17, T 40 N, R 4 W. As shown in Figure 6, these are: 1) Big Spring, 2) Spring Room (Historic Spring), 3) West Cabin Springs, 4) Tunnel Spring (Cattlemen's line) and 5) Drainage seeps (2) from the fort foundation. Of these, Tunnel Spring, flowing from the base of the hill 60 feet southwest of the fort, is used entirely by cattlemen. Only two of the remaining springs contribute measurable amounts of water for interpretive use at the fort or the historic ponds. The largest flow issues from Big Spring which originates under the parlor floor within the fort. Historic Spring also issues here and flows outside the fort. About 125 feet west of the fort, along the side of a south facing hill, West Cabin Springs flow from two fissures in the hill. However, the flow here is too weak to recover and use.

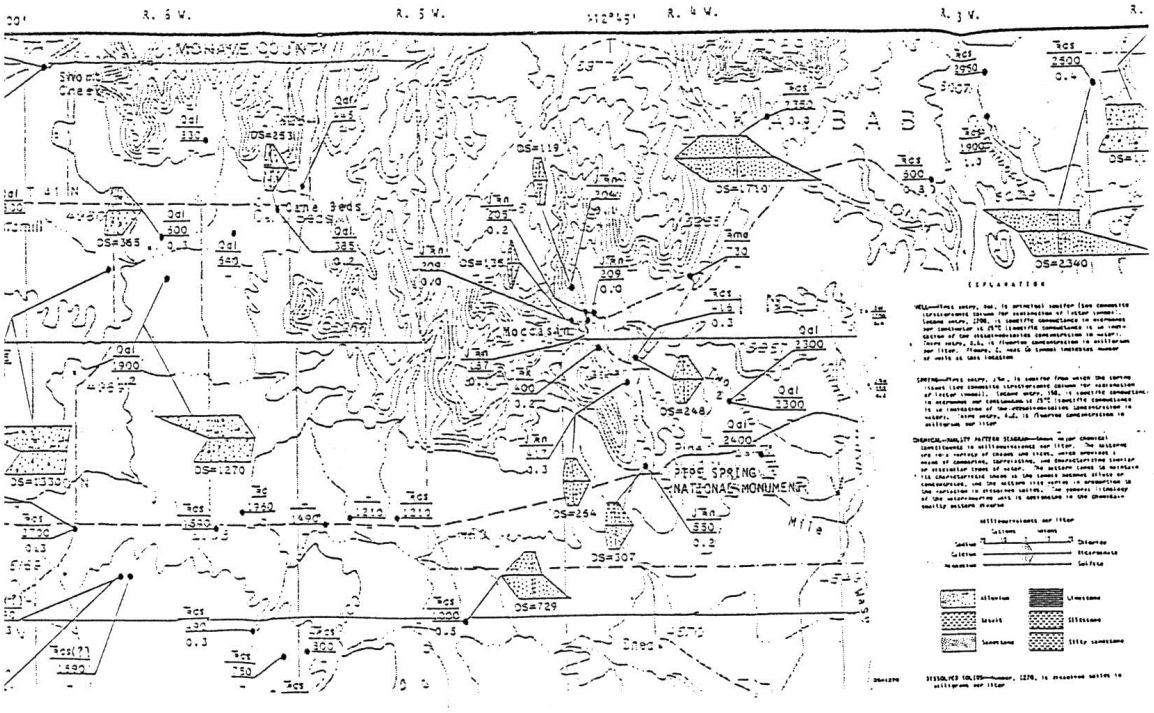



**Figure 5.** Water Quality of Springs in the Arizona Strip (USDI/BIA, 1976)

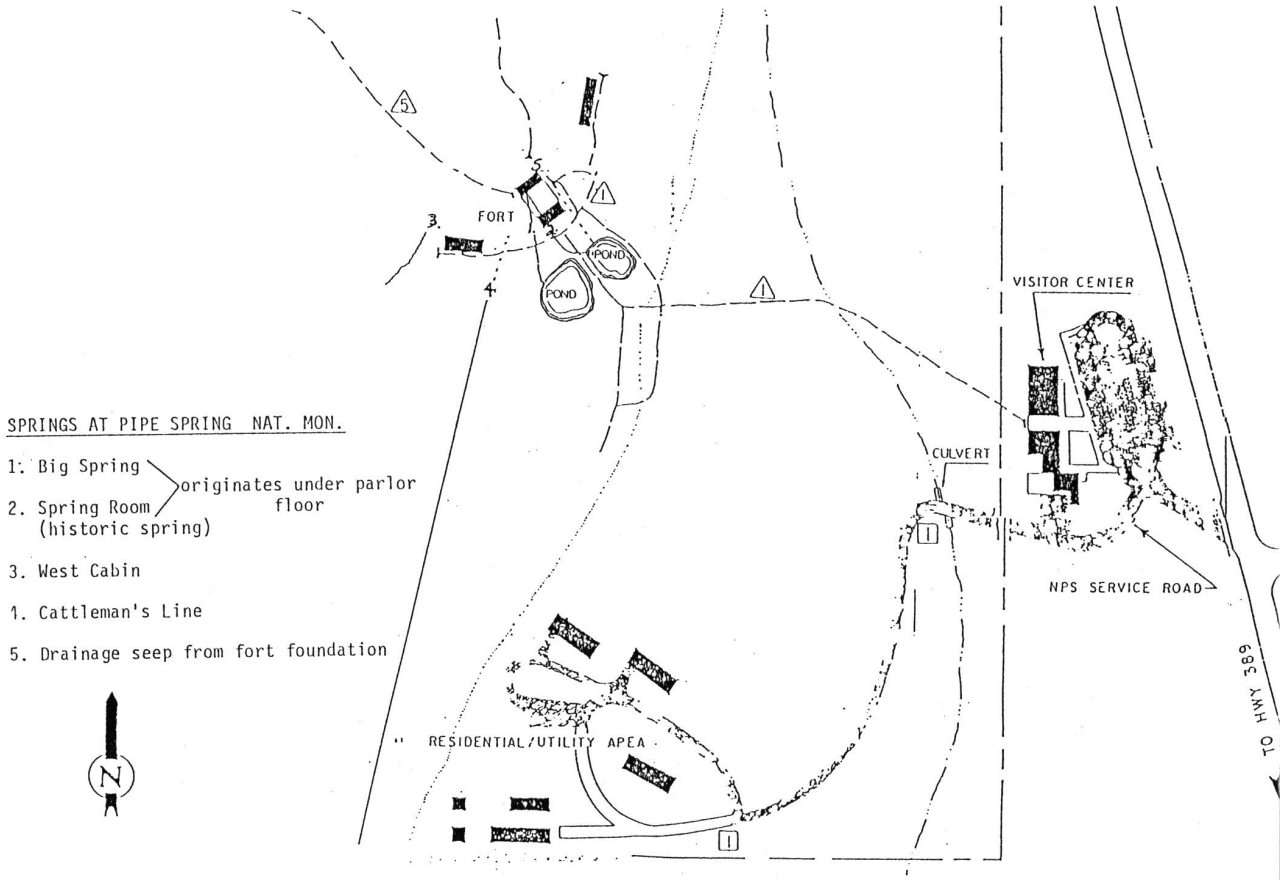



**Figure 6.** Springs at Pipe Spring N.M.

Domestic water requirements at the monument's visitor center and residence area are supplemented by an NPS well drilled in 1971. The well is located about two miles north of the monument on the Kaibab Paiute Indian Reservation land. By agreement dated April 13, 1972, this well serves both the monument and the Kaibab Paiute Indians. Water from the well is pumped through a 4-inch line to a 500,000-gallon reservoir. The water passes through a 6-inch line from the reservoir to the visitor center and the monument residential/utility area (see Figures 6-8).

## Water Quantity & Quality -- Pipe Spring

Prior to 1977, measurements of spring discharge at Pipe Spring NM were made on a spotty basis. Two early records report a flow of about 42 gallons per minute in September 1933, and 47 gallons per minute in May 1934. Other measurements are 35 gallons per minute on March 12, 1959, 38 gallons per minute on July 2, 1969, and 32 gallons per minute on August 6, 1976.

Levings & Farrar (1979) measured the flow of the springs at Pipe Spring NM on July 27, 1976, prior to the beginning of the decline in spring flow. They reported the flow to be 35 gallons per minute using a flume and volumetric measurements. The specific conductance was given as 550 micromhos/cm, and the temperature was 16° C. Sodium was estimated to be at <2 milliequivalents per liter, calcium at <2, magnesium at <2, chloride at <1, bicarbonate at 3, and sulfate at <2. Gregory (1950, p. 197), in an undated measurement, reported the springs to yield 56 gallons per minute at a temperature of 63° F.

In 1977 the staff at Pipe Spring NM began the systematic measurement of flow from the principal springs at the monument. The combined discharge of the springs was measured volumetrically at approximately the same time each month. Figure 9 presents the data graphically as annual averages and demonstrates, at least qualitatively, that a steady downward trend in discharge has been occurring since 1977. Presented in another format, Figure 10 reveals that this trend has been rather uniform between years, (i.e., January flows have been declining, February flows have been declining, etc.).

These data, for the period July 1976 to June 1986 inclusive, were paired with monthly precipitation data from the nearest weather station (Kanab). The relationship of spring flow as a function of precipitation was examined using multiple regression analyses. Less than 1 percent of the variance in spring flow was found to be associated with precipitation (that is -- the coefficient of determination, or "r squared," was less than .01).

To account for the possible effects of delayed transmission through the aquifer supplying the springs, the spring flow values were paired with precipitation values which had occurred one year, eighteen months, and two years previously. In each of these three analyses the lack of relationship between spring flow and precipitation remained evident (i.e., coefficient of determination less than 1 percent).

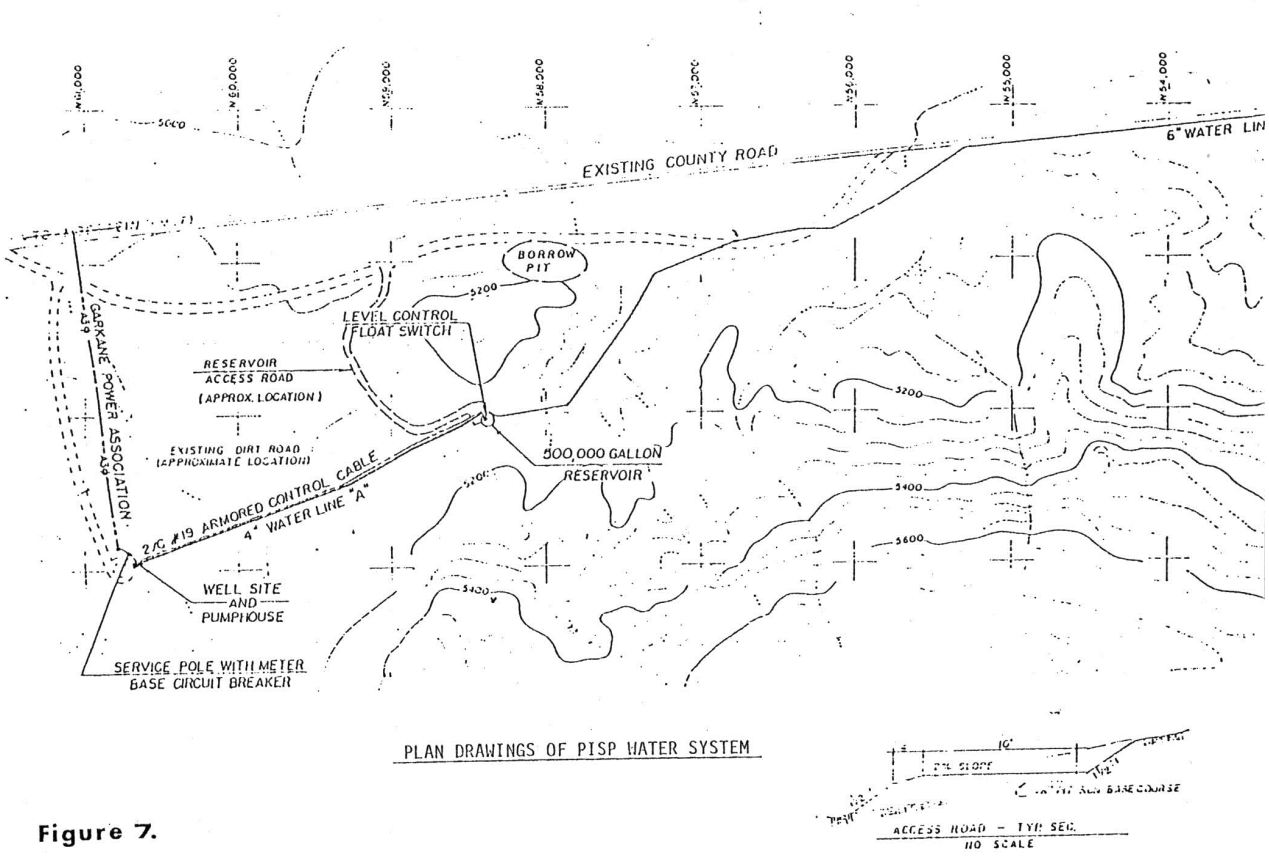

EXISTING COUNTY ROAD
6" WATER LIN
BORROW PIT
LEVEL CONTROL FLOAT SWITCH
RESERVOIR ACCESS ROAD (APPROX. LOCATION)
EXISTING DIRT ROAD (APPROXIMATE LOCATION)
500,000 GALLON RESERVOIR
2/C #19 ARMORED CONTROL CABLE
4" WATER LINE "A"
GARKANE POWER ASSOCIATION
WELL SITE AND PUMPHOUSE
SERVICE POLE WITH METER BASE CIRCUIT BREAKER
PLAN DRAWINGS OF PISP WATER SYSTEM
ACCESS ROAD - TYP. SEC.
NO SCALE

**Figure 7.**

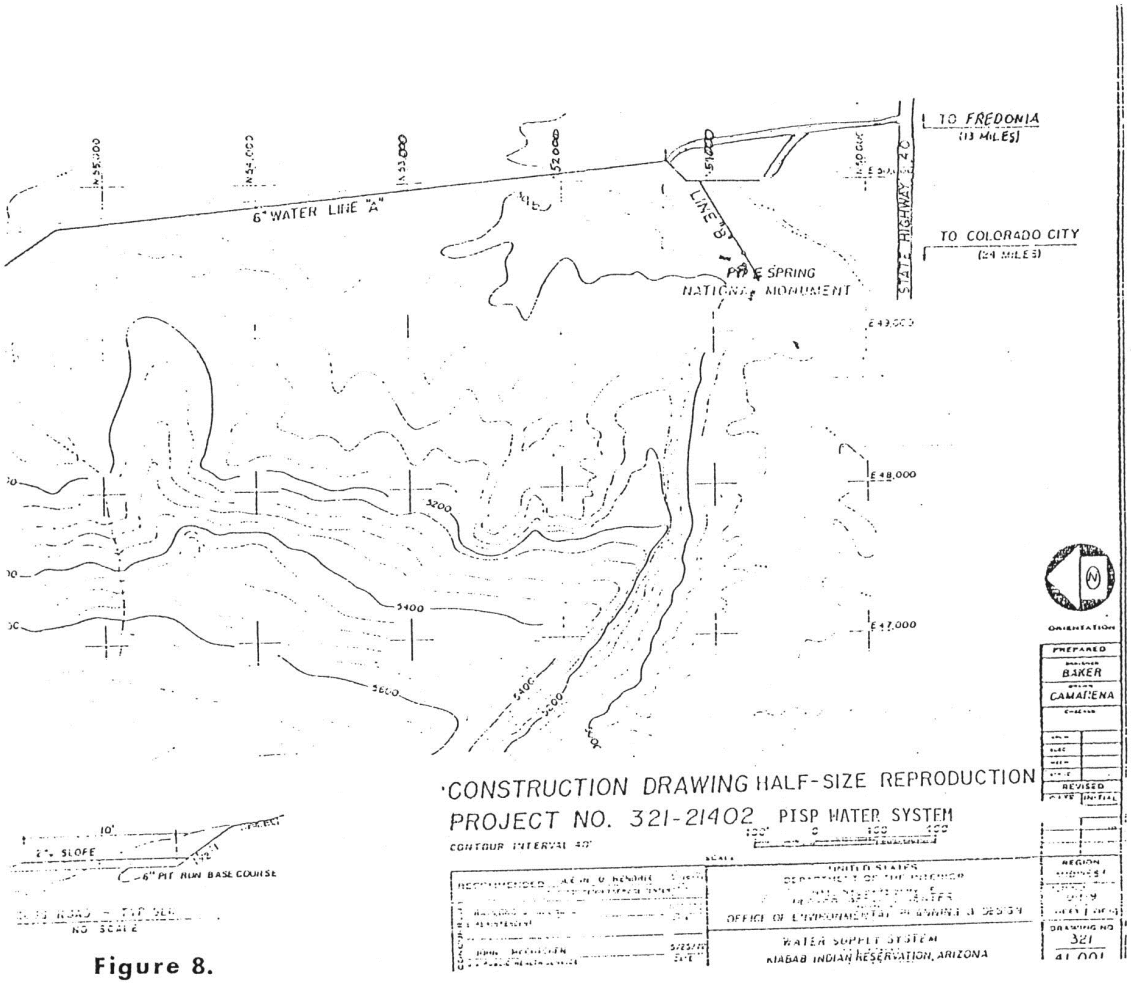

6" WATER LINE "A"
TO FREDONIA
(13 MILES)
TO COLORADO CITY
(24 MILES)
STATE HIGHWAY 389
PIPE SPRING
NATIONAL MONUMENT
LINE "B"
CONSTRUCTION DRAWING HALF-SIZE REPRODUCTION
PROJECT NO. 321-21402 PISP WATER SYSTEM
CONTOUR INTERVAL 40'
PREPARED
BAKER
CAMARENA
REVISED
ORIENTATION
UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF ENVIRONMENTAL PROJECTS
WATER SUPPLY SYSTEM
KAIBAB INDIAN RESERVATION, ARIZONA
DRAWING NO
321
41 001
2% SLOPE
6" PIT RUN BASE COURSE
NO SCALE

**Figure 8.**

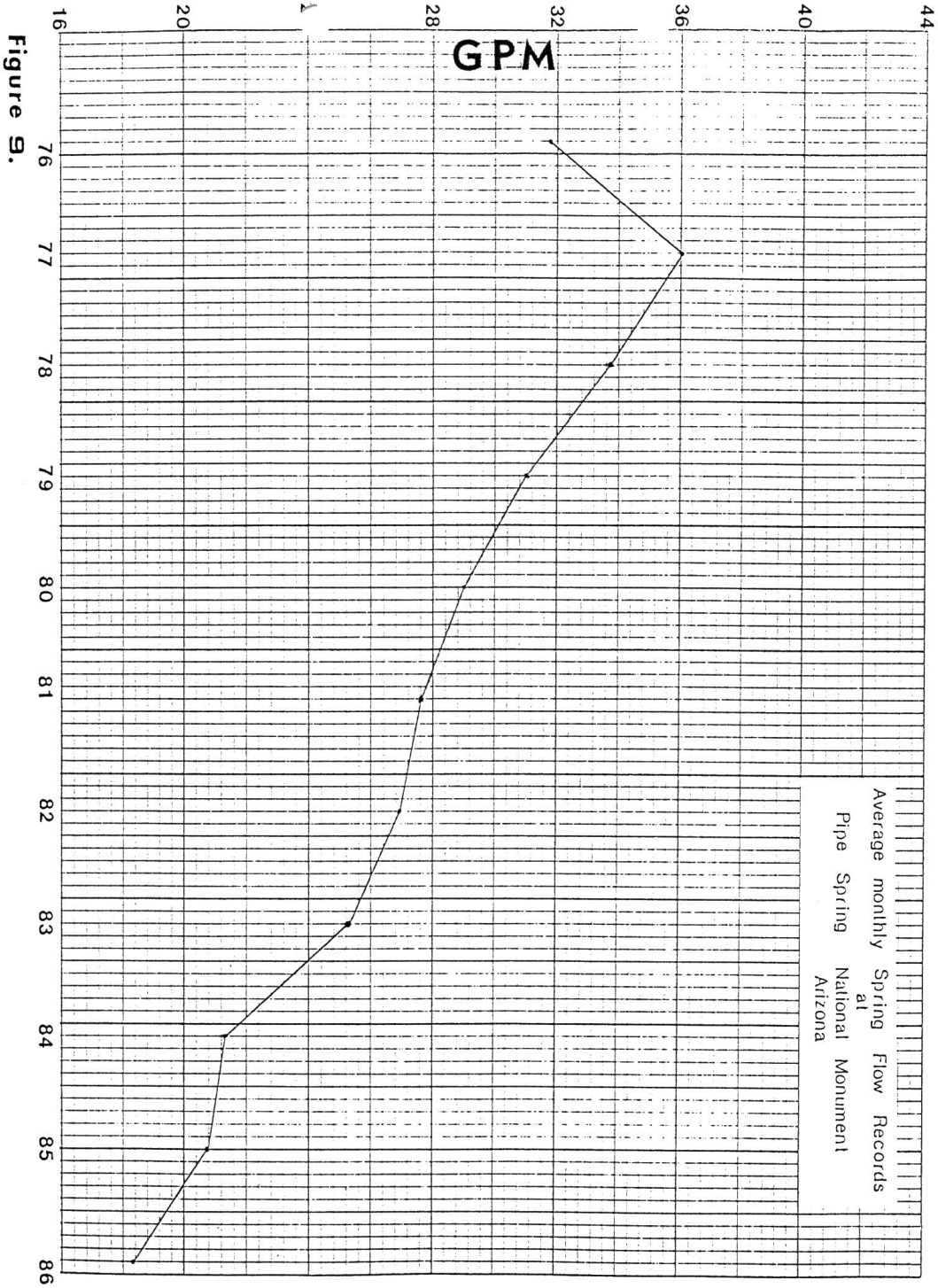

GPM
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Average monthly Spring Flow Records at Pipe Spring National Monument Arizona

Figure 9.

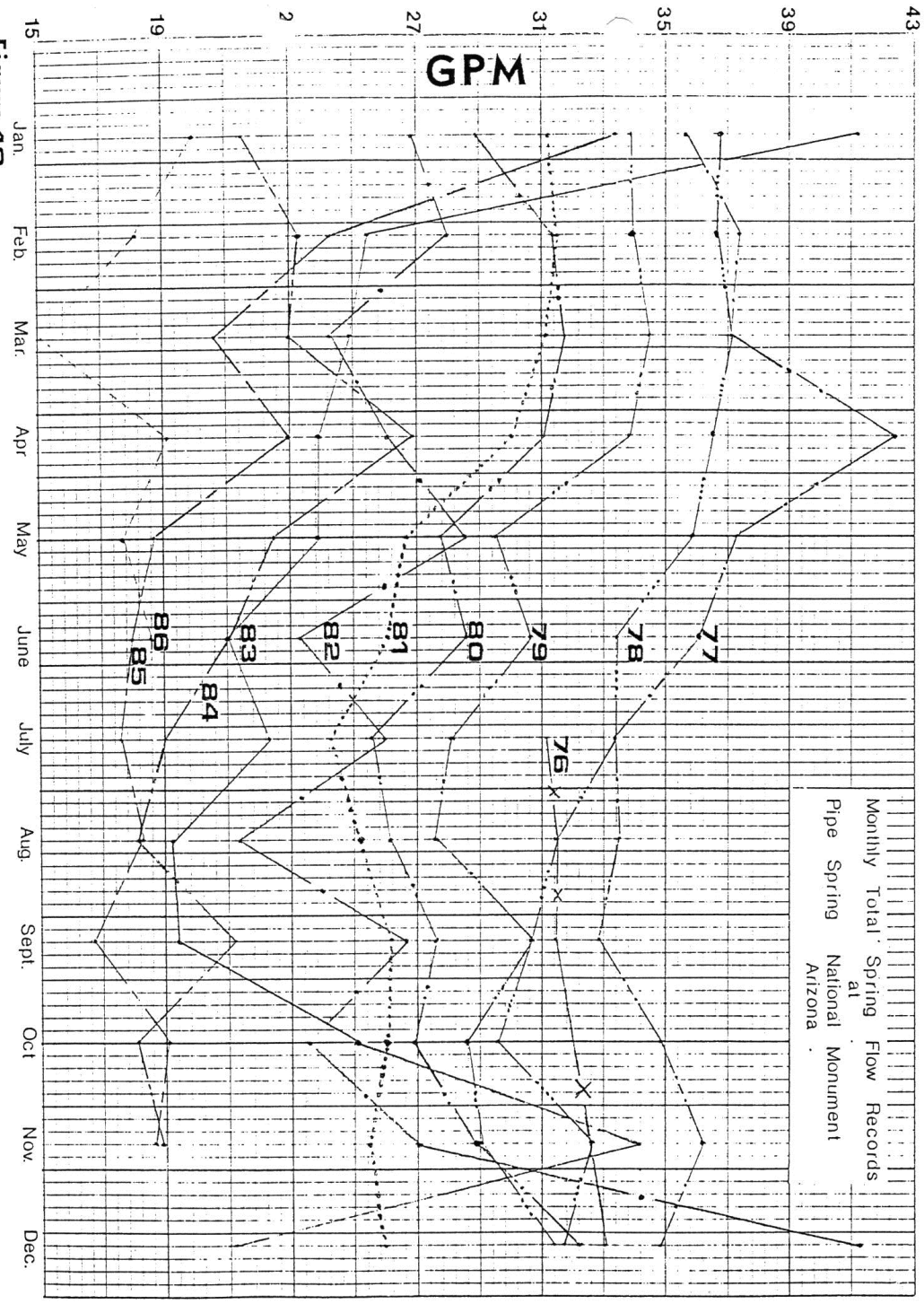

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Monthly Total Spring Flow Records at Pipe Spring National Monument Arizona .

**Figure 10.**

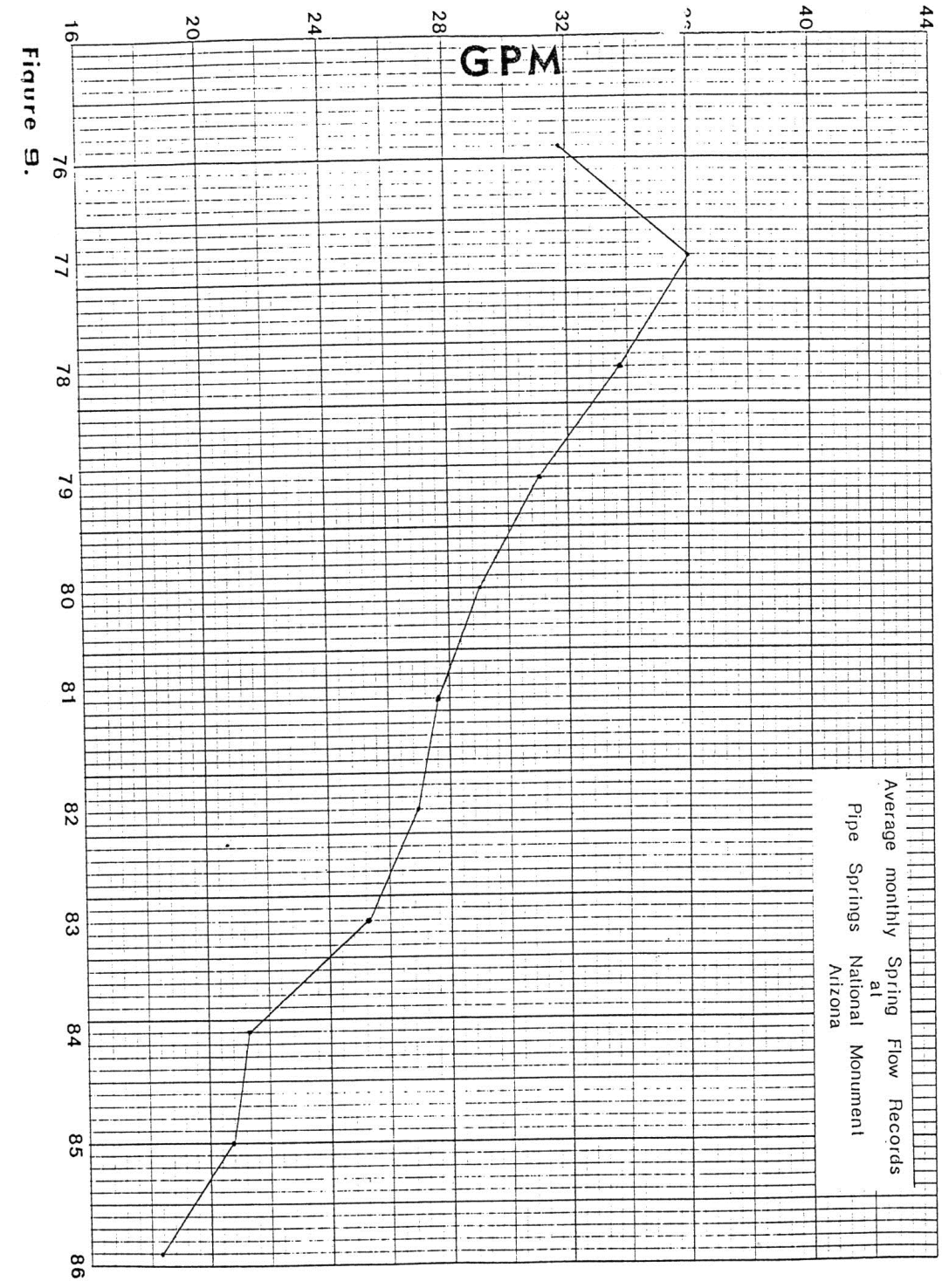

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Average monthly Spring Flow Records at Pipe Springs National Monument Arizona

Figure 9.

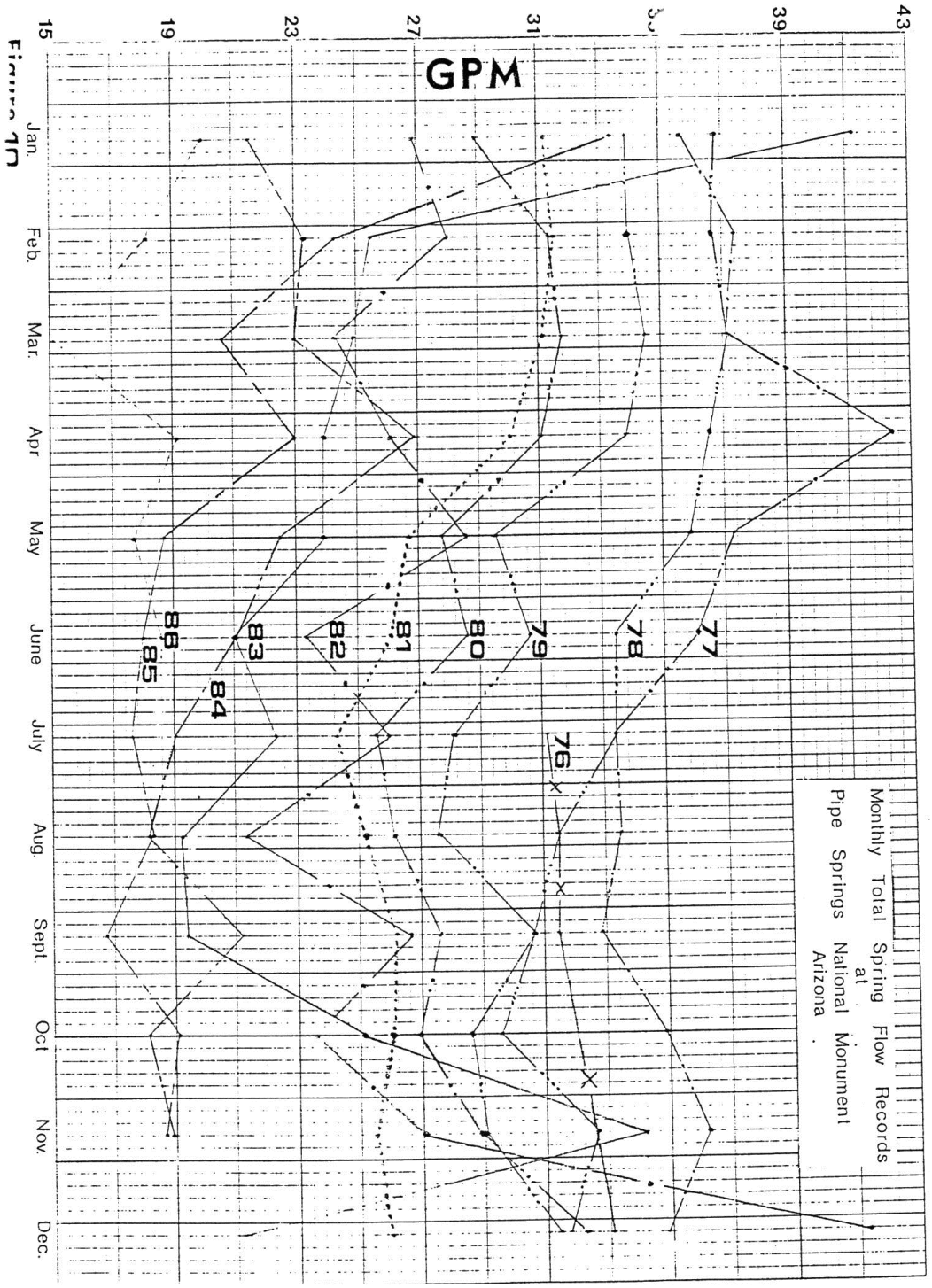

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Monthly Total Spring Flow Records
at
Pipe Springs National Monument
Arizona .

Figure 10

## Water Rights Situation at Pipe Spring NM

Pipe Spring NM exists because of the general absence of water between Zion NP and the north rim of Grand Canyon NP. The unique occurrence of water at this site has made it highly valuable to Indians, early settlers, and the traveling public. With water playing such an important role, both environmentally and socially, it is to be expected that water rights at this location are characterized by a complex interweaving of personalities and interests. The history of water rights at Pipe Spring to this day involves three parties -- the National Park Service, the Kaibab band of the Paiute Tribe, and local cattlemen.

The general understanding of the water rights situation at Pipe Spring is that the production of the springs is to be divided equally between the three parties. This understanding arises from an agreement developed in 1924. The degree to which it was binding is uncertain because the agreement does not appear to have been officially approved by the Secretary of the Interior.

The cattlemen's use of the flow from these springs seems to be founded upon their predecessor's purchase of such right from Charles C. Heaton whose claim to ownership was later purchased and donated to the United States. The right, which dates back to the late 1880s, is presumed to have arisen consequent to the original settlement of the site by Daniel Seegmiller. Since the Kaibab Paiute Indian Reservation was created in 1907 (confirmed in 1917) such a claim, if valid and applicable to water rights, could be senior to the rights of both the Indians and the NPS.

The validity of the claim, however, has been questioned. The basis of Seegmiller's title was his claim of ownership of the site as a "scrip location." Such a claim, to result in patent, required a completed land survey which, in the case of the Seegmiller property, did not occur until 1916 -- well after Seegmiller's death in 1899. The Government Land Office, as a result, showed no land to be privately owned in this area when the Indian reservation was created in 1907.

The division of spring flow between the NPS and the Kaibab Paiute Indians was a requirement of the Presidential Proclamation creating the monument (Proc. #16663, May 31, 1923). The division was further supported by the early contention of the Department of Indian Affairs that a reserved right was created for the Indians when the boundaries of the reservation were preliminarily established.

The initial and, more or less, informal agreement of 1924, dividing the flow of the three springs between the three principal interests, was essentially given recognition when regulations controlling the three-way division were promulgated by the Department of Interior in November 1933. The 1924 agreement and the resultant regulations produced a satisfactory accommodation but one which lacked formalization under Arizona water law.

In view of the questions of validity of past land ownership and the fact that the State, as of January 29, 1937, had no record of any water rights at

the springs, the NPS initiated action in April 1937 to secure State recognition of the three water rights. The amounts of water for which the NPS was initiating its claim was 42,500 gpd or 47.6 acre-feet per year for each of the three claimants.

However, as a result of consultation with the Bureau of Indian Affairs, the effort was scuttled. The reasons for not pursuing this course of action were 1) the Indians had a Federal reserved water right in the springs because the springs were included in the original reservation and there were no recognized outstanding rights to the land or water; and 2) the spring flow arose and fell on Indian property and, thus, did not create an appropriable flow in a defined channel beyond the limits of the reservation.

In April 1972, the NPS and the Kaibab Paiute Indians entered into a renewable 25-year agreement wherein the NPS was to drill a water well and provide associated delivery structures to the tribe in exchange for the tribe's one-third interest in Pipe Spring. The well was to provide the tribe with 7,884,000 gallons per year (24.2 acre-feet per year) and any shortfall in the delivery of this amount was to be made up from spring flow. The completed well subsequently was placed into service.

Since the agreement between the NPS and the Kaibab Indians talks to an amount of 24.2 acre-feet per year (with another 1.6 acre-feet per year from the springs for stock watering), it can be assumed that similar amounts are available to the NPS and the cattlemen under the terms of the three-way agreement and regulations mentioned earlier. This is of interest at this point in the discussion because a claim to a right to water from the Pipe Spring was filed on June 23, 1978, by eight individuals including Nora M., J. Grant, Fred E., Landell J., Derryll L., and I. McKay Heaton.

The application claimed a right to 14 gallons per minute, or 7,358,400 gallons per year (22.6 acre-feet per year), with first beneficial use occurring April 1, 1870. The claimed right to water was, according to the application, created by Jonathan and Lucy Heaton placing the water to beneficial use prior to 1890 with subsequent continuous use being made by their heirs and assigns.

In reviewing the foregoing summary, it becomes evident that prior to the Heatons' Statement of Claim and the agreement between the NPS and the Kaibab Paiute Indians, no statements had been made as to quantities of water to which each party held a right. The three parties to the division of the flow of Pipe Spring had previously only agreed to share equally in the springs' production. A decline in such production had not been directly addressed.

The State of Arizona has on file, for the area within approximately 4.75 miles of Pipe Spring NM, three additional water right applications, (totaling 282 acre-feet per annum) and five well registrations, (totaling 360 gpm for 581 acre-feet per annum) including the NPS well (150 gpm for 242 acre-feet per annum, see Figure 11). It seems likely that water use on the Kaibab Paiute Indian Reservation is substantial and may greatly overshadow the figures presented above. To the best of our knowledge, none of these water right claims have been adjudicated. The State of Arizona either did not have, or did not provide, information on wells or other water use within the Kaibab Paiute Indian Reservation.

| Designation | Registration # | Application # | Permit # | Priority |
|---|---|---|---|---|
| surface | -- | 33 0066094 | -- | 06/05/1978 |
| spring | 36 67900 | -- | -- | 04/01/1870 |
| surface | cert # 0001850 | A 0002819 | 2190 | 02/08/1947 |
| surface | cert # 0003233 | R 0002227 | 1556 | 04/19/1963 |
| well | WR 621499 | -- | -- | -- |
| well | WR 649200 | -- | -- | -- |
| well | WR 644450 | -- | -- | -- |
| well | WR 644449 | -- | -- | -- |
| well | WR 611159 | -- | -- | -- |

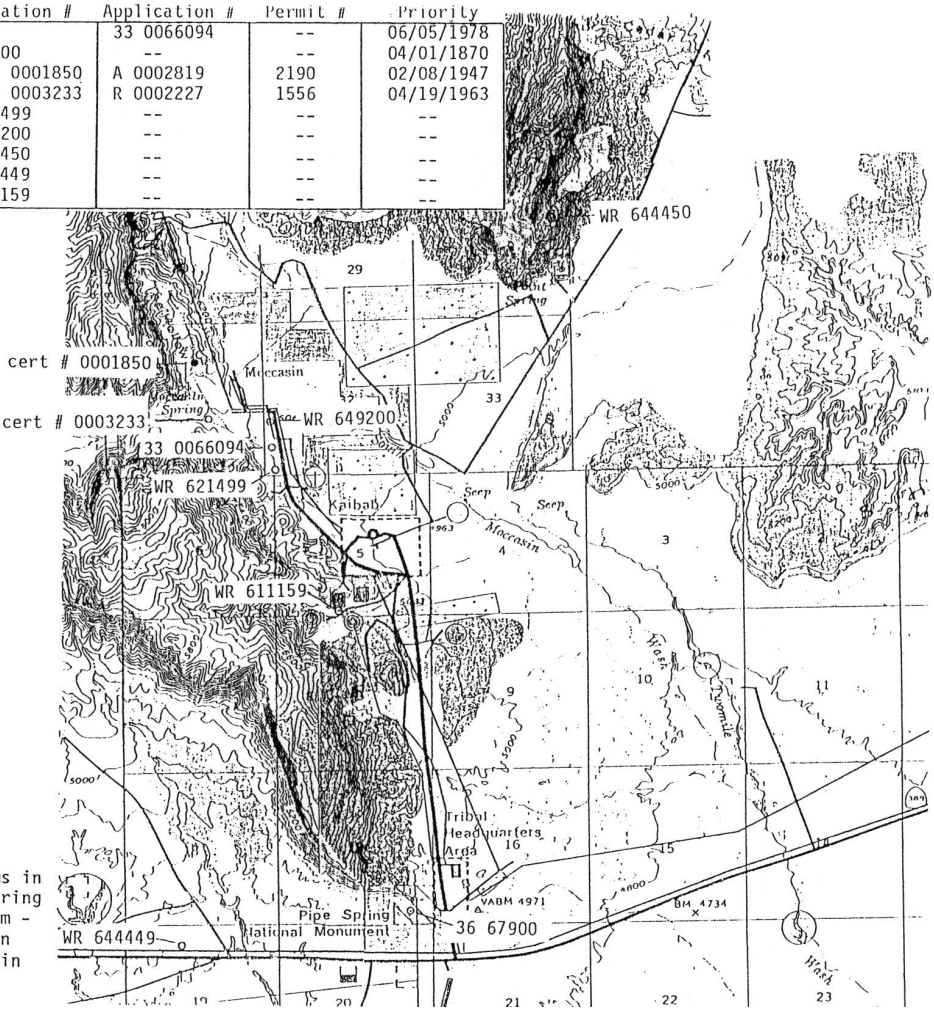



**Figure 11.** Water claims in the Vicinity of Pipe Spring National Monument. (from - Kaibab and Paiute Indian Reservation Map, Mountain West Research, 1977)

## IV. MANAGEMENT SITUATION

The situation facing management at Pipe Spring NM is complex. The three users of the water from Pipe Spring have very different needs. As flow from the springs continues to decline, a point will be reached where some or all of these needs will no longer be met. With the 25th anniversary of the 1972 agreement with the Kaibab Paiute Indians approaching, the complexity of the situation increases.

The potential for conflict between uses and users can be expected to increase over time as spring flow declines. Furthermore, the very purpose for the creation of the monument eventually may be threatened.

Against this background are arrayed:

1) a paucity of historical data on spring flow prior to the onset of the flow decline;

2) an incomplete understanding of the hydrology of the ground water system feeding the springs;

3) an unknown (though not unknowable) level of ground water use on the Kaibab Paiute Indian Reservation;

4) an incomplete understanding of the effects of well pumping upon the production of the springs;

5) little or no knowledge of the rate of ground water transmission at Pipe Spring;

6) an incomplete technical understanding of the Sevier fault; and

7) uncertainty as to the areal extent of the decline in spring flow.

Before any strategy can be developed to protect monument resources and the needs of the other two users, at least some of the above data gaps need to be filled. This will require the initiation of a field study as soon as practicable. Such a study should alleviate a portion of the existing uncertainty and allow corrective actions which have a reasonable chance for success.

The extent of the study will depend upon the requirements of management. Due to the complex heterogeneity of the system, a substantial uncertainty will attend the study results. Uncertainty can be minimized but the difficulty and the cost to achieve this will vary inversely with the level of acceptable residual uncertainty.

For example, it would be desirable to know the approximate level of "natural flow" (the flow which would occur without the effects of natural or man-caused changes in the aquifer). One way to determine the "natural flow" would be to eliminate the effects of "unnatural" discharge from the springs' ground water system. This would mean shutting down all wells which may affect spring flow at Pipe Spring NM. Although this would be a simplistic and direct

approach to answering the question, it would be a complex and costly endeavor. Furthermore, it would be difficult to accomplish in light of the dependence of the Kaibab Paiute Indians and the Village of Moccasin upon water coming from wells along the Sevier fault.

An indirect approach to answering the same question would be to find other springs along the Sevier fault and in the same general area of recharge that are not declining in the manner of Pipe Spring. This method would, however, still take some time and require collection of additional supportive data.

In any case, the cause of the spring flow decline must be determined before any effective management strategy can be developed.

## Alternative Study Approaches

Following are selected alternatives for determining the cause of spring flow decline. They are offered for management's consideration and admittedly are not exhaustive.

Alternative Approach #1.

Drill a series of ground water observation wells, install long-term monitoring systems on these and other wells, establish precipitation stations where needed, and monitor all existing uses.

Advantages: This approach will provide a reasonably accurate representation of the aquifer and its function, along with the role of the Sevier fault, and will allow development of input-output relations (i.e., a mass balance).

Disadvantages: While having low uncertainty, this approach is very costly and time consuming. The logistics of finding places to drill wells and getting permission, etc., may be prohibitive.

Alternative Approach #2.

Using continuous recording "data loggers", collect long-term data on ground water from: 1) the NPS-Kaibab well; 2) an observation well in the Navajo aquifer near the Sevier fault; 3) Moccasin Springs; and 4) Pipe Spring. Collect precipitation data in the Moccasin area.

Advantages: Data will be made available where, currently, no comprehensive data on the ground water budget for the Navajo aquifer exists. This data, when evaluated, may point to some hitherto unknown but subsequently obvious cause of the problem.

Disadvantages: This approach may not yield conclusive results before it is too late to arrest the decline in spring flow.

Alternative Approach #3.

Do not collect any additional data, just seek additional sources of water to substitute for the tribal and village wells in the Navajo Sandstone aquifer adjacent to the Sevier fault.

Advantages: The discovery of an alternative plentiful source of potable water near the monument would enable the NPS to bargain with the tribe and village of Moccasin over the use of their wells along the Sevier fault. This effort could be accomplished within one year.

Disadvantages: Although not all the hydrologic options for drilling a new high-yield well have been explored, the most promising option -- a deep test of the Shinarump conglomerate in the area west of the Sevier fault -- has some decided risks. The most significant risk is the chemical quality of deep water in this formation which has a reputation for a high dissolved-solids concentration and a high sulfate content, either of which would render the water unfit for domestic or irrigation use. Finding an adequate quantity of water may be less difficult than finding adequate quality of water. Furthermore, the potential for an adverse effect at the springs, while small, does exist.

Alternative #4.

Initiate the data collection effort described in alternative #2 and seek alternate water sources as described for alternative #3.

Advantages: This alternative entails less uncertainty than alternatives #2 and #3 in addition to the advantages already described for these alternatives.

Disadvantages: This alternative increases the costs above those of either alternative #2 or #3, but is still likely to have higher uncertainty than alternative #1.

We recommend Alternative #4.

## V. CONCLUSIONS

From the foregoing, it appears that management faces a difficult decision at Pipe Spring NM. Furthermore, time is of the essence and solid data upon which a suitable strategy may be founded is largely unavailable.

Our initial analysis indicates the decline in spring flow is real rather than apparent and is the result of man's influence rather than climatological factors. A determination of the nature and extent of the operative factors seems to be required before any reasonable strategy with possibilities of effect may be initiated.

A statement of the obvious may be warranted at this point; if the NPS finds itself in any form of litigation (water rights or Tort claim), an adequate analysis based upon good data would be helpful.

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STANDARD FORM No. 14
APPROVED BY THE PRESIDENT
MARCH 10, 1926

# TELEGRAM

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CHG. APPROPRIATION Zion National Park
Springdale, Utah

April 29, 1958

U. S. GOVERNMENT PRINTING OFFICE 10—1723

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Salt Lake City, Utah

Director, National Park Service, Washington, D. C., Stop
L54. Retel urwire 4/26 Pipe Spring. No 1957 flow records. Measurement

September 1933, Historic Spring 33.35 GPM, Tunnel Spring no measurement.

May 1934 Historic Spring 34.03 GPM, Tunnel Spring 8.12 GPM.

Paul R. Franke
Superintendent

Sent via Cedar City, Utah
4/29/58 9:00 a.m. LAL

Chronological
Files
Accounts
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cc: Pipe Spring

PiSP

C O P Y

REPORT ON SPRING FLOW
PIPE SPRINGS NATIONAL MONUMENT
May, 1934
By A. E. Cowell, Park Engineer
Zion National Park

Two springs furnish the water supply of Pipe Springs National Monument. The Historic Spring is located beneath the floor of the westerly building of the fort and flows through two pipes, one carries a small flow for domestic use through the easterly building of the fort, thence into the ponds in front. The other leads to a point immediately south of the fort and flows from the ground resembling a spring at an elevation of 4957 feet, thence into the ponds where the water elevation is 4950.35 feet.

The second spring flows from a tunnel the mouth of which is about 230 feet southwest from the Historic Spring and extends northerly 143 feet to face. A concrete bulkhead was built in the cut a few feet below the mouth of the tunnel and the cut walled up and covered, a manhole being provided for access. A two inch cast iron pipe connecting with a suitable intake unit at the bulkhead (elevation 4937 feet) extends southerly 185 feet in covered trench, discharging into a small earth reservoir, the overflow of which now flows southwesterly into the reservation and is used for watering the stock that feed in this vicinity.

An agreement is of record whereby the combined flow of these two springs is to be divided equally one-third to the Indian Service, one-third to the National Park Service, and one-third to the stockmen interested in local range.

Anticipating that some plan for diversion of water would be arranged, a tentative design for an outlet from the ponds was suggested by the office of the Chief Engineer of the National Park Service and the overflow and outlet pipe was installed by C.W.A. workmen in accordance therewith.

On May 3, 1934, Dr. E. A. Farrow, Superintendent of the Piute Indian Agency, and N. A. Hall, Indian Service Engineer, met with Custodian Leonard Heaton and the writer at the monument preparatory to measuring the flow of the springs and to plan a means for the diversion of the water. The Indian Service offered a plan for measuring structure identical as to principle with that suggested by the office of the Chief Engineer of the National Park Service, and proposed to construct same with the exception of wier plate with their E.C.W. labor. It was arranged that Engineer Hall and the writer measure the flow by wier method and this was done on May 7,

Pipe Springs

13

with Mr. Charles Heaton representing the interested stockmen, present. Engineer Hall supervised the installation of the diversion structure and the installation of the Indian Service pipeline to a point outside the easterly boundary of the monument. The design of the weir plate is to be submitted to the Chief Engineer for approval and purchase and is to be installed under the direction of the Park Engineer. Plan of structure as constructed and weir plate proposed is attached hereto.

The flow was determined from Tables by Francis from Kent Handbook for rectangular wier, with full end contractions with results as follows:

Historic Spring:

Rectangular wier 3" wide under .218 foot head flows 4.55 cu.ft. or 34.03 gal. per min.

Lower Spring or Tunnel Spring:

Rectangular wier 2" wide under 0.12 foot head flows 1.086 cu.ft. or 8.12 gal. per min.

The combined flow of the two springs is 42.15 gal. per min. and a division into thirds provides 14.05 gal. per min. each.

The elevation of the lower spring is such that its waters cannot best serve the interests of the Indian Service or National Park Service, but can be used for all requirements of the stockmen. In designing the wier plate it is presumed that all the flow of the lower spring plus 5.93 gal. per min. from the upper spring will be distributed to the stockmen and that 14.05 gal. per min. be distributed to the Indian Service and Park Service alike.

All the flow from the upper spring entering into the division is drawn from the ponds and eliminates any small amount of water that the public may draw directly from the spring for drinking and culinary purposes.

Of the three discharge lines from the distributing structure, one leads off the monument to the Indian reservation, one connects with the water system of the monument, and the third from the lesser wier is proposed to be discharged into the lower spring at tunnel takeout and flowing with the waters from the lower spring through the pipe now installed to its outlet in the small pond where it can be picked up by such means as the interests using it may adopt.

C O P Y

# PIPE SPRING NATIONAL MONUMENT

## WATER SYSTEMS

Branch of Engineering
San Francisco, Calif.,
February 19, 1935.

Reports by R. H. Rose, Sept. 19, 1933; Leonard Heaton, Dec. 28, 1933; G. E. Covell, May, 1934.

Pipe Springs drainage is tributary to Kanab Creek, which is tributary to Colorado River.

Pipe Springs are the only source of water in the vicinity and by some sort of an agreement, the supply is split three ways, one third going to the National Park Service for irrigation and domestic use in the Monument, one-third to the Indian Service to irrigate gardens of Indiana, and one-third to the local cattlemen for watering livestock.

The available supply comes from two sources, both of which were developed by early settlers. Historic Spring is located under the floor of the old fort and the water flows through two channels to two artificial pools in front of the fort. The flow, measured in Sept., 1933, was 33.44 gal. per minute; in May, 1934, 34.03 gal. per minute. Tunnel Spring was developed by digging a tunnel 143 feet long into the hill. Water from the tunnel flows through a 2" pipe to a pond in a lower portion of the Monument. Flow from the tunnel, measured in Sept. 1933, was 7.7 gal. per minute; in May, 1934, 8.12 gal.per minute.

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REPORT ON WATER RESOURCES AND ADMINISTRATIVE PROHLEMS

AT THE

PIPE SPRING NATIONAL MONUMENT

(Robert H. Rose, Assistant Superintendent, Southwestern Monuments)

September 19, 1933.

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# FOREWORD

Facts and observations based upon a four day study at Pipe Spring National Monument are contained in the following pages.

This report is lengthy. Yet greater length is invariably required for full presentation of facts and for an understanding of all angles to a given problem than is required for a mere setting forth of specific statements and recommendations.

My plea is for consideration of all of the facts relating to the water problem at Pipe Spring National Monument so that such regulations as might be imposed by the Secretary of the Interior in regard to the division of waters will be fair and just and be consistent with legal rights of the parties concerned.

Bringing the Monument property up to National Park Service standards involves restoration of the setting consisting of such acreage of trees, meadows, orchards, and fields as are consistent with historical facts.

Bringing the property up to National Park Service standards is expected of us by entire Mormondom and to maintain such standards requires that the National Park Service retain all rights they now have to the waters of the Monument. Whatever is then surplus may be diverted to Indian use.

R. H. Rose,
Assistant Superintendent.

# REPORT ON WATER RESOURCES AND ADMINISTRATIVE PROBLEMS

# AT THE

# PIPE SPRING NATIONAL MONUMENT

(Robert H. Rose, Assistant Superintendent, Southwestern Monuments)

## INTRODUCTION

The water question and administrative problems at Pipe Spring National Monument have been under consideration recently. The fact that most of the discussions have been based upon estimated rather than actual rates of flow of the springs on the Monument, gives no solid ground upon which to start in attempting to settle the water difficulties. Also it is noted in instances that conclusions have been drawn as to administrative procedure at that Monument for the future and that these conclusions and recommendations were based upon very brief stays on the Monument. Certainly too little time was spent either (1) to measure, or satisfactorily estimate, rates of flow of all of the springs there, or (2) to get at the bottom of the many angles to the water question and administrative problems, both of which are related to three-quarters of a century of history of that Monument.

Upon the request of Superintendent Pinkley of Southwestern Monuments, I drove to Pipe Spring National Monument, arriving on the evening of September 12, equipped with sufficient geological and surveying instruments to make an accurate water resources survey and geological reconnaissance. I spent four full and busy days studying the many problems there and departed for Southwestern Monuments Headquarters on the morning of September 17. Enroute home the 17th I met Doctor E. D. Farrow, Superintendent of the Kaibab Indian Reservation, at the Kanab Hotel, Kanab, Utah, where I discussed the water problem with him for about one hour.

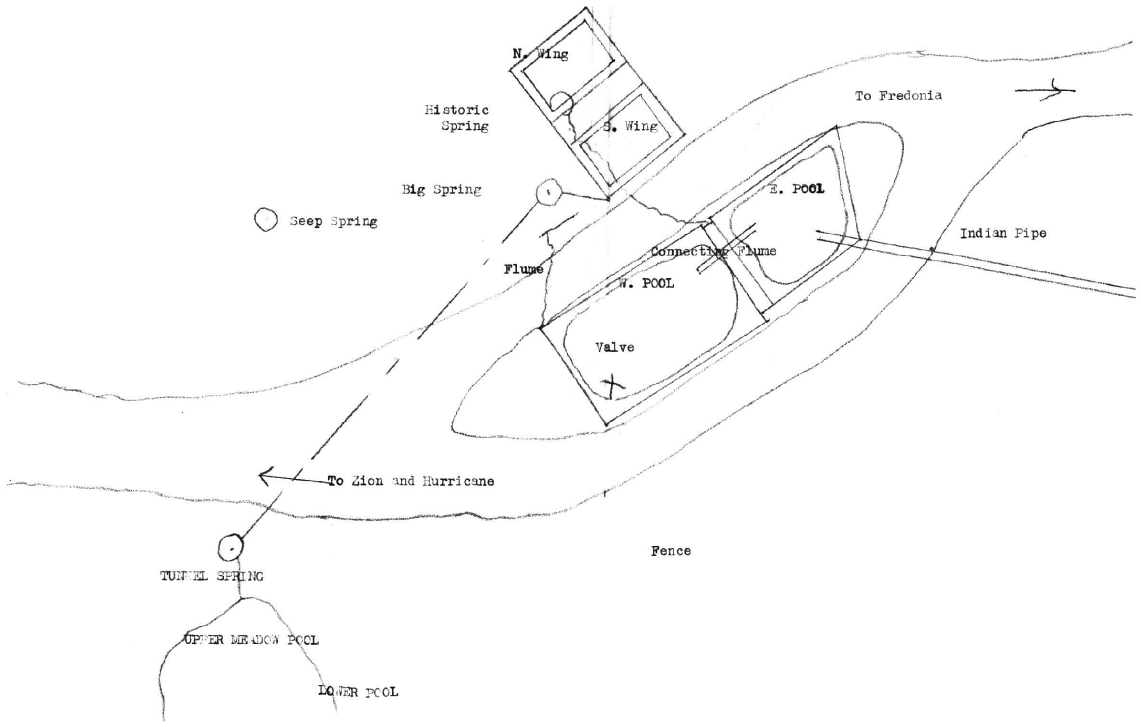
## RELATIVE LOCATION OF SPRINGS AND SEEPS

Shown on the accompanying sketch, and presently described, are the springs and seeps on the Monument and the names by which I shall hereafter refer to them. They are:

I. The Historic Spring.
   A. This spring apparently rises about 10 feet from the west end of the north wing of the old Fort. It seems to come up beneath the westernmost door sill. Its waters run underground across the patio of the old Fort and first emerge to light in the northwest corner of the south wing. Here the water discharges from an iron pipe into a long wooden box trough. From thence the water is carried through the south wall of the Fort to the outside of the building and is conveyed by a stone-slabbed, open top flume across the road and into the northwest corner of the East Pool.

MAP OF MONUMENT




N. Wing
Historic Spring
S. Wing
To Fredonia
Big Spring
E. POOL
Seep Spring
Indian Pipe
Connecting Flume
Flume
W. POOL
Valve
To Zion and Hurricane
Fence
TUNNEL SPRING
UPPER MEADOW POOL
LOWER POOL

I shall later submit data on the rate of flow of this spring.

II. The Big Spring.

A. This spring eclipses all the others in amount of water discharged per unit of time. It rises outside the walls of the Fort near the root system of a large tree. Its precise location is:

| | |
|---|---|
| Distance | 25 feet from southwest corner of Fort. |
| Bearing | S 85° W |

1. The Big Spring discharges immediately into a stone-slabbed flume with open top which carries the water about 15 feet. The entire flow then runs into a box trough and overflows into a stone-slabbed open top flume which conveys the water across the road and into the northwest corner of the West Pool.
2. Two very careful measurements of the flow of this spring were made which will be described later in this report.
3. The Big Spring was created in its entirety along in the early 1880's after dangers from Indian raids had passed. Prior to that time the Historic Spring inside the Fort was the only spring close to the building, therefore the Big Spring is a part of the history of the Monument.

III. The Tunnel Spring.

A. The stream of water where it issues from the mouth of the Tunnel is 22 feet lower than the surface of the Big Spring. The tunnel goes into the hill about 30 feet bearing approximately N 25° E. From the Big Spring the mouth of the tunnel is:

| | |
|---|---|
| Distance | about 200 feet |
| Bearing | S 40° W |

The significance of (1) the bearings, and (2) the 22 feet lower elevation will be considered in the geologic section of this report.

1. From the mouth of the tunnel the waters flow in a small running stream which leads a short distance downhill into the uppermost of the Meadow Pools. The overflow from the Upper Meadow Pool is conveyed in a small ditch for about 200 yards where it runs into two pools just outside the boundaries of the Monument where the water serves to water cattle belonging to the Cattlemen referred to later in this report.
    a. There is a Lower Meadow Pool on the Monument which is kept filled from the Upper Meadow Pool overflow from time to time as desired.
2. I accurately measured the overflow from the Upper Meadow Pool over a period of eight minutes. These data will be recorded later.

IV. Seep Spring West of Winsor Castle (The Fort).

A. This spring emerges 17 feet higher than the Big Spring. Its discharge is negligible compared with the Historic and Big Springs. By carefully cleaning out the place where the spring emerges, rocking the sides and bottom of the exit, and immediately storing

the water, the entire output of this spring would not exceed 150 gallons a day. Its present flow was estimated to be not more than 50 gallons a day. (See figure 1a)

B. As there appears to be no evidence of seeps or clumps of vegetation indicative of moisture just above this seep, chances of increasing flow by tunneling into the hill are pretty meagre. I shall later explain in the geologic section the objections to such tunneling operations.

These four springs: (1) the Historic Spring, (2) the Big Spring, (3) the Tunnel Spring, and (4) the Seep Spring to the west of Winsor Castle, comprise the entire water output of the springs on the Monument.

MEASURING RATES OF FLOW OF SPRINGS ON PIPE SPRING NATIONAL MONUMENT

I. The Historic Spring.
A. Using two buckets, the water was carefully caught for exactly three minutes and poured into a washing tub. Error through waste was very slight.
Measured flow 17 gallons in 3 minutes
5.67 gallons per minute - flow of Historic Spring

II. The Big Spring.
A. The water was by-passed as shown in the picture and allowed to flow on the road. The box trough was then bailed empty. At an instant recorded by the watch the by-pass was pulled aside and the time required to fill the trough to the instant of overflow was recorded. Following are observations: (See Figure 1.)

September 15, 1933

3:30 P. M. By-pass pulled aside allowing trough to fill.
3:34 P. M. Trough filled to instant of overflow.

Exactly 4 minutes - time required to fill box to overflow.

Capacity of box - 14' long by 16" wide by 12" deep filled to depth of 9½" at instant of overflow:

14.8 Cu. Ft. - or110.7 gallons. (7.48 gal.= 1 cu.ft.)

4 Minutes ---------- 110.7 gallons
1 Minute ---------- 27.68 gallons

B. A second measurement was made two days later as follows:

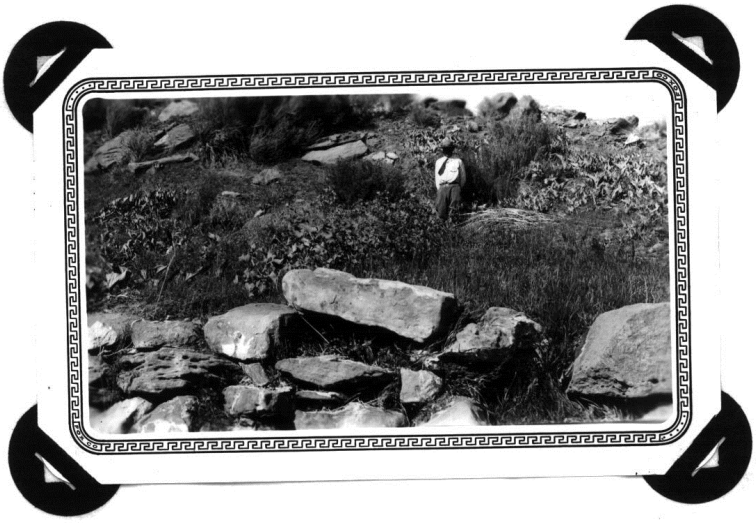


Figure 1-a.

West Slope Seep Spring. Estimated present flow, 50 gallons daily. Outflow soon lost by evaporation and seepage. This flow only one-twelfth of one percent of total daily flow of all springs on Monument.



Figure 1.

Pulling the by-pass aside, the precise time required for Big Spring to fill the box to instant of overflow was noted. From dimensions of box, the total gallons, then the gallons per minute, were computed.

September 15, 1933.

Box filled to 9 3/8" depth in 3 minutes 55 seconds.

14' by 16" by 9 3/8" = 14.58 cu.ft. = 109.06 gallons
109.06 gallons in 3:55 equal
27.85 gallons per minute (second measurement)

Average:

| | |
|---|---|
| First measurement | 27.68 gallons per minute |
| Second measurement | 27.85 gallons per minute |

AVERAGE DISCHARGE BIG SPRING - 27.77 gallons per minute

C. The (I) Historic Spring and the (II) Big Spring both discharge into two pools designated on the sketch as East Pool and West Pool. The flow into them is rapid and evaporation and seepage are negligible. The bottoms of the pools are sealed practically water tight by a clay deposit that is practically impervious to water. In the winter time, I am informed, some seepage occurs from the rocked up sides of the East Pool. This small seepage probably occurs in the summer also, but is consumed by evaporation because of generally higher temperatures and lower relative humidity of summer compared with winter conditions. The East and West Pools are interlocked by a wooden flume about 6" square such that 5½" of water can be drawn from completely filled pools before they get too low to allow free flow between them. (See Figure 2.)

1. TOTAL FLOW INTO INTERLOCKED POOLS (EAST AND WEST POOLS):

| | |
|---|---|
| The Historic Spring | 5.67 gallons per minute |
| The Big Spring | 27.77 gallons per minute |
| TOTAL | 33.44 gallons per minute |

D. Previous measurements and estimates:
1. A letter dated September 30, 1929, to Director Albright, and written over the signature of Commissioner Rhoades, states that a Supervising Engineer of the Indian Irrigation Service measured the flow of water from Pipe Springs and found it to be 33.56 gallons per minute. My measurements listed above check within .12 gallon per minute of this figure, or one-third of one percent.
2. In a report to the Director, National Park Service, dated June 6, 1933, by Assistant Superintendent Parker of Zion and Bryce Canyon National Parks, which report was based on approximately one hour study on the Monument grpund, we find the statement on page 3: "My estimate of the flow of Pipe Springs is approximately 75 gallons per minute."
   a. Mr. Parker's estimate seems to have been made with no attempt at even rough measurement. In view of the actual measurements made by the Indian Service in 1929 and my own measurements as reported above, I believe this estimate may safely be disregarded as hasty and unsupported by fact.

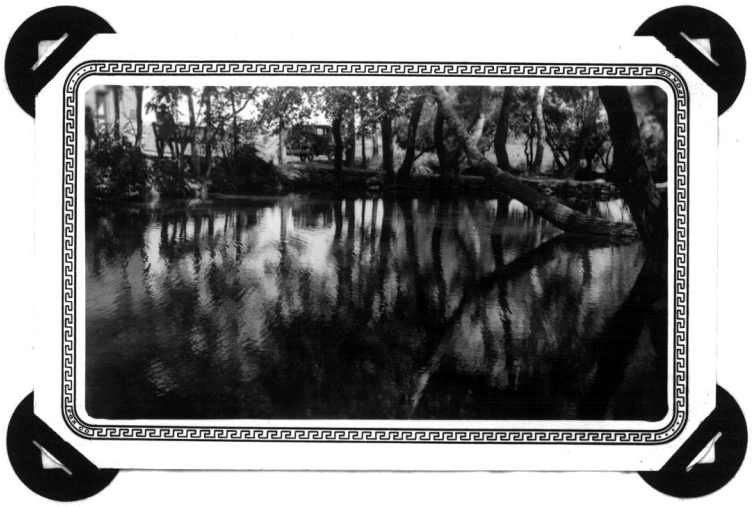


Figure 2.

West Pool looking northeast. Rocked walkway in left distance separates West and East Pools. These pools connected by box flume 31½ inches below water level of full pools. The beautiful East and West Pools are a part of the history of the Monument, having been constructed originally by the Mormon pioneers about 1886.

5. In our conference at Kanab, Utah, Doctor Farrow indicated that there had been no accurate records of the flow of Pipe Springs made but stated that it probably approximated a half cubic foot per second. This would be about 225 gallons per minute, which is actually five times the entire rate of flow of ALL springs and seeps on Pipe Spring National Monument.

III. The Tunnel Spring.

A. This flow could not be readily measured directly at the mouth of the tunnel. For that reason I took measurements at the point of overflow from the Upper Meadow Pool. Brush overhangs the mouth of the tunnel but the water flow is fairly free. The small stream from the mouth of the tunnel makes its way through a vegetation grown slope a short distance and enters the upper end of the Upper Meadow Pool. Thus, except for evaporation, seepage, and absorption of water by vegetation, the overflow of the Upper Meadow Pool is the flow of the Tunnel Spring. (See Figure 5.)

B. Measuring the flow:

A discharge pipe was installed at the overflow point of the Upper Meadow Pool. Care was taken that the intake end of the discharge pipe did not disturb the delicate water level of the pool. This was done by creating a small auxilliary reservoir at the intake end of the pipe which caught the water about where it was ready to leave the dam after overflow. In this way no error crept in and measurements could be taken immediately. (See Figure 4.)

September 15, 1933:

4:15 P.M. Began catching the flow in tub.
4:23 P.M. Ceased catching flow.(Absolutely no waste in catching flow.)

8 Minutes - flow 61.5 gallons
(no waste error)

Therefore - 7.7 gallons per minute was the rate of discharge at overflow point of Upper Meadow Pool.

1. This water, flowing from the Tunnel Spring into the Upper Meadow Pool, overflows and is carried in a small ditch to the Cattlemen's pools just outside the southwest limits of the Monument. This is all the water cattlemen have been getting during the summer of 1933.

2. Due to the short distance between the mouth of the Tunnel and the Upper Meadow Pool, losses by evaporation, seepage and use of water by vegetation can't be extremely high. If it required several days for the water to run this distance of about 20 yards, then evaporation, seepage, and other losses would be high. However, as conditions now exist, it requires only a matter of minutes to less than an hour. Hence 30 percent would certainly be a high figure for these losses.



Figure 3.

Tunnel Spring emerges 22 feet lower than Big Spring. Setting possesses some natural beauty. Measurement taken from below this point at Upper Meadow Pool overflow.



Figure 4.

Pipe installed at overflow of Upper Meadow Pool. Total of 61.5 gallons water flowed in 8 minutes, or 7.7 per minute. This overflow runs in small ditch to Cattlemen outside of Monument, or, when needed, into Lower Meadow Pool on Monument.

3. Consider 30 percent for all losses between the mouth of the tunnel and the Upper Meadow Pool. This would mean that the 7.7 gallons per minute measured at the Upper Meadow Pool overflow was what remained of 11 gallons per minute that left the mouth of the tunnel. As I list 30 percent as the highest possible loss in this case, I wonder if someone will think this isn't nearly high enough. For that reason a little detail might prove valuable here: The possible losses considered in order are: evaporation, use by brush and other vegetation in growth, and seepage.

   a. Evaporation: Experiments by the U. S. Geological Survey (U.S.G.S. Water Supply Paper No.68, 1902) in the Truckee River region, California, give an evaporation rate of 6½ inches for July as maximum, while during winter months 3/4 inch to 2 inches was the average evaporation per month. In extremely arid regions of the Mohave Desert, evaporation may total 6 feet per year, or equal 6 inches monthly. At 6 inches monthly evaporation on a vessel one foot deep and perpendicular sides would lower the level only 1½ inches in a week, or 10 percent. The daily flow of Tunnel Spring is more than 200 Cu. feet daily, or 1,400 weekly - enough water to fill a rectangular vat 38 feet by 38 feet by 1 foot deep in a week. The surface moistened by the flow of the Tunnel Spring is less than 38 by 38 feet. Therefore 10 percent is certainly a high enough figure for evaporation loss of waters of Tunnel Spring in reaching the Upper Meadow Pool.

   b. Growth of brush and other vegetation: On the basis of 11 gallons per minute issuing from the mouth of the Tunnel, 660 gallons, or about 15 barrels, is the flow in one hour. If this vegetation absorbed 15 barrels of water daily, this would be but about 5 percent of the entire daily output. Therefore we can be quite certain 5 percent loss in this way is high enough.

   c. Seepage: On basis of 30 percent total loss, this leaves 15 percent loss by seepage. This would amount to almost 50 barrels daily. Since the water really flows in a free surface channel to the Upper Meadow Pool, and reaches this pool in a short time after leaving the Tunnel mouth, this loss cannot be exceptionally high. This would make a seepage loss of about 47.5 barrels daily.

C. Comment: I have gone to length in discussing possible increased output of the Tunnel Spring and losses because it is here that we must look to increase the total usable water of the Monument if it is to be done at all. All of the factors for the Tunnel Spring listed under 50 percent losses would amount to 95 barrels loss daily! This seems very high and would support the contention that 11 gallons per minute is all the water we could possibly expect out of the Tunnel Spring by installing all of the improvements one could think of.

1. The surest way to decrease, and possibly entirely destroy, the present flow of the Big Spring would be to attempt to push the tunnel farther into the hill. The Tunnel Spring flow can be materially increased only at the hazard of destroying both the Historic and the Big Springs. Together with being 22 feet lower than the Big Springs in elevation, the mouth of the Tunnel and the Big Spring bear the same directional relation to each other as the major fracture system of the Sandstone from which the water comes.

SUMMARIZED RESULTS OF MEASUREMENTS

Measured

| | |
|---|---|
| (I) The Historic Spring | 5.67 gallons Per Minute |
| (II) The Big Spring | 27.77 gals. per minute |
| (III) The Tunnel Spring (Measured at overflow of Upper Meadow Pool.) | 7.70 gals. per minute |
| TOTAL | 41.14 |

Estimated Possible Flow

| | |
|---|---|
| (a) Historic Spring | 5.67 gals. per minute (fixed) |
| (b) Big Spring | 27.77 gals. per minute (fixed) |
| (c) Tunnel Spring | 11.00 gals. per minute after retimbering and cleaning mouth of tunnel. This supposes a possible 30% loss from mouth of tunnel to overflow of Upper Meadow Pool. |
| (d) West Slope Seep | .12 gal. per minute, or 150 gallons a day after fixing up. Present flow is about a barrel daily, or .05 gallon per minute. |

5.67
+ 27.77
11.00
44.44

## TOTAL ESTIMATED FLOW AFTER INSTALLING EVERY IMPROVEMENT

A. The 33.44 gallons per minute (Historic and Big Springs) can't be increased.
11.00 gallons per minute, possible flow Tunnel Spring
.12 gallons per minute, possible from west seep.

Therefore 44.56 gallons per minute is greatest amount of water that can be expected to be obtained for use at Pipe Springs National Monument. Present yield 41.14 gallons per minute.

B. Present yield of 41.14 gallons per minute is 92 percent of greatest yield we can expect. In other words, cleaning, timbering, and constructing flumes for the Tunnel Spring and the West Slope Seep would increase the total water output of the Monument LESS THAN TEN PERCENT over present yield! Of course such improvement should be done, but it should not be counted on as contributing a magic touch to the solution of the difficult problem of proper division of waters.

44.56 gallons per minute, greatest possible flow that could be obtained after installing improvements.

41.14 gallons per minute - present yield.

3.42 gallons per minute - greatest possible increase.

This indicates that less than 10 percent increase in flow is all that can ever be expected on Pipe Spring National Monument.

## GEOLOGICAL OBSERVATIONS

A. 1. The prevailing massive sandstone possesses such low porosity that water cannot readily migrate between the individual grains.

2. Low porosity is indicated by the small basins on the hill slope that serve as catchment basins for the water and are dried by evaporation rather than by seep.

3. Both to the east and the west of Pipe Spring Monument the thick, massive, reddish to yellowish brown sandstone is underlain by a blue or a white shale member, or both.

4. This sandstone formation is continuous for miles in either direction from Pipe Spring and is lying quite horizontal except in approaching Pipe Spring, where the warping becomes more pronounced.

5. Right at the Monument, by warping probably, a system of joints and fissures has been developed. The most prominent joint system is oriented as follows:

Strike N 70 W
Dip 75 south

Minor fracture systems and fissures:

Strike N 15 to 30 W; Dip 25-65 N.
Strike N 70 E; Dip 65 S.
Strike N 30 E; Dip 65 N.

6. Undoubtedly the shale beds underly the sandstone at Pipe Spring at a depth of 50 feet or less. They are possibly instrumental in bringing water to surface.

7. The West Slope Seep Spring, as well as the Big Spring were observed to issue from the fractures in the sandstone.

8. Walking over the hill point, examination showed that gypsum is deposited in most of the fractures. Seeping waters are capable of dissolving and carrying the gypsum away, thus enlarging the passageway.

(See Figure 5.)

B. Significance of Geological Observations:

1. Fractures and joint systems afford passageways for the flow of underground water through the sandstone.

2. The Tunnel Spring bears S 40 W from the Big Spring. In an attempt to increase its flow, in the early days the Tunnel was dug into the hill about 50 feet bearing N 25 E. The figures on joint systems show minor systems running N 30 E and N 70 E.

a. The chance that tunneling into the hill farther would tap the big spring which issues more than 20 feet higher is almost certain in view of the following points:
i. The trend of two minor fracture or joint systems is in the direction of bearing of the two springs from each other.
ii. The 22 feet drop to the mouth of the Tunnel comprises a rather high pressure head and once a heavy flow is started underground between the Big Spring and Tunnel Spring, it would likely continue to increase until the Big Spring dried up.

3. The West Seep Spring comes from fractures in the rocks. This spring is 17 feet higher than the Big Spring. Since there is no heavy vegetation growing above this seep, and since there are no other seeps near, tunneling in here would do little or no good toward increasing water flow.

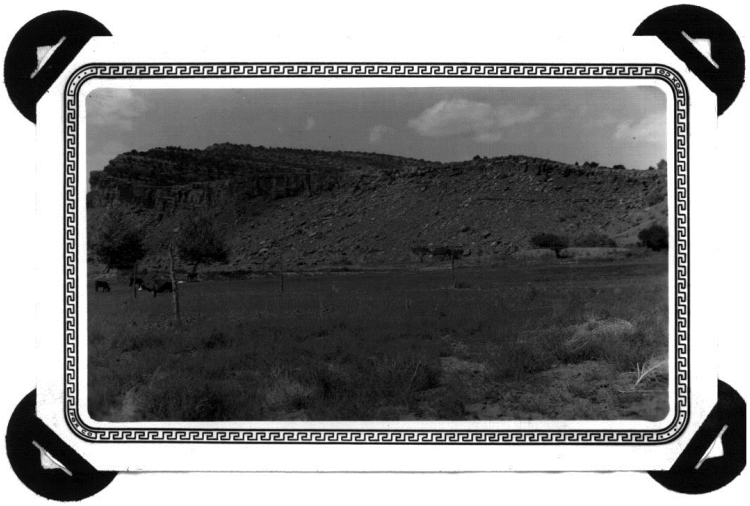


Figure 5.

Considerable warping and fracturing of the sandstone formation prevail in immediate vicinity of Pipe Spring National Monument. Springs and seeps emerge from fractures and joints.

4.All geologists and irrigation engineers are aware of the possible tapping and drying up of springs in jointed rocks by digging tunnels and the like near these springs. Tapping the Big Spring 17 feet lower is not likely to occur by tunneling in at the West Seep. However, it seems the water yield would not be increased by such tunneling of the Seep Spring, and there is some actual risk of disturbing the flow of the larger springs by such tunneling operations.

Therefore my conclusions in view of geologic conditions are:

a. Clean up mouth of Tunnel Spring and construct and install such flumes and pipes as will conserve all the water possible.

b. No one should be permitted to enlarge or extend the Tunnel Spring into the hill because of the great danger of tapping the Historic and Big Springs.

c. The flow of the West Slope Seep Spring is so small and shows such small amount of possible increase that mere cleaning up the point of emergence and rocking up the place is all that should be done. The amount of water obtainable makes it unwise to expend much on flumes and pipe lines for using this water for stock or irrigation. Merely cleaning and improving of appearance is about all that is justified. Danger of disturbing flow of other springs would arise if tunneling were attempted here.

UTILIZATION OF THE WATERS OF PIPE SPRING NATIONAL MONUMENT

From Assistant Superintendent Parker's June 6th report I find the following excerpts which intend to show where the trouble centers in the water question:

"These letters show that the matter is of long standing and that the difficulty is between the local farmers of Moccasin, Arizona, and Superintendent Farrow."

"I feel that the Heatons are using the Custodian to assist them in their long fight with the Indian Service."

"The Heaton family is working against the Indians through Custodian Heaton."

"This little settlement of Moccasin is composed almost entirely of the Heaton family."

This implies that the Heatons are the only people involved in the water problem. The following information will show definitely that this is not true. The following named men, or groups of people, comprise the Cattlemen's Organization. Note that the Heaton Brothers of Moccasin are but one of thirteen people or groups of people belonging to the organization that is

interested in watering cattle from the waters of Pipe Springs. The Heaton cattle usually comprise less than one-third of all the cattle involved in this watering problem. I am listing the cattlemen according to towns in which they reside:

1. Cedar City, Utah.

    a. Bullock Brothers
    b. Leheigh Jones
    c. John A. Adams

2. Kanab, Utah.

    a. H. J. Meeks
    b. B. A. Riggs

3. Orderville, Utah.

    a. David H. Esplins
    b. Ed Lamb

4. St. George, Utah.

    a. E. Foremaster
    b. John Schmutz
    c. John Finlay
    d. Mrs. Andrews
    e. Ben Sorenson

5. Moccasin, Arizona.

    a. Heaton Brothers

(Note the name Heaton Brothers is one in 13 listed. Their cattle comprise rarely more than one-fourth to one-third the entire herd to be watered.)

It is quite incorrect to leave the impression that a little local group of Heatons are the only people involved. These people are citizens from an enormous region of southern Utah and Northern Arizona.

CLAIMS OF VARIOUS CONTESTANTS TO PIPE SPRINGS WATERS

A. The following claimants are concerned in the water division problem.

    1. The National Park Service

    2. The Cattlemen's Organization

    3. The U. S. Indian Service

B. Analyses of Bases for These Claims

    1. The U. S. Indian Service.

a. In the Presidential Proclamation creating the Pipe Spring National Monument dated May 31, 1923, are the following words:

"The Director of the National Park Service under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this Monument, as provided in . . . . etc., . . . . . Provided, that in the administration of this Monument, the Indians of the Kaibab Reservation, shall have the privilege of utilizing waters from Pipe Springs for irrigation, stock watering and other purposes, under regulations to be prescribed by the Secretary of the Interior."

Doubtless, at the time the proclamation was drawn, it was submitted for approval of the U. S. Indian Service, since it was concerned with lands bounded by the reservation. It is further definitely presumed that the U. S. Indian Service was instrumental in injecting this clause as to Indians using waters into the Proclamation. But a critical examination of this clause would show the following:

a. The Indian Service, in having a right merely to "Utilize waters" certainly haven't valid claim to utilizing ALL waters. Had this been intended to mean ALL waters, the statement would have said ALL waters, and there would be no need for inserting the phrase "under regulations prescribed by the Secretary of the Interior."

b. The Indian Service doesn't control the waters of Pipe Spring National Monument, although in conversation with me, Superintendent Farrow talked to me of CONCESSIONS which the Indian Service was willing to make to the National Park Service, the Cattlemen, and others, as though the Indian Service was in complete charge of parceling out these waters. He stated some few years ago what would be considered a reasonable CONCESSION to the Park Service in stating that certain water for cooking, drinking, and for possibly a cow and chickens would be about right for us.

The National Park Service should remember that in reserving the Monument, we also reserved its setting. Irrigated trees, orchards, gardens, and a meadow were all a part of the history of the Monument, Anyone familiar with the history of the place will at once agree that the fields, orchards, meadows, and trees as the Mormons once had things developed, will take a large proportion of all of the water resources

of all of the springs of the Pipe Spring National Monument. In view of the fact that the Park Service has an obligation to fill in developing the Monument, the basis of the claim of our service to these waters will next be analyzed:

2. The National Park Service.

a. Undoubtedly, when the Monument area was purchased for "the benefit and enjoyment of the people," we acquired whatever rights to the waters were possessed by the former owners. The former owners recognized the one-third right of cattlemen and the owners themselves controlled the remainder. Therefore, legally, there seems to be little reason for thinking anything other than that the National Park Service has rights to all water over and above that which any outside parties acquired prior to our purchase, under the "beneficial use and prior rights" clauses of Arizona Water Law. For that reason, I feel that Park Service needs, present and future, should be regarded as primary in whatever regulations may be prescribed by the Secretary of the Interior.

b. A clause "utilize waters" certainly is indefinite as to just how much water, and cannot be construed to mean ALL waters any more than the right to "utilize air" for breathing would mean a man with this right could corner ALL the air for himself. This is the matter for regulation.

c. Refer to the Proclamation; there is found a very significant statement:

> "Now therefore, I . . . . President of the United States . . . . do proclaim that there is hereby reserved, SUBJECT TO ALL PRIOR VALID CLAIMS, and set apart as a National Monument to be known as Pipe Spring National Monument the lands shown . . . . . "

This certainly means rights any and all parties had prior to the creation of the Monument, which rights were in accordance with ARIZONA WATER LAWS, are respected in this transfer of ownership. Under Arizona Law the cattlemen had watering rights to these waters and Arizona Law respected these rights. Under Arizona Law the previous owners of the Monument lands had beneficial use rights for cropping, irrigation, and upkeep use, of the waters of the springs. Certainly the National Park Service acquired these rights by assuming ownership. In other words, one of these days the development and maintenance of the Monument, tourists' facilities,

and beautifying the setting, are going to take a large share of these waters, which I firmly believe we now legally own.

3. The Cattlemen's Organization.

a. I am presenting no defense plea for this group. I only want to refer to certain agreements and letters which would tend to establish a legal, and certainly a moral, right to the waters of this monument.

The following excerpts from correspondence indicate that the former Director Mather gave some pretty definite assurance to the Cattlemen that their privilege as to watering would be respected. Allow me to quote from some of these:

October 30, 1924.

"Dear Mr. Heaton:

Just before receiving your letter of October 24th, I wrote President Grant (President, Mormon Church) in regard to the acceptance of the quit-claim deed by the Department . . . . .

"I do not think the Cattlemen's Association need have any fear that their watering rights at the Monument will not be fully recognized by the Department in view of the agreement of June 9th, which was signed by all concerned and officially approved both by the Commissioner of the Indian Office and the Park Service. As I wrote you on July 2, when the time comes, should it be necessary to run the water off the Indian Reservation, sufficient of the public land can be set aside as a public water reserve. The Commissioner of the General Land Office has this in mind and there should be no reason to worry about this as at the proper time it will be taken care of if the present permit is not renewed.

"I note that Mr. White is willing to stay on and look out for the old buildings and as Mr. Pinkley will have some funds to do some restoration work, he can be helped out from this source.

Sincerely yours,
Stephen T. Mather, Director."

Following is a copy of the agreement to which Director Mather was referring:

KAIBAB

Moccasin, Arizona,
June 9, 1924.

MEMORANDUM

"At a conference held upon the grounds at Pipe Spring, located on

the Kaibab Indian Reservation, at which representatives of the National Park Service, of the Cattlemen's Organization, also Mr. Heaton (claimant of the Pipe Spring), Mr. Jones of Cedar City, Doctor Farrow, and Mr. Reed were present.

"The object of this meeting was to arrive at a satisfactory arrangement concerning the use of the water from Pipe Spring by the aforesaid association of cattlemen. It was the concensus of public opinion and practically agreed upon by those present as but a fair and just solution of the situation that the cattlemen had the acknowledgement of all parties present to an ownership of one-third of the water from these springs and since a permit exists over the adjacent portion of the Indian Reservation that they have the right to conduct water to and upon any portion of the land covered by the permit, if said permit is not renewed, to conduct the water off the reservation.

(Signed)

E. D. Farrow
(Superintendent Kaibab Reservation)

Frank Pinkley,
(Supt., Southwestern Monuments)

Wm. Reed,
(Irrigation Engineer)

Charles C. Heaton,
(Claimant of Pipe Spring)

Randall L. Jones,
(Cattlemen's Association)."

b. Mr. Mather, under date of October 29, 1924, wrote President Grant of the Mormon Church, Salt Lake City, making a statement that Mr. Chas. Heaton of Moccasin, Arizona, was responsible for giving $1,000 of the total of $5,000 involved in the purchase of the Monument and transfer to the Government.

c. Under date of March 12, 1924, Director Mather wrote Mr. Heaton saying he didn't object to the Caretaker Mr. White putting a garden down below the road and requested that Mr. White keep the premises in good condition. Mr. Mather again enclosed his personal check to further help Mr. White subsist on his small wage and garden.

d. There are several more letters of Mr. Mather to Mr. Heaton and to President Grant of the Mormon Church indicating Mr. Mather's and President Grant's deep interest in this Monument and their hope that Cattlemen's rights would be recognized and respected.

e. A letter of September 12 by President Grant's Secretary to Mr. Heaton indicates that the title to the Pipe Springs land, which title belonged to Mr. Heaton, would no doubt be found satisfactory to the government.

B. The Cattlemen's Association base their claims on (1) the Agreement of June 9, 1924, acknowledging their ownership; and (2) Arizona Water Law which gave them rights by prior usage and beneficial use while the land was in private ownership and which rights they feel still hold upon transfer of the Monument lands from private to National Park Service ownership.

C. The Indian Services bases its claim on the clause in the Presidential Proclamation creating Pipe Spring National Monument. This proclamation said "waters" and is certainly conditional upon satisfactory settlement of all valid claims prior to the proclamation. The proclamation didn't give the Indian Service OWNERSHIP of the waters; it merely gave them the PRIVILEGE of utilizing WATERS . . . . an indefinite amount, and not 20 percent; 60 percent; or 99.9 percent; of all the water resources.

## PRESENT DISTRIBUTION OF PIPE SPRING WATERS

I shall now go into the problem of how the water of the Pipe Spring National Monument has been handled during the past season. The present effective output of the Monument Springs is 41.14 gallons per minute. I explained in detail reasons why we can never expect this to exceed 44.56 gallons per minute. With the cattlemen now getting 7.7 gallons per minute, they are getting LESS THAN one-sixth the present output of the springs. If their claims are legal, they have a right to 13 gallons per minute - almost twice the present output of the Tunnel Spring.

Only 7.7 gallons per minute of the Tunnel Spring have been going to the Cattlemen all summer.

Of the 33.44 gallons per minute flowing into the interlocked pools, the Indian Service has been getting three-fourths and the Park Service for use on the meadow, one-fourth. Thus, the Indian Service has been getting 25.08 gallons per minute and the Park Service 8.36 gallons per minute. The following diagram illustrates graphically the amounts of water going to each claimant:

(See vertical bar graph, Figure 6, next sheet)

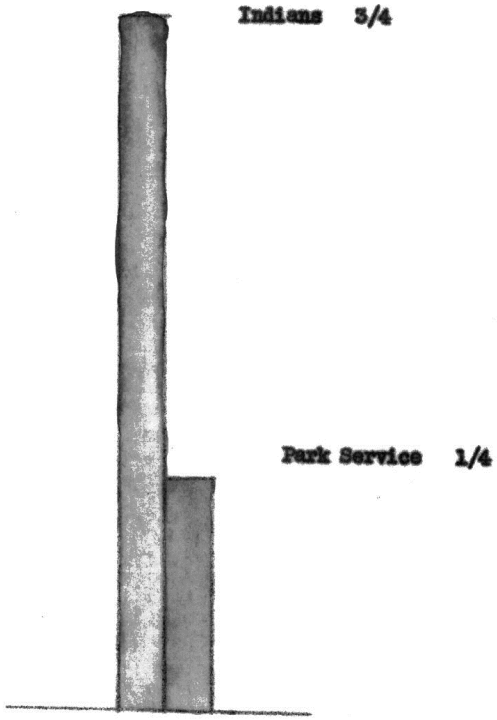



Figure 6.

Relative amounts of water supplied to Interlocked Pools going to the Indians and to the National Park Service during the summer of 1933.

| | | |
|---|---|---|
| Indians | 3/4 | 25.08 Gals/minute |
| Park Service | 1/4 | 8.36 " " |

While on the ground at Pipe Spring National Monument, I carefully checked the areas of each of the Interlocked Pools and checked up on the manner in which the water flow is being controlled. The following are observed facts:

1. The Indian Service takes the water from the surface of the full pools. The pools must be full before the water is running into their pipe.

2. The water for the Park Service meadow is taken from a valve situated close to the bottom of the pool. In 1½ hours the Interlocked Pools can be lowered 16 inches. Until the pools refill, no water runs into the Indian Service Pipes.

3. Acting Custodian (Laborer) Heaton allows the water to flow to Indians from full pools 9 days. At the end of the ninth 24-hour period, he opens the headgate allowing the rush of 1½ hours flow to lower the interlocked pools by 16 inches. In 24 hours the pools refill and Heaton takes a second 16-inch head. Allowing refill again, he takes a third 16-inch head. Heaton then allows the pools to fill and just as the third 24-hour period ends, the interlocked pools are full and water is again running into Indian pipes from full pools. Thus, Heaton gives the Park Service one-fourth and the Indian Service three-fourths of water (33.44 gallons per minute). Note the accompanying diagram on division. (Figure 7)

## DIMENSIONS OF INTERLOCKED POOLS

### Directions of Sides

| West Pool | | | East Pool |
|---|---|---|---|
| AC ------ S 60° W=77'6" | | | EG ------ N 56° E=55'3" |
| AB ------ N 38° W=43'6" | CE ------ N 50° E=8' 4" | | EF ------ N 38° W=43' |
| CD ------ N 35° W=44'9" | DF ------ N 42° E=9'6" | | EH ------ N 55° E=40'9" |
| BD ------ N 60° E=75'3" | | | GH ------ N 18° W=45'4" |

The pools are connected by one flume about 6" square. Bottom of flume is 31½" below the surface of the pools when they are full.

Mr. Heaton states that he draws 16" water out of the pools each of the three times he waters the Park Service Meadow and that each time it requires 24 hours for pools to refill. Considering a 16-inch withdrawal, and using the above dimensions, the following results are obtained:

| | |
|---|---|
| West Pool ---------- | 33,994.3 gallons |
| East Pool ---------- | 20,640 gallons |
| 24-hour withdrawal ------ | 53,634.3 gallons |

Due to the fact that sides of the pool slope slightly, measurements of sides were taken outside actual water's edge, and the sides are irregular, there should

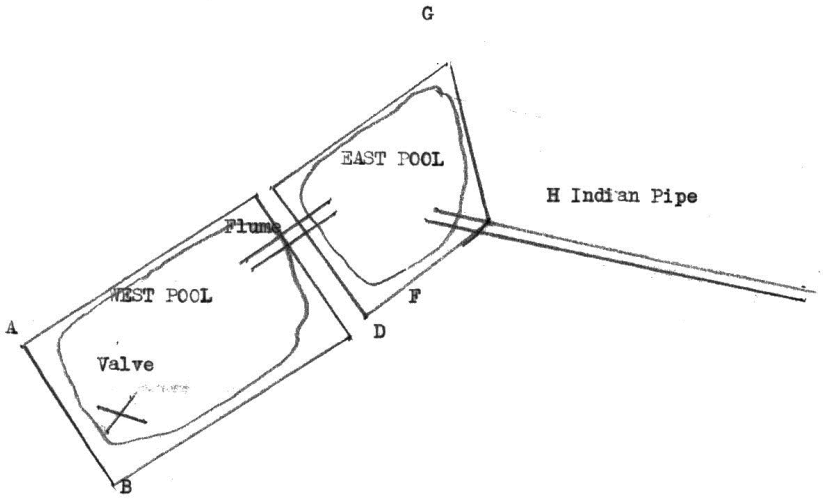
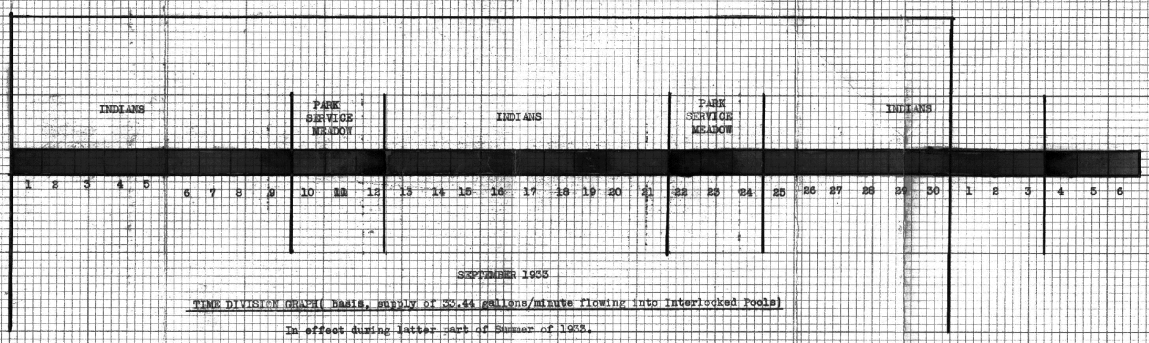



Figure 6a

Sketch showing dimensions and directions of sides of Interlocked Pools.

TIME DIVISION OF WATER OF PIPE SPRING NATIONAL MONUMENT BETWEEN INDIANS AND THE NATIONAL PARK SERVICE AS TAS DONE DURING LATTER PART OF SUMMER OF 1933.




SEPTEMBER 1933

TIME DIVISION GRAPH( basis, supply of 33.44 gallons/minute flowing into Interlocked Pools)

In effect during latter part of Summer of 1933.

1. Indians received 33.44 gallons per minute during a 9-day period, continuous flow.
2. Park Service Meadow received 33.44 Gals./Minute during next 3-day period, taking a 16 inch rush from the Interlocked Pools. At the end of the third 24 hour period, water was always diverted entirely to Indians.
3. Therefore----Indians got 3.4 of Interlocked Pools supply------Park Service got 1/4.
4. With supply of 33.44 gal/minute, Indians got equivalent of 25.08 gallons per minute continuous flow.
   With supply of 33.44 gal/minute, National Park Service got equivalent of 8.36 gallons per minute continuous flow.
5. Cattlemen received 7.7 Gals./Min. output of Tunnel Spring at overflow of Upper Meadow Pool. (Not related to above diagram).

be approximately 10 percent reduction to take care of these factors. This would reduce the 55,634.5 to 48,270.87 gallons.

The 48,270.87 gallons in 24 hours checks out to 33.52 gallons per minute.

(See Figure 7a.)

Earlier in the day I stepped off the sides of the pool and allowing for loss of 10 percent since some corners are not square, and sides of pool slope, I obtained 34.1 gallons per minute. Dimensions used were:

| West Pool | East Pool |
|---|---|
| 45' by 75' | 42' by 42' by 45' by 54' |

16 inches as depth was taken

This is pretty ample proof that Acting Custodian (Laborer) Heaton is dividing the waters exactly as he explained. And of course, his procedure can always be checked by the Indians for the instant any water were to be taken at odd times, the water would cease running to the Indian Pools just outside the Monument and the Indians would immediately come forth with objections.

Thus, the 33.52 gallons per minute calculated upon the capacity of 16 inches of the Pools depth checks with the 33.44 gallons per minute obtained by adding the 27.77 for the Big Spring and the 5.67 for the Historic Spring.

See two graphs on the following page. See also bar diagram, Figure 10.

The report by Assistant Superintendent Parker states (page 3) that the two ponds designated as Upper and Lower Meadow Pools on my sketch "were recently constructed in the meadow as duck ponds by the Heatons."

The elder Mr. Heaton (Charles) stated that Mr. Mather regarded the construction of these pools as an addition to the beauty of the little meadow. They were constructed, it seems, both with the approval of Director Mather and Superintendent Pinkley. This was done in 1926. Acting Custodian Heaton does have about a half dozen geese which range on the lower end of the Monument. No ducks were observed about. The burden of evidence will be found to prove these pools were designed for their scenic effect and approved with that end in mind.

## ACREAGE UNDER IRRIGATION FROM WATERS OF PIPE SPRING

C. I. The National Park Service.

With one-fourth of the 33.44 gallons per minute in the Interlocked Pools, the Park Service Meadow of a little more than 2 acres is being watered. Trees of the Monument are also being irrigated.

## ARIZONA WATER LAW APPLYING TO THIS CASE

A. From Revised Water Code of the State of Arizona, Compiled June, 1931, by the State Water Commissioner, Mr. Frank Trott.

a. Constitution of Arizona, Water Laws

> "All existing rights to use of water in the state for all useful or beneficial purposes are hereby recognized and confirmed."

b. Paragraph 3200, Article I: Water Code

> "A spring of water, as such, is not one of the sources from which water may be appropriated."

This means that if title to land is transferred from ownership of one citizen to the ownership of another, the new owner cannot promptly ignore all rights which might have been had to waters of springs on the property by neighbors. Transference of ownership of the Pipe Spring lands to Government ownership would carry with it, it seems, this same mandate to recognize and respect rights of citizens to the waters as would have been the case in a deal between Arizona citizens.

It appears that the Cattlemen were acknowledged to own one-third of the water at the time of or shortly after the transfer of ownership to the Government. If this is the case, we are therefore obligated to the State of Arizona to recognize whatever rights that were protected by state law while the land was in private ownership. Transferring the land from a private citizen to the United States, where water law is involved, would bind the United States to respect rights to waters that were held under Arizona law. On this basis, it seems that Cattlemen have a right to one-third of the water and the National Park Service the remainder. If there is some surplus, then the Indian Service could use it for the Indians as stated in the Presidential Proclamation. The Proclamation certainly doesn't abrogate all rights in the area and the full force of any Presidential Proclamation is contingent upon subsequent settlements and adjustments of ownership, rights, and other problems in the area.

The summarized results of bases of claims are:

A. The National Park Service certainly obtained the rights held by former owners (private) under provisions of Arizona Water Law. All waters not subject to prior valid claims are certainly controlled by the Park Service.

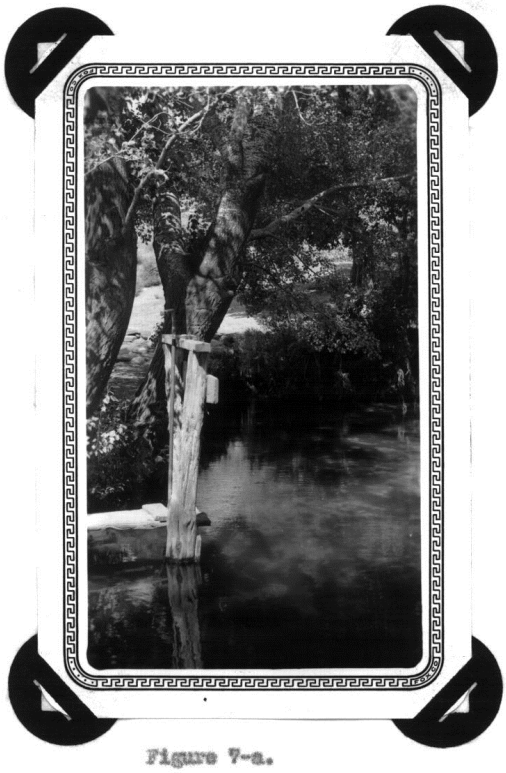


Figure 7-a.

Valve situated near bottom of West Pool. Interlocked Pools can be lowered 16 inches in 1½ hours. For 3 out of 12 days during summer of 1933, water was delivered through this valve to Park Service Meadow. Remaining 9 days, full flow of more than 35 gallons per minute went to Indians.

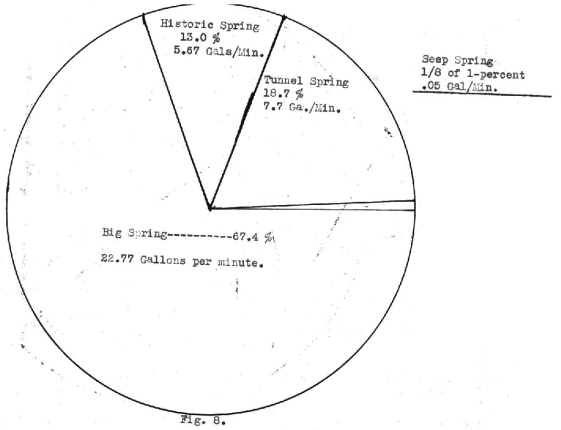



Fig. 8.

Flow of Springs On Pipe Spring National Monument shown as proportionate parts of 41.19 gallons per minute effective present flow.

| | | | |
|---|---|---|---|
| Historic Spring | 13.80 % | 5.67 | Gals/minute |
| Big Spring | 67.40 % | 27.77 | " " |
| Seep Spring | 0.12 % | 0.05 | " " |
| Tunnel Spring | 18.70 % | 7.70 | " " |
| TOTAL | 100.02 % | 41.19 | " " |

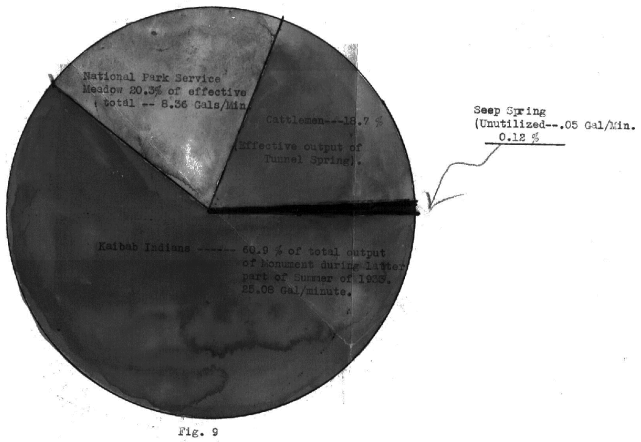



Fig. 9

Division of the 41.19 Gals/Minute effective yiels as was done during Summer of 1933.

| | | | |
|---|---|---|---|
| Kaibab Indians | 60.90 % | of total output | (3/4 of water after Tunnel and Seep Springs deducted) |
| National Park Meadow | 20.30 % | " " | (1/4 after deductions). |
| Cattlemen Assoc. | 18.70 % | " " | (Output of Tunnel Spring at Upper Meadow Pool overflow). |
| Seep Spring | 0.12 % | " " | (Unutilized) |
| TOTAL | 100.02 % | " " | 41.19 Gallons/Minute. |

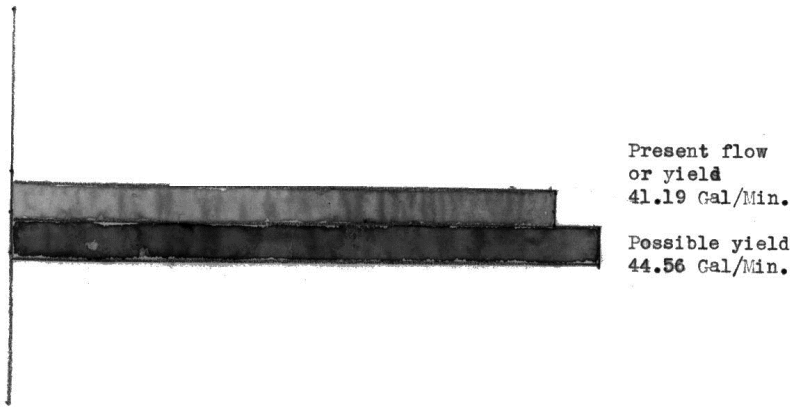



Figure 10

Diagram showing graphicall y that present yield is approximately 92% of greatest possible yield of all springs and seeps on the Monument.

The Monument area is 40 acres. The early Mormons had orchards, gardens, and many more trees than are now on the Monument. With the reservation of the Winsor Castle there was also the reservation of its setting. For increased cultivation and irrigation of the future, and with increased needs for tourists and the Custodian's residence and public facilities, it would seem unwise to turn over 99 percent of the water to the Indian Service after the Cattlemen have been recognized. The entire Mormon Church is interested in the preservation of this memorial to early Mormon history. If we give away all but a figurative spoonful of this monument's water and cannot carry out the development of gardens, orchards, trees, and meadows, we will be breaking the faith Mr. Mather developed with the heads of the Mormon Church. Some of the leaders of that Church were recently at Pipe Spring National Monument for the unveiling of a marker of the Utah Pioneer Trails and Landmarks Association which was erected at Pipe Springs.

The Mormon Church had faith in Mr. Mather's desire to recognize the rights of Cattlemen. They were also enthusiastic about Mr. Mather's intense interest in restoration of the place to its old historic standard. To do both of these things will require that (1) we recognize the Cattlemen's legal or moral right to water as the case may be, and (2) that we guarantee ourselves the necessary amount of water to care for all of the needs, present and future, of the Monument. With the Indian Service feeling that the Monument needs only enough for cooking and possibly for a cow and chickens, there is certainly a mistaken idea of the rather large proportion of the water that will be needed to develop the Monument as Mr. Mather and President Grant had in mind when it was turned over to us, and to develop it in accordance with present park standards.

II. The Cattlemen's Association.

The Cattlemen are getting the overflow from the Upper Meadow Pools that reaches their pools. Acting Custodian Heaton is not raising garden or other crops this year.

III. The Indian Service.

The Indian Service uses three-fourths of the total flow of the Historic and Big Springs. This three-fourths of 33.44 is 25.08 gallons per minute. With this three-fourths of the supply to the Interlocked Pools, they irrigate a patch of ground of the dimensions shown in the figure (Figure 11) shown on the next page. This area is 3.11 acres.



Figure 11.

Indian Pool just outside southeast edge of Monument, into which three-fourths of total flow into Interlocked Pools on Monument has been supplied during 1933 summer.

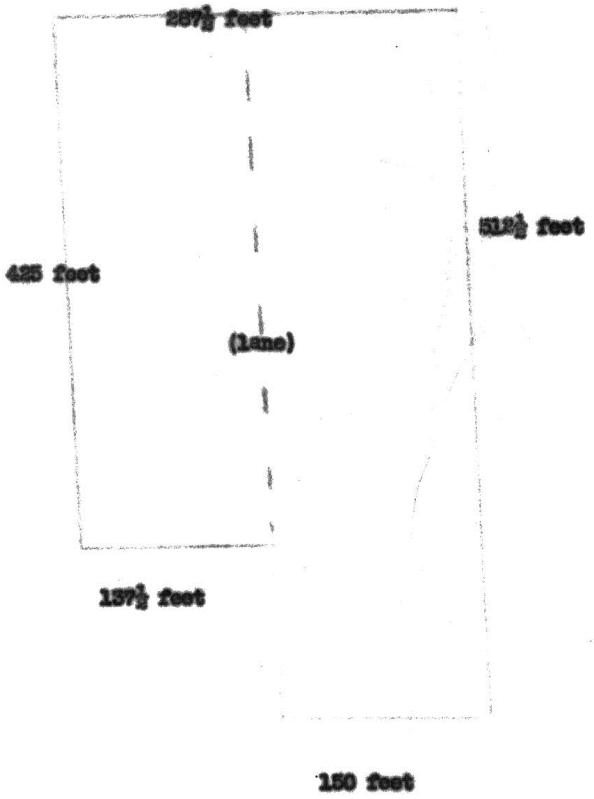



Figure 11.

Shape and approximate dimensions of 3.11 acre Indian corn field and garden plot just S.E. of Monument. Same amount of water(3/4 of 33.44 gal/min) should irrigate at least three times this much.

D. EFFICIENCY OF PRESENT UTILIZATION OF WATERS BY INDIANS

All water available on Monument with improvements ---------- 44.56 gal.min

or 2,673.6 gallons per hour, or ---------- 64,166.5 gal. day

or in 8-month crop season, 240 days ---------- 15,399,936.0 gallons

At 7.48 gallons per cubic foot, equals ---------- 2,045,455.7 cu. feet

2,045,455.7 cubic feet equals 46.95 acre feet during 8-month crop season.

Duty of water in Pipe Springs region is about 2.5 acre-feet per acre.

Therefore $\frac{47.2}{2.5}$ equals 18.8 acres which could be irrigated with the entire water output of Pipe Spring National Monument.

Leonard Heaton, Acting Custodian, and his father, Charles Heaton, never used the entire water output of these springs. However, they said that at best, with all water from the Big and Historic Springs and the Tunnel Spring that they could irrigate approximately 15 acres and in addition care for the needs of the Cattlemen. This is a pretty close check on 18.8 possible acres.

I. Acreage Irrigated by Indians. (See Figure 12.)

Instead of irrigating three-fourths of 15, or 11¼ acres, the Indians have a plot 3.11 acres under cultivation. In other words, they should be cultivating 3.6 times as much as they now are, with the same amount of water they have been getting during the summer. See diagram of Indian Field, Figure 12a.

A 4-inch pipe carries three-fourths of the supply of the Interlocked Pools to a pool of the Indians just off the Monument. The Indians can accumulate about 1½ feet head of water in the pool by corking the end of a pipe. This method of irrigation with a small head of water causes great waste. The water is allowed to trickle in little ditches down the rows of corn and garden plants. Upon visiting this field, at its lower end a small stream of approximately 5 gallons per minute was going to waste. The snapshot enclosed shows this stream. (Figure 13)

It would appear, therefore, that no great need or emergency for water exists on the part of these Indians, who are raising 3.11 acres of crops where they should, properly directed, be raising more than 10 acres.



Figure 12.

View of 3.11 acre patch of garden and corn Indians raised during summer of 1933 with three-fourths of 33.44 gallons per minute that flows into Interlocked Pools. Efficient utilization should make possible about 11 acres on same water.

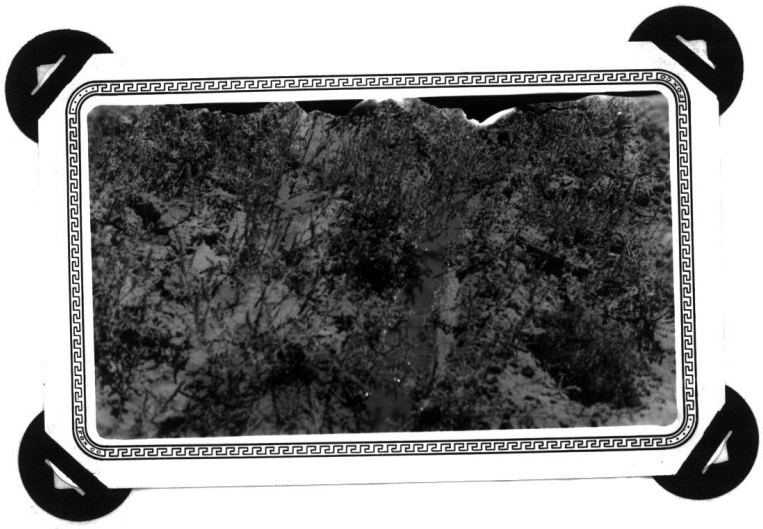


Figure 13.

Indians irrigate the 3.11 acres frequently, allowing much water to run away unused. This approximately 5 gal/Min. was running away at time of observation.

Suppose 5.11 acres were the most that could possibly be irrigated with three-fourths of the Interlocked Pools output. On this basis, not even one more Indian family could be supported if they got four-fourths of this water, for two Indian families are represented in the 5.11 acres now under cultivation, and the remaining one-fourth of the water would, under this supposition, irrigate only .78 acre. On present usage, one family needs 1.56 acres.

## SPRINGS AND SEEPS OUTSIDE THE MONUMENT USED BY INDIANS

Just outside the north boundary of the Monument on Indian Reservation land is a small spring near which is camped a family of Indians. This family is one of the two sharing the 5.11 acre patch south of the Monument.

A. Flow of North Seep Indian Spring:

Taking a small container nearby and my watch, I found the usable output of this spring less than a gallon a minute. It is in a very unsightly condition. Litter, old buckets, and trash are all over its exit slope. While a little tunneling has been done, other than that the spring presents a most neglected appearance. Yet, with the spring cleaned up, rock walled, and flumes constructed, the output could be made to approximate 1 gallon per minute, or 1,500 gallons a day.

The Indians were soaking a cowhide in one of the several mirey pools above the steel barrel section shown in the picture (Figure 14). This family is making no garden use of this water and to drink any of it would be most unhealthful. The point is that if there were a crying need on the part of the Indians, this spring could be cleaned up, production increased, and efficient utilization begun. (See also Figure 15.)

B. Two-Mile Wash (Indian Reservation)

It occurred to the writer that if this problem were to come to a head, the final decision would rest on the actual urgency of the need which Indians might have for more water. In other words, when there is no precedent or test case to look back upon, the outcome of a case coming up around entirely new sets of conditions will largely depend upon relative needs for water by the parties concerned.

The Two-Mile Wash is northeast of the Pipe Spring National Monument a distance of about two miles. The water seeps from the channel of an arroyo and runs some distance to where a small storage reservoir has been made by damming the arroyo. The following facts were observed:

(1) The amount of water leaving the small reservoir in an open top ditch is practically twice the 33.44 gallons per minute supplied to the Interlocked Pools on Pipe Spring National Monument.

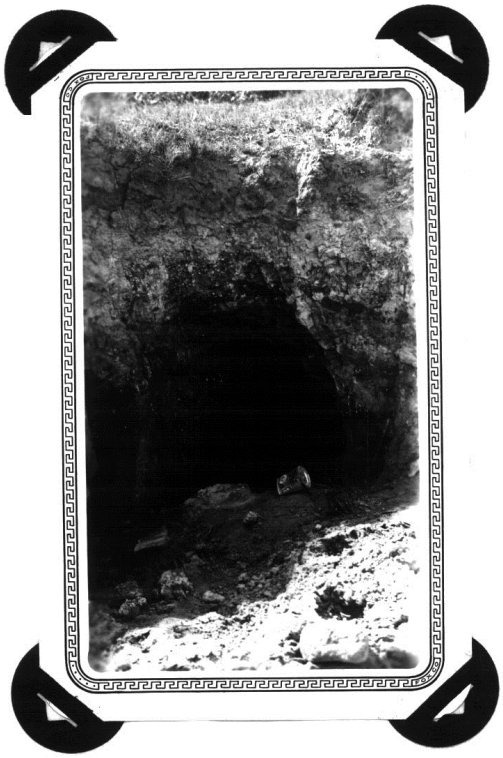


Figure 14.

North Seep Indian Spring just outside Monument. This Spring isn't cleaned up. No efficient utilization of waters is in effect. Present effective yield of approximately 750 gallons daily could be increased to 1,500 gallons daily.



Figure 15. (Same Spring as Figure 14)

Considerable litter and mire about North Seep Indian Spring just outside Monument. Water not efficiently utilized by Indians.

(2) Approximately 60 gallons per minute, is my estimate of the amount of water leaving the dam.

(3) The 4-inch pipe leads the water from the dam into an open ditch. The soil is sandy and there is a very high seepage loss. In 300 yards flow in this open ditch the loss is around 50 percent.

(4) At this rate, probably not more than half of the original 60 gallons per minute reaches the Indian fields and gardens.

(5) Between two and three miles of pipe line to replace the open ditch would save almost half the amount of water leaving the dam.

C. Indian Use of Water:

(1) Two little plots of ground, one less than 1 acre and the other less than 2 acres, are under cultivation. Thus, less than 3 acres are watered on about 30-gallons per minute - almost the entire output of the Interlocked Pools at Pipe Spring Monument.

(2) On basis of previous calculations, the 30 gallons per minute should be irrigating nearly 12 acres of crops if efficiently used. The Indians are irrigating one-fourth that amount.

(3) The seepage loss is high because the ditch walls, by capillary attraction, are moist for 6 inches to 1 foot above the running water surface. This is conclusive proof of both high evaporation and seepage losses.

(4) With pipe lines direct from the small dam, approximately 60 gallons per minute could be supplied to the Indians - enough water for 25 acres of cultivation.

Hence, again, if there were an acute need for more water on the part of the Indians, with a little help they could be irrigating 25 acres at the Two-Mile Wash instead of the meagre 3 acres or less now under cultivation.

Therefore, in view of the following observations, summarized, I do not believe the Indian Service is in immediate need of more water for the Indians on the Kaibab Reservation.

(1) Under efficient supervision, the Indians should be having more than three times the 3.11 acres under cultivation near the

south end of the Monument.

(2) If acute need existed, the seep spring north of the Monument boundary could be cleaned up and improved both in point of flow and efficiency of utilization.

(3) If an emergency need existed, the Two-Mile Wash Seep could deliver, with piping, almost twice the water now being obtained from it - enough to irrigate almost 25 acres of ground. The present output of about half that much is being used to irrigate less than one-fourth the crop yield that could be had from this available half. These figures are based upon the average duty of water in that area as accepted by irrigation engineers.

(4) Though I did not personally make an examination of Moccasin Springs, it appears, from several I consulted about it, that Indians are not getting near the acreage from waters there that white people are obtaining.

## ADMINISTRATION OF PIPE SPRING NATIONAL MONUMENT

Mr. Leonard Heaton, Acting Custodian of Pipe Spring National Monument, is on Laborer status. His yearly salary is $1,200. Less 15%, leaves a net salary of $1,020. I arrived at the Monument unannounced, but found Mr. Heaton dressed in the regulation uniform of the National Park Service as shown in the accompanying photograph (Figure 16).

Laborer Heaton has made meritorious efforts toward improving the appeal of the Monument to the visitors. Among these are:

(1) He has secured the loan of old bedsteads, spinning wheel, old churns, and other items of pioneer history, from his wide acquaintance of Mormons in the Pipe Springs region.

(2) Collected the more common snakes of the region and has them on display for the visitors.

View of Monument Contacted by the Visiting Public:

Pipe Spring National Monument, especially the old Mormon Fort and the Interlocked Pools, presents a really beautiful picture to the approaching visitor. This is proved effectively in the accompanying snapshot (Figure 17). This view and the one following (Figure 18) show the portion of the Monument the visitor sees in coming in. Mr. Heaton irrigates the trees, handles the distribution of the waters for the Monument, and serves as guide to visitors.

I walked down south of the Trans-Monument road and secured the view next shown (Figure 18). Visitors never go down as far as I stood to take this picture. In the cluster of trees are a few of the houses, including a garage and chicken houses. Mr. Heaton is moving the chicken houses on down to the south out of view and by next spring only the garage, the large



Figure 16

Laborer Heaton, Acting Custodian Pipe Spring National Monument. West Pool is in background. Compartment cage made for snakes of vicinity, by Heaton.

Figure 17.

View of Winsor Castle and East Pool from East approach.

Figure 17a

There is shade in abundance about the Interlocked Pools and Winsor Castle. This photograph was taken about eight years ago. Visitors approach this view from the east.



Figure 18.

The Acting Custodian is moving smaller houses down to a more secluded spot on Monument. Picture taken from much closer position than visitors reach.

boarded building, will be left. This garage, Mr. Heaton wants to rebuild making it smaller and more attractive and if, on his $1,080 salary, he can at all afford it, he will have that completed by spring also. Because of no Park Service money for all of this, Mr. Heaton will, at his own expense, remove old buildings that have been on the Monument for years. Under pioneering conditions, this would prove that a pretty creditable desire for improvement prevails at Pipe Spring on Laborer Heaton's part.

Another View Farther South:

See Figure 19. I took this snapshot standing below the last houses shown in the clump of trees above. This view is still farther removed from the area contacted by visitors.

Look carefully at the location shown by arrow. Here is where Heaton will finally have such chicken houses as will be left on the Monument. I found Mr. Heaton desirous of removing his cow, few calves, and chickens all off of the Meadow and placing them down in this secluded part of the Monument, or taking them five miles to Moccasin and range them on his father's and brother's land. On present meagre salary, Mr. Heaton rather badly needs these few chickens and cow near to enable him and his family to live on the Laborer's salary. With a little help, I think Laborer Heaton will cooperate in bettering appearances of the Monument as much as he can possibly afford.

Let us suppose that a full $1,860 salary were immediately available and a man were drawn from Civil Service. Further, suppose this man had a Service-built residence to live in. This man could take 5 men, a team of horses and wagon, and in 10 days remove every evidence or trace of structures now needed by Mr. Heaton for chickens, cow, and calves. Upon inspecting the relocation with Architect Langley of the Branch of Plans and Designs, we agreed that Mr. Heaton is placing his chicken house and small barn in a successfully secluded spot on the Monument. This spot is 200 yards from any point a visitor will ever approach and the houses are secluded as shown in the last view above. Early Mormons had poultyy and stock on the Meadow and, after all, this point isn't seriously inconsistent with history.

Fences About the Meadow:

See Figure 20. A previous report voiced a protest that "Custodian (Laborer) Heaton - parentheses mine - has been allowed to fence off a little oasis (approximately 2½ acres) and is using it for purposes of pasturing . . "

In going into this problem of fences, I found that there have been fences in these exact locations since the 1880's. A few fences of the early days have actually been removed. Apparently, no fences in new locations have been constructed. Existing fences that have been there 50 to 60 years have been repaired or replaced from time to time.

Necessity of Fences:

While it is true that Heaton has been grazing the Meadow to a limited extent and the fences aid in keeping his stock confined, investigation

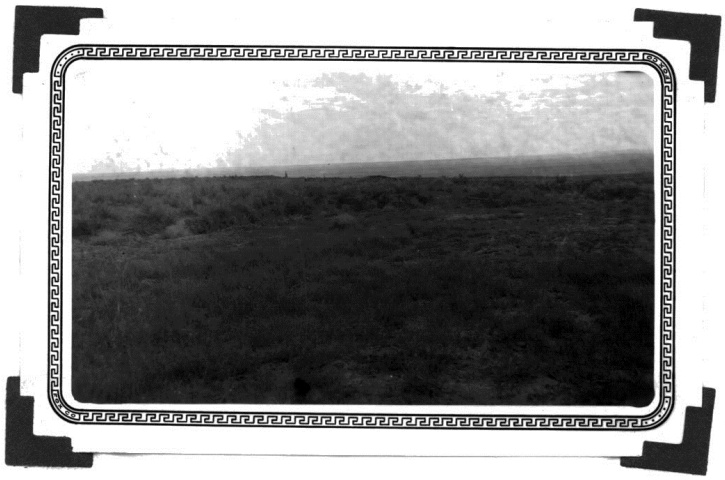


Figure 19.

Here's where small structures of previous view are being moved.



Figure 20.

Fences shown have been rebuilt where previous fences of early Mormon days were located. Fence along road absolute necessity to keep out stock running at large.

revealed that is is absolutely necessary to have the high fence along the road to keep out stray range cattle and horses. There are frequent drives of horses and cattle through the Monument on the Trans-Monument road and were it not for our high fences, our entire Meadow would be frequently overrun by the outside stock. The building of these fences cannot be charged to Laborer Heaton since they have been there almost since the history of the place began. In the future development of the Monument practically all of the present fences will have to be retained if the historical restoration is complete.

Summarization of Administrative Problems

I think the investigation outlined above proves the following:

(a) That (1) the reallocation of the Laborer Position to a Civil Service Ranger Position; (2) the appropriation of necessary funds for an adequate residence for this Custodian; and (3) the providing of sufficient maintenance money through appropriation for this Monument; would promptly solve all problems as to the general appearance of the Monument. Even with Laborer Heaton retained, and the remaining conditions met, the problem of the appearance of the Monument would be completely solved.

The finest, most highly developed of the national parks have gone through their pioneering stages when the finest view of cliffs or a water fall was from a stock corral, or when temporary wooden shacks greeted the view of visitors on several turns of the road. Appropriation of sufficient funds for such parks easily solved the problem. Similarly, the problem at Pipe Spring will be solved - that is, the problem of temporary buildings, not the water problem, which is another independent issue entirely.

Pipe Spring National Monument is in its pioneering stages. We know that, and we know what is needed to remedy such administrative problems as exist there. The water problem is another matter. Solving the administration of the Monument doesn't solve the water problem. Tip-top Park Service standards wouldn't solve the Water Problem there, and I want to emphasize this point, for it must be understood in order to make the issues there clear.

## SUMMARY AND CONCLUSIONS OF WHOLE INVESTIGATION

(1) Water discharging from Big Spring (27.77 gallons per minute) and the Historic Spring (5.67 gallons per minute) totals 33.44 gallons per minute. This is the total amount flowing into the Interlocked Pools. The 7.70 gallons per minute from Upper Meadow Pool goes to Cattlemen. Total 41.14 gallons per minute, is present water yield at Monument.

(2) Any material increase in available water at the Monument hinges upon cleaning Tunnel Spring entrance and constructing a flume. The greatest possible increase: 41.14 gallons per minute might be increased to 44.56 gallons per minute, less than 10 percent increase over the present available water.

(3) No further extension of the Tunnel into the hill should be permitted under any circumstances. Tunnel Spring emerges 22 feet lower than Big Spring and directional trend of fracture and joint system strongly indicates connection between the two springs.

(4) This water difficulty is not between merely the Heatons of Moccasin, and the Indian Service. The Cattlemen's Association is made up of 13 signatures with Heaton Brothers as only one of them. Heaton cattle rarely make up more than one-fourth all of the cattle that figure in this water problem.

(5) The Indian Service bases their claim to the waters and are contesting legal rights of Cattlemen solely on the wording of the Presidential Proclamation, which wording was in all probability inserted by that Service when the Proclamation was being prepared. They seem to interpret "use waters" to mean ALL water, and the Indian Service seems to pass up the statement " . . . subject to all prior valid claims . . "

(6) The National Park Service, it seems, is not aware that its future needs will require a large portion of all available water on the Monument after Cattlemen are recognized. Our Service should, it seems, remember that the Heads of the Mormon Church - not merely Heatons - are interested in the complete historical restoration of Winsor Castle and its setting of trees, orchards, meadows, and gardens. Mr. Mather's dream was to carry out this beautiful restoration. It seems to fall short of this future program would mean breaking the faith of the whole Mormon Church in the National Park Service and Mr. Mather. We must realize the magnitude of this intense interest in Pipe Spring. It is the whole Mormon Church and its leaders. Let's not make the grave mistake of underestimating this interest in Pipe Spring National Monument.

(7) Under Arizona Water Law, and according to the Proclamation, the National Park Service accepted Pipe Spring Monument lands "SUBJECT TO PRIOR VALID CLAIMS" and there seems little reason to presume that the Indian Service OWNS the waters there now. The amount they receive, it seems, would be

contingent upon whatever SURPLUS is left after Park Service rights (acquired through transfer from private ownership) are preserved. These Park Service needs are, and will be, more than mere "culinary water, and possibly enough for a cow and chickens, and the small meadow."

(8) The Cattlemen appear to have had legal rights to water under Arizona Water Law prior to the establishing the Monument. This would appear to be one of the "prior valid claims" which we, as owners of the land, should recognize in accordance with the Proclamation.

(9) During the Summer of 1933, the Indian Service has been getting three-fourths of the 33.44 gallons going into the Interlocked Pools, except for small tourists' needs and water used by the Laborer's household.

(10) The Park Service Meadow has been getting one-fourth of the same water after the small amounts taken are deducted.

(11) It seems definitely established that the Indians are irrigating less than one-third the land their three-fourths of the water would irrigate if the Indians made the best use of available waters.

(12) At Two-Mile Wash, if developed, the Indians could be cultivating 8 times the crops now being cultivated. Less than 3 acres are now cultivated, where possibly 25 acres could be irrigated if pipe were installed and farming were efficient.

(13) THE INDIANS CERTAINLY ARE NOT IN DIRE NEED OF A FEW MORE GALLONS PER MINUTE AT PIPE SPRINGS. If efficiently used, their present waters would irrigate from 5 to 8 times the amount of land they now have under cultivation.

(14) Re-allocation of the Laborer's position to Civil Service Custodial grade and appropriation for residence and maintenance of the Monument would, in two weeks after operation, remove all trace of the pioneering appearance from the Monument.

(15) Landscape architects should cooperate with us at once in working out definitely the future needs in trees, meadows, orchards, and gardens for an historical restoration of the Monument. The Engineers should then promptly have some one familiar with Irrigation Engineering submit figures on water the National Park Service needs for this restoration, and for residential and tourists' needs. We will then know just how much water we can turn over as surplus above our needs to the Indians.

Finally, solving the administrative problem at the Monument is only a matter of increased appropriations for (1) re-allocation of the Laborer position to Custodian or Park Ranger; (2) residence for the Custodian; (3) maintenance of the Monument premises; and (4) restoration of the Monument

Setting as it was in past days. Such bringing of the property up to Park Service standards and maintaining those standards is contingent upon retention of rights we now have to Pipe Spring waters. The entire Mormon Church has a live interest in this most important historic landmark to their early pioneers. The Mormon Church fully expects us to bring the property up to Park standards by a full and complete restoration of Winsor Castle and its setting. To accomplish this end, most, if not all, of the water to which we now have legal right will be needed. Whatever is then surplus can be utilized by the Indians.

Respectfully submitted,

Robert H. Rose,
Assistant Superintendent.

Approved:

Frank Pinkley,
Superintendent.



Figure 21.

Pipe Spring National Monument marker at Fredonia, Arizona, constructed by Utah Pioneer Trails and Landmarks Association. September 2, 1933, civic and Church leaders assembled here and at Pipe Spring for dedication of markers. Interest in Pipe Spring is live throughout the entire Mormon realm.



**Other Supporting Information**

11-08-2000: Memorandum regarding proposed groundwater development near PISP and ZION

United States Department of the Interior
NATIONAL PARK SERVICE
Water Resources Division
1201 Oak Ridge Drive, Suite 250
Fort Collins, CO 80525

November 8, 2000

IN REPLY REFER TO:

L54(2380)
Zion/General
PISP/General

Memorandum

To: Superintendent, Zion National Park
Superintendent, Pipe Springs National Monument

Through: William L. Jackson, Chief, Water Operations Branch

From: Larry Martin, Hydrogeologist, Water Operations Branch

Subject: Proposed groundwater development near Pipe Springs National Monument and Zion National Park

The attached report was prepared to address the potential effects of proposed groundwater pumping near the Utah-Arizona border on water resources at Zion National Park and Pipe Springs National Monument.

Two water right applications have been filed in Utah for water wells in the Moccasin Mountains near the Arizona-Utah border. Each water right application is for 1817.25 acre-feet/ year. The water would be used for irrigation and other development on land north and west of Elephant Butte. Proposed well locations are about 10 miles northwest of Pipe Springs National Monument and 11 miles southeast of Zion National Park.

The report concludes that concludes that pumping groundwater from the proposed wells would cause water table drawdown at the Sevier Fault, possibly affecting spring flow at Pipe Springs National Monument. Drawdown would extend to the north, into the Virgin River Basin, possibly, resulting in diversion of groundwater from the Virgin River Basin. The amount of this diversion would need to be determined and counted against the cap on new groundwater withdrawals in the Virgin River Basin.

Several alternative locations were identified which would reduce the potential threat to Pipe Springs National Monument. The effect of developing water at these alternative sites on the water resources in the Virgin River would need to be determined by a combination of monitoring and computer modeling.

If you have any questions or comments regarding this report, feel free to contact me by phone at, (970)-225-3515, or email at, larry_martin@nps.gov

Attachments

cc: IMR – Reber, Ladd
2380 – Kimball, Pettee, McGlothlin
Zion – Sharrow
BLM – Paul Summers
USGS – Margot Truini
Kaibab Band of Paiute Indians
SOL – Scott Loveless

# Evaluation of Proposed Water Supply Wells South of Elephant Butte, Utah

Larry Martin
National Park Service
Water Resources Division

November 7, 2000

## Introduction

Instone Founders LLC is proposing to construct two water supply wells south of Elephant Butte, Utah in Section 11, T44S, R9W to provide irrigation and stock water to their property located in Sections 16 and 20, T43S, R9W. The proposed well locations are in southern Utah, within a mile of the Arizona border. They are about 10 miles northwest of Pipe Springs National Monument and about 11 miles southeast of Zion National Park (Figure 1).

Instone Founders LLC applied for water rights for 1817.25 acre-feet/year from each of two wells, for a total of 3634.5 acre-feet per/year (2250 gallons per minute, gpm) (see appendix of this report). Instone Founders LLC provided a preliminary hydrogeologic report (Pentacore Resources and Aquaterra, 2000) to the National Park Service evaluating the effect of pumping 400 gpm from each of two wells (1300 acre-feet/year).

The National Park Service is concerned that pumping this amount of groundwater may have adverse impacts on the discharge of Pipe Springs and/or discharge of groundwater providing baseflow to streams in Zion National Park.

This report provides; review of the consultant's report submitted by Instone Founders LLC, an alternative analysis of probable effects of pumping two wells at 400 gpm, comments regarding the probable effects of pumping two wells at 1125 gpm each, and alternative well locations.

## Regional Hydrogeology

The proposed wells would be constructed in the Navajo Aquifer. The Navajo Aquifer is the saturated part of the Navajo Sandstone formation that occurs

throughout a large portion of southern Utah. The proposed location of the wells is near the southern extent of the Navajo Sandstone where the Navajo is at the surface and its thickness has been reduced by erosion to about 500 feet. Further to the north, the thickness of the Navajo Sandstone is greater than 2000 feet. The Navajo Sandstone has a 1-5° dip to the north. Groundwater flow is generally to the north, following the regional dip of the formation. In the vicinity of the proposed wells, canyons have cut deeply into the Navajo Sandstone, creating local discharge areas for groundwater and causing groundwater flow direction to flow in a southerly direction.

Cordova (1981) showed that groundwater flow divides in the Navajo Sandstone generally coincided with surface water divides. Recharge occurs throughout the area where the Navajo Sandstone is at the surface. The water table tends to mound in areas coinciding with surface-water divides. Groundwater flow is toward discharge areas in deeply cut canyons. The approximate locations of surface water divides in this area are shown on Figure 2 and are assumed to provide an indication of the general location of groundwater divides. Groundwater north of Elephant Butte flows toward the north, eventually discharging in canyons and providing baseflow for the East Fork of the Virgin River and its tributaries. Groundwater to the east of the proposed well sites flows toward the east, toward the Sevier Fault and Moccasin Wash and Sandy Canyon Wash. At the proposed well sites, groundwater flow is generally toward the southwest, toward discharge areas in Parashont, Rosy, and Cottonwood Canyons.

The Sevier Fault runs approximately north-south about five miles east of the proposed well site. The Sevier Fault acts as a barrier to groundwater flow. The relatively impermeable rocks of the Chinle and Moenkopi Formations have been upthrown on the east side of the fault and are adjacent to the Navajo Sandstone on the west side of the fault. The boundary of the Navajo Aquifer to the south and west is coincident with the extent of the Navajo Sandstone. The Navajo Aquifer continues for many tens of miles to the north, becoming buried by younger formations, resulting in a confined aquifer.

Figure 2 shows the approximate locations of the Sevier Fault, groundwater divides, the extent of the Navajo Aquifer, the location of the proposed wells, and

the proposed locations where the water would be used. Bold arrows on figure 2 indicate the general direction of groundwater flow.

Freethey (1988) determined that wells yield water more readily when they tap fractured Navajo Sandstone than when they tap unfractured Navajo Sandstone. High reported values of hydraulic conductivity (6-7 ft/d) are associated with aquifer tests at wells constructed in, or very near, major fault zones where fracturing has increased the permeability of the Navajo Sandstone (Freethey, 1988). The storage coefficient for the confined portion of the Navajo Aquifer ranges from about $1x10^{-3}$ to $1x10^{-5}$ (Cordova, 1981). Specific yield for the unconfined portion of the Navajo Aquifer ranges from 5-10 percent (Hood and Danielson, 1979). The Navajo Aquifer is unconfined in the vicinity of the proposed wells.

Heilweil and Freethey (1992) simulated groundwater flow in the Navajo Aquifer to assess the probable effect of pumping groundwater to supply a coal slurry pipeline. Groundwater flow was simulated using specific yield values ranging from 5 to 10 percent and hydraulic conductivity values of 1.5 to 2.2 feet per day. Values of horizontal hydraulic conductivity from previous investigations were reported to range from 0.002 to 6.1 feet per day, with the higher values from wells completed near fault zones.

Fracture permeability greatly influences production from wells. The permeability of fracture and joint zones is up to 35 times greater than adjacent unfractured rock (Hurlow, 1998). Fault zones in the Navajo Sandstone are characterized by fractured and broken rocks on either side of the central fault zone, resulting in a high permeability zone associated with the fault.

Instone's Analysis

Aqua Terra Engineers and Pentacore Resources conducted a hydrogeologic analysis of the southwest portion of the Elephant Butte Quadrangle for Instone Founders LLC (Pentacore Resources and Aquaterra, 2000). The purpose of the investigation was to evaluate hydrogeologic data for the area and the potential impacts to BLM water rights from the proposed wells. BLM has water rights for Pine Spring (Section 34, T43S, R9W) and a well in Section 4, T44S, R9W (Figure 2). The report did not address the potential for impacts to National Park Service resources at Pipe Spring National Monument or Zion National Park.

Modeling of the extent of the cone of depression from the proposed wells was conducted using very large values for the hydraulic conductivity and storage coefficient with the expressed goal "to estimate the highest possible yield scenario". The predicted drawdown was based on a storage coefficient of 30% (.3), hydraulic conductivity of 31.7 feet per day, and aquifer thickness of 330 feet. Other investigations of the hydrogeology of the Navajo Aquifer in this area have determined that average values for the storage coefficient were 0.002 (Cordova, 1981), 0.07 (Heilweil and Freethey, 1992), and generally ranged from 0.05 to 0.10 (Hood and Danielson, 1979). Average values for hydraulic conductivity at wells completed in fracture zones reported by other investigators were 3-7 feet/day (Cordova, 1981) and 7.55 feet/day (Heilweil and Freethey, 1992). Cordova (1981) used a hydraulic conductivity of 3 feet/day to predict drawdown from groundwater pumping. (Transmissivity was 6000 $ft^2$/day and assuming an aquifer thickness of 2000 feet.) Heilweil and Freethey (1992) used an average hydraulic conductivity of 2.2 feet/day to model potential effects of groundwater pumping. Harlow (1998) reports written communication from Heilweil (USGS) of the results of aquifer tests at Anderson Junction, Hurricane Bench and Grapevine Pass with hydraulic conductivity ranging from 0.18-31.7 feet/day. These areas are intensely fractured fault zones and would be expected to have large hydraulic conductivity values. It appears the potential impacts from pumping the proposed Instone wells are based on the single highest value of hydraulic conductivity reported for the Navajo Aquifer.

The RockWorks[99] software (referenced on page 9 of the report) used to estimate drawdown contained an error. This software uses the Theis non-equilibrium method to estimate drawdown from pumping well(s). The input screen of the software program asked for transmissivity in $ft^2$/d, but the program used an equation which required that transmissivity be in units of gpd/ft. The result of this error is greatly underestimating the extent of the cone of depression surrounding the wells.

On page 2 of the report, it states that there are no major structural features present in the study area. The nearest major fault is the Sevier Fault, approximately 5 miles east of the proposed well sites.

Page 4 of the report discusses the occurrence of an "intensely faulted or jointed" area in the southwest part of the study area. This is an area where the Navajo Sandstone outcrops to the northwest of Rosy Canyon. The geologic map of Sable and Doelling (1990) clearly shows this as an area with numerous faults and joints. This might be an alternative location for water supply wells. The presence of faults and joints in the Navajo are generally indicators of high permeability zones. This area would be several miles closer to the points of use than the proposed site and it would be farther from Pipe Springs National Monument, lessening the potential for impacts to resources at that park.

The applicant chose to use the largest reported value of hydraulic conductivity reported by any investigator for the Navajo Aquifer, 31.7 ft/d. This high value was not for the regional homogeneous matrix, but rather one direction of the transmissivity tensor aligned parallel to a predominant fracture orientation (Heilweil et. al., 2000). Most investigations of the hydrogeology of the Navajo Aquifer have determined an upper limit of 5-7 ft/d for the hydraulic conductivity in fractured areas. The geologic map of the proposed well site (Sable and Doelling, 1990) does not substantiate the applicant's claim that the vicinity of the proposed well site is intensely faulted or jointed.

The aquifer thickness at the proposed well sites is estimated to be 265 feet. However, a thickness of 330 feet was used "to account for some margin of error and to estimate the highest possible yield scenario". Using the estimate of 265 feet would provide a more realistic prediction of potential drawdown and yield for wells at the proposed site.

The hydraulic conductivity used to estimate drawdown was 31.7 ft/d. A more realistic value is 5-7 ft/d. Hydraulic conductivity values of 5-7 ft/d have been reported by other investigators for wells completed in fault or fracture zones in the Navajo Aquifer (Cordova, 1981, Cordova, 1978, Heilweil and Freethey, 1992, Hurlow, 1998, Freethey, 1988). Only one occurrence of a hydraulic conductivity value larger than 8 ft/d has been reported in the literature.

The storage coefficient used in the model was 0.3. Other investigators have reported much lower values, generally 0.1 or less (Cordova, 1981, Cordova, 1978, Heilweil and Freethey, 1992, Hurlow, 1998, Freethey, 1988).

The applicant concluded that Pine Spring is not hydrologically connected with the Navajo Aquifer and would not be affected by pumping of the proposed wells. I concur.

The applicant used a Theis analysis (RockWorks[99]) to predict drawdown at the BLM well from pumping at the proposed wells. There was an error in the software used for this analysis. Using the correct form of the Theis equation and the applicant's estimates of hydrologic parameters, the predicted drawdown at the BLM well would be approximately 3.2 feet. However, the estimates of hydrologic parameters used by the applicant are unrealistic. The applicant chose to use the largest values reported for hydrologic parameters for the Navajo Aquifer anywhere in the Virgin River Basin. These values represent conditions at major fault zones, such as the Hurricane Fault, and are probably not representative of conditions at the proposed sites.

NPS Analysis of Drawdown – 1300 acre-feet/year

Springs at Pipe Springs National Monument emerge at the contact of the Sevier Fault with Navajo Aquifer at the southernmost extent of the Navajo Aquifer in this area. The National Park Service is concerned that pumping from the proposed wells might adversely impact the flow from these springs.

There is also concern that the cone of depression from the proposed wells would extend beyond the groundwater divide to the north of the proposed wells. This would cause the divide to shift to the north, resulting in capture of some portion of the groundwater currently flowing to the north, which provides baseflow for the East Fork of the Virgin River and its tributaries in Zion National Park. An agreement between the Utah State Engineer's Office and the National Park Service limits new diversions and depletions from surface and groundwater sources in the East Fork of the Virgin River upstream and upgradient of the park.

Groundwater in the Navajo Aquifer at the proposed well sites probably flows in a southwesterly direction, discharging to springs and seeps along canyon walls or as underflow into the alluvium filling the bottom of canyons and valleys.

NPS-WRD staff conducted an analysis of water table drawdown from pumping the proposed wells. The primary reason to conduct this analysis was to determine the areal extent and amount of drawdown using more representative

values of hydrologic parameters for the Navajo Aquifer. This analysis was conducted treating the pumping as if it occurred from a single well rather than the two wells proposed by the applicant. NPS-WRD lacks the sophisticated computer software to conduct the analysis for simultaneous pumping of two wells. At distances greater than about 5000 feet from the well(s), predicted drawdown is approximately the same for a single well pumped at 800 gallons/minute vs. two wells each pumped at 400 gallons/minute.

Values of hydrologic parameters used in this analysis were:

hydraulic conductivity..... 6 feet/day
aquifer thickness..... 265 feet
transmissivity ..... 1600 feet$^2$/day
storage coefficient..... 0.1
pumping time ..... 50 years, 18250 days
pumping rate..... 800 gpm (combined flow of both wells)
equal to 154,000 feet$^3$/day

Predicted drawdown at various distances from pumping of the proposed wells was determined using the Theis equation in the form:

$$W(u)=\frac{4\pi sT}{Q} \qquad \text{and} \qquad r=\sqrt{\frac{4Ttu}{S}}$$

Values of W(u) for drawdown (s) of 10, 5, 2, and 1 feet were calculated using the equation on the left. Values of u for calculated W(u)'s were estimated from the table in Lohman (1972). The equation on the right was then used to determine the distance (r) from the pumped well where we would expect to observe water table drawdown of 10, 5, 2, or 1 foot.

$$W(u)=\frac{4\pi s\left(1600\ ft^2/d\right)}{154{,}000\ ft^3/d} \qquad \text{and} \qquad r=\sqrt{\frac{4\left(1600\ ft^2/d\right)\left(18250\,d\right)u}{0.1}}$$

| drawdown (s) | W(u) | u | distance (r) | |
|---|---|---|---|---|
| 10 feet | 1.305 | 0.18 | 14,500 ft | 2.75 miles |
| 5 feet | 0.652 | 0.43 | 22,400 ft | 4.25 miles |

| | | | | |
|---|---|---|---|---|
| 2 feet | 0.261 | 0.9 | 32,400 ft | 6.1 miles |
| 1 foot | 0.1305 | 1.3 | 39,000 ft | 7.4 miles |

The extent of drawdown from pumping the proposed wells is shown on Figure 3. Drawdown at the BLM well, approximately 10,000 feet from the center of pumping would be about 15 feet. The predicted drawdown at the BLM well is 3.2 feet, when using the hydrologic parameters presented in the applicant's preliminary hydrogeologic report (Pentacore Resources and Aquaterra, 2000) and the correct form of the Theis equation.

The cone of depression would extend across the groundwater divide shown a couple of miles east of the location of the proposed wells. Pumping would probably capture some of the groundwater in the Navajo Aquifer that currently flows toward the east, supplying springs and baseflow to streams (Willow Spring, Burnt Corral Spring, Sandy Canyon Wash, Moccasin Springs, and possibly Pipe Springs). Pipe Springs is one of a number of springs associated with the Sevier Fault. Drawdown from the proposed pumping would approach 5 feet along the West Branch of the Sevier Fault. This may affect the flow of groundwater toward or along the fault, effectively reducing the recharge area for groundwater flowing from north to south along the fault which is thought to be the source of water for Pipe Springs and Moccasin Springs. Drawdown from pumping might also intercept groundwater flowing along the Sevier Fault and cause it to be diverted toward the wells instead of flowing to the south, toward Pipe Springs.

The cone of depression from the proposed wells would extend beyond the groundwater divide to the north. This would result in intercepting groundwater that currently flows to the north, supplying baseflow to the East Fork of the Virgin River and its tributaries. The amount of groundwater that might be intercepted from the Virgin River Basin can be estimated by prorating the pumping rate based on comparison of the area of the cone of depression north of the groundwater divide with the total area of the cone of depression. In this case, it would be about 15%. However, the cone of depression as shown on Figure 3 extends beyond no-flow boundaries, the Sevier Fault to the East and the extent of the aquifer to the south and southeast. When the expansion of a cone of depression is limited by a no-flow boundary, water table drawdown will increase (Lohman, 1972). The cone of depression will expand further than predicted in

other directions (away from the no-flow boundary). The presence of these no-flow boundaries will result in the cone of depression expanding further north into the Virgin River Basin than would otherwise be predicted. Therefore, a more realistic estimate of the amount of groundwater that would be diverted from the Virgin River Basin might be on the order of 20% of the total pumped from the wells. Extensive monitoring and computer modeling would be required to determine the amount of water that might be diverted from the Virgin River Basin.

NPS Analysis of Drawdown – 3600 acre-feet/year

The preliminary hydrogeologic report submitted by the applicant (Pentacore Resources and Aquaterra, 2000) provided analysis of drawdown from pumping two wells, each at a rate of 400 gpm (1300acre-feet/year). The water right application submitted by the applicant requested approximately 3600 acre-feet/year (2250 gpm). In this section, I provide preliminary analysis and general comments of the potential hydrologic effects of pumping groundwater at a rate of 3600 acre-feet/year, as requested in the water right applications.

Drawdown due to pumping from the proposed wells at other pumping rates can be estimated using the Theis equation. If all other factors are unchanged (aquifer parameters, distance from the pumped wells, time), then drawdown is proportional to the pumping rate. If the pumping rate is doubled, drawdown will double.

The analysis in the preceding section was based on a combined pumping rate of 800 gpm from the two wells. The total amount of the water right applications is 2250 gpm. Water table drawdown due to pumping the requested appropriation of water can be estimated by multiplying the results obtained in the preceding section by the ratio of the requested appropriation to the pumping rate used in the preceding analysis.

In this case: $\frac{2250\,gpm}{800\,gpm} = 2.8$

The distance-drawdown table from the preceding section can be updated to show the predicted drawdown for both the 800 gpm pumping rate used in the

consultant's report and the 2250 gpm pumping rate corresponding to the water right applications.

| Distance from pumping center | | Drawdown from pumping 800 gpm | Drawdown from pumping 2250 gpm |
|---|---|---|---|
| 3650 ft | 0.7 miles | 30 feet | 85 feet |
| 7100 ft | 1.3 miles | 20 feet | 56 feet |
| 14,500 ft | 2.75 miles | 10 feet | 28 feet |
| 22,400 ft | 4.25 miles | 5 feet | 14 feet |
| 32,400 ft | 6.1 miles | 2 feet | 6 feet |
| 39,000 ft | 7.4 miles | 1 foot | 3 feet |

Alternatively, the Theis analysis, as used in the preceding section, can be used to predict the distance-drawdown response for groundwater pumping centered at the proposed well locations. This analysis is based on a pumping rate of 2250 gpm. Values of hydrologic parameters used in this analysis were:

hydraulic conductivity..... 6 feet/day
aquifer thickness..... 265 feet
transmissivity ..... 1600 $feet^2$/day
storage coefficient..... 0.1
pumping time ..... 50 years, 18250 days
pumping rate..... 2250 gallons/minute (433,000 $feet^3$/day)

| drawdown | W(u) | u | distance | |
|---|---|---|---|---|
| 30 feet | 1.39 | 0.16 | 13,700 ft | 2.6 miles |
| 20 feet | 0.93 | 0.29 | 18,400 ft | 3.5 miles |
| 10 feet | 0.46 | 0.59 | 26,250 ft | 5.0 miles |
| 5 feet | 0.23 | 0.97 | 33,700 ft | 6.4 miles |
| 2 feet | 0.093 | 1.55 | 42,500 ft | 8.0 miles |
| 1 foot | 0.0464 | 2.05 | 48,900 ft | 9.3 miles |

If wells at the proposed locations could produce 2250 gpm, drawdown at the Sevier Fault would be about 10 feet. Drawdown toward the north, in the Virgin

River Basin, would need to be determined by monitoring water levels and computer modeling of the groundwater flow system to determine how much groundwater was being diverted from the Virgin River Basin. The Sevier Fault would probably act as an impermeable barrier, preventing groundwater flow toward the well(s) from east of the fault. The southern extent of the Navajo Aquifer is only a few miles south of the proposed well locations. The impermeable boundary representing the southern extent of the aquifer would cause drawdown to be greater than predicted by the simplistic model discussed above. Drawdown would also extend further to the north and be greater than predicted by this model.

Alternative Well Locations

An approach to resolving NPS concerns is to assess whether reasonable alternatives exist to the proposed diversion. Three alternative sites for groundwater development are briefly discussed. These locations are shown in Figure 4. Relocating the proposed wells to any of the alternative locations would reduce the threat to water resources at Pipe Springs National Monument, primarily due to increasing distance, hydrogeologic barriers, and preferential flow paths. NPS would remain concerned about the potential diversion of groundwater tributary to the East Fork of the Virgin River.

Page 4 of the consultant's report discusses the occurrence of an "intensely faulted or jointed" area in the southwest part of the study area. This is an area where the Navajo Sandstone outcrops northwest of Rosy Canyon. The geologic map of Sable and Doelling (1990) clearly shows this as an area with numerous faults and joints. This might be an alternative location for water supply wells. The presence of faults and joints in the Navajo are generally indicators of high permeability zones. This area would be several miles closer to the points of use than the proposed site and it would be farther from Pipe Springs National Monument, lessening the potential for impacts to resources at that park. However, the concern remains regarding capture of groundwater tributary to the East Fork of the Virgin River. This area is shown as Alternative 1 on Figure 4.

Another alternative target for water supply wells is the alluvium in Rosy Canyon near the Utah-Arizona border. Rosy Canyon and its tributaries drain a large area of the southeast part of the Elephant Butte quadrangle. Pumping groundwater from the alluvium would eliminate National Park Service concerns with respect to

natural resource protection at both Pipe Springs National Monument and Zion National Park. Further investigation would be needed to determine the potential for developing water supply wells in the alluvium. This area is shown as Alternative 2 on Figure 4.

The geologic map of the Elephant Butte Quadrangle (Sable and Doelling, 1990) shows a north-south trending fault north and west of the proposed points of use in Sections 16 and 20. The fault is mapped in Sections 5, 8, and 17 of T43S, R9W. It then appears to be buried by the alluvium in the valley. A linear valley extends to the south of the mapped fault in the eastern part of Sections 17, 20, and 29, T43S, R9W. A parallel valley occurs to the west in Sections 17 and 20, T43S, R9W. These linear valleys may be indicative of faulting or intensely developed jointing. This area would likely have a greater saturated thickness than the proposed well locations by virtue of being several miles further north from the boundary of the Navajo Aquifer. This area is shown as Alternative 3 on Figure 4.

Conclusions

The consultant's preliminary hydrogeologic report (Pentacore Resources and Aquaterra, 2000) provided an analysis of predicted drawdown from pumping two wells at 400 gpm (800 gpm total). This analysis used faulty software that underestimated drawdown. Hydrologic parameters used in the analysis were very optimistic, further reducing the predicted drawdown.

Analysis conducted by NPS staff (this report) concludes that pumping 800 gpm from the wells would cause about 5 feet of water table drawdown at the Sevier Fault, possibly affecting spring flow at Pipe Springs National Monument. Drawdown would extend to the north, into the Virgin River Basin, possibly, resulting in diversion of groundwater from the Virgin River Basin. The amount of this diversion would need to be determined and counted against the cap on new groundwater withdrawals in the Virgin River Basin.

Hydrogeologic conditions at the proposed well locations do not appear favorable for developing the requested quantity of water (2250 gpm). Developing 800 gpm appears overly optimistic. At any given distance from the center of pumping, drawdown from pumping 2250 gpm would be nearly three times that of pumping 800 gpm.

Several alternative locations were identified which would reduce the potential threat to Pipe Springs National Monument. The effect of developing water at these alternative sites on the water resources in the Virgin River would need to be determined by a combination of monitoring and computer modeling.

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# Appendices

Water Right Applications

81-4343
81-4344

UTAH!
DEPARTMENT OF NATURAL RESOURCES
Division of Water Rights

## WRPRINT Water Right Information Listing

Version: 2000.10.23.00 Rundate: 11/08/2000 10:14 AM

# Water Right 81-4343

Click here to view documents

[WRPRINT] ***WR#: 81 4343 has been PRINTED!!
(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 11/08/2000 Page 1

WRNUM: 81-4343 APPLICATION/CLAIM NO.: A72695 CERT. NO.:

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OWNERSHIP**********

---

NAME: Instone Founders LLC OWNER MISC:
ADDR: HC 65 Box 437
CITY: Cane Beds STATE: AZ ZIP: 86022 INTEREST: 100%
LAND OWNED BY APPLICANT? No

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DATES, ETC.**********

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FILING: 02/04/2000|PRIORITY: 02/04/2000|ADV BEGAN: 02/16/2000|ADV ENDED: 02/23/2000|NEWSPAPER: Southern Utah News
PROTST END:03/14/2000|PROTESTED: [Hea] |APPR/REJ: [ ]|APPR/REJ: / / |PROOF DUE: / / |EXTENSION: / /
ELEC/PROOF:[ ]|ELEC/PROOF: / / |CERT/WUC: / / |LAP, ETC: / / |PROV LETR: / / |RENOVATE: / /
PD Book No. 2 Type of Right: APPL Status: UNAP Source of Info: APPL Map: 174 Date Verified: 02/04/2000 Initials: KEC

---

LOCATION OF WATER RIGHT**********

---

FLOW: 1817.25 acre-feet SOURCE: Underground Water Well

COUNTY: Kane COMMON DESCRIPTION: 5-6 mi. SW of Coral Pink S.P.

POINT OF DIVERSION -- UNDERGROUND:
(1) S 75 ft W 2000 ft from NW cor, Sec 11, T 44S, R 9W, SLBM DIAM: 16 ins. DEPTH: 200 to 800 ft. YEAR DRILLED: WELL LOG?
Comment:

PLACE OF USE OF WATER RIGHT

| | NORTH-WEST4 NW NE SW SE | NORTH-EAST4 NW NE SW SE | SOUTH-WEST4 NW NE SW SE | SOUTH-EAST4 NW NE SW SE |
|---|---|---|---|---|
| Sec 16 T 43S R 9W SLBM | X X X X | X X X X | X X X X | X X X X |
| Sec 20 T 43S R 9W SLBM | X X : X | X X X X | : : : : | : : : : |
| Sec 21 T 43S R 9W SLBM | X : : : | : : : : | : : : : | : : : : |

USES OF WATER RIGHT

CLAIMS USED FOR PURPOSE DESCRIBED: 4343
Referenced To: Claims Groups: Type of Reference -- Claims: Purpose: Remarks:

IRRIGATION

| | *---NORTH WEST QUARTER--* | *---NORTH EAST QUARTER--* | *---SOUTH WEST QUARTER--* | *---SOUTH EAST QUARTER--* | |
|---|---|---|---|---|---|
| Tot Irr. Acrg.: 450.00* | NW NE SW SE * | NW NE SW SE * | NW NE SW SE * | NW NE SW SE * | Section Totals |

or a Total of .00 acres.

Sole Supply: 450.00 acres Diversion Limit: 1800.00 acft. PERIOD OF USE: 04/01 TO 10/31

DOMESTIC: 5 Families Diversion Limit: 2.25 acft. PERIOD OF USE: 01/01 TO 12/31

COMMERCIAL Cultural and Educational Center including restaurant and lodge PERIOD OF USE: 01/01 TO 12/31

Maximum annual diversion expected to be around 15.00 AF/year. This use will be supplemental under 81-4343 and 81-4344.

OTHER COMMENTS

Estimated Maximum Water Use:

| | |
|---|---|
| Irrigation 450 acres @ 4.0 AF/Acre = | 1800.00 AF |
| Domestic five families @ 0.45 AF each = | 2.25 AF |
| Commercial: 200 persons/day x 104 days (weekends) = 20,800 person-days + 100 persons/day x 261 days (weekdays) = 26,100 person-days = 46,900 person-days x 100 gpd/person = 4.69 million gallons per year = | +/-15.00 AF |
| Total: | 1817.25 AF |

==========

Land Ownership: The proposed place of use is privately owned by the applicant



but the proposed well site is located on BLM-administered lands.

Water Use: The proposed "commercial use" for the Cultural and Educational Center will have its water supplied under this application and/or companion application 81-4344 (A72696).

[See "Addendum #1" attached to file.]

PROTESTANTS**************************************************************************************************

| | |
|---|---|
| NAME: Bureau of Land Management<br>C/O : Field Manager - Kanab Field Office<br>ADDR: 318 North 100 East<br>CITY: Kanab STATE: UT ZIPCODE: 84741 | NAME: Bureau of Land Management<br>C/O : State Director<br>ADDR: PO Box 45155<br>CITY: Salt Lake City STATE: UT ZIPCODE: 84145-0155 |
| NAME: Department of Interior<br>C/O : Field Solicitor<br>ADDR: 125 South State Street, Suite 6201<br>CITY: Salt Lake City STATE: UT ZIPCODE: 84138 | NAME:<br>C/O :<br>ADDR:<br>CITY: STATE: ZIPCODE: |

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UTAH!
DEPARTMENT OF NATURAL RESOURCES
Division of Water Rights

## WRPRINT Water Right Information Listing

Version: 2000.10.23.00 Rundate: 11/08/2000 10:24 AM

# Water Right 81-4344

Click here to view documents

[WRPRINT] ***WR#: 81 4344 has been PRINTED!!
(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 11/08/2000 Page 1

WRNUM: 81-4344 APPLICATION/CLAIM NO.: A72696 CERT. NO.:

---

OWNERSHIP**********

---

NAME: Instone Founders LLC OWNER MISC:
ADDR: HC 65 Box 437
CITY: Cane Beds STATE: AZ ZIP: 86022 INTEREST: 100%
LAND OWNED BY APPLICANT? No

---

DATES, ETC.**********

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FILING: 02/04/2000|PRIORITY: 02/04/2000|ADV BEGAN: 02/16/2000|ADV ENDED: 02/23/2000|NEWSPAPER: Southern Utah News
PROTST END:03/14/2000|PROTESTED: [Hea] |APPR/REJ: [ ]|APPR/REJ: / / |PROOF DUE: / / |EXTENSION: / /
ELEC/PROOF:[ ]|ELEC/PROOF: / / |CERT/WUC: / / |LAP, ETC: / / |PROV LETR: / / |RENOVATE: / /
PD Book No. 2 Type of Right: APPL Status: UNAP Source of Info: APPL Map: 174 Date Verified: 02/04/2000 Initials: KEC

---

LOCATION OF WATER RIGHT**********

---

FLOW: 1817.25 acre-feet SOURCE: Underground Water Well

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Comment:

PLACE OF USE OF WATER RIGHT

| | NORTH-WEST4 NW NE SW SE | NORTH-EAST4 NW NE SW SE | SOUTH-WEST4 NW NE SW SE | SOUTH-EAST4 NW NE SW SE |
|---|---|---|---|---|
| Sec 16 T 43S R 9W SLBM | * X: X: X: X* | * X: X: X: X* | * X: X: X: X* | * X: X: X: X* |
| Sec 20 T 43S R 9W SLBM | * X: X: : X* | * X: X: X: X* | * : : : * | * : : : * |
| Sec 21 T 43S R 9W SLBM | * X: : : * | * : : : * | * : : : * | * : : : * |

USES OF WATER RIGHT

CLAIMS USED FOR PURPOSE DESCRIBED: 4344
Referenced To: Claims Groups: Type of Reference -- Claims: Purpose: Remarks:

###IRRIGATION

| Tot Irr. Acrg.: 450.00 | *---NORTH WEST QUARTER--* | | | | *---NORTH EAST QUARTER--* | | | | *---SOUTH WEST QUARTER--* | | | | *---SOUTH EAST QUARTER--* | | | | Section Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | * NW | NE | SW | SE * | NW | NE | SW | SE * | NW | NE | SW | SE * | NW | NE | SW | SE * | |

Or a Total of .00 acres.

Sole Supply: 450.00 acres Diversion Limit: 1800.00 acft. PERIOD OF USE: 04/01 TO 10/31

###DOMESTIC: 5 Families Diversion Limit: 2.25 acft. PERIOD OF USE: 01/01 TO 12/31

###COMMERCIAL Cultural and Educational Center including restaurant and lodge PERIOD OF USE: 01/01 TO 12/31
Maximum annual diversion expected to be around 15.00 AF/year. This use will be supplemental under 81-4343 and 81- 4344.

OTHER COMMENTS

Land Ownership: The proposed place of use is privately owned by the applicant but the proposed well site is located on BLM-administered lands.

Water Use: The proposed "commercial use" for the Cultural and Educational Center will have its water supplied under this application and/or companion application 81-4343 (A72695).

Estimated Maximum Water Use:

Irrigation 450 acres @ 4.0 AF/Acre = 1800.00 AF

```
     Domestic five families @ 0.45 AF each =                          2.25 AF
     Commercial: 200 persons/day x 104 days (weekends) =
WRNUM 81-4344 continued***  (WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 11/08/2000  Page 2

     20,800 person-days + 100 persons/day x 261 days
     (weekdays) = 26,100 person-days = 46,900 person-days x
     100 gpd/person = 4.69 million gallons per year =            +/-15.00 AF
                                                                 -----------
                                Total:                            1817.25 AF
                                                                  ==========
     [See "Addendum #1" attached to file.]
------------------------------------------------------------------------------------------------------------------------------------
PROTESTANTS************************************************************************************************************************
------------------------------------------------------------------------------------------------------------------------------------

NAME: Bureau of Land Management                                 NAME: Bureau of Land Management
C/O : Field Manager - Kanab Field Office                        C/O : State Director
ADDR: 318 North 100 East                                        ADDR: PO Box 45155
CITY: Kanab                        STATE: UT ZIPCODE: 84741     CITY: Salt Lake City                 STATE: UT ZIPCODE: 84145-015
------------------------------------------------------------------------------------------------------------------------------------
NAME: National Park Service - Water Rights Branch               NAME: Office of the Field Solicitor
C/O : c/o Eric Lord (late)                                      C/O : c/o A. Scott Loveless (late)
ADDR: 1201 Oakridge Drive, Suite 250                            ADDR: 125 South State Street, Suite 6201
CITY: Ft. Collins                  STATE: CO ZIPCODE: 80525     CITY: Salt Lake City                 STATE: UT ZIPCODE: 84138
------------------------------------------------------------------------------------------------------------------------------------
IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII E N D   O F   D A T A IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                       XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO E N D   O F   D A T A OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
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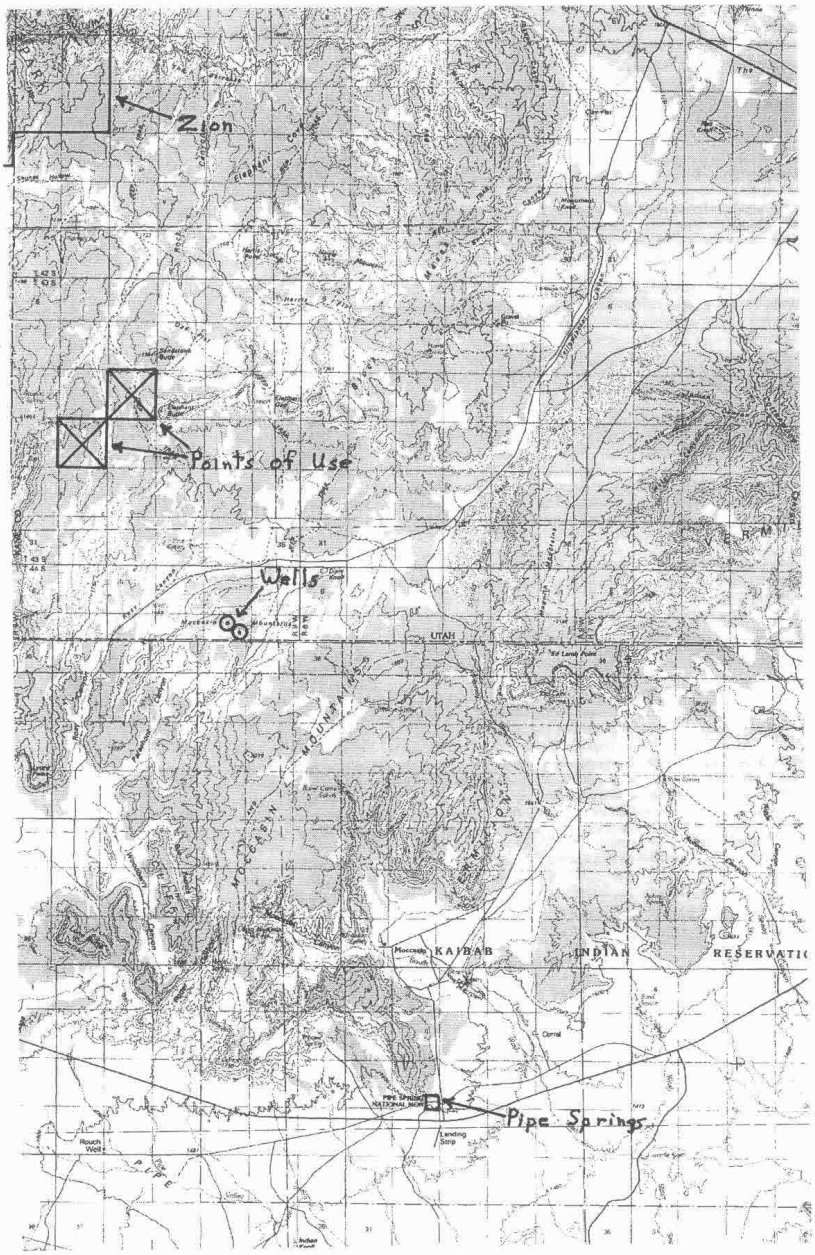



Figure 1. Location of proposed wells, points of use, Zion National Park, and Pipe Springs National Monument.

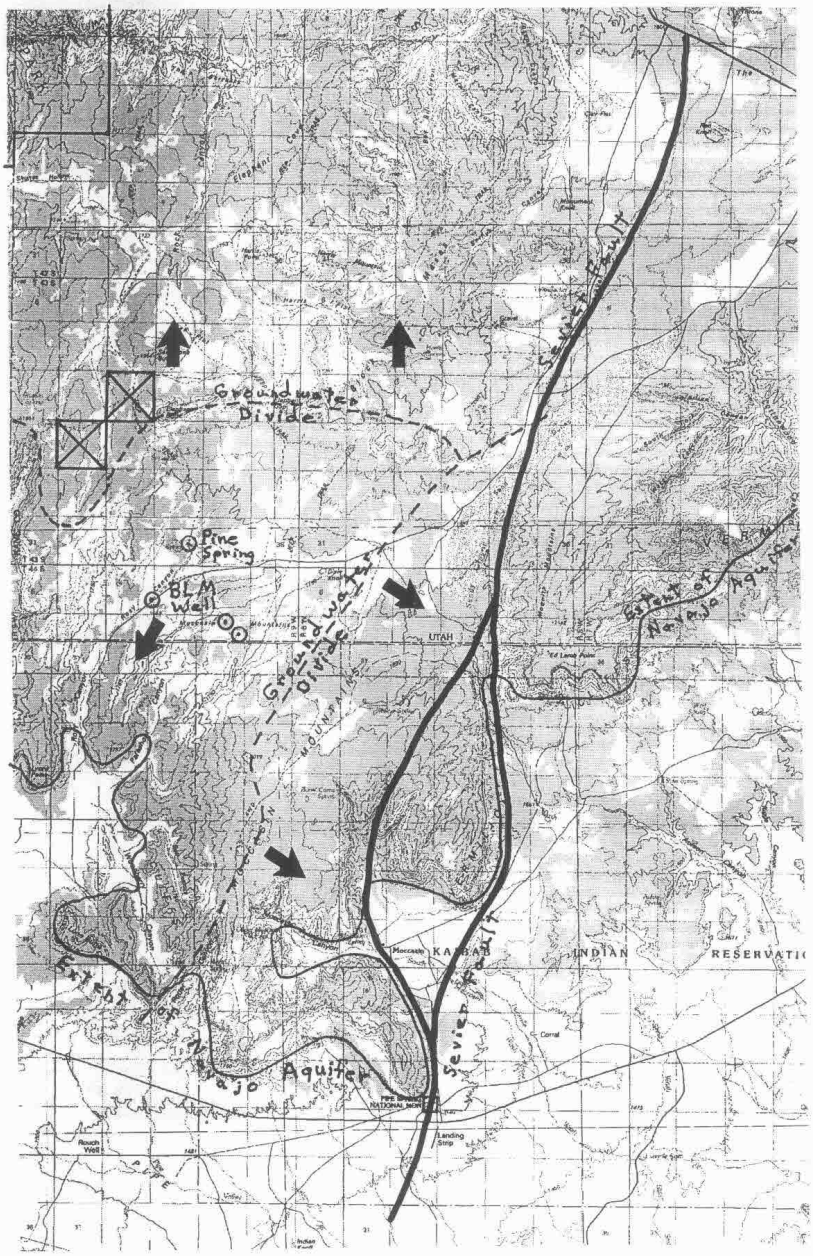



Figure 2. Location of proposed wells, points of use, Sevier Fault, estimated groundwater divides, and extent of Navajo Aquifer.
Bold arrows indicate general direction of groundwater flow.

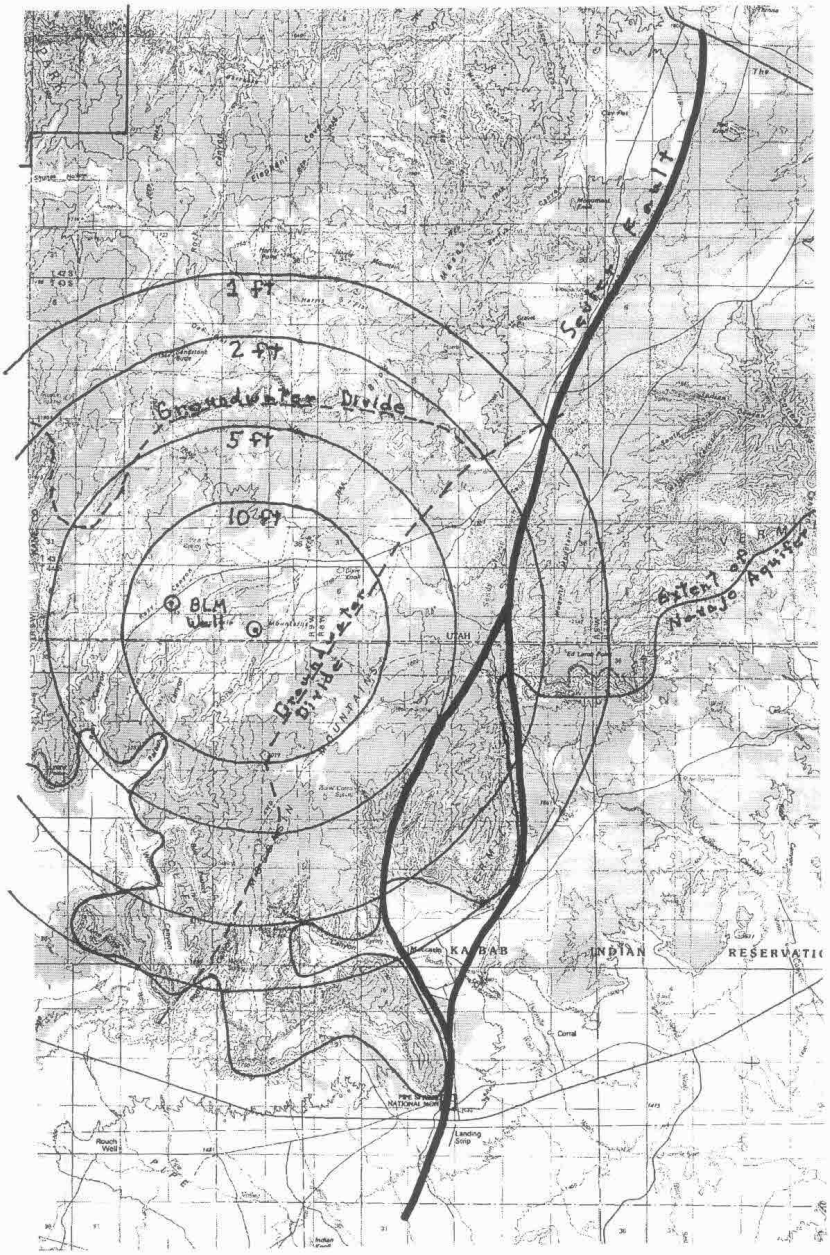



Figure 3. Areal extent of drawdown from pumping of the proposed wells. Pumping rate for this analysis was 800 gpm (2 wells x 400 gpm).

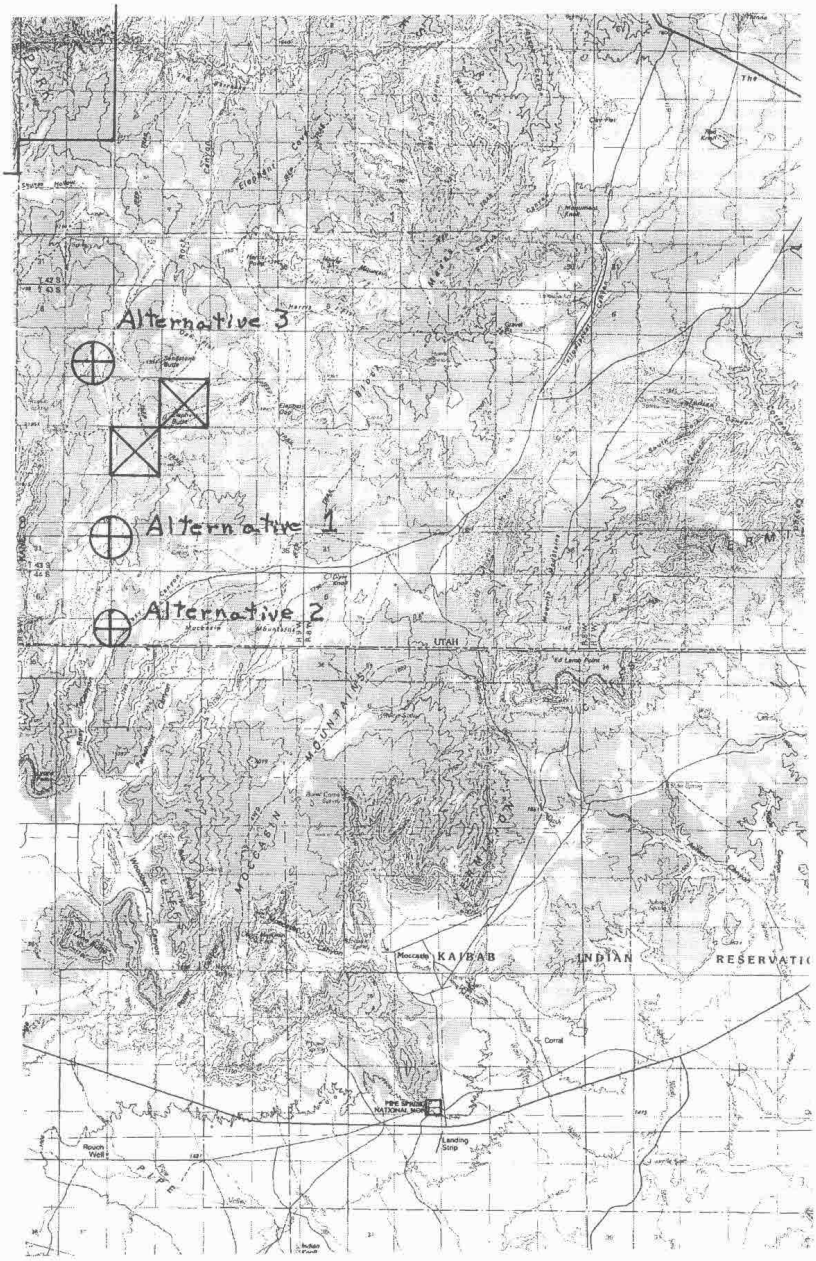



Figure 4. Alternative well locations.

L54 (PISP)

June 30, 1999

Memorandum

To: Regional Director, Intermountain Region

From: Superintendent, Pipe Spring National Monument

Subject: Cessation of Historic Spring Flow

## TOPIC

As of the second week of June, 1999, the historic spring at Pipe Spring National Monument ceased to flow for the first time on record. This spring, located directly beneath the north building of Winsor Castle is divided into two flows - one which proceeds through a historic subsurface trench to an emergence point outside the west gate of the Castle, known as Big Spring or Main Spring, and a second flow which is piped beneath the Castle courtyard into and through the Castle's Spring Room. The runoff from both Main Spring and the Spring Room feed historic masonry ponds immediately south of the Castle. The flow of the spring is critical to the historic integrity of the site, and provides life giving sustenance to acres of shade trees, a representative historic orchard, and wildlife.

## BACKGROUND

### Springs and Other Water Sources on the Monument

The flow of Main Spring and the Spring Room have been measured since at least the 1930's and documented consistently since the 1970's. For perspective, in September of 1933, the flow of Main Spring was measured at 27.77 gallons per minute, and the flow of the Spring Room at 5.67 gallons per minute. Flow at these two points gradually diminished over the latter 1970's through the 1990's. Flows vary seasonally. In June of 1998, Main Spring was measured at 1.7 gallons per minute, and the Spring Room at 2.3 gallons per minute. In June of this year the flow at Main Spring and the Spring Room ceased.

There are two additional water producing features at the Monument. One is West Cabin Spring, or West Slope Seep, immediately west and upslope of the historic West Cabin structure. In September of 1933, West Cabin Spring was measured at .05 gallons per minute. In June of this year, West Cabin Spring was measured at 1.3 gallons per minute. At least in recent times, the flow of West Cabin Spring, has simply been allowed to follow its natural course, flowing down the hillside, and eventually evaporating or soaking into the ground. The other source is Tunnel Spring, actually a horizontal manmade adit excavated into the hillside between the West Cabin and Winsor Castle in 1906 to produce additional water for livestock. In September of 1933, Tunnel Spring was measured at 7.7 gallons per minute. In June of this year, Tunnel Spring was measured at 12.8 gallons per minute. The flow of Tunnel Spring is diverted via pipeline out of the Monument, across Kaibab Paiute Reservation lands, to a series of cattle watering troughs on Bureau of

Land Management, State and private lands, to the south, pursuant to a 1933 Secretarial order. The approximately 100 foot long adit of Tunnel Spring has been partially collapsed since at least the 1980's and not entered - as deemed unsafe - since that time. Clearly, the collapse does not entirely restrict the flow of water from the feature.

**Legal and Administrative Water Use and Delivery Obligations**

The waters of the springs have been used for literally thousands of years by prehistoric and historic American Indian people. In the 1860's, the springs were essentially claimed by Mormon pioneers and used by Euro-Americans for settlement and ranching purposes until 1923, when Pipe Spring was proclaimed a national monument and the ranch purchased from its private owners.

The 1923 proclamation addresses the water of the springs in two regards. It clarifies that the availability of water at the site was one reason for its establishment as a monument, stating: "Whereas, there is in northwestern Arizona on the road between Zion National Park and the North Rim of the Grand Canyon National Park a spring, known as Pipe Spring, which affords the only water along the road between Hurricane, Utah, and Fredonia, Arizona, a distance of sixty-two miles . . . ." It also declares that: "in the administration of this Monument, the Indians of the Kaibab Reservation, shall have the privilege of utilizing waters from Pipe Spring for irrigation, stock watering and other purposes, under regulations to be prescribed by the Secretary of the Interior." Although the proclamation does not speak to any other third party use of water, it does state that the establishment of the Monument is "subject to all prior valid claims."

Throughout the early years of the Monument, descendants and associates of the former ranch owners were allowed to continue using water for their livestock. Through those same years, the Indian Agent for the Kaibab Paiute Tribe pointed out that the Tribe's use was precluded, or made extremely difficult. As a result of disagreement between the cattlemen, the Indian Agent, and the Monument custodian, in 1933, Assistant Secretary of the Interior, Oscar L. Chapman, signed a document titled "Regulations For The Division Of The Waters Of Pipe Springs" that states the following: " The waters of the Springs shall be divided equally, one-third to the Pipe Springs National Monument, one-third to the Indians of the Kaibab Indian Reservation, and one-third to the stockmen represented by a memorandum agreement signed June 9, 1924, by representatives of the respective interests." In 1933, the flow of Tunnel Spring roughly approximated one-fifth of the total flow of all the springs. As this presumably met the cattlemen's needs and as a matter of engineering convenience, the totality of the Tunnel Spring flow was diverted to the cattlemen. After many years of discontent over water delivery to the Tribe, the National Park Service (NPS) and Tribe entered into an agreement in 1972 whereby, in exchange for the Tribe's one-third of the spring flow, the NPS built and agreed to maintain a culinary water well and delivery system on reservation lands north of the Monument. The NPS pays the Tribe for its use of water from this system. This twenty-five agreement expired in 1997. A rewritten agreement has been mutually drafted, but is yet to be effectuated. In the interim, the old agreement has been mutually renewed in three month increments.

**Hydrologic Research**

Due to the decline in spring flow over the years, the NPS has undertaken considerable research to ascertain the extent and recharge rate of the groundwater aquifer, and the effect of well pumping from the aquifer on spring flow.

In the 1980's, the NPS drilled a monitor well on reservation lands between the NPS culinary well and the Monument to attempt to ascertain the effect of NPS pumping on spring flow at the Monument. The study did not indicate any direct relationship between pumping at the NPS culinary well, or tribal culinary well, and declines in spring flow.

In the last two years, the NPS and United States Geological Survey (USGS) have conducted research that essentially confirms that all wells and springs along the Sevier Fault, running as far north from the

Monument as approximately the Utah border are fed by a common groundwater aquifer. Users include the Kaibab Paiute Tribe, the NPS, the Town of Moccasin (a Euro-American inholding within the reservation largely comprised of descendants of the owners of Pipe Springs at the time of its sale to the NPS), and private landowners within Moccasin. The research has also provided some insight into the recharge rate of the aquifer.

Additional USGS research funded and scheduled for 1999 included seismological work in and around the Town of Moccasin to ascertain the amount of surficial groundwater leakage from the Sevier Fault and down Moccasin Wash, and well and spring monitoring in the Town of Moccasin and on the reservation to further ascertain relationships between well pumping and natural spring flow. Unfortunately, the people of the Town of Moccasin have recently objected to, and disallowed any NPS/USGS research to proceed in the Town, in reaction to the proposal for a Arizona Strip national monument by Secretary of the Interior Bruce Babbitt. Consequently, the planned research has been canceled for this year.

## ISSUES

### Effects on Park Purpose/Cultural and Natural Resources

Quite clearly, water and spring flow are a central purpose of Pipe Spring National Monument. The natural spring flow is the reason why people have been drawn to, and utilized the site for literally thousands of years. Prehistoric and historic American Indian peoples settled in the immediate vicinity of the springs, and relied upon the water for drinking and cultivation of crops. The Mormon pioneers arrived in the 1860's and built Winsor Castle directly over the springs in the 1870's. They collected, channeled, and stored the spring flow for maintaining major ranching operations on the Arizona Strip for at least 30 years, and scaled down ranching in ensuing years. Since 1923, the public has been able to visit Pipe Spring, and while touring its historic district gain an understanding of the critical importance of water at the site, seeing first hand the spring flow through and adjacent to Winsor Castle, the historic masonry ponds, grapevines, orchard, and garden, as well as envisioning the importance of water at the site to Native Americans.

With the cessation of spring flow, there is no water flowing through or adjacent to Winsor Castle. This has drastically affected the visitor experience.

With the cessation of spring flow, the historic masonry ponds can not be filled or maintained at their normal water level without utilizing water from the NPS culinary system. We are maintaining the ponds at minimal levels with the water system for now, however, continuing to do so at the cost of additional pumping from aquifer may be counter-productive. Letting the ponds go dry will partially or irreparably damage the sealing clay liner in the bottoms of the ponds. It will also detrimentally affect wildlife that relies upon the ponds. Pond water has also traditionally been used for irrigation of the orchard and acres of shade trees at the site. Without pond water from the springs, this vegetation will have to be irrigated from the water system or die. At present, we are irrigating from the water system so as not to have any immediate loss of mature trees.

Since its construction in the 1870's, the structural components of Winsor Castle (sandstone masonry, wood, plaster, etc.), masonry ponds, masonry water channels, wooden troughs, have been subject to constant infiltration of moisture from the underlying springs, or spring flow. The penetration of moisture into these building components has always been a concern, however, has been fairly constant with its consequences pretty well known. Now, all components of the building have begun drying out for the first time in 130 years. This is a major change which will have unknown effects that could significantly alter preservation needs, techniques, and costs.

**Tunnel Spring**

As a result of the cessation of the flow in the Spring Room and at Main Spring, our concern over the continued flow of Tunnel Spring has increased. As described, the total flow of Tunnel Spring has always been diverted to the cattlemen's association. We our concerned about continued delivery to the cattlemen's association, however, if Tunnel Spring continues to represent 90+% of the total flow, we are also interested in capturing and making use of 60+% of that flow. One problem with doing so is that the emanation point of Tunnel Spring is topographically lower than Winsor Castle, the historic ponds, and existing water distribution channels and piping. Therefore, any capture and redistribution system would have to be engineered to meet our needs. Any change to distribution of water from Tunnel Spring should be expected to be opposed, or at least draw suspicion, from the cattlemen's association.

As mentioned previously, the adit of Tunnel Spring has not been entered since the late 1980's due to safety concerns. Even at that time, the adit was only entered for approximately 40 - 50 feet to a point of total collapse. The area of the adit where water is produced from intersected geologic layers is beyond the total collapse. The collapse is permeable enough, however, to allow at least a portion of the water through. On June 24, 1999, the Monument procured the services of MCO Mining of Prescott, Arizona, to conduct a safety evaluation of the adit. The MCO mining engineer discovered unacceptably low levels of oxygen, and unacceptably high levels of carbon dioxide, in the entry vault to the adit. After airing out the vault and adit, the contractor proceeded into the adit as far as the total collapse. MCO's assessment is that the adit has continued to collapse, and total collapse is possible, if not likely, at any time. MCO has presented us with a preliminary estimate for the modification and stabilization of Tunnel Spring aimed at making the facility safe for routine, ongoing maintenance responsibilities, and preserving or increasing current water flow levels. MCO's preliminary estimate for their costs to perform what we consider to be the minimum amount of work necessary is approximately $100,000 (this needs to be developed further).

## INITIAL RECOMMENDED ACTIONS

Our limited, preliminary assessment of the situation has resulted in the following, initial, recommended actions:

- Continue frequent and close monitoring of springs.
- Closely evaluate MCO Mining proposal concerning Tunnel Spring and rapidly proceed with stabilization work (possibly with emergency repair/rehab. funding).
- Evaluate additional hydrologic research proposals suggested by Water Resources Division and USGS regarding cessation of spring flow. Acquire funding for any such research.
- Pursue renewed approval from Town of Moccasin on conducting previously proposed hydrologic research. Pursue new funding for said research.
- Monitor direct effects of drying on historic structural resources.
- Pursue assistance in evaluating effects of loss of riparian habitat, vegetation, and wildlife.
- Pursue assistance on engineering water delivery system to reestablish flow through Winsor Castle, into ponds, and through channels and irrigation ditches to maintain cultural scene and riparian habitat. Redirected water to come from Tunnel Spring or water system. Pursue funding for such reengineered water distribution.

**We will require substantial funding and professional services assistance to achieve any of these actions.**

I am copying a number of program managers on this briefing. We request that these managers and their staff provide input, and ultimately assistance.

John W. Hiscock

cc:
Deputy Regional Director, Colorado Plateau
Superintendent, IMDE
Superintendent, IMSF
Assistant Regional Director, Cultural Resources, IMR
Division Chief, Water Resources Division
Superintendent, ZION

45

PIPE SPRING NATIONAL MONUMENT
Hydrologist's Summary

Following is a description of Spring House Spring from points of issuance to point of discharge into east pool, and a summary of the data requested by the WSB to prepare plans for the installation of flow measuring devices at Main Spring, Spring House Spring, and Tunnel Spring.

According to Fred Banks, Chief of Interpretation, there are two springs which issue from the north end of the monument building, in the kitchen and parlor areas. This he had heard from Leonard Heaton, the former caretaker of the park. Banks was present when the back wall was uncovered a few years ago for maintenance. He indicated that the spring which emerges from the kitchen was dry. He did not know how long the spring had been dry, and if it was only dry seasonally. He said that Heaton claimed that the springflow was 'changed' after the Nevada test-bombing occurred. (However both Banks and Doug Dewitz cast some doubt upon this statement because Heaton is very old and somewhat forgetful.)

The two springs join in an unknown fashion and emerge in the "cistern" in the courtyard. On the floor of the cistern are large cobbles covered with a film of sand. It appears that the cistern acts like a shallow well. No pipes can be seen which deliver water from the parlor and kitchen spring source areas; however, they may be obscured by the cobbles. The water evidently percolates upward from beneath the cobbles. (The sides of the cistern are concrete.)

Leading from the cistern to Main Spring and Spring House Spring are two pipes. The pipe leading to Main Spring has a valve to control the intake. According to Doug Dewitz, the valve no longer works because the pipes are old and corroded. The pipe leading to Spring House Spring was cleared of roots and debris a few years ago because Dewitz thought that there may be more water going into this pipe than coming out from it. Clearing the roots did not change the apparent differences in flow. Either the pipe is leaking, or the flow <u>appears</u> lower as it emerges in Spring Room but is not.

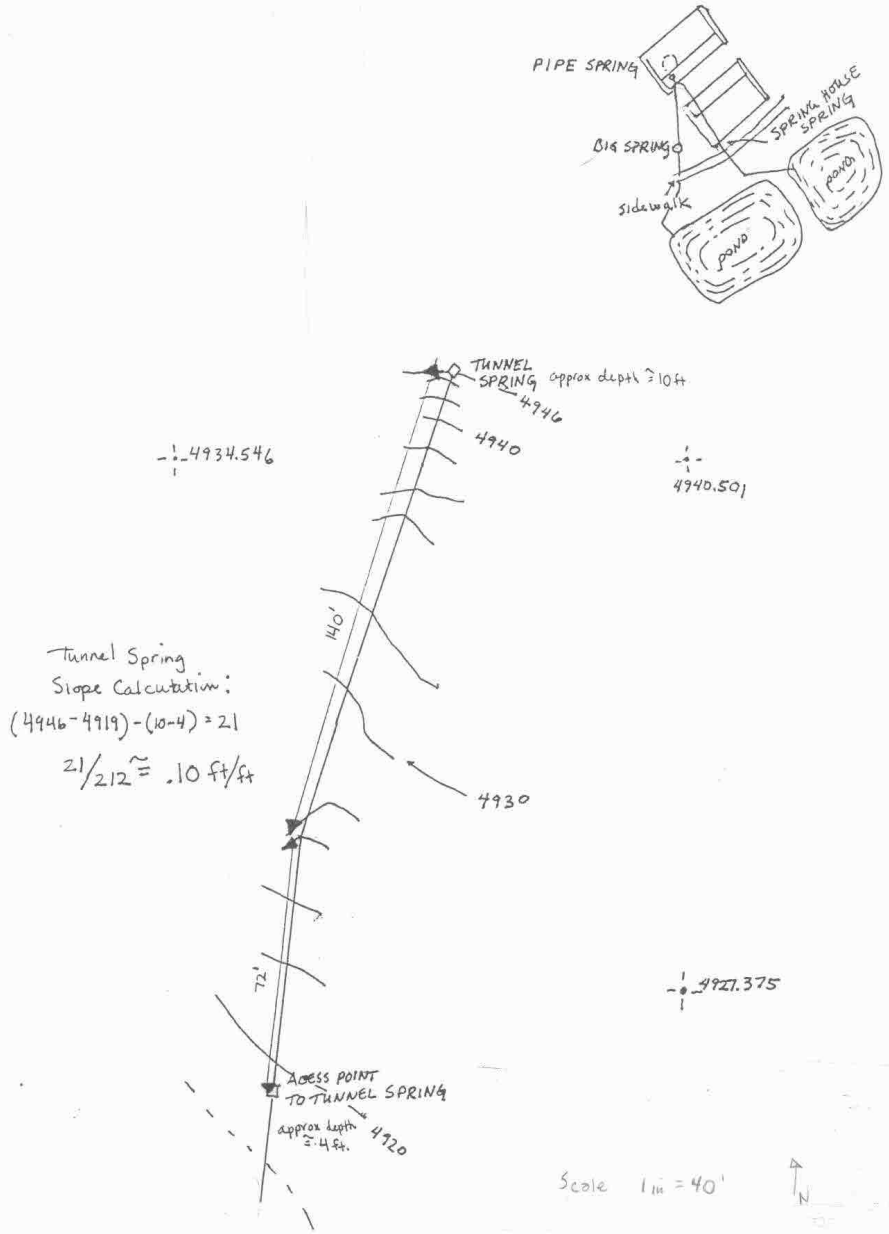
The pipe which carries water from the cistern to the Spring House Spring acts as an overflow pipe. The pipe emerges in the Spring Room, and the flow enters a long trough. At the south end of the trough the water exits via a notch in the end of the trough where it spills over the edge into a short concrete channel. Water then exits the Spring Room through an opening at the base of the south wall of the monument, and runs into a canal which crosses beneath two sidewalks to enter the east pool in front of the monument building.

Attached are diagrams showing the dimensions and slopes of the conveyance structures for Spring House Spring, and selected measurements of Main Spring. Also enclosed are photographic

slides of the conveyance structures for Spring House Spring.

Alice Johns
Hydrologist

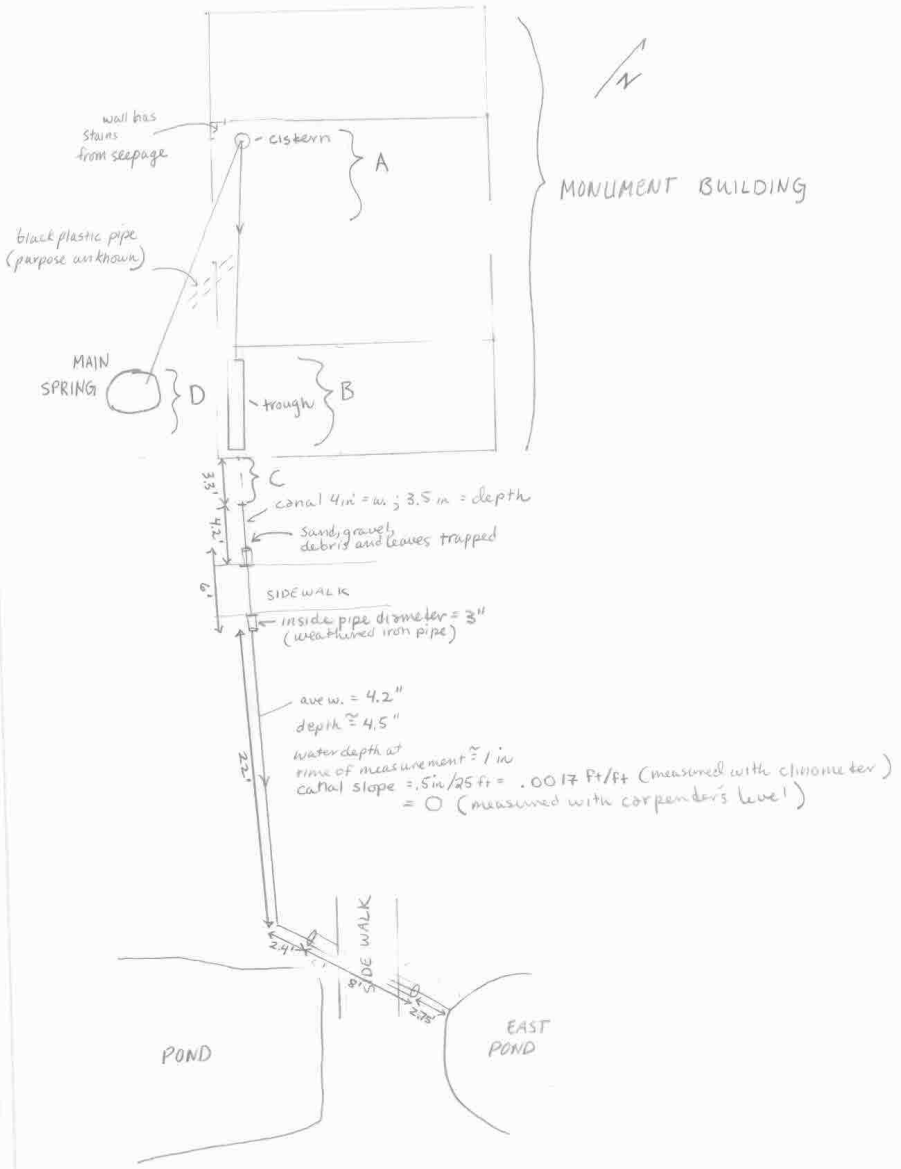
PIPE SPRING NATIONAL MONUMENT




(Adapted from: USDI, NPS, Utilities Layout; Part of the Master Plan for Pipe Spring National Monument; Prepared by Division of Engineering, November, 1946)

SPRING HOUSE SPRING:
& MAIN SPRING

Scale 1" ≈ 10'

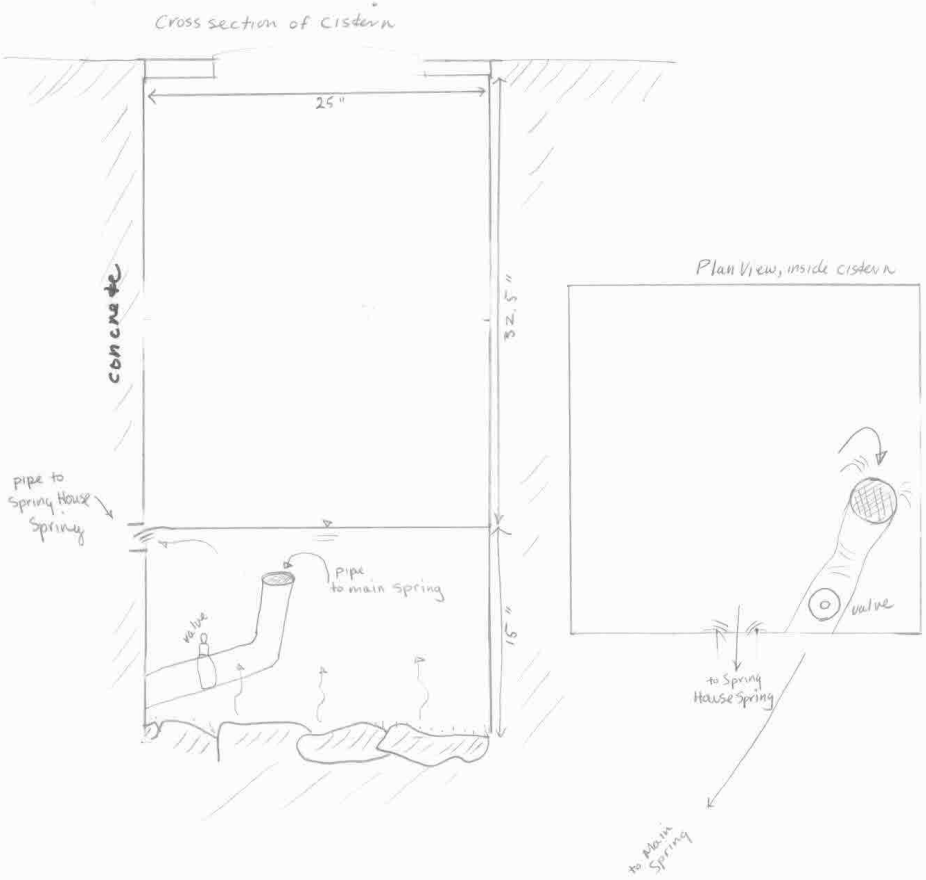



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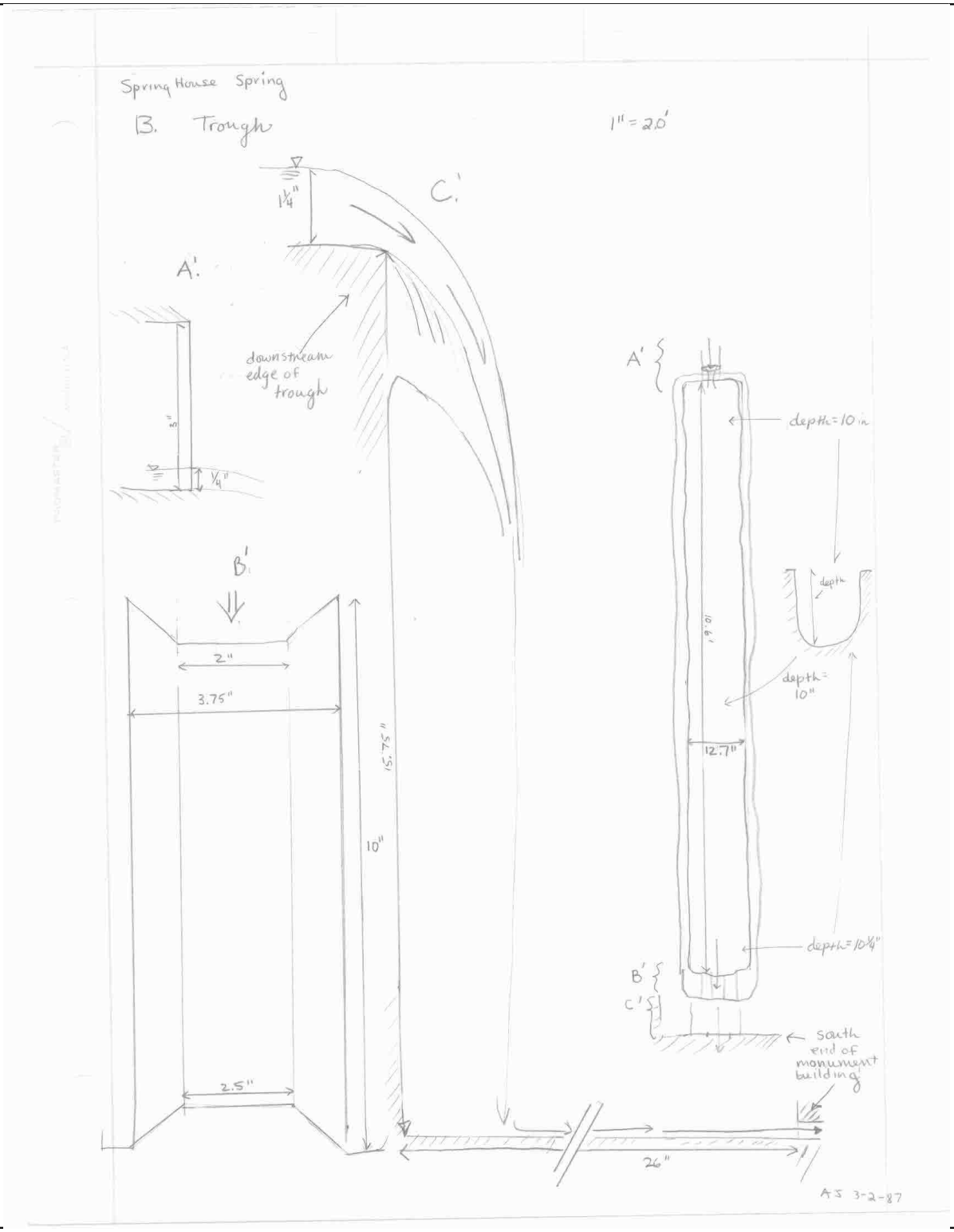
Spring House Spring

A. Cistern

1" = .83' = (10")



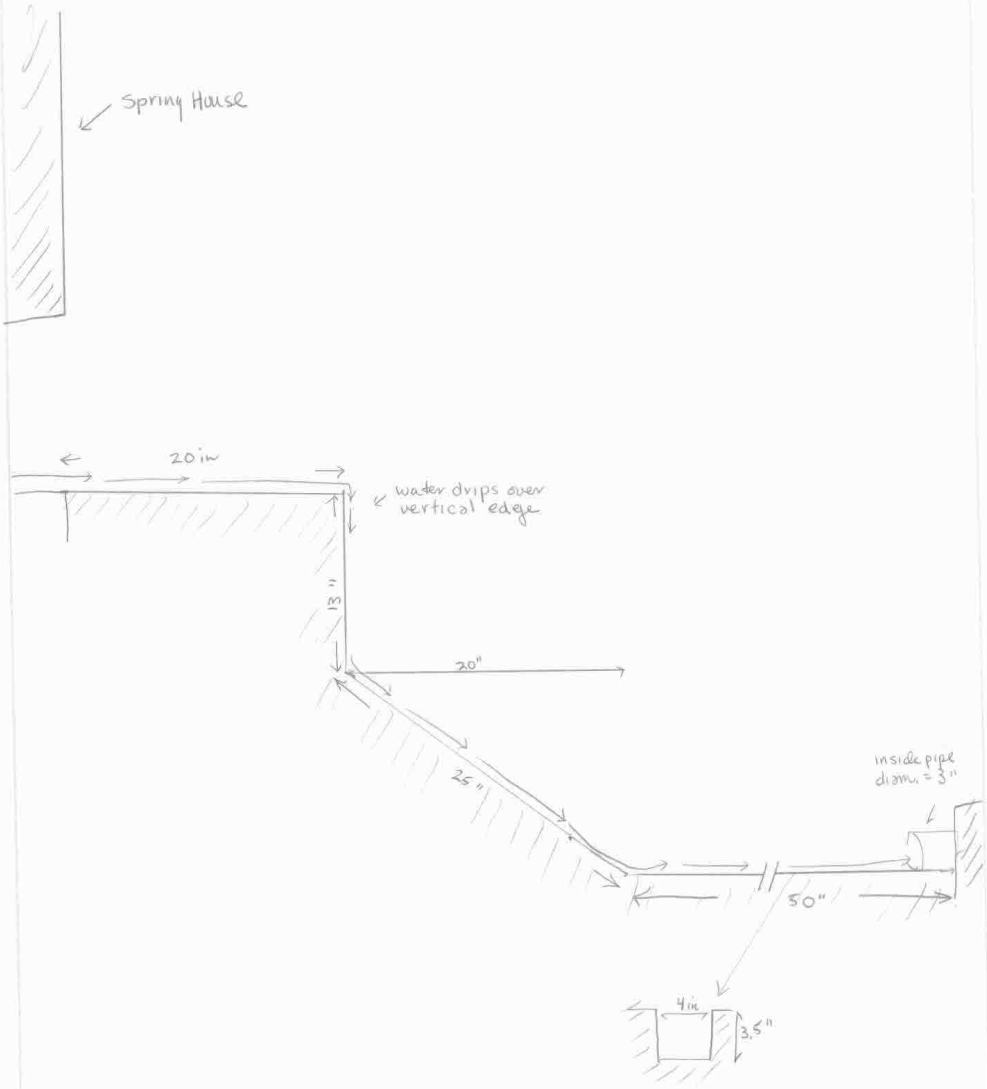

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Spring House Spring
B. Trough
1" = 2.0'
1¼"
C'
A'
downstream edge of trough
¼"
B'
2"
3.75"
15.75"
10"
2.5"
A'
depth = 10 in
depth
depth = 10"
12.7"
depth = 10¼"
B'
C'
south end of monument building
26"
AS 3-2-87

Spring House Spring

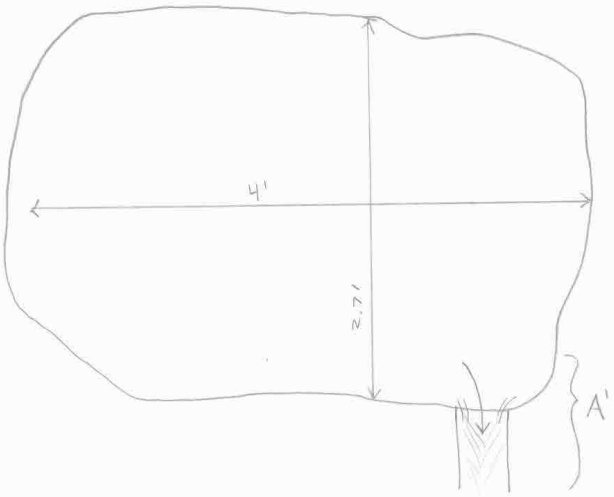
C. canal -- Spring House Spring at exit of Monument Building

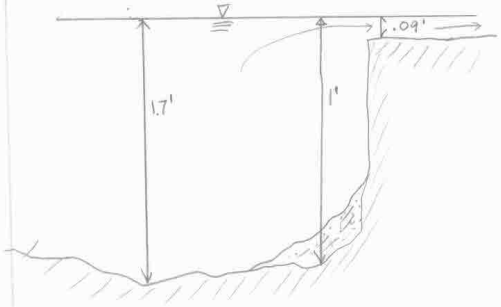
1" = .83' = (10")



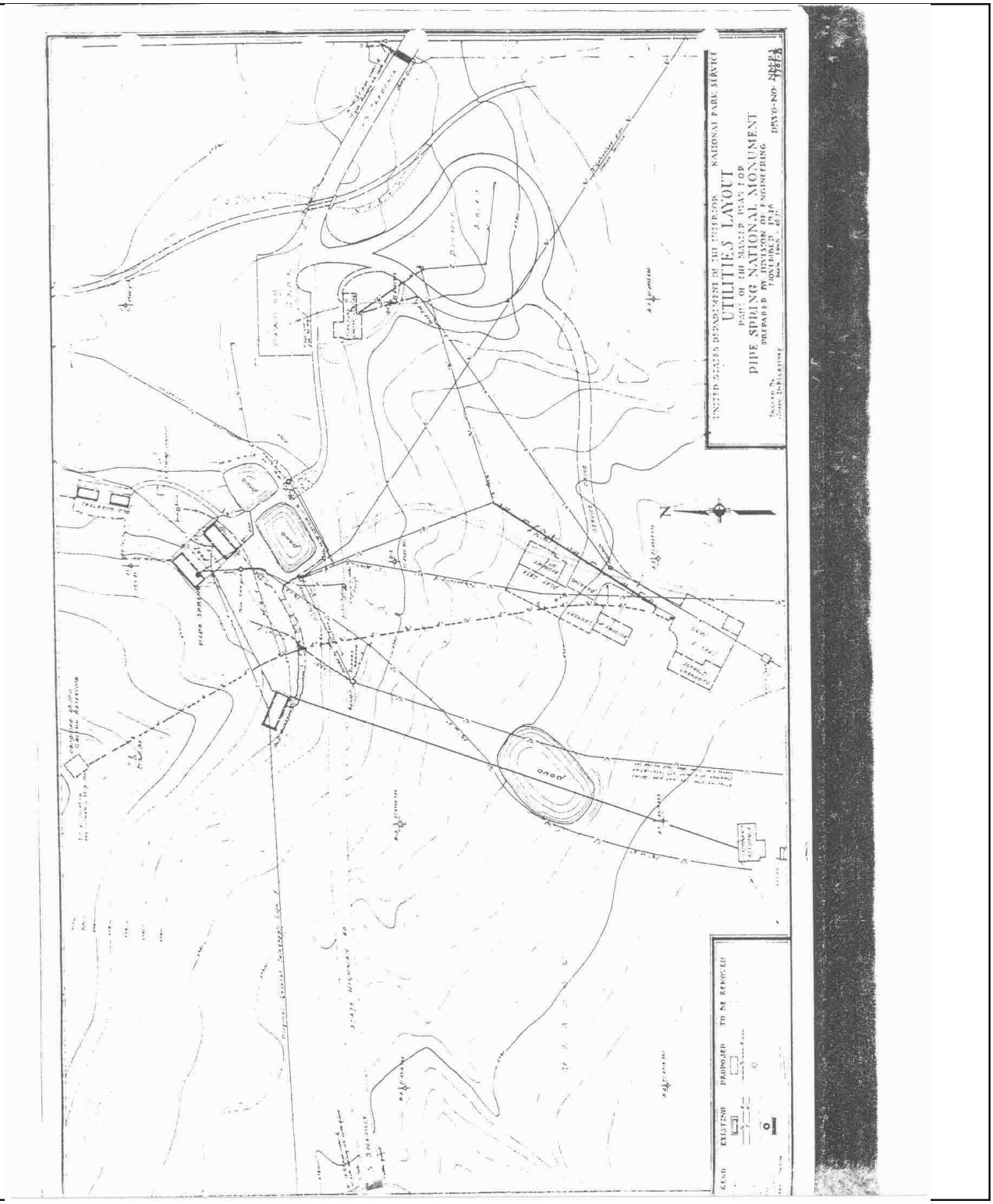

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D. MAIN SPRING




AJ 3-2-87


UTILITIES LAYOUT
PIPE SPRING NATIONAL MONUMENT
NATIONAL PARK SERVICE
N
EXISTING
PROPOSED
TO BE REMOVED

PIPE SPRINGS NATIONAL MONUMENT

Moccasin Spring Flow Monitoring Station

## Background

The spring located about 2.5 northwest of the monument, is believed to discharge from the same Sevier Fault structure as Pipe Spring National Monument. The Navajo Sandstone is the aquifer for both springs. Moccasin Springs is shared by the village of Moccasin and the Kiabab Piaute Indian Reservation under an agreement which gives one third of the flow to the tribe. A splitting weir has been installed sometime in the past just below the spring box. It is designed to divide the spring flow into the prescribed legal proportions. Stevan Turner of the Tribal Housing Authority, reports that the the maximum flow of Moccasin Spring has been reported to be 190 gpm. The monitoring program is designed to determine if Moccasin Spring is declining in a manner similar to Pipe Springs and, if so, to determine the most likely cause of such decline.

## Installation

In the weir splitter below Moccasin Spring, a pressure transducer was placed in a 10" long, 1"-ID iron pipe and attached to a half size cinder block with insullated copper wire and seated in the stilling well uptream from the rectangular weirs (see diagram). The transducer cable runs through several buried segments of 1" white PVC pipe to a locked environmental instrument box that contains the data logger which is buried just below ground level and covered with boards. One key to the environmental instrument box is held by the area manager for Pipe Spring N.M. and the other is retained by the WRD in Ft. Collins. An 8" raingage is mounted on a wooden stand about 40' north of the instrument box and it's cable is protected by wooden fence posts laid on the ground.

## Future Course of Action

Quarterly visits to this site are necessary for recovery of the data, maintenance of the equipment and verification of the probe's location. During such visits the cables and data logger should be checked for vandalism and environmental damage. The raingage should be kept clear of tall vegetation and all connections should be tight and free of corrosion. The raingage should also be level. The data logger batteries should be checked and if necessary replaced with 4-double size D cells. A new Data Storage Pack should replace the used pack on the data logger and the used pack shipped to the Water Services Branch in Fort Collins, Colorado for data retreval.

Data Logger Specifications

**Probe**
Type - Druck Pressure Transducer 1.02 psi
Range - 0'-2.34' at 0.01' intervals
Cable length - 50'
Scale formula - V/3.678-1.47
Reference - 1.47

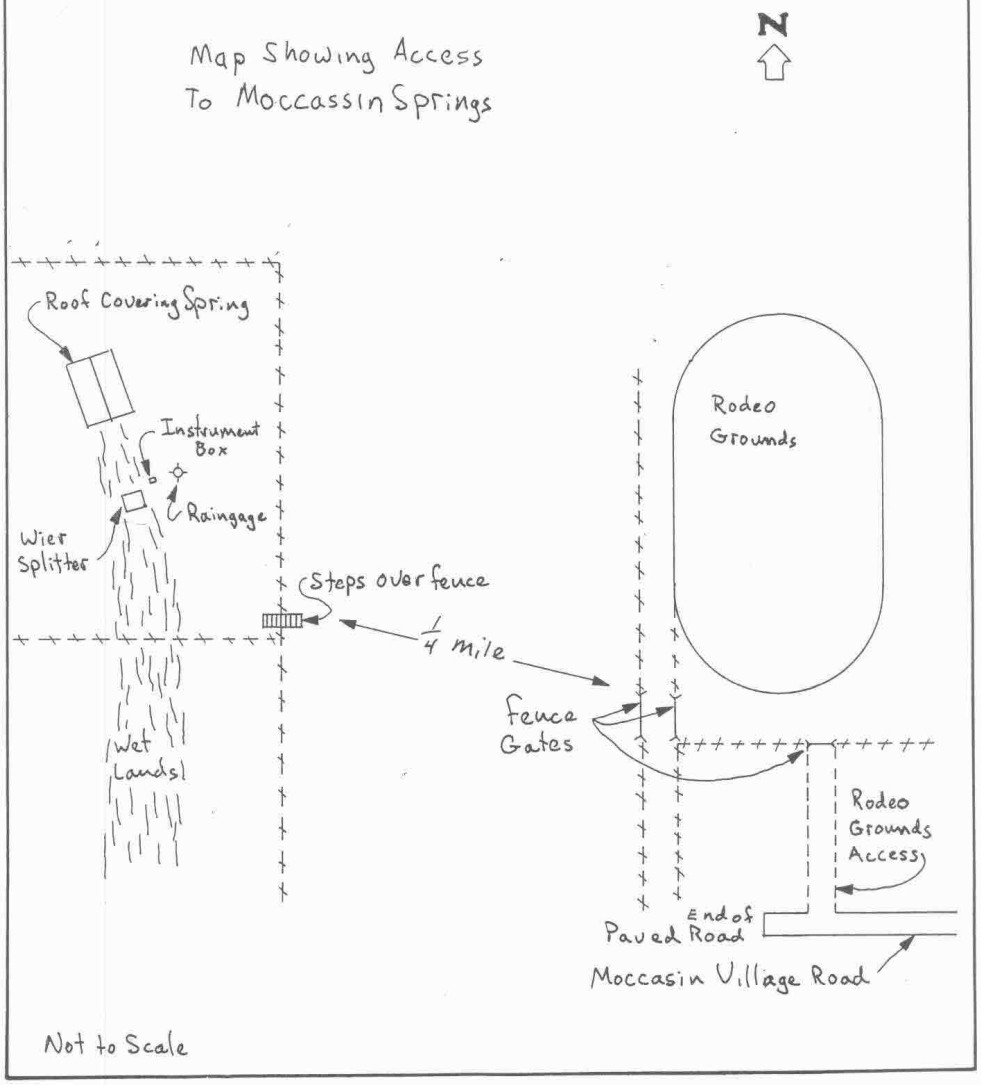
**Raingage**
Type - Sierra Misco Tipping Bucket Model RG40
Range - infinite at 0.01' intervals
Cable length - 50'
Scale formula - V/100

**Data Logger**
Type - Omnidata Field Unit (Unit #1)
Scan rate - 60 min.
Report rate - 360 min.
Time zone - Arizona Std Time
Starting time - approximatly 11:00 8/22/86
Battery life - 3 mon.

FORM D S C - 44

| | | | |
|---|---|---|---|
| Park PipeSprings NM | NATIONAL PARK SERVICE | | Sheet 3 of 6 |
| Area Kaibab Paiute Reservation | | | |
| Project Ground Water Monitoring | By Rick Inglis | Checked | Pkg. |
| Feature Moccasin Spring Map | Date 9/29/86 | Date | Account |

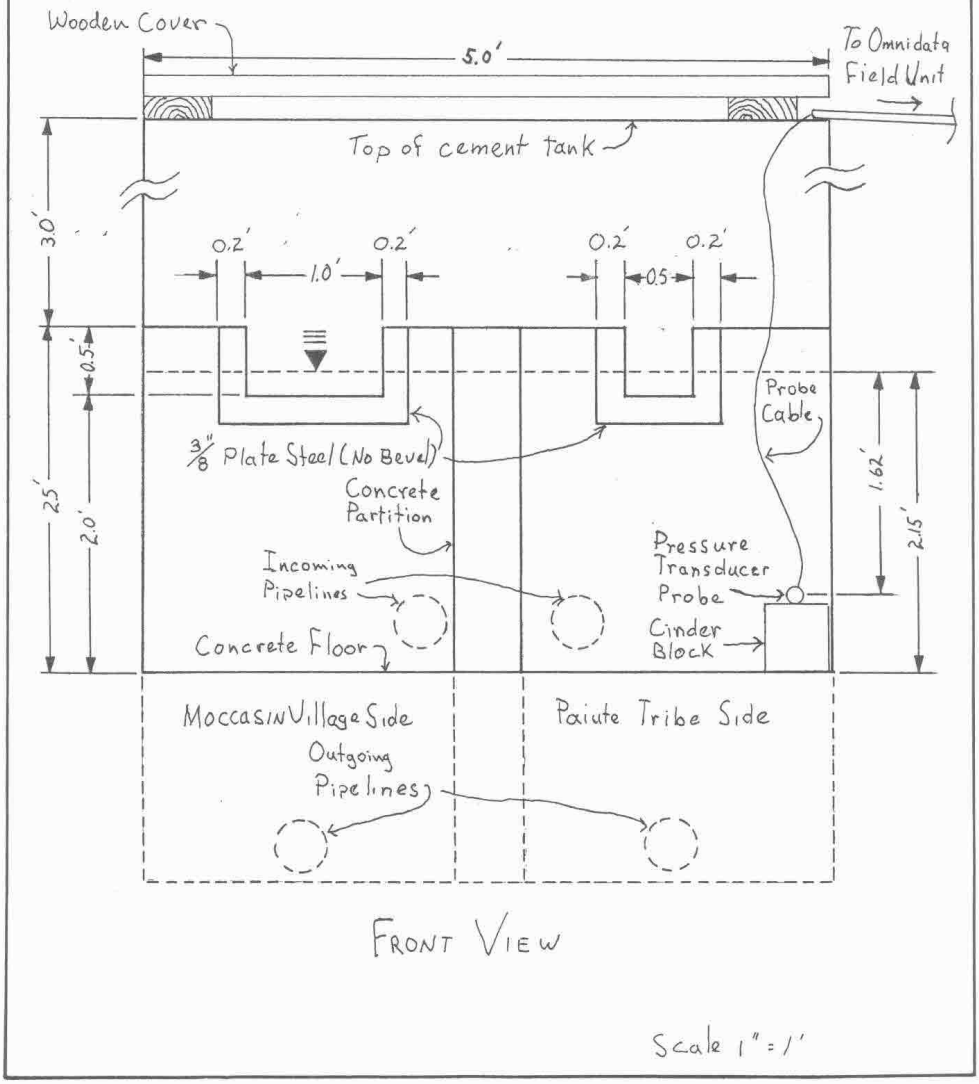
Map Showing Access To Moccassin Springs




*U.S. GPO: 1984-778-378

FORM D S C - 44

| | | | |
|---|---|---|---|
| Park Pipe Springs N.M. | NATIONAL PARK SERVICE | | Sheet 4 |
| Area Kaibab Paiute Reservation | | | of 6 |
| Project Ground Water Monitoring | By Rick Inglis | Checked | Pkg. |
| Feature Moccasin Spr. Weir Splitter | Date 8/21/86 | Date | Account |



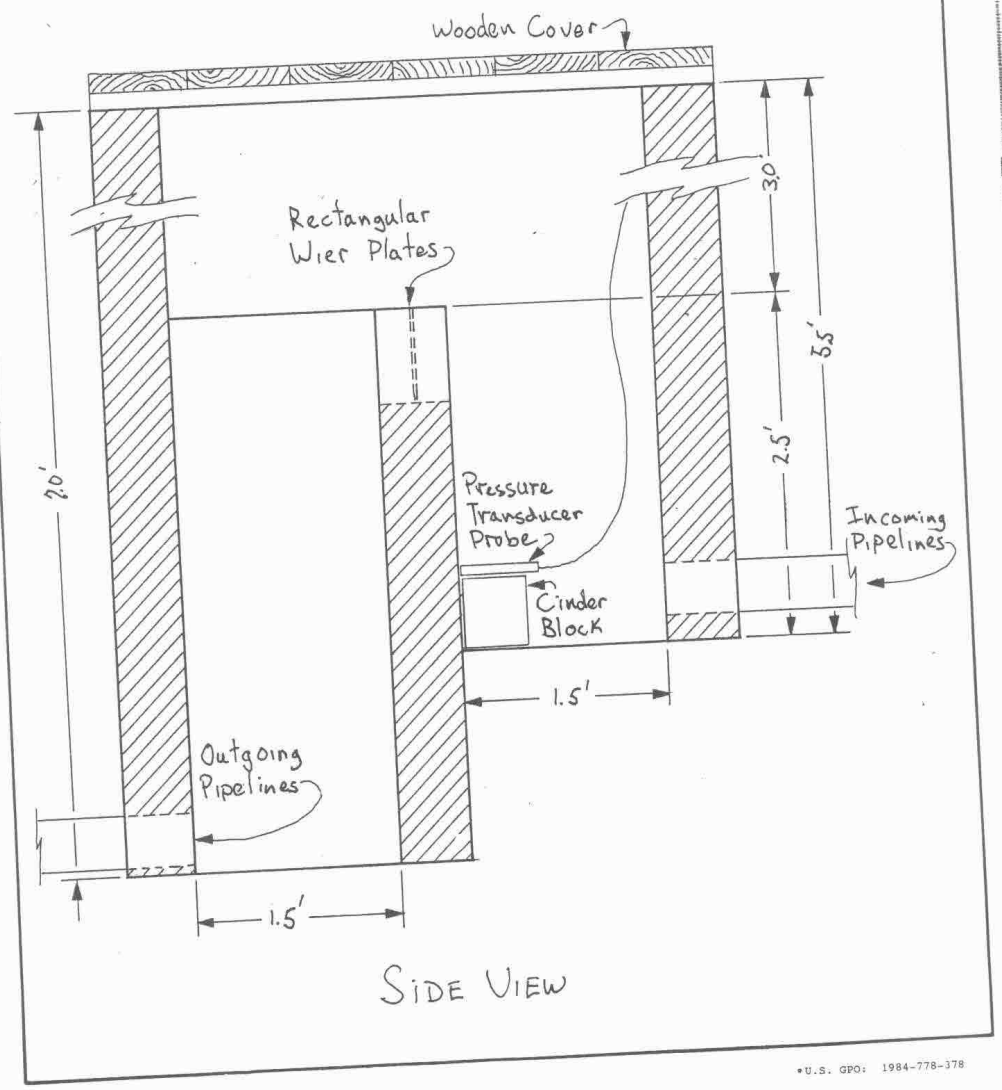

FRONT VIEW

Scale 1" = 1'

*U.S. GPO: 1984-778-378

FORM D S C - 44

| | | | |
|---|---|---|---|
| Park Pipe Springs NM. | NATIONAL PARK SERVICE | | Sheet 5 of 6 |
| Area Kaibab Paiute Reservation | | | |
| Project Ground Water Monitoring | By Rick Inglis | Checked | Pkg. |
| Feature Moccasin Spr. Weir Splitter | Date 8/21/86 | Date | Account |

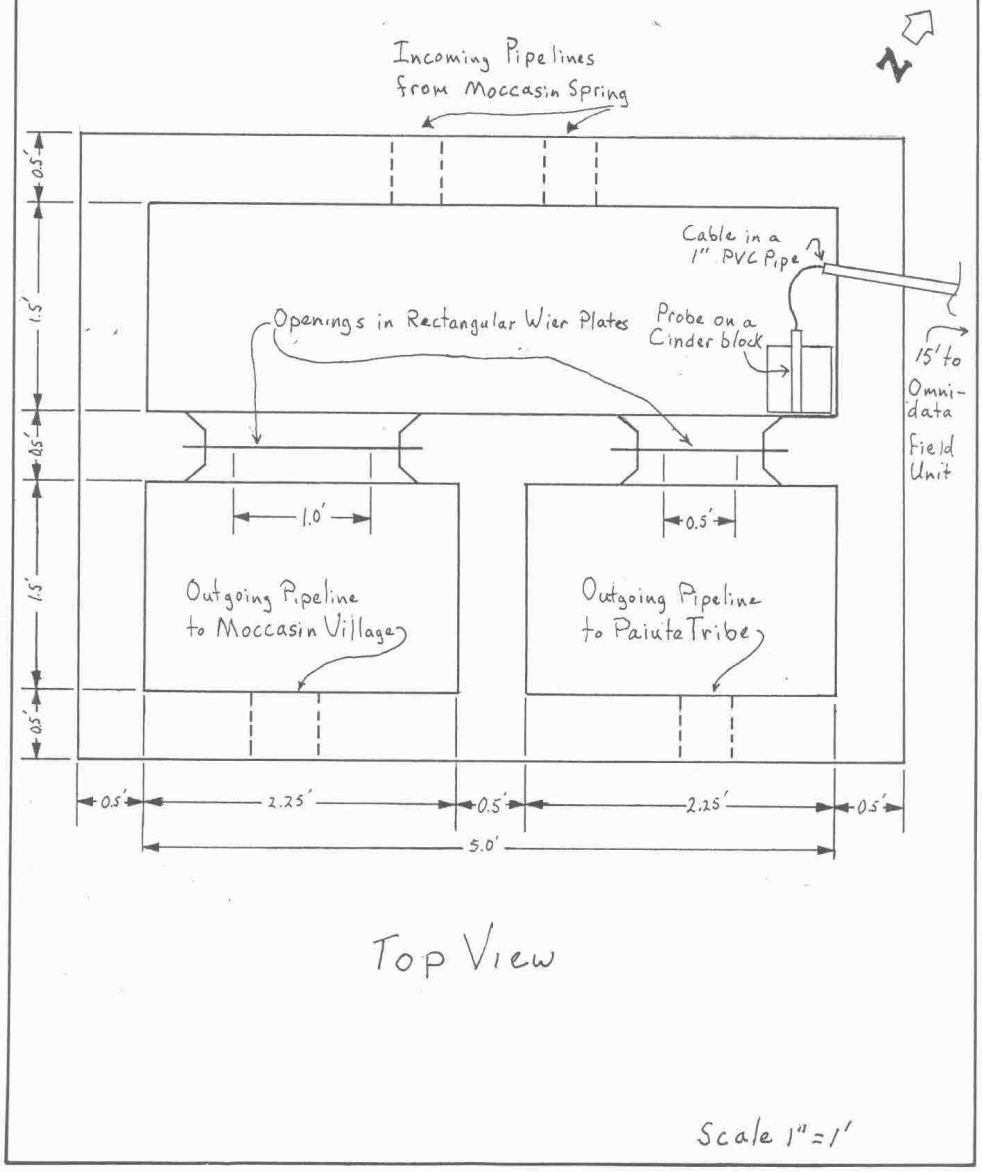



SIDE VIEW

*U.S. GPO: 1984-778-378

FORM D S C - 44

| | | | |
|---|---|---|---|
| Park Pipe Springs N.M. | NATIONAL PARK SERVICE | | Sheet 6 |
| Area Kaibab Paiute Reservation | | | of 6 |
| Project Ground Water Monitoring | By Rick Inglis | Checked | Pkg. |
| Feature Moccasin Spr. Weir Splitter | Date 8/21/86 | Date | Account |




Top View

Scale 1" = 1'

*U.S. GPO: 1984-778-378

09-02-1986: Memorandum regarding Spring Flow Decline -PISP- Scoping Report

September 2, 1986

L54 (479)
RMR/PISP

Memorandum

To: Chief, Water Rights Branch
Water Resources Division

From: Hydrologist, Water Rights Branch
Hydrologist, Water Services Branch
Water Resources Division

Subject: Spring Flow Decline - PISP - Scoping Report

Attached please find a Scoping Report covering the technical, management and water right aspects of declining flow at the springs located at Pipe Spring NM. This document is intended to provide management with the information it needs to select an approach to determine the cause of the flow decline so that appropriate actions may be taken by management to protect the site's unique resource values.

The authors stand ready to provide explanation or additional assistance if either you or management have questions relative to the above.

Owen Williams

Owen R. Williams

Donald C. Barrett

Donald C. Barrett

FNP:Williams/Barrett:cs:9/2/86:221-5341:owen.cs

# An Evaluation of the Decline in Spring Flow at Pipe Spring NM

by

Donald C. Barrett and
Owen R. Williams [1/]

## I. EXECUTIVE SUMMARY

An analysis of water rights, the management situation, and available physical data was performed to assess the decline in spring flow at Pipe Spring National Monument (NM). Initial examination reveals that the decline is real and likely to be the result of man-caused changes in the delivery of ground water to the collective springs at the monument as opposed to natural variations in precipitation. Further, at the present rate of decline it is anticipated that spring flow will cease by the mid 1990s.

A review of the status of the water rights was completed and is presented in summary form. Three parties have recognized rights to pro rata use of the production of the combined flow at Pipe Spring but only the interests of the cattlemen have been registered with the State of Arizona.

A suitable course of action for management is unclear at this time due to the lack of certain data. Therefore, a set of alternatives for the correction of this deficiency was developed and is presented with a recommended alternative identified.

## II. INTRODUCTION

Since 1977, the yield of the springs at Pipe Spring NM has experienced a decline of, on the average, two gallons per minute per year. If this rate of decline continues, the springs will cease to flow by the mid 1990s.

The continued flow of the springs is essential to monument purposes. The springs are the reason for the historic settlement at this location. They provide water for the monument's living history gardens, interpretation of the pioneer way of life, and for local cattlemen who have a right to one-third of the collective spring flows for livestock watering. This latter activity has been practiced for over 100 years.

Other regional water sources such as Moccasin Spring are exhibiting a decline in water quality and, possibly, flow. While they may be part of the same bedrock structure and aquifer as Pipe Spring, the Sevier fault and Navajo Sandstone, the specific cause or the decline in spring flow is unknown.

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1/ Hydrologists, Water Services Branch and Water Rights Branch respectively, Water Resources Division, National Park Service, Federal Building, Room 335, 301 S. Howes Street, Fort Collins, Colorado 80521.

Until the cause of the spring flow decline is ascertained, reasonable strategies for protecting monument resources cannot be developed and other users of the water must function in an environment of uncertainty. However, the determination of such cause will remain a matter of conjecture until a better understanding of the hydrology of the system is at hand. It is the objective of the Water Rights Branch to develop a set of approaches for assessing the nature of the ground water delivery system. From this set of alternatives, management may select one approach for implementation. Once implemented, it is reasoned that the information produced can be used to develop a strategy to arrest the decline in spring flow.

In the following report we first evaluate existing information to provide an overview of the physical and legal aspects of the water resource at Pipe Spring NM. Second, we examine the management situation and finally, we present a set of management alternatives for consideration.

## III. OVERVIEW OF WATER RESOURCES AT PIPE SPRING NM & SURROUNDING WATERSHED

### Geology and Geography

Pipe Spring NM is situated in an area known as the Arizona strip, located in the northwestern part of the Colorado Plateau Province, in north central Arizona. The dominant topographic features of the area -- plateaus, cliffs, and canyons -- are marked by strongly contrasting colors. The rugged Vermillion Cliffs, a striking example, are visible northwest and northeast of the monument. Light yellowish-tan or gray Shinarump conglomerate is exposed in parallel cliffs to the south and northeast.

Formations exposed in the immediate area of the monument and north to Moccasin belong to the Triassic and Jurassic Systems. The generalized section is presented in Table 1 and Figure 1.

These sedimentary formations generally dip less than two degrees NE, but dips may steepen to nearly 10 degrees adjacent to major structures where they are displaced downward to the west. The steeply dipping Sevier fault which passes just east of Pipe Spring NM is such an example extending slightly east of north for 150 miles into the central Mountain and Valley province of Utah. North of the monument the fault divides into two main branches which rejoin eight miles to the north in Sand Canyon at the Utah border (see Figures 2 and 3). The Sevier Fault divides the area roughly north to south into the Kanab Plateau on the east and the Uinkaret Plateau to the west (see Figure 4). Displacement on the fault at the monument is estimated to be between 1850 and 2380 feet (Gregory, 1950, p. 147).

### Geohydrology

The springs for which the monument is named, issue from the Sevier fault, a normal fault contact between the Navajo Sandstone on the west in the down thrown block and the Moenkopi formation to the east (Gregory 1950, p. 197). Here the basal Navajo Sandstone abuts against the impervious (gypsiferous) Shnabkaib member of the Moenkopi formation. Water absorbed by outcrops of porous Navajo Sandstone and underlying beds percolates down the dip slope

Table 1. General Section - Vicinity of Pipe Spring NM
(modified from Gregory, 1950)

| SYSTEM | GROUP | FORMATION | CHARACTER | THICKNESS |
|---|---|---|---|---|
| | | Navajo Sandstone | Lt. pinkish white & buff cross-bedded sandstone | 1200' |
| Jurassic | Glen Canyon Gp. | ---------Local unconformity---------- | | |
| | | Kayenta formation | Maroon, coarse-grained sandstone, conglomerate with some dense limestone and shale in thin, irregular beds. | 118' |
| | | Wingate Sandstone | White to reddish-brown massive sandstone, jointed, cross-bedded | 0-402' |
| | | ----------Unconformity---------- | | |
| | | Chinle formation | Red, brown & buff sandstone with some limestone near top, with prominent sandstone ledge in middle and brightly variegated shale, & sandstone with fossil wood in lower half | 1,460' |
| Triassic | | Shinarump conglomerate | Light gray to yellow tan coarse-grained sandstone conglomerate with fossil wood. | 100' |
| | | Moenkopi formation | Brown, red and yellowish thin-bedded gypsiferous and calcareous sandstone with fossiliferous marine limestone | 1,500' |

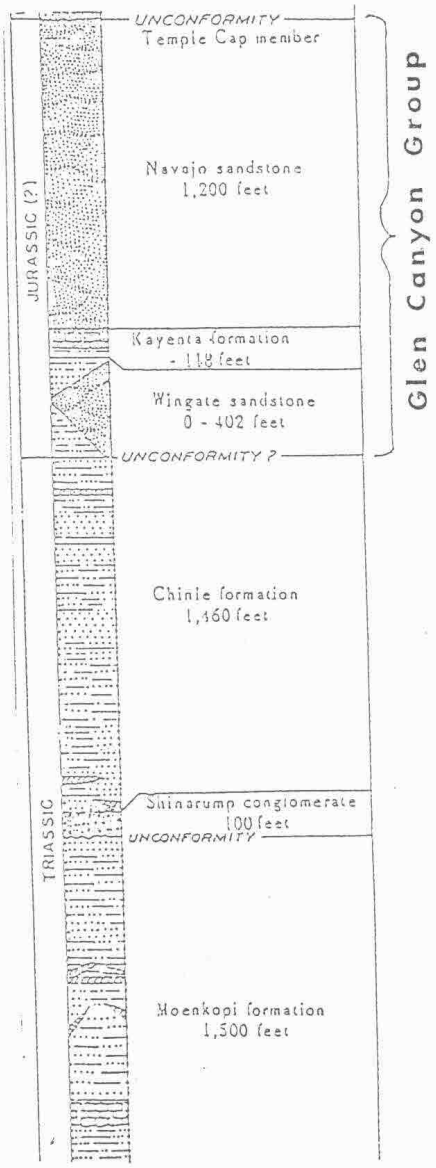



**Figure 1.** General Geologic Section - Vicinity of Pipe Spring N.M.
(modified after Gregory, 1950)

09-02-1986: Memorandum regarding Spring Flow Decline -PISP- Scoping Report, cont

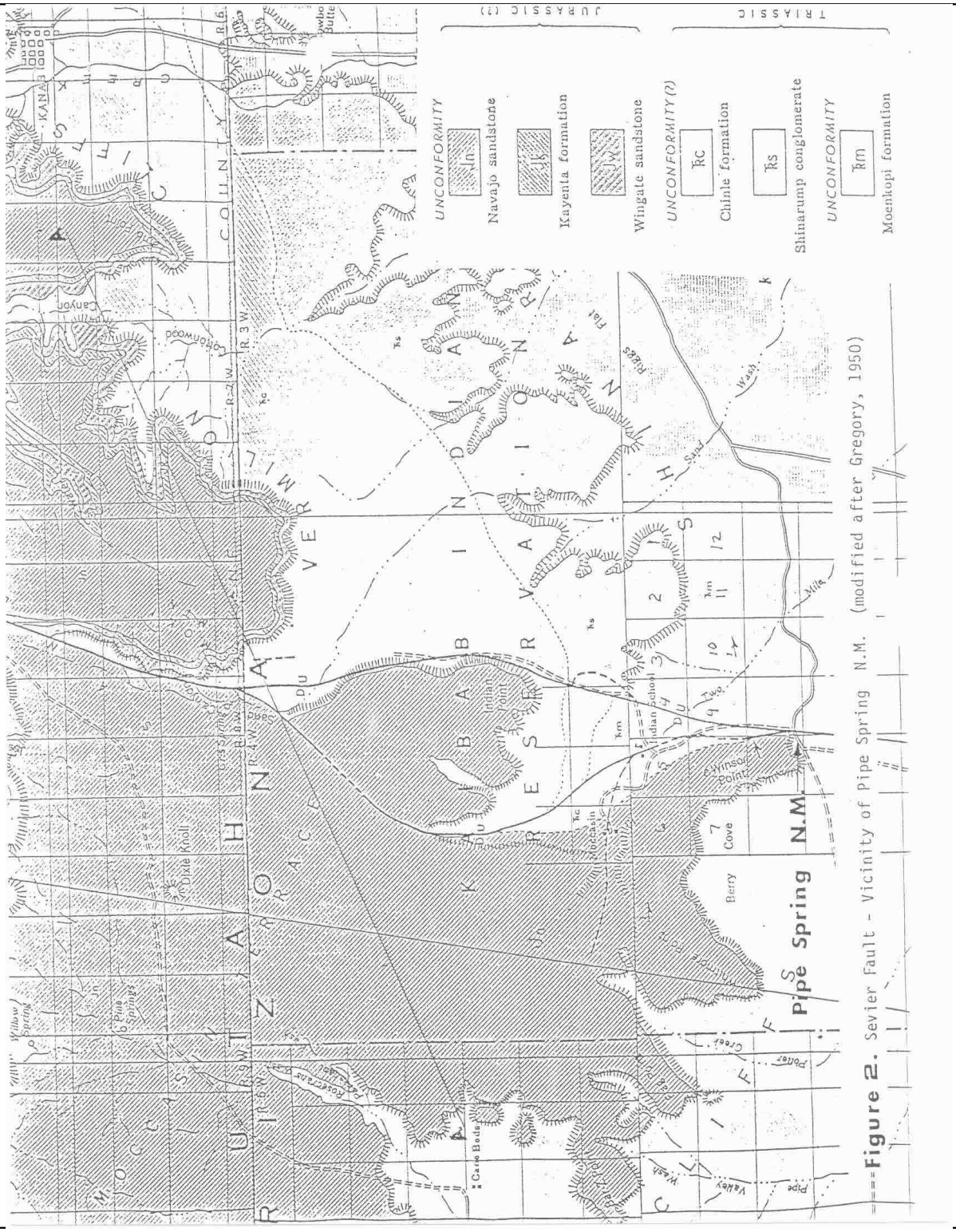



**Figure 2.** Sevier Fault - Vicinity of Pipe Spring N.M. (modified after Gregory, 1950)

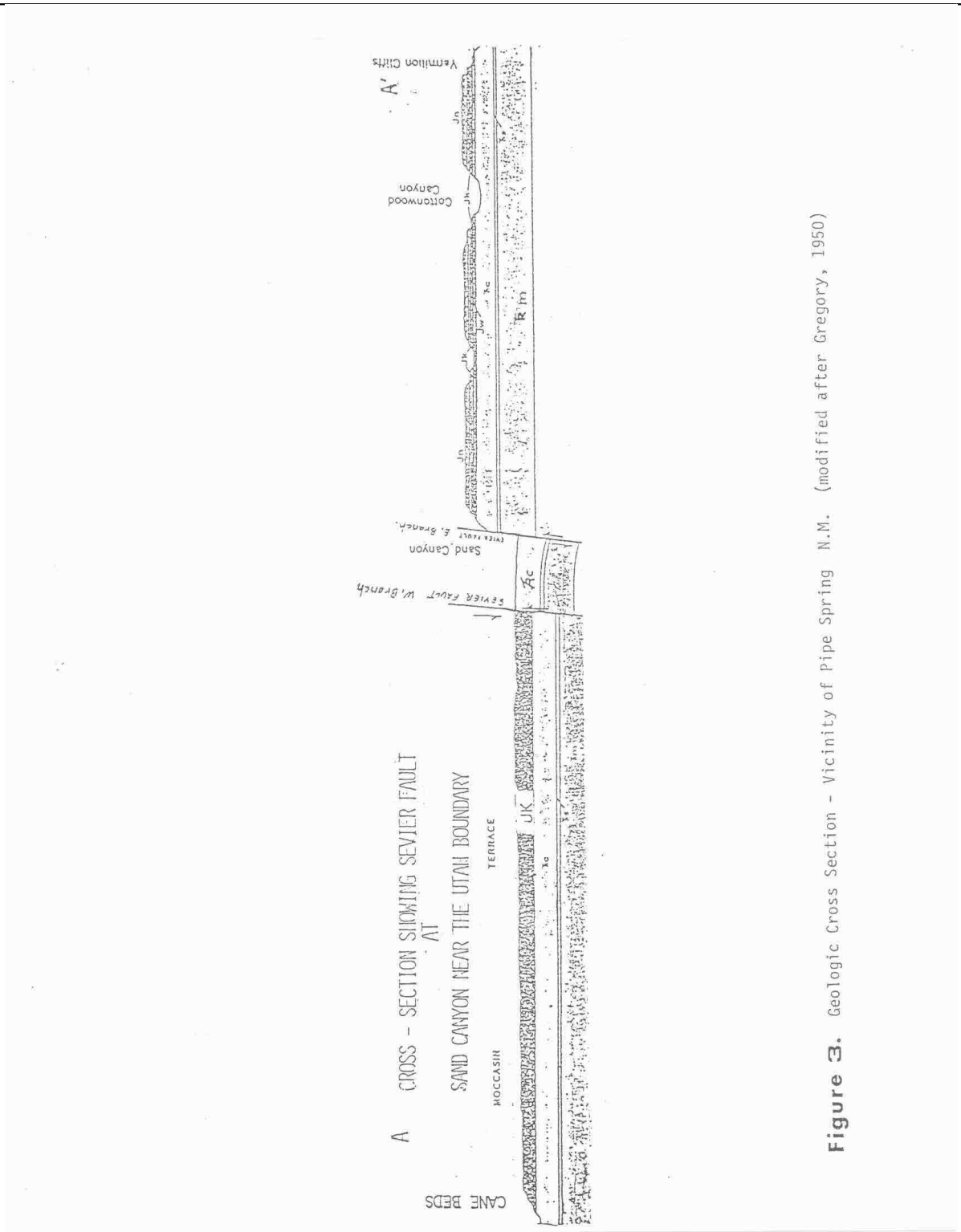



**Figure 3.** Geologic Cross Section - Vicinity of Pipe Spring N.M. (modified after Gregory, 1950)

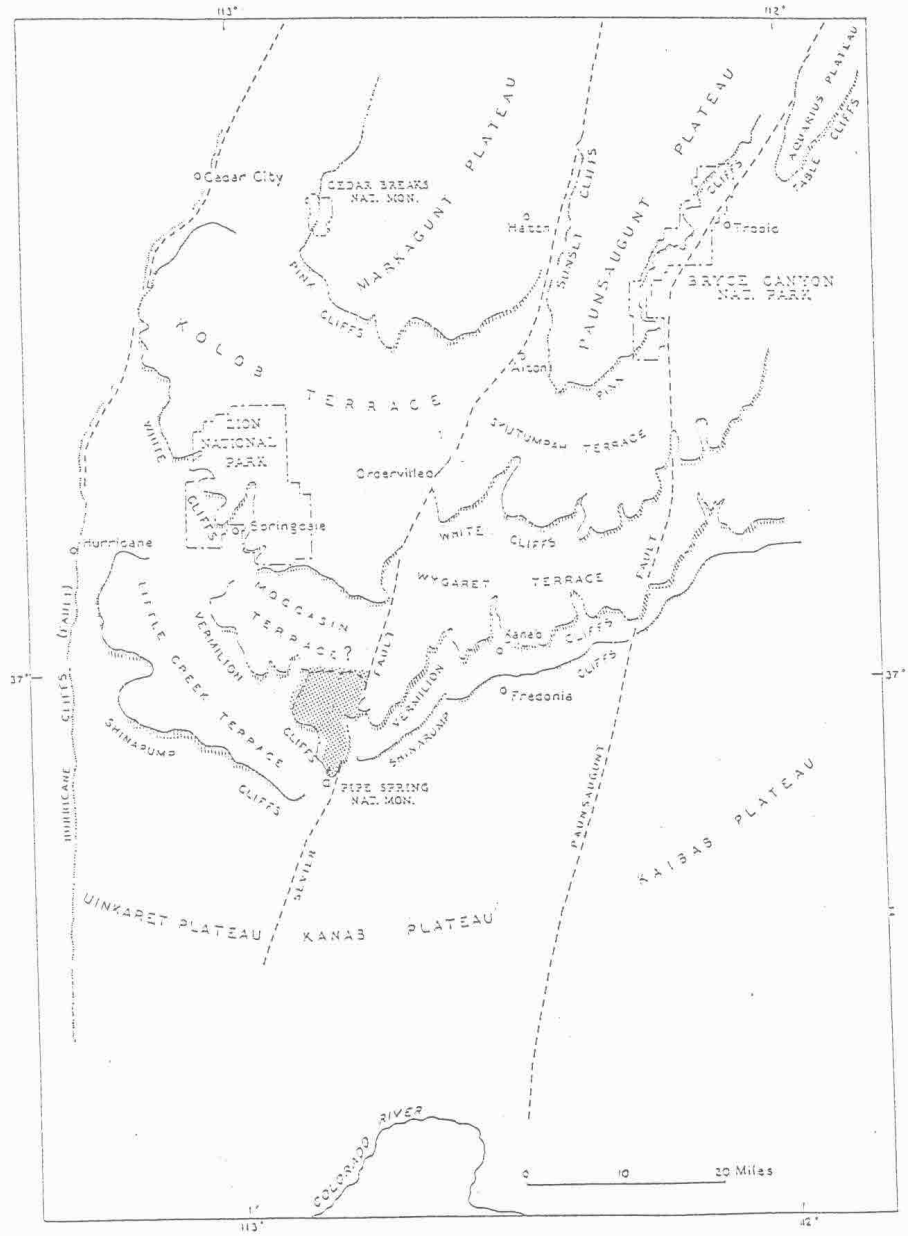



**Figure 4.** Sketch map of Zion Park Region Physiography (with potential recharge area shaded) (modified after Gregory, 1950)

until its further progress is interrupted by impervious beds of the Moenkopi formation, raised to this level by the Sevier fault. The fault plane facilitates upward movement of excess water which has become impounded against the impervious Moenkopi formation to form springs along the fault.

## Aquifers

In the Kaibab Paiute Indian Reservation surrounding Pipe Spring NM, the principal sources of ground water are the fractured sandstone beds in the consolidated sedimentary rock units and, to a lesser degree, in the unconsolidated surficial deposits along the intermittent streams.

Surficial deposits range in thickness from a thin veneer to 100 feet or more. They mainly consist of silt, sand and clay. Irrigation wells in the alluvium in the Short Creek and Cane Beds area (see Figure 2) may yield up to 200 gallons per minute, but in the rest of the Kanab area permeability is usually low (Levings and Farrar, 1979). Where the deposits are thick enough, wells may yield modest amounts of poor quality water (Specific Conductance = 1500-2700 micromhos/cm)(USDI, BIA, 1976).

The greatest water producing consolidated sedimentary aquifer in the region is the Navajo Sandstone formation which crops out north and northwest of the monument in the Moccasin Mountains. Within the Kaibab Paiute Indian Reservation the thickness of the Navajo Sandstone may attain 1200 feet, consisting of fine-grained eolian sand with conspicuous cross-bedding. It is especially jointed and fractured along the west branch of the Sevier fault where well yields may exceed 250 gallons per minute. In unfractured areas, however, well yields may be quite small. Water quality is suitable for domestic use and irrigation.

The Kayenta and Wingate formations crop out along the flanks of the Moccasin Mountains and primarily consist of sandstone and siltstone. No wells are known to have been completed in either formation in the Kaibab Paiute Indian Reservation area, but the potential exists for the production of small amounts of water from these formations.

Of the two Chinle members, only the lower Shinarump conglomerate may yield appreciable amounts of water. However, the sulfate concentration generally exceeds U.S. Public Health Service standards for domestic water supply and the high sodium adsorption ratio (SAR) frequently renders the water unsuitable for irrigation.

Of the five Moenkopi members occurring in the reservation area, only one, the upper member, produces water, but in small quantities and of poor quality.

In summary, only the intensely fractured Navajo Sandstone yields water of adequate quality and quantity for both domestic and irrigation uses. Furthermore, according to a USDI/BIA (1976) study of the hydrology of the Kaibab Paiute Indian Reservation, large-scale pumping of ground water from the fractured Navajo Sandstone along the west side of the Sevier fault near Moccasin can be expected to decrease the flow of the springs in the area.

## Recharge

The natural absorption of rain water and snowmelt by the Navajo Sandstone and formations above it contributes to the recharge of the aquifer along the west side of the Sevier fault contact. Recharge also occurs from seepage losses of streams in areas where elevations exceed 5000 feet. Cordova (1981) estimated the average annual volume of ground water recharge in the Upper Kanab Creek basin as 25,000 acre-feet using a base flow to precipitation ratio of 0.04.

## Discharge

Ground water along the Sevier fault generally moves from the recharge areas in the highlands of southern Utah to the areas of natural discharge in northern Arizona. The general southward gradient of the potentiometric surface is indicated by the higher water surface elevations of wells to the north as compared to wells in the same formation in the south. Seepage into streams such as Two Mile Wash at Moccasin is probably the principal means of ground water discharge. Some seepage into alluvial aquifers occurs before being discharged as surface flow. Additional loss of ground water through evapotranspiration takes place in areas with phreatophyte growth where the ground water is near the land surface. Springs, wells, and subsurface outflow account for the remainder of the loss.

Spring flow throughout the area has been reported to be declining. It has been suggested that seismic activity during the 1950s may have caused the reduction in flow. However, subsurface outflow has probably not changed greatly in the past 30 years. Well use, on the other hand, has increased in the past 10 years (Garkane Power, 1986). There has been an overall increase in well use in this area. This trend is especially noticeable if one studies records from 40 or more years before the development of the modern water well and modern pumping systems.

## Precipitation

In the Upper Virgin River and Kanab Creek basins annual precipitation, based on U.S. Weather Bureau data for Utah for the 1931-60 period, averages about 2 million acre-feet. Of this, about 1,375,000 acre-feet falls in the upper Virgin River basin and the remainder falls in the upper Kanab Creek basin. Most of this precipitation is consumed as evapotranspiration and sublimation at or near the place of fall leaving little to reach streams or to seep into rocks to enter the ground water system.

The amount of precipitation in southwestern Utah is minimal and is characterized by great annual and seasonal variations in place and time. In general, the influence of elevation is apparent but not consistent. Between 1903 and 1937, Kanab, at an elevation of 4,925 feet, had a mean annual precipitation of 14.5 inches with a range of 7.29 to 20.70 inches. Springdale (elevation 4,048 feet) had a mean of about 15.5 inches and a range of 7.98 to 20.78 inches for the same period. Because of its topographic setting, Springdale receives more precipitation than Kanab, even though Kanab is almost 900 feet higher in elevation.

At all stations in southwestern Utah, June is the driest month and February or March the wettest. However, the other months fit into no recognizable pattern. The complexity of the annual distribution of precipitation is enhanced by a sparse data collection network resulting in a poor understanding of the temporal and spatial distribution of precipitation.

The deficiencies of existing meteorological data are mentioned in the Gregory (1950, p. 31) report where it is stated that "The meteorological stations in the Zion Park region show no consistent wet and dry cycles. The records of precipitation are unsuited for general climatic studies. They are brief and fragmentary and lack other features needed for the recognition of climatic cycles. Their lack of accord with the long records at Fort Defiance...Los Angeles and Salt Lake remains to be explained."

## Surface Water - Runoff

Most of the discharge of Kanab Creek and the Virgin River is derived from snowmelt. Estimates of total mean annual runoff from the upper Kanab Creek basin into Arizona are on the order of 50,000 acre-feet (Moore, 1968).

These streams can also receive significant flow from torrential summer rains. In Kanab Creek basin, instantaneous peak discharges of several hundred to more than 1,000 cu.ft./sec. have been commonly recorded as the result of summer cloudbursts. However, ground water seepage is generally regarded as the main source of flow for perennial streams during the low-flow periods of the dry summer months. In the Virgin River, at USGS site (C-41-10)22bc, it is estimated that ground water contributes as much as 43 percent of the average annual discharge.

## Surface Water - Quality

Dissolved-solids concentrations in the surface waters of most streams in the Kaibab Paiute Reservation area are generally less than 1,000 mg/l during both high- and low-flow periods. Moreover, the dissolved-solids concentrations in the headwaters of Kanab Creek are less than 250 mg/l but have been found to exceed 500 mg/l in the lower reaches of the streams during low-flow periods. The water quality of springs in the Arizona Strip area adjacent to Pipe Spring NM is shown in Figure 5 using pattern diagrams (USDI/BIA, 1976).

## Water Development and Use at Pipe Spring NM

The water resources at Pipe Spring NM consist of five springs or seeps in the SE 1/4 of Sec. 17, T 40 N, R 4 W. As shown in Figure 6, these are: 1) Big Spring, 2) Spring Room (Historic Spring), 3) West Cabin Springs, 4) Tunnel Spring (Cattlemen's line) and 5) Drainage seeps (2) from the fort foundation. Of these, Tunnel Spring, flowing from the base of the hill 60 feet southwest of the fort, is used entirely by cattlemen. Only two of the remaining springs contribute measurable amounts of water for interpretive use at the fort or the historic ponds. The largest flow issues from Big Spring which originates under the parlor floor within the fort. Historic Spring also issues here and flows outside the fort. About 125 feet west of the fort, along the side of a south facing hill, West Cabin Springs flow from two fissures in the hill. However, the flow here is too weak to recover and use.

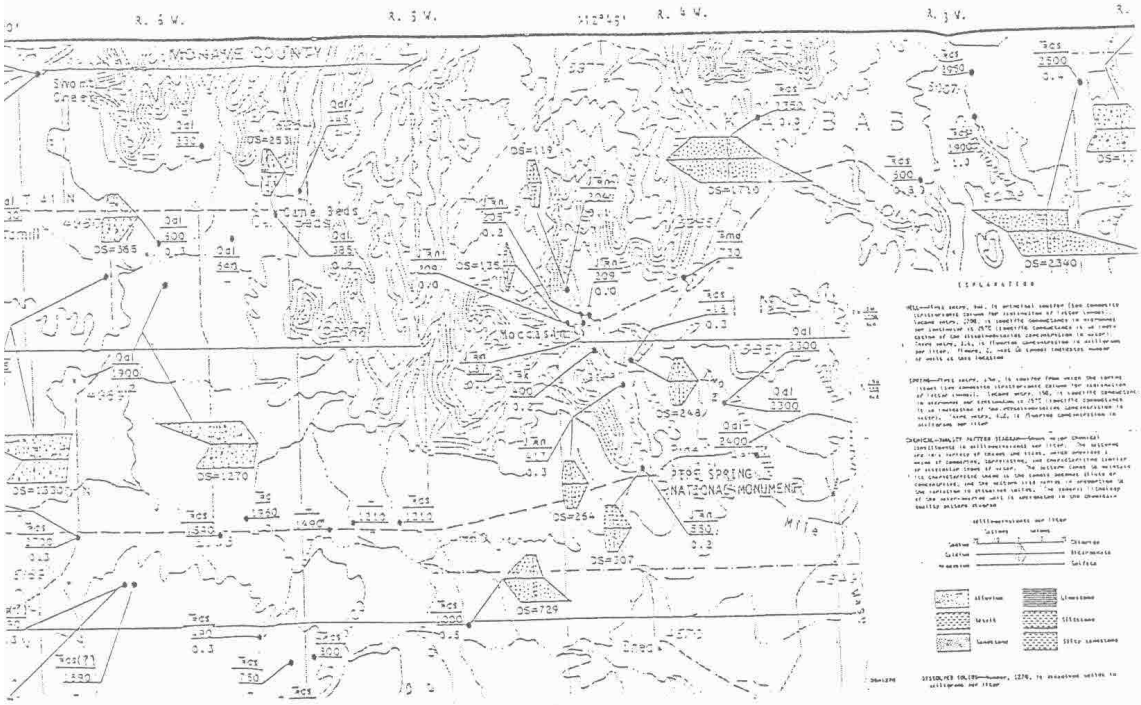



**Figure 5.** Water Quality of Springs in the Arizona Strip (USDI/BIA, 1976)

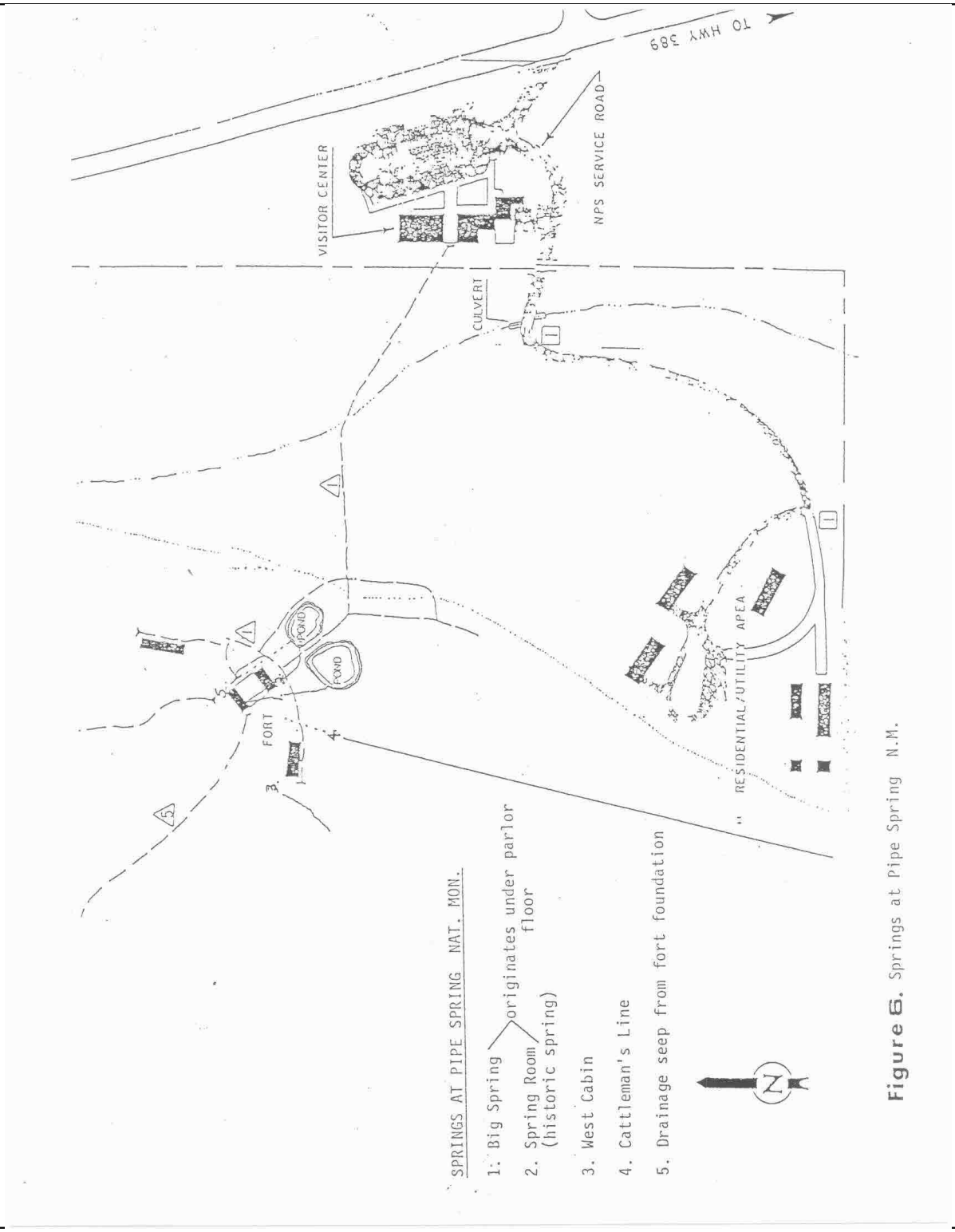



**Figure 6.** Springs at Pipe Spring N.M.

Domestic water requirements at the monument's visitor center and residence area are supplemented by an NPS well drilled in 1971. The well is located about two miles north of the monument on the Kaibab Paiute Indian Reservation land. By agreement dated April 13, 1972, this well serves both the monument and the Kaibab Paiute Indians. Water from the well is pumped through a 4-inch line to a 500,000-gallon reservoir. The water passes through a 6-inch line from the reservoir to the visitor center and the monument residential/utility area (see Figures 6-8).

Water Quantity & Quality -- Pipe Spring

Prior to 1977, measurements of spring discharge at Pipe Spring NM were made on a spotty basis. Two early records report a flow of about 42 gallons per minute in September 1933, and 47 gallons per minute in May 1934. Other measurements are 35 gallons per minute on March 12, 1959, 38 gallons per minute on July 2, 1969, and 32 gallons per minute on August 6, 1976.

Levings & Farrar (1979) measured the flow of the springs at Pipe Spring NM on July 27, 1976, prior to the beginning of the decline in spring flow. They reported the flow to be 35 gallons per minute using a flume and volumetric measurements. The specific conductance was given as 550 micromhos/cm, and the temperature was 16° C. Sodium was estimated to be at <2 milliequivalents per liter, calcium at <2, magnesium at <2, chloride at <1, bicarbonate at 3, and sulfate at <2. Gregory (1950, p. 197), in an undated measurement, reported the springs to yield 56 gallons per minute at a temperature of 63° F.

In 1977 the staff at Pipe Spring NM began the systematic measurement of flow from the principal springs at the monument. The combined discharge of the springs was measured volumetrically at approximately the same time each month. Figure 9 presents the data graphically as annual averages and demonstrates, at least qualitatively, that a steady downward trend in discharge has been occurring since 1977. Presented in another format, Figure 10 reveals that this trend has been rather uniform between years, (i.e., January flows have been declining, February flows have been declining, etc.).

These data, for the period July 1976 to June 1986 inclusive, were paired with monthly precipitation data from the nearest weather station (Kanab). The relationship of spring flow as a function of precipitation was examined using multiple regression analyses. Less than 1 percent of the variance in spring flow was found to be associated with precipitation (that is -- the coefficient of determination, or "r squared," was less than .01).

To account for the possible effects of delayed transmission through the aquifer supplying the springs, the spring flow values were paired with precipitation values which had occurred one year, eighteen months, and two years previously. In each of these three analyses the lack of relationship between spring flow and precipitation remained evident (i.e., coefficient of determination less than 1 percent).

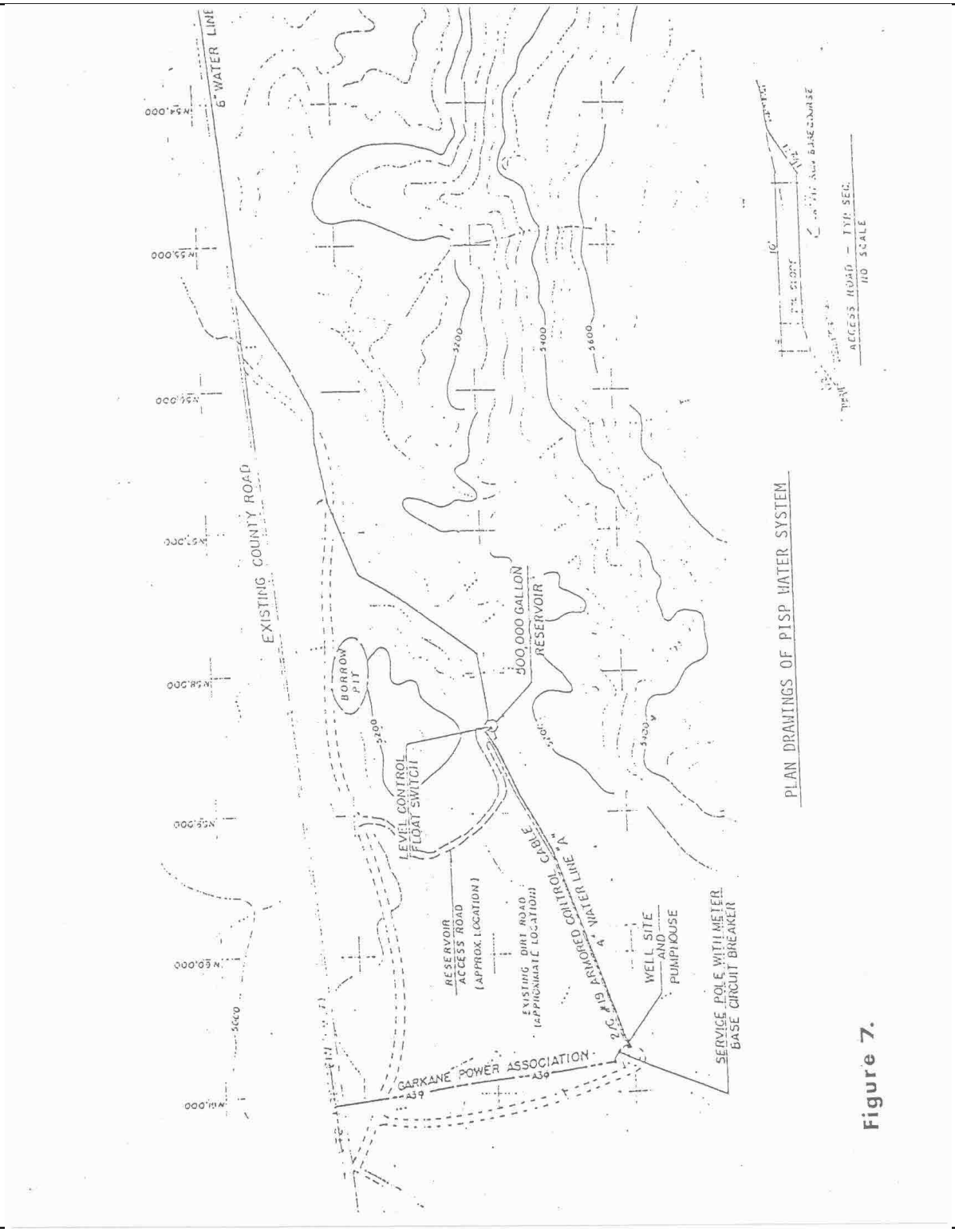

6" WATER LINE
EXISTING COUNTY ROAD
BORROW PIT
LEVEL CONTROL FLOAT SWITCH
500,000 GALLON RESERVOIR
RESERVOIR ACCESS ROAD (APPROX. LOCATION)
EXISTING DIRT ROAD (APPROXIMATE LOCATION)
CABLE
ARMORED CONTROL
WATER LINE
WELL SITE AND PUMPHOUSE
SERVICE POLE WITH METER BASE CIRCUIT BREAKER
GARKANE POWER ASSOCIATION
A39
3200
3400
3600
3420
PLAN DRAWINGS OF PISP WATER SYSTEM
ACCESS ROAD - TYP. SEC.
NO SCALE

Figure 7.

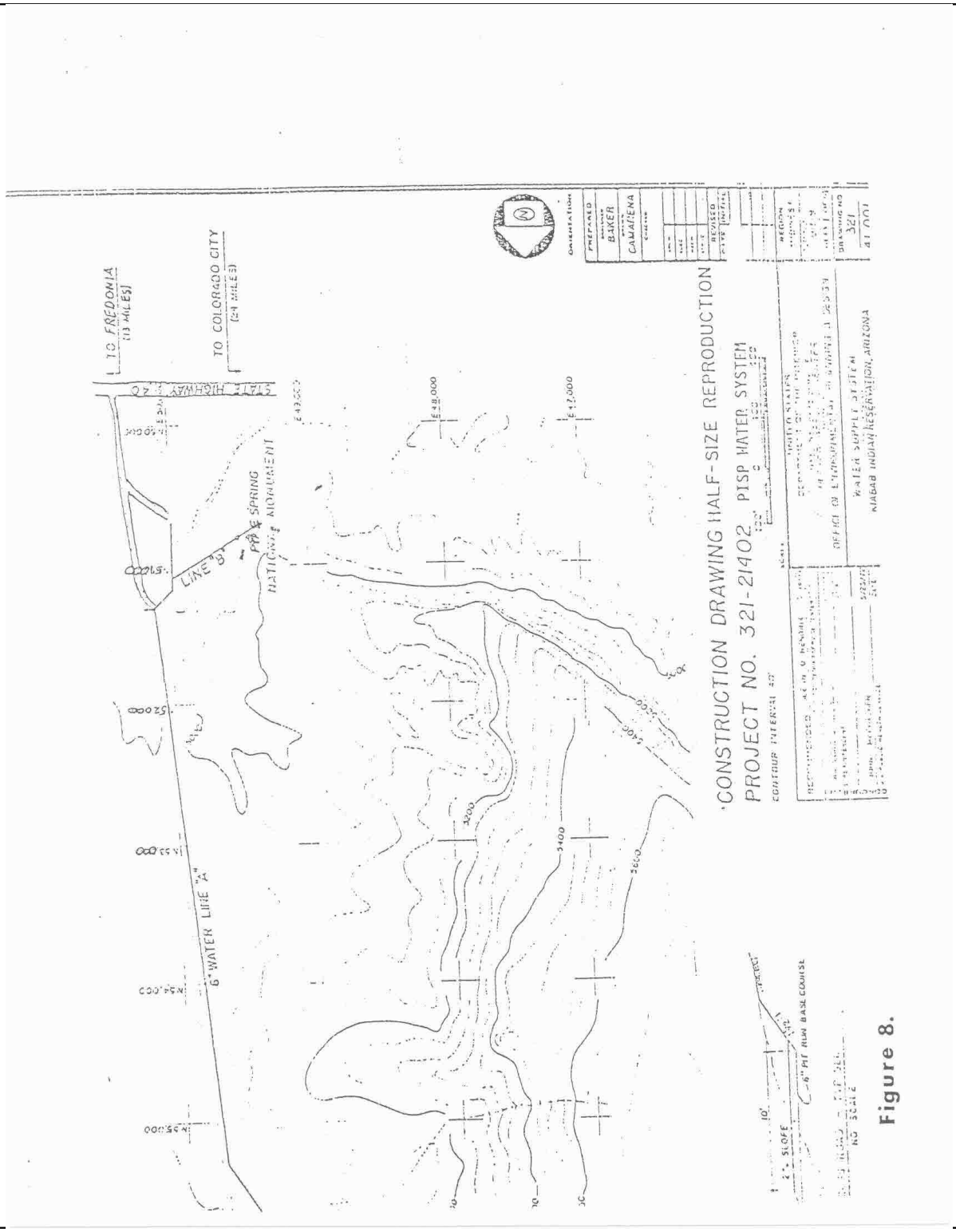

CONSTRUCTION DRAWING HALF-SIZE REPRODUCTION
PROJECT NO. 321-21402 PISP WATER SYSTEM
TO FREDONIA (13 MILES)
TO COLORADO CITY (24 MILES)
STATE HIGHWAY 89A
SPRING MONUMENT
LINE "A"
6" WATER LINE "A"
E49,000
E47,000
N35,000
N34,000
N33,000
3200
3400
3600
6" PIT RUN BASE COURSE
4:1 SLOPE
PREPARED
BAKER
CAMARENA
REVISED
WATER SUPPLY SYSTEM
NAVAJO INDIAN RESERVATION, ARIZONA
DRAWING NO
321
41 OF 41

Figure 8.

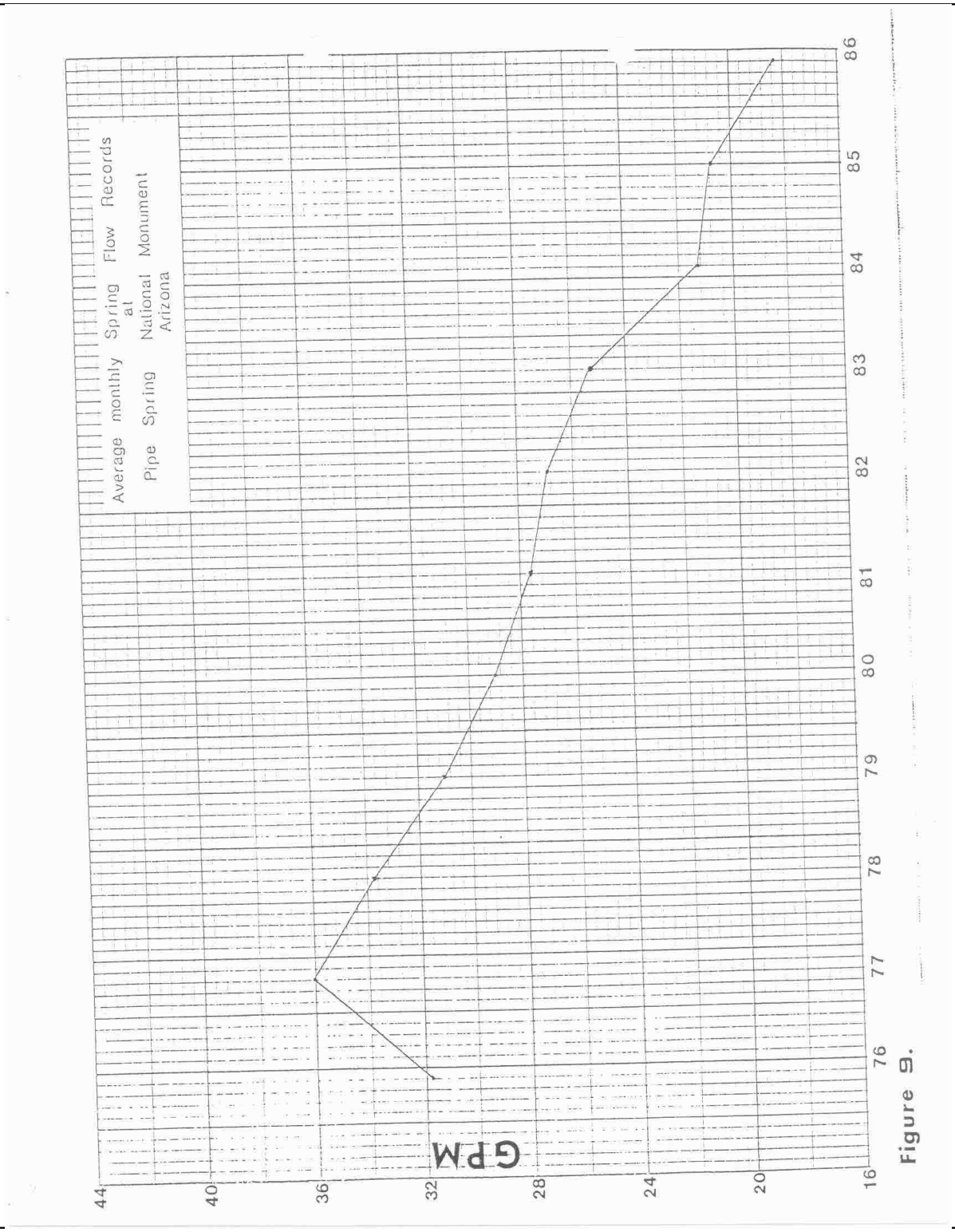

Average monthly Spring Flow Records
at
Pipe Spring National Monument
Arizona
GPM
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Figure 9.

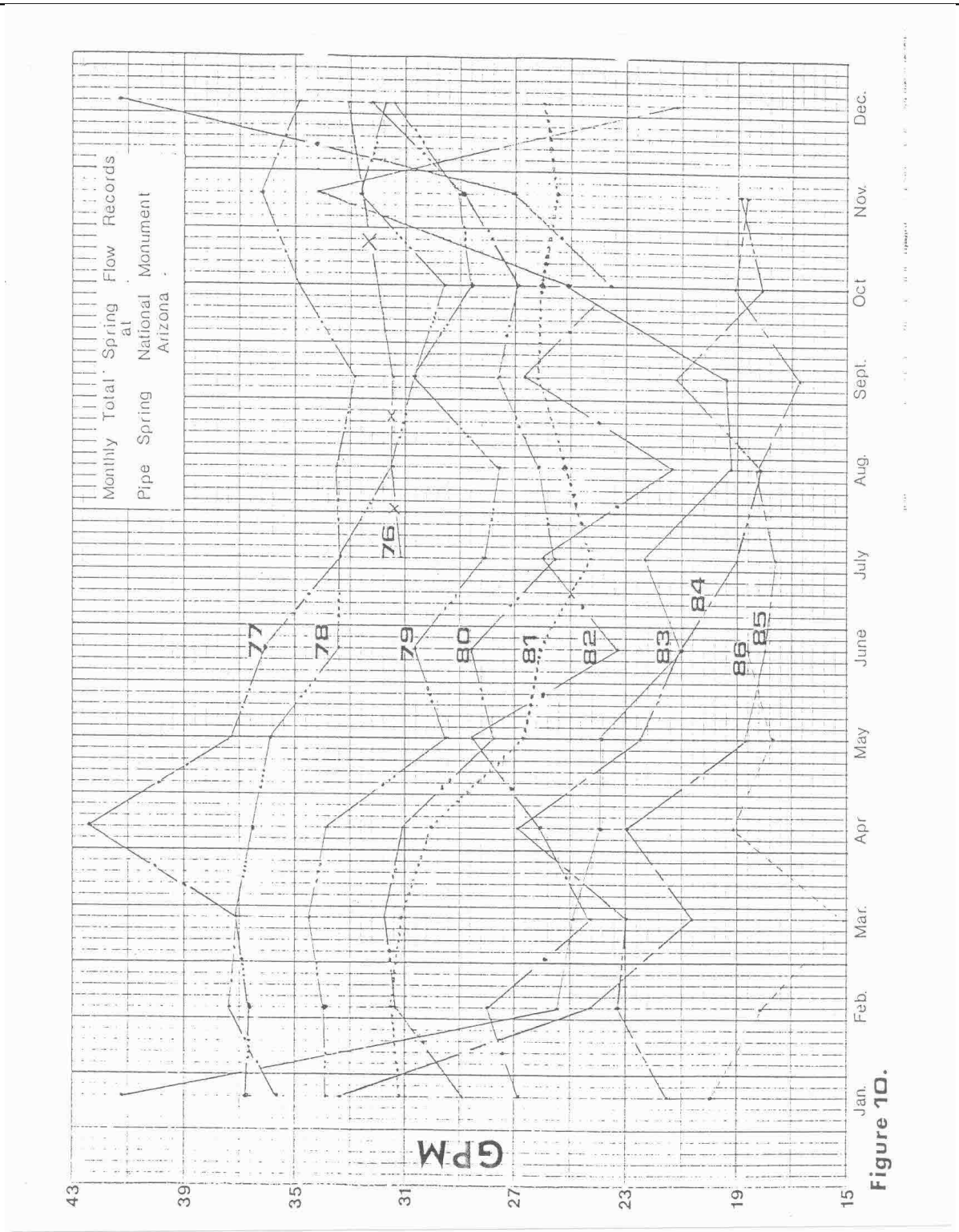

Monthly Total Spring Flow Records at
Pipe Spring National Monument
Arizona
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86

**Figure 10.**

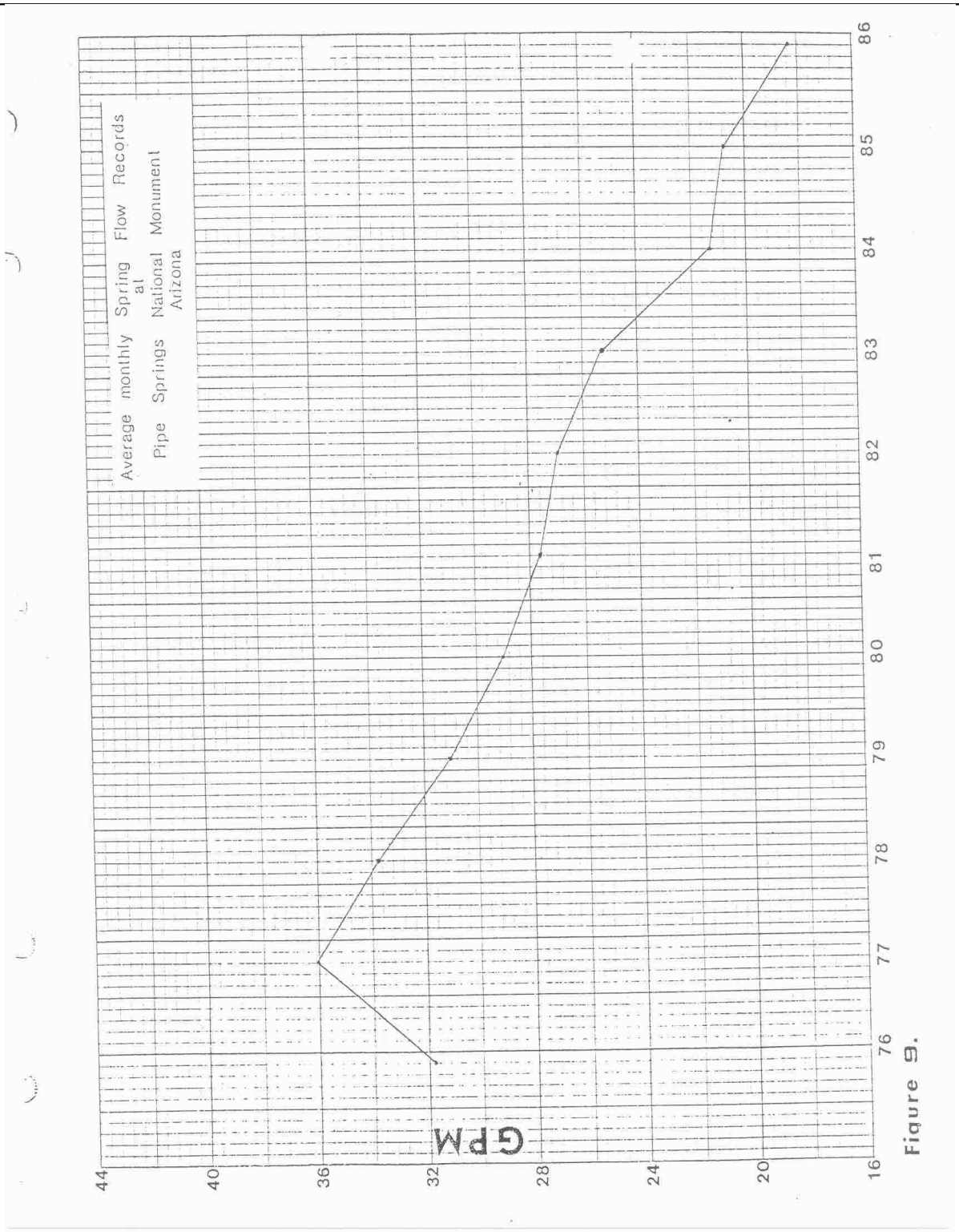
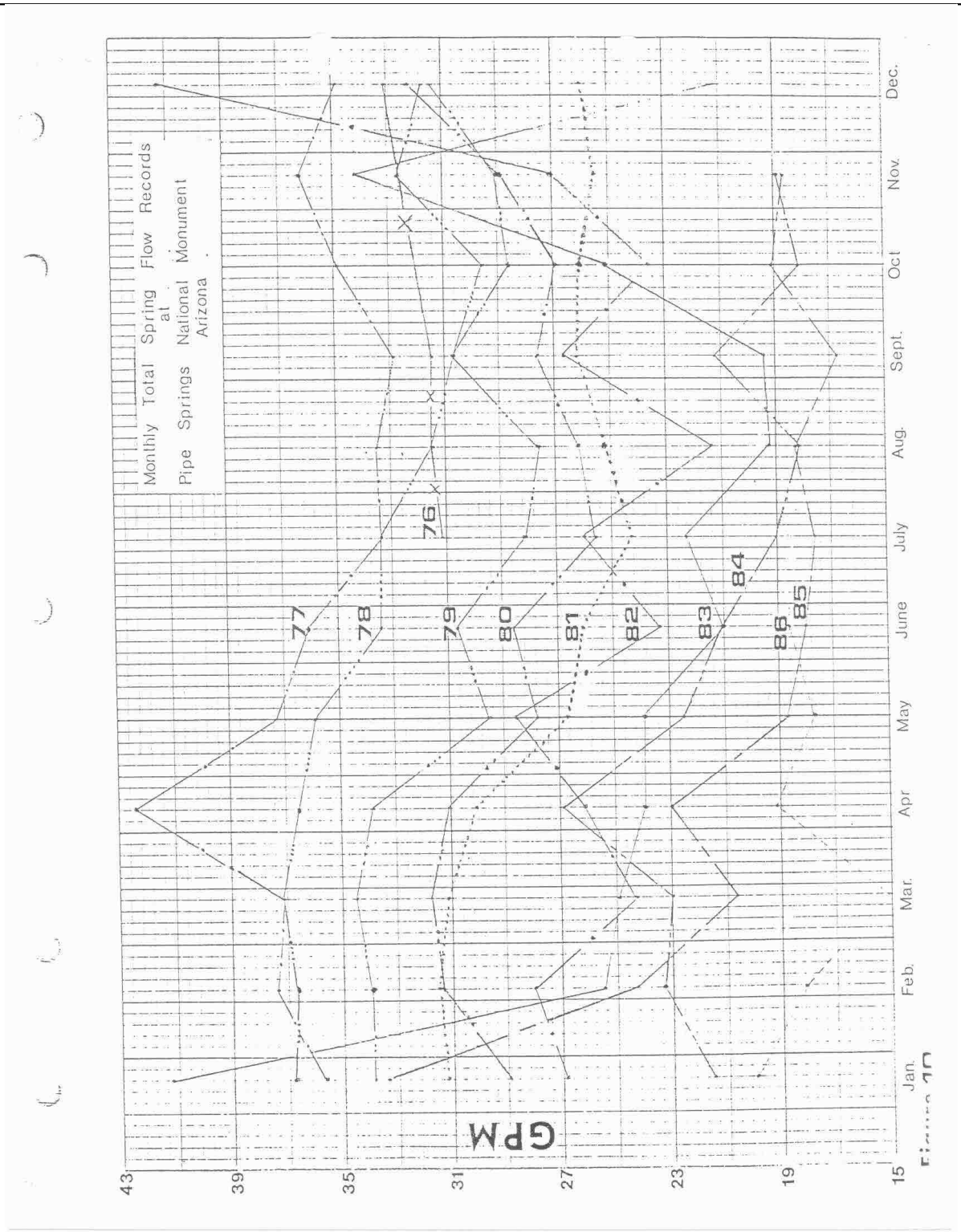

Average monthly Spring Flow Records
at
Pipe Springs National Monument
Arizona
GPM
44
40
36
32
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Figure 9.


Monthly Total Spring Flow Records at Pipe Springs National Monument Arizona
GPM
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Water Rights Situation at Pipe Spring NM

Pipe Spring NM exists because of the general absence of water between Zion NP and the north rim of Grand Canyon NP. The unique occurrence of water at this site has made it highly valuable to Indians, early settlers, and the traveling public. With water playing such an important role, both environmentally and socially, it is to be expected that water rights at this location are characterized by a complex interweaving of personalities and interests. The history of water rights at Pipe Spring to this day involves three parties -- the National Park Service, the Kaibab band of the Paiute Tribe, and local cattlemen.

The general understanding of the water rights situation at Pipe Spring is that the production of the springs is to be divided equally between the three parties. This understanding arises from an agreement developed in 1924. The degree to which it was binding is uncertain because the agreement does not appear to have been officially approved by the Secretary of the Interior.

The cattlemen's use of the flow from these springs seems to be founded upon their predecessor's purchase of such right from Charles C. Heaton whose claim to ownership was later purchased and donated to the United States. The right, which dates back to the late 1880s, is presumed to have arisen consequent to the original settlement of the site by Daniel Seegmiller. Since the Kaibab Paiute Indian Reservation was created in 1907 (confirmed in 1917) such a claim, if valid and applicable to water rights, could be senior to the rights of both the Indians and the NPS.

The validity of the claim, however, has been questioned. The basis of Seegmiller's title was his claim of ownership of the site as a "scrip location." Such a claim, to result in patent, required a completed land survey which, in the case of the Seegmiller property, did not occur until 1916 -- well after Seegmiller's death in 1899. The Government Land Office, as a result, showed no land to be privately owned in this area when the Indian reservation was created in 1907.

The division of spring flow between the NPS and the Kaibab Paiute Indians was a requirement of the Presidential Proclamation creating the monument (Proc. #16663, May 31, 1923). The division was further supported by the early contention of the Department of Indian Affairs that a reserved right was created for the Indians when the boundaries of the reservation were preliminarily established.

The initial and, more or less, informal agreement of 1924, dividing the flow of the three springs between the three principal interests, was essentially given recognition when regulations controlling the three-way division were promulgated by the Department of Interior in November 1933. The 1924 agreement and the resultant regulations produced a satisfactory accommodation but one which lacked formalization under Arizona water law.

In view of the questions of validity of past land ownership and the fact that the State, as of January 29, 1937, had no record of any water rights at

the springs, the NPS initiated action in April 1937 to secure State recognition of the three water rights. The amounts of water for which the NPS was initiating its claim was 42,500 gpd or 47.6 acre-feet per year for each of the three claimants.

However, as a result of consultation with the Bureau of Indian Affairs, the effort was scuttled. The reasons for not pursuing this course of action were 1) the Indians had a Federal reserved water right in the springs because the springs were included in the original reservation and there were no recognized outstanding rights to the land or water; and 2) the spring flow arose and fell on Indian property and, thus, did not create an appropriable flow in a defined channel beyond the limits of the reservation.

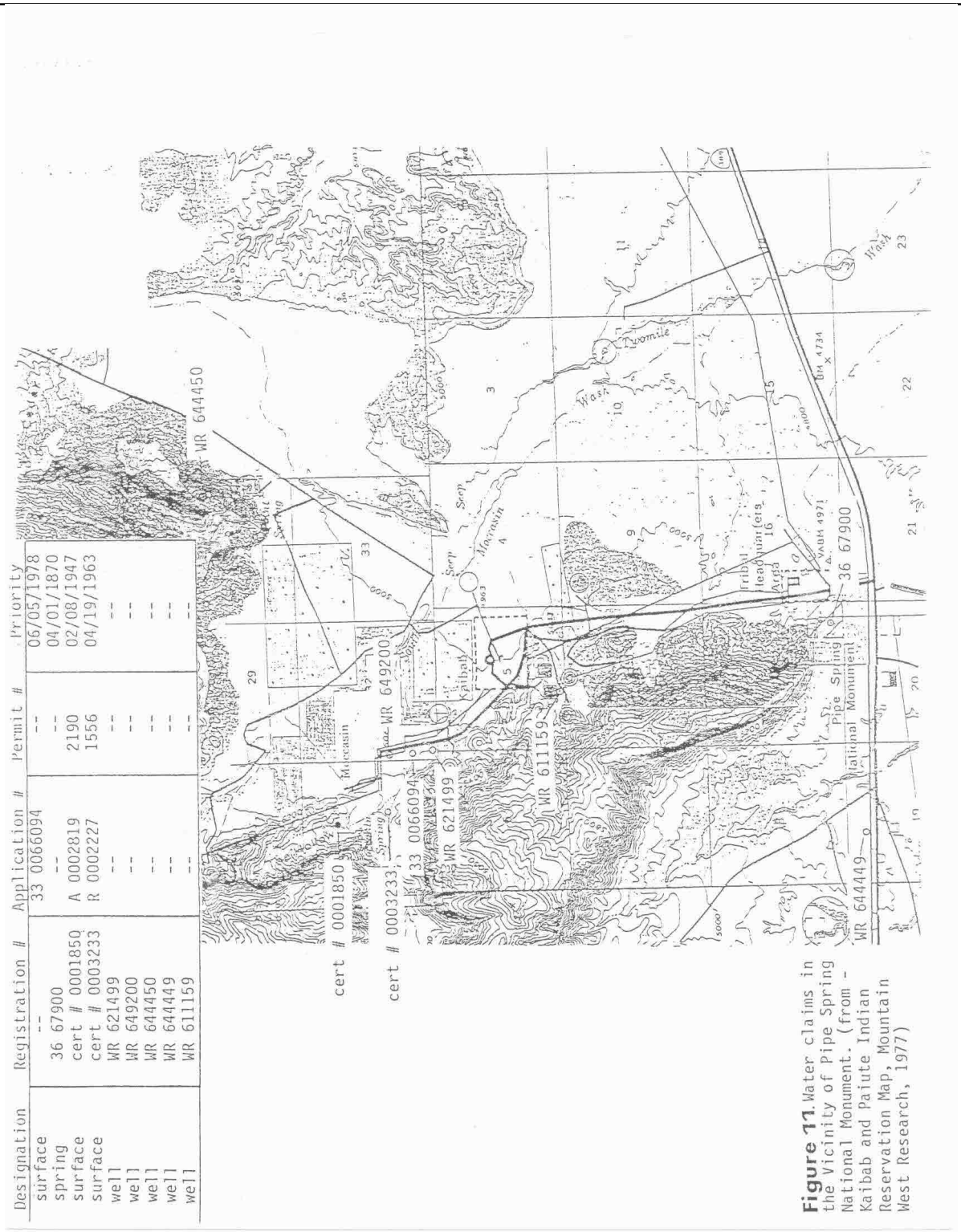
In April 1972, the NPS and the Kaibab Paiute Indians entered into a renewable 25-year agreement wherein the NPS was to drill a water well and provide associated delivery structures to the tribe in exchange for the tribe's one-third interest in Pipe Spring. The well was to provide the tribe with 7,884,000 gallons per year (24.2 acre-feet per year) and any shortfall in the delivery of this amount was to be made up from spring flow. The completed well subsequently was placed into service.

Since the agreement between the NPS and the Kaibab Indians talks to an amount of 24.2 acre-feet per year (with another 1.6 acre-feet per year from the springs for stock watering), it can be assumed that similar amounts are available to the NPS and the cattlemen under the terms of the three-way agreement and regulations mentioned earlier. This is of interest at this point in the discussion because a claim to a right to water from the Pipe Spring was filed on June 23, 1978, by eight individuals including Nora M., J. Grant, Fred E., Landell J., Derryll L., and I. McKay Heaton.

The application claimed a right to 14 gallons per minute, or 7,358,400 gallons per year (22.6 acre-feet per year), with first beneficial use occurring April 1, 1870. The claimed right to water was, according to the application, created by Jonathan and Lucy Heaton placing the water to beneficial use prior to 1890 with subsequent continuous use being made by their heirs and assigns.

In reviewing the foregoing summary, it becomes evident that prior to the Heatons' Statement of Claim and the agreement between the NPS and the Kaibab Paiute Indians, no statements had been made as to quantities of water to which each party held a right. The three parties to the division of the flow of Pipe Spring had previously only agreed to share equally in the springs' production. A decline in such production had not been directly addressed.

The State of Arizona has on file, for the area within approximately 4.75 miles of Pipe Spring NM, three additional water right applications, (totaling 282 acre-feet per annum) and five well registrations, (totaling 360 gpm for 581 acre-feet per annum) including the NPS well (150 gpm for 242 acre-feet per annum, see Figure 11). It seems likely that water use on the Kaibab Paiute Indian Reservation is substantial and may greatly overshadow the figures presented above. To the best of our knowledge, none of these water right claims have been adjudicated. The State of Arizona either did not have, or did not provide, information on wells or other water use within the Kaibab Paiute Indian Reservation.




| Designation | Registration # | Application # | Permit # | Priority |
|---|---|---|---|---|
| surface spring | -- | 33 0066094 | -- | 06/05/1978 |
| surface | 36 67900 | -- | -- | 04/01/1870 |
| surface | cert # 0001850 | A 0002819 | 2190 | 02/08/1947 |
| surface | cert # 0003233 | R 0002227 | 1556 | 04/19/1963 |
| well | WR 621499 | -- | -- | -- |
| well | WR 649200 | -- | -- | -- |
| well | WR 644450 | -- | -- | -- |
| well | WR 644449 | -- | -- | -- |
| well | WR 611159 | -- | -- | -- |

**Figure 11.** Water claims in the Vicinity of Pipe Spring National Monument. (from - Kaibab and Paiute Indian Reservation Map, Mountain West Research, 1977)

IV. MANAGEMENT SITUATION

The situation facing management at Pipe Spring NM is complex. The three users of the water from Pipe Spring have very different needs. As flow from the springs continues to decline, a point will be reached where some or all of these needs will no longer be met. With the 25th anniversary of the 1972 agreement with the Kaibab Paiute Indians approaching, the complexity of the situation increases.

The potential for conflict between uses and users can be expected to increase over time as spring flow declines. Furthermore, the very purpose for the creation of the monument eventually may be threatened.

Against this background are arrayed:

1) a paucity of historical data on spring flow prior to the onset of the flow decline;

2) an incomplete understanding of the hydrology of the ground water system feeding the springs;

3) an unknown (though not unknowable) level of ground water use on the Kaibab Paiute Indian Reservation;

4) an incomplete understanding of the effects of well pumping upon the production of the springs;

5) little or no knowledge of the rate of ground water transmission at Pipe Spring;

6) an incomplete technical understanding of the Sevier fault; and

7) uncertainty as to the areal extent of the decline in spring flow.

Before any strategy can be developed to protect monument resources and the needs of the other two users, at least some of the above data gaps need to be filled. This will require the initiation of a field study as soon as practicable. Such a study should alleviate a portion of the existing uncertainty and allow corrective actions which have a reasonable chance for success.

The extent of the study will depend upon the requirements of management. Due to the complex heterogeneity of the system, a substantial uncertainty will attend the study results. Uncertainty can be minimized but the difficulty and the cost to achieve this will vary inversely with the level of acceptable residual uncertainty.

For example, it would be desirable to know the approximate level of "natural flow" (the flow which would occur without the effects of natural or man-caused changes in the aquifer). One way to determine the "natural flow" would be to eliminate the effects of "unnatural" discharge from the springs' ground water system. This would mean shutting down all wells which may affect spring flow at Pipe Spring NM. Although this would be a simplistic and direct

approach to answering the question, it would be a complex and costly endeavor. Furthermore, it would be difficult to accomplish in light of the dependence of the Kaibab Paiute Indians and the Village of Moccasin upon water coming from wells along the Sevier fault.

An indirect approach to answering the same question would be to find other springs along the Sevier fault and in the same general area of recharge that are not declining in the manner of Pipe Spring. This method would, however, still take some time and require collection of additional supportive data.

In any case, the cause of the spring flow decline must be determined before any effective management strategy can be developed.

## Alternative Study Approaches

Following are selected alternatives for determining the cause of spring flow decline. They are offered for management's consideration and admittedly are not exhaustive.

Alternative Approach #1.

Drill a series of ground water observation wells, install long-term monitoring systems on these and other wells, establish precipitation stations where needed, and monitor all existing uses.

Advantages: This approach will provide a reasonably accurate representation of the aquifer and its function, along with the role of the Sevier fault, and will allow development of input-output relations (i.e., a mass balance).

Disadvantages: While having low uncertainty, this approach is very costly and time consuming. The logistics of finding places to drill wells and getting permission, etc., may be prohibitive.

Alternative Approach #2.

Using continuous recording "data loggers", collect long-term data on ground water from: 1) the NPS-Kaibab well; 2) an observation well in the Navajo aquifer near the Sevier fault; 3) Moccasin Springs; and 4) Pipe Spring. Collect precipitation data in the Moccasin area.

Advantages: Data will be made available where, currently, no comprehensive data on the ground water budget for the Navajo aquifer exists. This data, when evaluated, may point to some hitherto unknown but subsequently obvious cause of the problem.

Disadvantages: This approach may not yield conclusive results before it is too late to arrest the decline in spring flow.

Alternative Approach #3.

Do not collect any additional data, just seek additional sources of water to substitute for the tribal and village wells in the Navajo Sandstone aquifer adjacent to the Sevier fault.

Advantages: The discovery of an alternative plentiful source of potable water near the monument would enable the NPS to bargain with the tribe and village of Moccasin over the use of their wells along the Sevier fault. This effort could be accomplished within one year.

Disadvantages: Although not all the hydrologic options for drilling a new high-yield well have been explored, the most promising option -- a deep test of the Shinarump conglomerate in the area west of the Sevier fault -- has some decided risks. The most significant risk is the chemical quality of deep water in this formation which has a reputation for a high dissolved-solids concentration and a high sulfate content, either of which would render the water unfit for domestic or irrigation use. Finding an adequate quantity of water may be less difficult than finding adequate quality of water. Furthermore, the potential for an adverse effect at the springs, while small, does exist.

Alternative #4.

Initiate the data collection effort described in alternative #2 and seek alternate water sources as described for alternative #3.

Advantages: This alternative entails less uncertainty than alternatives #2 and #3 in addition to the advantages already described for these alternatives.

Disadvantages: This alternative increases the costs above those of either alternative #2 or #3, but is still likely to have higher uncertainty than alternative #1.

We recommend Alternative #4.

V. CONCLUSIONS

From the foregoing, it appears that management faces a difficult decision at Pipe Spring NM. Furthermore, time is of the essence and solid data upon which a suitable strategy may be founded is largely unavailable.

Our initial analysis indicates the decline in spring flow is real rather than apparent and is the result of man's influence rather than climatological factors. A determination of the nature and extent of the operative factors seems to be required before any reasonable strategy with possibilities of effect may be initiated.

A statement of the obvious may be warranted at this point; if the NPS finds itself in any form of litigation (water rights or Tort claim), an adequate analysis based upon good data would be helpful.

VI. LITERATURE CITED

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Cordova, R.M., 1981. Ground-Water Conditions in the Upper Virgin River and Kanab Creek Basins Area, Utah, with Emphasis on the Navajo Sandstone. Utah Dept. of Nat. Res. Tech. Publication No. 70. 87 p.

Written Communication from Garkane Power Assn., Inc., 6/6/86, Re: kWh history for well pumps in the Moccasin area, Arizona.

Charles W. Pellee

Stanley L. Ponce

September 21, 1990

L54(479)
PISP/Water Rights

Memorandum

To: Superintendent, Pipe Spring National Monument

From: Chief, Water Resources Division

Subject: Response to Urgent Request for Assistance

This memorandum outlines proposed actions by the Water Resources Division in response to issues identified in your memorandum dated August 8, 1990.

Issue #1 On August 23, 1990, Rick Inglis made a site visit to Pipe Springs National Monument (PISP) to determine if on-site factors may be contributing to the spring flow decline. Additionally, he collected data logger records for the new monitoring well. Rick has been in travel status since that visit and will prepare an assessment when he returns to the office.

Issue #2 The 1972 water distribution agreement is between the National Park Service and the Kaibab Paiute Indians, therefore, it does not bind the local Cattleman's Association. There is documentation of an agreement in 1933 that splits water from pipe springs equally among the NPS, Tribe, and Cattlemen. Neither the 1933 nor the 1972 agreements are recorded with the State of Arizona.

The 1972 agreement allows the Tribe 7,884,000 gallons of water per year, or 15 gallons per minute (gpm) continuous pumping from the well. Additionally, the Tribe is allowed one gpm from Pipe Springs. Usage of seven gpm from the well would not violate the agreement. In point of fact, the agreement guarantees 15 gpm to the Tribe. It states that "In the event rated production of the well becomes less than 15 gallons per minute, the deficit of the amount agreed to be furnished by the Service to the Tribe shall be made available to the Tribe from Pipe Springs." Apparently, those who framed the agreement failed to consider the possibility of reduced spring flow due to changes in the hydrogeology or interference from the well described in the agreement or other wells. The agreement grants to the NPS the Tribe's allotment (one third) of water from the spring and is structured such that the NPS carries any burden of spring flow reductions. It could be argued that withdrawals from the tribe's well should be reduced because they may be depleting spring flow, however, the agreement would require NPS to make up the reduced amount of withdrawal with water from Pipe Springs.

We cannot take any action until we get technically sound evidence that other water users are impacting spring flow. The WRD's spring flow decline project currently underway is designed to determine if ground water pumping in the vicinity of PISP is causing the decline of spring flow. Because the 1972 agreement has worked against NPS interests due to declining spring flow, we recommend that, if possible, the NPS pursue a significantly modified agreement for the future.

The Cattleman's Association, according to the 1933 agreement, is only entitled to one third of the spring flow. Reduced spring flow would limit the Cattleman's Association water allotment, although this agreement is not recognized under State water law. However, in view of the physical setting of the Cattlemen's water source at tunnel springs, a reduction in their withdrawal would do little or nothing to help main springs. This, of course, assumes no pipeline and pump system to artificially deliver the water uphill.

Please forward copies of the Cattleman's Association water use records to the Water Rights Branch if you would like us to prepare correspondence for your consideration.

Issue #3 You and region staff have kept our office apprised of the status of the hazardous waste incinerator proposal. With respect to water rights, the avenue of protecting PISP water resource values will depend upon the basis of entitlement and source of water proposed for the incinerator. While your observations about limited water supplies are accurate, we cannot take protective action until one of three things occurs, 1) water is appropriated for use at the incinerator, 2) an EIS is prepared to consider the impacts of developing an incinerator, or 3) an application to appropriate water is filed with the State of Arizona. Please continue to send us information concerning the status of the incinerator, particularly early warnings concerning any of the three events described above that would trigger action on our part.

Stanley L. Ponce

cc: ZION - Superintendent
RMR - Hermance
SOL - Swan
479 - Pettee, Inglis

FNP:CPETTEE:jt:(303)221-8321:09/21/90:WANG ID #654

# United States Department of the Interior

NATIONAL PARK SERVICE
Pipe Spring National Monument
Moccasin, Arizona 86022

IN REPLY REFER TO:




L54 (PISP-S) (Zion-S)

August 8, 1990

Memorandum

To: Chief, Water Resources Division

From: Superintendent, Pipe Spring National Monument

Through: Superintendent, Zion National Park *WH 8/13*

Subject: Urgent Request for Assistance

Pipe Spring National Monument is presently facing three critical water resource issues that require your attention and assistance.

Issue #1. Decreased spring flow from Historic Spring.

It was noted by my personal observation that on July 31, 1990 there had been a noticeable decrease in the rate of flowing spring water from the historical spring beneath Winsor Castle. It was this spring that allowed pioneers to settle here in 1863.
A check in the parks monthly spring flow rates show that this spring was flowing at 3.57 gpm on May 1, 1990, and at 2.59 gpm on August 1, 1990. The parks staff made a physical exam of the springs piping and found no blockage or other possible cause for the decreased flow.

You will recall that your division has been conducting studies on the spring flow rates here at Pipe Spring for the past three years. We now have the situation where this historical spring may dry up this summer, and we need to fully understand what has happened to the spring, and are there measures that may be taken to extend the life of this spring, or do we allow the spring to go dry?

WDR * We are requesting that immediate action be taken to investigate the reasons for this decrease in spring flow and to better understand the geohydrology of the area.

Issue #2. Apparent water-rights violation

As part of the Secretaries Water Agreement of 1970, the local Cattleman's Association is entitled to 1/3 of the spring flow from Pipe Spring and the Kaibab-Paiute Indians are entitled to 1gpm of Pipe Spring water. Currently both groups are taking excess amounts of water. The Cattleman's Association are receiving the total amount of spring flow from Tunnel Spring, about 9 to 11 gpm, while the total combined spring flow from all springs is averaging about 21 gpm. The Paiute Indian Tribe is presently using about 7 gpm of well water.

WEB

We at the park level do not have the depth of knowledge to address these two groups regarding apparent water-rights violations. We would welcome your investigation of this issue and any subsequent recommendations that you would make.

Issue #3. Hazardous Waste Incinerator.

It appears that the Kaibab-Paiute Indian Tribe and Waste-Tech Services are just about to sign a contract agreement that will lead toward Waste-Tech placing a 100,000 gallon per year, waste incinerator on the reservation.

WRD

The park does not know how to address this issue in regard to the other 2 issues identified in this memorandum. We apparently have a historic spring running dry, violations to existing water agreements and the timing of placing an incinerator close to the monument does not present an optimistic view for the limited water resources of this area.

We welcome your immediate intervention into these issues.

Gary M. Hasty

CC:Regional Director:RMR-D

Charles W. Pett

Owen Williams

Stanley L. Ponc

June 26, 1989

L54(479)
RMR/PISP Water Rights

Memorandum

To: Regional Director, Rocky Mountain Region
Attention: Homer Rouse
Superintendent, Zion National Park
Unit Manager, Pipe Spring National Monument

From: Chief, Water Resources Division

Subject: Assessment of the Decline in Spring Flow at Pipe Spring National Monument

This memorandum is a followup to telephone conversations with Ron Hermance (Rocky Mountain Region Coordinator), Harold Grafe (Zion National Park Superintendent), and Gary Hasty (Pipe Spring National Monument (PISP) Manager) by Chuck Pettee, of my staff, on June 7 and 8, 1989, concerning spring flow decline at PISP.

An evaluation of this issue was made by the Water Resources Division (WRD) in 1986. That evaluation concluded that the cause of spring flow decline should be assessed before formulating a management strategy. Pursuant to this conclusion, alternatives were presented for gathering data to determine the cause of decline. The alternative selected involved monitoring existing springs and water wells.

WRD staff have been monitoring existing springs and water wells since that decision was made, including a well to the north of PISP that is close to the area where a large amount of ground water is being withdrawn. An assessment of this data is in preparation. However, preliminary indications reveal that the existing monitoring system has not provided the data necessary to determine the cause of the decline in spring flow. Additionally, the well to the north of PISP (the primary background ground water level observation point) has been pumped, thus, compromising its value for background water level observations.

The assessment, when completed, will identify the need to continue existing monitoring sites, replace the primary observation well (the well noted above), and install additional wells in locations that will allow a determination of whether or not the cause of spring flow decline is external to the monument area. We feel that the above noted need for additional wells constitutes a change of direction from the originally selected alternative to a more intensive study. This assessment is currently in the review stage and should be available for management consideration by the end of this summer.

The WRD has set aside $10,000 of Water Rights monies in the FY-89 budget, initially to replace the observation well. While developing the contract for this one well, it became apparent that up to three well installations may be possible with the $10,000. The use of three wells would accomplish the needed increased monitoring intensity. All of the wells would be located on Indian lands and the Kaibab-Paiute Tribe has given their written permission to allow the National Park Service to install and monitor three wells.

Since we have the permission of the Tribe, the money available, and your verbal approval, we have prepared the well drilling and construction contract so that it can be let this year. This constitutes written confirmation that I have authorized the expenditure of $10,000 for the placement of up to three wells in locations that will enable a determination as identified in paragraph four of this memorandum. If you have reconsidered your response, let me know and the contract can be stopped. If I do not hear from you, we will proceed with the contract as planned and have the written assessment available for your consideration as soon as possible.

If you have any questions, please call me or Dean Williams at (303) 221-8305 or (303) 221-8321, respectively.

William L. Jackson

cc: [illegible] - Hermanns
Zion - Hays
WASO - Jackson, Inglis, Worrell

PMP:CPETTEE:jr:221-8321:06/16/89:WANG #553

Charles W. Pe
Owen Williams
Richard R. Inglis, RRS
William L. Jack
Stanley L. Por

June 16, 1989

L54(479)
RMR/PISP Water Rights

Memorandum

To: Associate Regional Director for Park Operations, RMR
Superintendent, Zion National Park
Unit Manager, Pipe Spring National Monument

From: Chief, Water Resources Division

Subject: Assessment of the Decline in Spring Flow at Pipe Spring National Monument

This memorandum is a followup to telephone conversations between you and Chuck Patton, of my staff, on June 7 and 8, 1989, concerning spring flow decline at Pipe Spring National Monument (PISP).

An evaluation of this issue was made by the Water Resources Division (WRD) in 1986. That evaluation concluded that the cause of spring flow decline should be assessed before formulating a management strategy. Pursuant to this conclusion, alternatives were presented for gathering data to determine the cause of decline. The alternative selected involved monitoring existing springs and water wells.

WRD staff have been monitoring existing springs and water wells since that decision was made, including a well to the north of PISP that is close to the area where a large amount of ground water is being withdrawn. An assessment of this data is in preparation. However, preliminary indications reveal that the existing monitoring system has not provided the data necessary to determine the cause of the decline in spring flow. Additionally, the well to the north of PISP (the primary background ground water level observation point) has been pumped, thus, compromising its value for background water level observations.

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Since we have the permission of the Tribe, the money available, and your verbal approval, we have prepared the well drilling and construction contract so that it can be let this year. This constitutes written confirmation that I have authorized the expenditure of $10,000 for the placement of up to three wells in locations that will enable a determination as identified in paragraph four of this memorandum. If you have reconsidered your response, let me know and the contract can be stopped. If I do not hear from you, we will proceed with the contract as planned and have the written assessment available for your consideration as soon as possible.

If you have any questions, please call me or Owen Williams at (303) 221-8305 or (303) 221-8301, respectively.

cc: RMR - Hermance
Zion - Hays
WASO - Jackson, Inglis, Worrell

FNP:CPETTEE:jr:221-8321:06/16/89:WANG #553

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

# *Memorandum*

TO : L-54 Water Files, Zion, Water Resource Division DATE: 10/29/87
RMR/ME

FROM : Doug Dewitz, Maintenance Mechanic P.I.S.P.

SUBJECT: Use of water allotments at Pipe Spring National Monument; Decreasing flow concerns; water monitoring project, Fort Collins Water Resource Division.

In talking with John Jeffredo of the Soil Conservation Service office in Fredonia, I was informed that one of the cattlemen who draw water from Pipe Spring has applied for some sort of permission to double the length of the existing line. One McKay Heaton may also have applied for federal aid in constructing this extension.

As I understand the existing line of 18,000' will be doubled to approximately 36,000'.

In that we are monitoring a decreasing flow of pipe Spring we question any increased demand on this source. The aquifer is also being tapped by residents of Moccasin, Az. with a new well currently being developed.

As I understand, the cattlemen show the only patents listed with the state of Arizona on water rights.

At this time we feel we must address the following:
Our definitive water rights
Our water requirements for the Monument for the next 20-50 years
Any further development of demand on the Pipe Spring Water source.
Any grants of Federal aid to any one desiring to appropriate water, especially form Pipe Spring.

Our question in this matter is; if we allow the cattlemen to expend time and money to further the development of Pipe Spring waters to be used for stock watering purposes and then shortly thereafter curtail the amount they are currently utilizing per the 1/3 water agreement; will we be liable for any professed loss of earning potential by the cattlemen.

5010-106

*Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan*

# United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO:

L54 (479)
PISP/General

18 DEC 1984

Memorandum

To: Chief, Water Rights Unit

From: Hydrologist, Water Services Unit

Subject: Pipe Spring National Monument - Water Rights Status

As requested, I have researched the water rights status of Pipe Spring, Pipe Spring National Monument. Pipe Spring was proclaimed a national monument by President Warren G. Harding on May 31, 1923. The monument consists of 40 acres purchased from Charles Heaton for $4,000 on April 28, 1924. In the proclamation (attachment 1) it is stated that the lands will be administered by the National Park Service "Provided that in the administration of this Monument, the Indians of the Kaibab Reservation, shall have the privilege of utilizing waters from Pipe Spring for irrigation, stock watering, and other purposes, under regulations to be prescribed by the Secretary of the Interior." Regulations for the division of waters of Pipe Springs was issued by Assistant Secretary Oscar L. Chapman on November 2, 1933 (attachment 2).

Our records indicate that Pipe Spring consists of two springs; 1) Historic Spring - N36° 33'20"W 1021 ft. from the SE corner of Section 17, T40N, R4W, Gila and Salt River Base and Meridan, and 2) Tunnel Spring - N40° 04'48"W 1014 ft. from the SE corner of Section 17, T40N, R4W, Gila and Salt River Base and Meridan. On June 9, 1924, representatives of the Indian Service (now BIA), National Park Service, and stockmen, met at Pipe Spring and arranged an inter-Departmental agreement (attachment 3), signed by reprsentatives of each interest and giving one-third of the spring flow to each. It should be noted that the "stockmen" use is downstream of the Monument, i.e., their right would also be affected by decreasing flow; and from a historic perspective their use is not in conflict with ours. Our records indicate that a draft April 1937 Application For A Permit with the State of Arizona was not submitted because it was opposed by the Commissioner of Indian Affairs. The draft permit would have been submitted for all parties to the June 9, 1924 agreement and have shown source of appropriation as "Pipe Springs which consists of Historic Spring and Tunnel Spring."

By an April 13, 1972 Agreement (attachment 4) between Kaibab Indians and National Park Service, a well was drilled by the Service on tribal lands, 2 miles north of PISP. It was agreed that this contract would become effective on execution thereof and would extend for a period of twenty-five (25) years with an option for an additional 25 years. The agreement warrants close

reading but basically; (1) grants exclusive use of Pipe Springs to the Service in that the Service provides 7,884,000 gallons of water per year to the tribe from the well, and (2) in the event rated production of the well becomes less than 15 gallons per minute, the deficit of the amount agreed to be furnished by the Service to the tribe shall be made available to the tribe from Pipe Springs.

I could not find a drillers report in our records nor could I find a State of Arizona permit to drill the well on tribal lands (however, the lands are likely reserved lands and the Reservation Doctrine would apply). I believe that the non-active Water Resources files in San Francisco might have further information regarding the drilling of the well and its water rights status. A trip report dated April 2, 1971 and signed by Donald C. Barrett provides a brief resume of the as-built dimensions and hydrologic data of the well; it is reported that the aquifer is artesian and the producing formation is the Navajo Sandstone (perforations are 175 ft. to 205 ft. below land surface). However, USGS reports that the water in the aquifer is under unconfined conditions (results of test drilling near the Pipe Spring National Monument, Mohave County, Arizona, by E. H. McGavock). It is also stated in the USGS memorandum report dated January 1974 that, "The Navajo Sandstone is known to yield from 30 to 100 gpm (110 to 380 l/m) to springs at the Pipe Spring National Monument and at Moccasin . . ." In our records we have two water quality analyses for the well (one analysis in the USGS report and another dated 8/1/78).

As requested by you and discussed with Ron Hermance, RMR, on December 17, 1984 I will prepare an outline/scope of work for a study to address the decreasing flow of Pipe Spring. As you know, I am presently working on Aspenglen Campground Flood Assessment, ROMO, and the Zion National Park Virgin River Water Rights Claim. Therefore, I do not plan to work on this new project until January. At this time I envision the outline including elements such as, 1) preparation of a map showing all water uses in the area, the quantity used, the nature of use, and the source, 2) a search for all available drilling logs to help assess the hydrogeology of the area, 3) a search of water quality records to help identify sources with common aquifers and/or chemical characteristics, 4) classification of wells and springs in the area by producing/source formation, 5) search of precipitation records to develop precipitation history of area, 6) possible identification of principle aquifer recharge area and ground water basin, 7) aquifer test (coordinated with tribe) to determine local aquifer characteristics, 8) search for evidence of other springs in the area having reduced flows, 9) evaluation of existing spring discharge records with recommendations for future data needs, and 10) analysis, conclusions and recommendations as appropriate.

As stated in PISP's Statement for Management, the Monument's springs are on the Sevier Fault and therefore, it is possible that the decreasing flow of Pipe Spring is due to "natural causes", i.e., formational changes resultant of minor earthquakes known to have occurred in the area. Thus, it may also be necessary to research the area's seismic activity over the last twenty years.

William B. Reed

Attachments

cc: 479 - Whittington w/o attach.
Ron Hermance, RMR w/o attach.

12-18-1984: statement of claim of right to use public waters: registry no. 36-67900

ARIZONA STATE LAND DEPARTMENT
1624 West Adams
Phoenix, Arizona 85007

STATEMENT OF CLAIM OF RIGHT TO USE PUBLIC WATERS - STATE OF ARIZONA

Examination Fee $5.00
Map (see instructions)
CLAIM MUST BE SUBMITTED IN DUPLICATE

To be filled in by State Land Department

Registry No. 36-67900
Filed 6/23/78 (Date) at 10:30 A M (Time)

1. Name of Claimant SEE #1 (10 Print Last Name or Name of Co.) (31 First Initial) (32 Middle Initial)

Mocassin Arizona 86022 643-5516
(Address, City, State, Zip) (Phone No.)

2. The waters claimed are used for (33) S

3. The amount of water used annually is 14 AFA = ~~7,300,000~~ 7,358,400 GAL from 1 JAN (Gallons or Acre Feet) (Day) (Month)
to 31 DEC (Day) (Month) each year.

4. The date the water was first used beneficially was (37 Month) 04 (39 Day) 01 (41 Year) 1920

5. The direct source of supply is (44) PIPE SPRING (Source Name) SP (65 Type of Watercourse)
Tributary to NO FLOW AT THIS TIME on the (67 Leave Blank) 02 Watershed.

6. The Point of Diversion (locate on map) is within the (10) SW ¼ (12) SW ¼, Section (14) 17,
of Township (16) 41N, Range (20) 24W, G&SRB&M, in the County of MOHAVE
Number of Points of Diversion (24) 1

NE ¼ NE ¼ SECTION 32 T41N.
SW ¼ NW ¼ SECTION 33 T41N.
NE ¼ SW ¼ SECTION 4 T39N.
SE ¼ SE ¼ SECTION 5 T39N.

7. The Place(s) of Use (locate on map) is in the SE ¼ NW ¼, Section 17 T32N, of
Township (N/S), Range (E/W), G&SRB&M, in the County of MOHAVE
Acres irrigated (27) Number and Kind of Stock (31 Number) 0180 (35 Kind) A
Number of Families (36) Other uses explain on line 14.

8. The water is diverted by Water from spring runs to 5 tanks as
indicated on map the maximum flow is 12 GPM

9. If water is stored, give capacity and name of Reservoir in Acre Feet (41) (Capacity)
(Name)
Height of Dam ft., Area inundated in Acres

10. The Claimed Right to Water was created by the following facts: Water put to
beneficial use prior to 1919 by Johnson & Lucy Hualapai and
has been in continuous use since that time by users
and assignees.
(Attach copies of any documents supporting Claim)

11. The land on which the water is used is owned by F (50)

12. The water is supplemented by other water from the following supply Underground reservoirs

13. Is the water presently being used YES Yes ____ No. If no, date last used ____

14. OWNERS: Norma H. Heaton, Mesquite, Arizona
J. Grant Heaton, Mesquite, Ariz.
Fred E. Heaton, Kanab, Utah
Landell L. Heaton, Fredonia, Az.
Derrill L. Heaton, Mesquite Az.
I. McKay Heaton, Mesquite Az.
Owen H. Johnson, Mesquite, Az.
Rowland Lamb, Orderville, Ut.

STATE OF ARIZONA )
) SS
County of Mohave )

All Owners Listed at #14 Herein being first duly sworn on oath, deposes and states: that the foregoing Statement of Claim is true and correct of their own knowledge except as to any matters stated therein to be on information and belief and as to all such matters so stated They believes the same to be true and correct.

See Attached Signature Sheet
CLAIMANT(S)

Subscribed and sworn to before me this 20th day of June, 1978.

My Commission Expires:
July 5, 1980.

SEAL

Leonard P. Heaton
NOTARY PUBLIC

Water Rights Registration No. 36-67900

June 23, 1978 at 10:30 a.M.

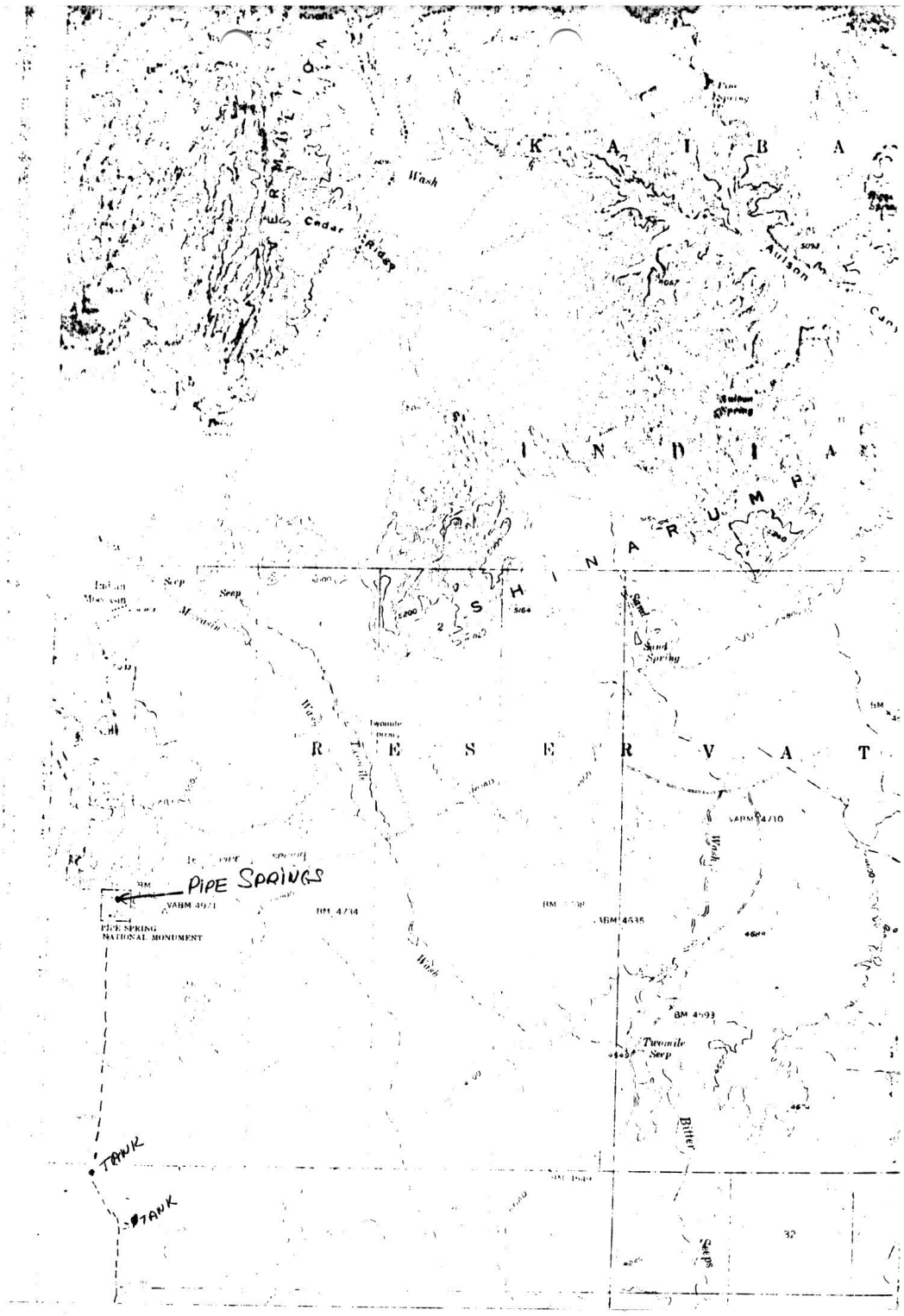
ARS 45-184 "FILING OF CLAIM WITH THE DEPARTMENT NOT DEEMED ADJUDICATION OF RIGHT"

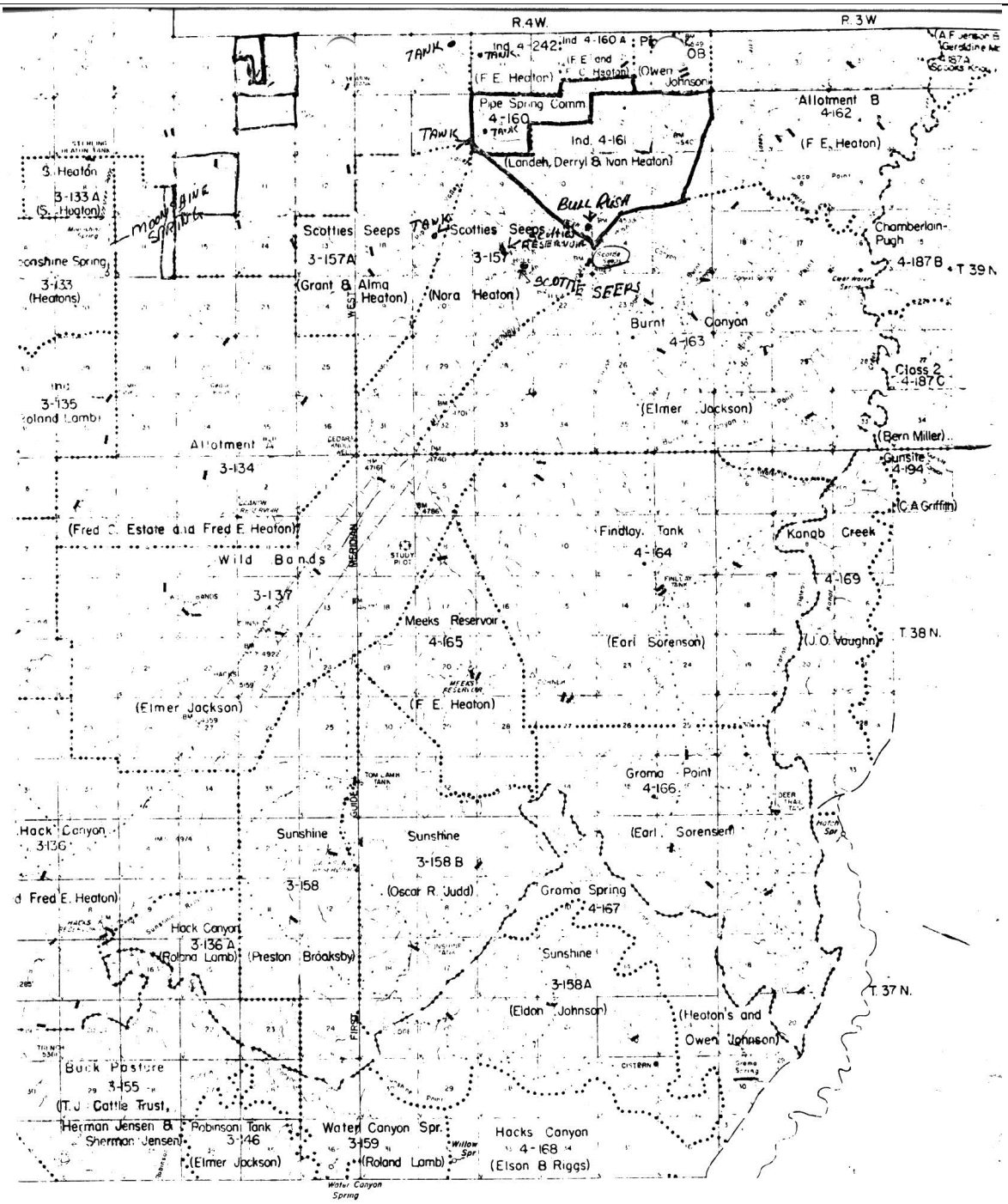
F. C. RYAN, DIRECTOR
WATER RIGHTS DIVISION

STATEMENT OF CLAIM OF RIGHT TO USE PUBLIC
WATERS - STATE OF ARIZONA
SIGNATURE SHEET

FOR PIPE SPRINGS water supply located
in SE ¼ SE ¼ Section 17 Township 40N Range 4W
G & SRB & M in Mohave County, State of Arizona.

Rolland Lamb
Landell Heaton
Owen W Johnson
Nora M. Heaton
F. M. Kay Heaton
Fred E Heaton
Derryll F Heaton
J Grant Heaton


K A I B A
Wash
Cedar Ridge
Allison
I N D I A N
R E S E R V A T
PIPE SPRINGS
VABM 4971
PIPE SPRING
NATIONAL MONUMENT
BM 4734
VABM 4635
BM 4593
Twomile Seep
Bitter
TANK
TANK
Seeps
32


R.4W.
R. 3W
T 39 N.
T 38 N.
T 37 N.
Ind. 4-160 A
Ind. 4-242
(F E. Heaton)
(F E and C. Heaton)
(Owen Johnson)
Pipe Spring Comm. 4-160
Ind. 4-161
(Landeh, Derryl & Ivan Heaton)
Allotment B 4-162
(F E. Heaton)
BULL PASTA
Scotties Seeps
3-157A
3-157
(Grant & Alma Heaton)
(Nora Heaton)
SCOTTIE SEEPS
Burnt Canyon 4-163
(Elmer Jackson)
Chamberlain-Pugh 4-187 B
Class 2 4-187C
(Bern Miller)
Sunsite 4-194
(C A Griffin)
Allotment A 3-134
(Fred C. Estate c/o Fred E. Heaton)
Wild Bands
3-137
Findlay Tank 4-164
Kanab Creek
4-169
Meeks Reservoir 4-165
(Earl Sorenson)
(J. O. Vaughn)
(Elmer Jackson)
(F E. Heaton)
Groma Point 4-166
(Earl Sorensen)
Hack Canyon 3136
Sunshine
Sunshine 3-158 B
(Oscar R Judd)
3-158
Groma Spring 4-167
Hack Canyon 3-136 A
(Roland Lamb)
(Preston Broaksby)
Sunshine 3-158A
(Eldon Johnson)
(Heaton's and Owen Johnson)
Buck Pasture 3-155
(T. J. Cattle Trust, Herman Jensen & Sherman Jensen)
Robinson Tank 3-146
(Elmer Jackson)
Water Canyon Spr. 3-159
(Roland Lamb)
Hacks Canyon 4-168
(Elson B Riggs)
Water Canyon Spring
Moonshine Spring
Sunshine Spring 3-133
(Heatons)
3-135
(Roland Lamb)
3-133 A
(S. Heaton)
S. Heaton
TANK
OB

AFFIDAVIT
OF

Jennie H. Brown

Jennie H. Brown being first duly sworn, deposes and says:

1. She was born August 15, 1904

2. She was born and reared in Moccasin, Arizona and has spent her entire life living in Moccasin.

3. She knows of her own knowledge that the waters of Pipe Spring located in the SE ¼ SE section 17 Township 40N Range 4W West G&S.R.B.&M. in Mohave County, Arizona, were used by affiants grandfather and decendants of Moccasin, prior to 1910 and that the successors in interest of the original appropiators are Nora M. Heaton, J. Grant Heaton, Fred E. Heaton Landell J. Heaton, Derryll L. Heaton, I. McKay Heaton, Owen H. Johnson RoLand Lamb

4. To the affiants own knowledge, the said use has never been interrupted or interfered with.

Jennie H. Brown
Affiant: Jennie H. Brown

Subscribed and sworn to before me this 20th day of June 1978.

Leonard P Keaton
Notary Public
Moccasin, Arizona

My commission expires 2/5/1988

AFFIDAVIT
OF

Sterling Heaton

Sterling Heaton being first duly sworn, deposes and says:

1. He was born November 21, 1897

2. He was born and reared in Moccasin, Arizona and has spent his entire life living in Moccasin, or adjacent Fredonia.

3. He knows of his own knowledge that the waters of Pipe Spring located in the SE ¼ SE ¼ section 17 Township 40N Range 4W West G&S.P.B.&M. in Mohave County, Arizona, were used by affiants father and decendants of Moccasin prior to 1910 and that the successors in interest of the original appropiators are Nora M. Heaton, J. Grant Heaton, Fred E. Heaton Landell J. Heaton, Derryll L. Heaton, I. McKay Heaton, Owen H. Johnson RoHand Lamb

4. To the affiants own knowledge, the said use has never been interrupted or interfered with.

Sterling Heaton
Affiant / Sterling Heaton

Subscribed and sworn to before me this 20th day of June 1978.

Leonard P Heaton
Notary Public
Moccasin, Arizona

My commission Expires Jul 5 1980

AFFIDAVIT
OF

Leonard C. Heaton

Leonard C. Heaton being first duly sworn, deposes and says:

1. He was born November 15, 1901

2. He was born and reared in Moccasin, Arizona and has spent his entire life living in Moccasin.

3. He knows of his own knowledge that the waters of Pipe Spring located in the SE ¼ SE ¼ section 17 Township 40N Range 4W West G&S.R.B.&M. in Mohave County, Arizona, were used by affiants grandfather and decendants of Moccasin, prior to 1910 and that the successors in interest of the original appropiators are Nora M. Heaton, J. Grant Heaton, Fred E. Heaton Landell J. Heaton, Derryll L. Heaton, I. McKay Heaton, Owen H. Johnson Rolland Lamb

4. To the affiants own knowledge, the said use has never been interrupted or interfered with.

C. Leonard Heaton
Affiant: C Leonard C. Heaton

Subscribed and sworn to before me this 20th day of June 1978.

Leonard C Heaton
Notary Public
Moccasin, Arizona

My commission expires Feb 5 1980

Rec'd 8/11/70
J Morris 8/12

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
AND
SHADOW MOUNTAIN NATIONAL RECREATION AREA
ESTES PARK, COLORADO 80517

IN REPLY REFER TO:
L54

July 31, 1970

Memorandum

To: Chief, Water Resources Division, WASO

From: Legal Assistant, Water Resources Division, Rocky Mountain

Subject: Water Rights Study - Pipe Spring National Monument

Further study has been made of the status of water rights at the Pipe Spring National Monument and in response to your request of July 22, 1970, the following information and opinion is furnished.

Pipe Spring maintains a flow of approximately 64,000 gallons per day and by agreement the water is equally divided between the Monument, the Indians, and the local ranchers. The Monument uses its full share from May through October and much less during the rest of the year. To date, all or some part of the remaining two-thirds share has been used for stock water by the Indians and local ranchers. This use can only be approximate since no measurement figures are available. However, the important factor appears to be that neither the ranchers nor the Indians have exceeded their respective one-third share at any time since the agreement was made.

The division of the spring water was the result of the withdrawal of certain lands for use as an Indian reservation. At the time the land was withdrawn it was concluded that the water of Pipe Spring either was or became the property of the Indians. On this premise the division of the water was made. However, when the reservation was set aside the Indians took subject to existing vested rights, and it now appears without a doubt that the chain of title of the Monument extends back many years before the creation of the Indian reservation. Included were rights to the water of Pipe Spring.

Obviously sufficient research was not accomplished prior to acquisition of the Monument or negotiation of the water division agreement and certain incorrect assumptions were made. Raymond Geerdes, Area Manager at the Monument, has accomplished a tremendous task in researching deeds in a number of counties and has established an unbroken chain of title which substantiates the above conclusions and the fact that the title to the water of Pipe Spring rightfully rests with the Park Service.

The title to Pipe Spring water, notwithstanding the agreement, was considered important when the Indians started construction of an extensive complex contiguous to the Monument. This complex includes a museum-visitor center, motel with swimming pool, restaurant, service station and service buildings and will require a considerable water supply, obviously exceeding their one-third share of Pipe Spring and, in fact, exceeding the entire flow from Pipe Spring. It is somewhat inconceivable that planning of such a complex would not have included a suitable water supply in the primary planning stages but apparently this was not done. There is some indication that the Indians were led to believe in the early planning stages that the Park Service would drill them a well but I have been unable to substantiate this as an established fact.

There appears to be no question that the Indians need additional water above their one-third share in Pipe Spring to supply the complex described above. The Park Service cannot maintain the Monument on less than their one-third share and with the scarcity of the water in the area it appears certain the local ranchers would not surrender any part of their share of the water. Consequently, it appears that a well is the logical alternative, especially in view of the fact that geological reports have indicated a good possibility of finding water in Two Mile Wash, northeast of the Monument on Paiute tribal lands. The question is who should drill and pay for a well.

There has been some concern expressed recently that the flow of Pipe Spring is decreasing and the Park Service might encounter serious water shortages in the not too distant future. Available records do not substantiate this contention, and in fact indicate practically no decrease in flow over the past several years. Consequently, I cannot understand how the Park Service can justify drilling a well on this basis, except for a back-up system in the unlikely event of failure of Pipe Spring after over 100 years of known flow.

However, if the drilling of a well by the National Park Service can be satisfactorily justified an agreement should be executed to retain the right to a reasonable amount of the water produced in case it is needed in future years. In addition, the agreement should include the surrendering of all right, title, and interest the Indians claim

in Pipe Springs. This would serve to quiet title to the Spring and put the Park Service in a position to negotiate with the ranchers for the remaining one-third interest at some future date.

If I can be of further service on this matter I will be pleased to do so.

William L. Mekeel
William Mekeel

In duplicate

cc:
Chief, OLW, WSC
Director, Southwest Region

80-1-27-70
H. R. Cafg

Original
sent to Morris
1/27/70

L54

January 20, 1970

Memorandum

To: Chief, Division of Water Resources, WASO

From: Legal Assistant, Rocky Mountain National Park

Subject: Water Rights: Pipe Spring National Monument

The following observations are the result of a trip to Pipe Spring National Monument on December 12. I made the trip at the request of Ed Reed while I was investigating water rights at Bryce Canyon National Park.

Pipe Spring maintains a flow of approximately 64,000 gallons per day and by an old agreement the water is equally divided between the Monument, the Indians, and the local ranchers. The Monument uses its full share from May through October and much less during the rest of the year. To date, the remaining 2/3 share has been used for stock water by the Indians and local ranchers. Recently, however, the Indians have started construction on what eventually will be quite an extensive complex including a museum-visitor center (approximately 90% complete) motel with swimming pool, restaurant, service station, and service buildings. This development will require a considerable water supply, obviously far exceeding the 1/3 share of Pipe Spring and heavy use will be encountered at the same time that the Monument use will be at a maximum.

Consequently, it appears that in order to establish an adequate water supply, the Indians will need most of the supply of Pipe Spring (the agreement not withstanding), a well supply, or extensive storage facilities. I could not ascertain any planning for the latter two possibilities so it appears they will expect a larger share of the spring.

The division of the Spring water, originally was the result of withdrawal of certain lands for an Indian Reservation. When the land was withdrawn it was concluded that the water of Pipe Spring became the property of the Indians and by agreement 1/3 of the water was granted to the Park Service and 1/3 to local ranchers. However, when the reservation was

set aside, the Indians took subject to existing vested rights and it now appears that the chain of title of the Monument extended back many years before creation of the Indian Reservation. Included were rights to the water of Pipe Spring. Obviously, sufficient research was not accomplished prior to acquisition of the Monument or negotiation of the agreement which divided the water to establish the title of the water and certain incorrect assumptions were made. Raymond Geerdes, Area Manager at the Monument, has accomplished a tremendous task in researching deeds in a number of counties and has established an almost unbroken chain of title which substantiates the above conclusion.

The above is important from the standpoint of Park Service claim to water from Pipe Spring. It appears 1/3 of the total water of Pipe Spring will be sufficient for Park Service use for a number of years in the future. However, the Indians may exert their right to more than their 1/3 share of the water, not withstanding the agreement, and base their claim on full ownership of the water from the time the reservation was set aside. Consequently, the Park Service should establish their legal right to the water as outlined above in order to be in a good negotiating position in the event the present share of the water is endangered.

U. S. Geological Survey has done some reconnaissance work in the area relative to the drilling of a production well. Apparently the work was done at the request of the Park Service's Southwest Region. The Indians are apparently under the impression that the Park Service will provide sufficient water for the Monument as well as their commercial comples and haven't made any alternate plans for a water supply; i. e., their own well or extensive storage facilities.

The problem is further complicated by a contemplated land exchange whereby the Bureau of Land Management will provide 500 acres of grazing land in exchange for an unsettled number of acres to increase the size of the Monument to include some Indian ruins and a Powell historical site. I am not sure of the status of the negotiation nor the exact details thereof, but have a feeling that somewhere along the line the water supply may have at least been implied as a "too boot" to land the exchange.

At this point I would suggest that a further study be made of the legal status of Pipe Spring so that the exact legal position of the Park Service is known prior to any further negotiations with the Indians.

It should also be established, to what degree, if any, the drilling of a well figures in the planned land exchange.

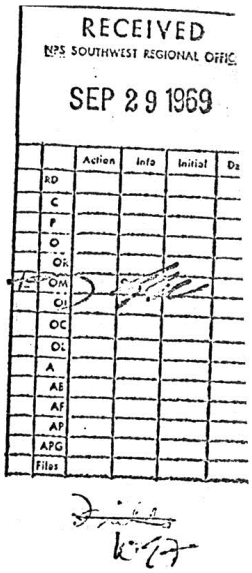
I will continue to work along the line indicated above unless directed differently by you.

William L. Mekeel

William L. Mekeel

Jerry Wituski, D.S.C.

from Bill Fields




Memorandum

To: Regional Director, Southwest Region

From: General Superintendent, Southern Utah Group

Subject: Water Matters, Pipe Spring

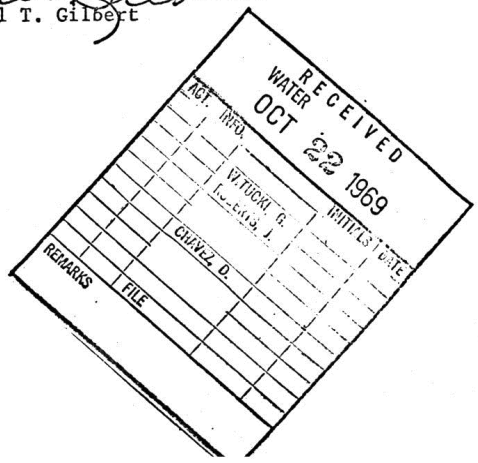
Enclosed is copy of a letter to me from BIA Assistant Area Director Lassiter concerning the use of Pipe Spring water by the Paiute Indians in their new office building near Pipe Spring. Mr. Lassiter was one of the men who was present at the September 11 meeting at the Monument.

Karl T. Gilbert

Karl T. Gilbert

Enclosure

cc:
Mgmt. Asst., Pipe Spring, w/copy inc.



09-22-1969: letter to superintendent, zion national park from area director regarding water supply to the kaibab-paiute tribal office

L54

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
Phoenix Area Office
P.O. Box 7007
Phoenix, Arizona 85011

IN REPLY REFER TO:
Plant Management

| | | |
|---|---|---|
| V | Superintendent | |
| V | Secretary 9/25 | |
| | Administration | |
| | Opr. & Maint. | |
| | Plant Management | |
| | Interpretation | |
| COPY SENT: | | |
| | All Divisions | |
| | Zion | |
| | Bryce Canyon | |
| | Capitol Reef | |
| | Cedar Breaks | |
| | Pipe Spring | |

September 22, 1969

Mr. Karl T. Gilbert
Superintendent, Zion National Park
P. O. Box 749
Cedar City, Utah 84720

Dear Mr. Gilbert:

This is in regard to the meeting on September 11, 1969 at Pipe Springs National Monument regarding water supply to the Kaibab-Paiute Tribal office building located adjacent to National Park Service property.

In accordance with terms of our verbal agreement, plans have been drawn up to tap the existing two inch supply line outside the Park boundary fence. Excess water not being utilized for the tribal building will continue to overflow into the stock water pond.

We have received a copy of the water analysis from Mr. William E. Fields, National Park Service. Biological tests well be requested from U.S. Public Health Service to determine the advisability of chlorination.

I wish to take this opportunity to express my appreciation for the courtesies shown to members of the Bureau of Indian Affairs at the meeting. It is indeed a pleasure to realize that problems of mutual concern can be resolved so readily.

Sincerely yours,

Albert Laviteo

ASSISTANT Area Director

RECEIVED
SEP 25 1969
SOUTHERN UTAH GROUP

L54-CBL

WR 60a

March 30, 1959

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Master Plan, Pipe Springs

Mr. Hall's memorandum of March 3 to the Chief, WODC, is correct in stating that the waters of the springs are divided one-third each, to the Indian Reservation, Monument, and the stockmen. This division was made by regulations of November 2, 1933, signed by the Assistant Secretary, of which a copy is in Docket 1. WODC was supplied with copy of the docket on April 24, 1957.

The method of distribution to stockmen has never been explained, but wasteful overflow of watering troughs would be contrary to the water laws. I also believe that only about one family uses the Indian quota. That use may also be wasteful, but I believe the Indian rights would be paramount.

I believe that the division of water was based on no sound analysis of beneficial use or future needs. I believe that NPS development is now restricted by the one third quota, but the Secretary has authority to negotiate new agreements and issue new regulations. It might be well justified to make a map of the complete water system and uses and analysis of water uses by each party when convenient, to determine whether there is waste of water. Such an investigation should be made for factual data, without stirring up the other water claimants.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Pipe Springs
Chief, WODC
Mr. Dunn

AvVDunn:lct

05-31-1943: memorandum to regional director, region three from hydraulic engineer regarding mr. folson's decision with regard to

May 31, 1943.

MEMORANDUM for the Regional Director, Region Three.

Reference is made to your memorandum to the Superintendent of Zion of May 27 with regard to Mr. Tolson's decision with regard to water rights at Pipe Springs.

An application to appropriate water in Arizona provides for names and addresses of other water claimants, the land owner and those familiar with the source of supply. If the stockmen should file a claim with the State Water Commissioner and answer these questions properly, the Park Service and Indian Service would be advised. However, it is quite possible that such claimant would merely refer to the United States and that the notice would be sent to either the Park Service or Indian Service, depending on the State Water Commissioner's familiarity with local conditions.

I have considered the desirability of advising Mr. Wanslee that we were interested in the springs, but if Mr. Tolson does not wish to make a federal filing we should not do so until we have a proper argument against making the filing in case the Commissioner demands one. For this reason, I think it might be well now merely to be sure that the local Indian Agent will notify our bureau if he is notified of such private claim.

I also feel that the Park Service could use more of the total flow than its third without detriment to the others, so long as the pipe capacities of the Indian Service and stockmen are what they are. I gather that the custodian would like to do so. If you can show the urgency for more than one-third of the water we should make more complete profiles of those two pipe lines and determine exactly what their capacities are. Since Mr. Tolson rules against immediate changes in agreements as well as filings, such surveys can be put on the "on-the-shelf" program for post-war action.

A. van V. Dunn,
Hydraulic Engineer.

AvVD:SH

FILE COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION THREE
SANTA FE, NEW MEXICO

MAY 31 1943

May 27, 1943.

MEMORANDUM for the Superintendent,
Zion and Bryce Canyon National Parks.

In response to my memorandum of May 14, regarding the water rights at Pipe Spring National Monument, the following information has just been received from Acting Director Tolson, under date of May 22:

"This refers to the memorandum of May 14 from Acting Associate Regional Director Richey, enclosing copies of memoranda relating to the water situation at Pipe Spring National Monument.

"So far as we are informed, the existing tri-party agreement and Departmental regulations for the division of the water are meeting the needs of the monument adequately, and there is no suggestion that the other parties thereto are dissatisfied with the arrangement. While Mr. Dunn has suggested there is a potential danger of appropriation by private interests, no evidence has been submitted indicating that any such action is imminent.

"In the circumstances, we consider it inadvisable to initiate any action affecting the present arrangement."

Mr. Tolson's memorandum showed that copies were intended for Attorney Johnson and Engineer Dunn. However, they were not enclosed with the original and it is, therefore, assumed that they were sent direct. A copy of this memorandum is being supplied to them in case they did not receive the information.

CHARLES A. RICHEY

Charles A. Richey,
Acting Regional Director.

cc: Attorney Johnson, Water Rights
Section, Region Four.

MAY 27 1943
ROUTING
5/27 Okay!!
FILE

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
CHICAGO, ILLINOIS

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

May 22, 1943.

MEMORANDUM for the Regional Director, Region Three.

This refers to the memorandum of May 14 from Acting Associate Regional Director Richey, enclosing copies of memoranda relating to the water situation at Pipe Spring National Monument.

So far as we are informed, the existing tri-party agreement and Departmental regulations for the division of the water are meeting the needs of the monument adequately, and there is no suggestion that the other parties thereto are dissatisfied with the arrangement. While Mr. Dunn has suggested there is a potential danger of appropriation by private interests, no evidence has been submitted indicating that any such action is imminent.

In the circumstances, we consider it inadvisable to initiate any action affecting the present arrangement.

(SGD) Hillory A. Tolson
Acting Director.

cc: Attorney Johnson, Region Four.
Engineer Dunn, Region Four

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
WATER RIGHTS SECTION
SAN FRANCISCO, CALIF.
601 Sheldon Building

April 22, 1943.

MEMORANDUM for Attorney Albert L. Johnson.

Reference is made to Mr. Richey's memorandum of March 10 and Mr. Franke's of March 20, 1943, with regard to Pipe Springs water rights.

Since the matter involves past decisions by the Secretary of the Interior, Solicitor of the Department, Commissioner of Indian Affairs, Director of the National Park Service, and Commissioner of the General Land Office, it does not seem wise for Mr. Franke to bring the matter up with local representatives of the Kaibab Indian Reservation at this time, as he has suggested. Neither should it be discussed with the local stockmen.

In my memorandum of February 6, 1943, to you and my discussion with Mr. Richey and Mr. Franke in March, I was most interested in obtaining reconsideration of the problem as to whether the Park Service needed to file a water right application to obtain a proper right; and if not, to obtain a definition of such existing right as we are willing to accept as final.

I offer the following analysis of conditions.

Some water use started on the monument area about 1863 while the State was still a territory. It seems to have continued fairly consistently to date. Any water rights established between 1863 and February 14, 1912, when Arizona was admitted to the Union, were in accordance with the territorial water code. I know nothing about this code, but believe it probably recognized rights based on physical diversion and use without requirements for filing.

We know that a system of county filings was used in the State between 1912 and 1919 when the present appropriative water code was adopted. In some States I have found old territorial filings in the county records. So far as I know, no one has investigated the county records. It might pay to look up county claims under the various names on the tri-party agreement of 1924 and the names of others historically known to have occupied the area. A filing by Daniel Seegmiller in about 1888 should be checked.

Quoting from a memorandum from the Commissioner of the General Land Office to Mr. Cammerer of May 23, 1923, part of the township was withdrawn by the Secretary on October 16, 1907, for use of Kaibab and other Indians. I gather that the monument area was part of this withdrawal, but it is

(4/30/43: 5 copies mailed Region Three for Region Three, Director (2), Coord. Supt. Franke, and Act. Custodian Heaton.)

not clear. This was during territorial administration. Apparently the monument area was occupied by Seegmiller or his successors at this time, but my records are not clear.

If the monument was part of the Indian Reservation the case of Winters et al vs. United States (207 U.S. 564) could easily apply. The case must have been settled in Montana courts before the Reservation was established because the appealed case was decided on January 6, 1908. It is particularly interesting to note that the Fort Belknap Reservation, involved, was established while Montana was a territory just as the Kaibab Reservation was established while Arizona was in the same status.

If we acknowledge that the Indians acquired a right to waters on their reservation we do not know yet whether the monument was part of this initial reservation or whether the Indians actually used water from Pipe Springs at that time. There is other water on the present Indian Reservation according to our files.

The aforesaid memorandum of May 23, 1923, further advises that all land within one quarter mile of Pipe Springs was withdrawn as Public Water Reserve No. 34 on April 17, 1916, and adjusted to cover S½ SE¼ Sec. 17, T. 40 N., R. 4 W., G. & S.R. B. & M., on May 31, 1922. This was after Arizona became a State, but before it adopted its present water code.

If we accept the Solicitor's opinion of June 15, 1942, to the effect that establishment of national monuments cancels water reserves we can also probably assume that no water reserve would have been necessary in 1916 if the area was already an Indian Reservation -- unless the water reserve was established to limit Indian use in the interest of the white public. At all events, using the Solicitor's opinion of June 15, 1942, would not the withdrawal of 1916 cancel any portion of the Indian Reservation within one-quarter mile of Pipe Springs?

The memorandum of May 23, 1923, next shows that T. 40 N., R. 4 W., G. & S.R. B. & M., was withdrawn for Kaibab Indians on July 17, 1917. This seems to cancel the water reserve but, as previously stated, the Secretary adjusted the water reserve to cover S½ SE¼ Sec. 17 by interpretation of May 31, 1922. If it takes an Executive Order of the President to establish either water reserve or Indian Reservation, the Secretary's interpretation might be meaningless.

The memorandum of May 23, 1923, also shows that after the survey of the township Charles C. Heaton and the Pipe Springs L. S. Co. filed an application to locate Valentine scrip on the SE¼ SE¼ Sec. 17 (the present monument) as of March 3, 1920. This was rejected April 15, 1920, as conflicting with the water withdrawal. Note that this was between the creation of the Indian Reservation in 1917 and the interpretation of the water withdrawal of 1922.



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By proclamation of May 31, 1923, the SE¼ SE¼ Sec. 17, T. 40 N., R. 4 W., G. & S.R. B. & M. was established as Pipe Spring National Monument, being the east half of the amended water withdrawal of 1922, a part of the Indian Reservation created in 1917 as T. 40 N., R. 4 W., G. & S.R. B. & M. Again the Solicitor's opinion of June 15, 1942, seems to imply that the creation of the monument nullifies any water withdrawal or Indian Reservation covering the same area.

The memorandum of May 23, 1923, advises that Mr. Heaton appealed the nullification of his application for the SE¼ SE¼ Section 17 on December 10, 1920, but that the record had not been returned by the Secretary by May 23, 1923. From Mr. Demaray's letter to Joseph E. Taylor of May 21, 1937, we find that local people interested in the monument purchased the Heaton claim for $5000 and that he executed a quitclaim deed to the United States on April 28, 1924, and withdrew the application.

Regardless of past claims, all title to the monument area seems to be in the name of the United States and under the supervision of the National Park Service at this time.

As previously stated, subject to check of the Mohave County records, any water rights existing when the present water code was adopted in 1919 were probably manifest only in use under territorial code. I wonder if the Arizona code of 1919 was subject to vested rights. I think the matter needs further investigation.

By letter of January 29, 1937, State Water Commissioner Edwin T. Stewart advised you that: "We have searched our records and find no filing in T. 40 N., R. 4 W., G. & S.R. B. & M." We know that neither Park nor Indian Service has filed any since that date, and I am reasonably confident that the stockmen have relied on the tri-party agreement and made no filing.

On June 9, 1924, an agreement for the division of waters of Pipe Springs was signed by the Director of the National Park Service, Commissioner of the Indian Service, and thirteen local stockmen, including Heaton Brothers. The water was divided one-third to each bureau and one-third to the stockmen. On November 2, 1933, Assistant Secretary of the Interior, Oscar L. Chapman signed "Regulations for the Division of the Waters of Pipe Springs," which confirmed the tri-party agreement. The Assistant Secretary acted under authority vested in him by Presidential Proclamation of May 31, 1933. The closing item specifies:

> "6. Nothing herein shall be construed as in any way affecting or determining the respective water rights of the parties herein referred to. The right is reserved to modify, amend or change these regulations as conditions may warrant."



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The National Park Service and the Office of Indian Affairs are bound by the acts of the Assistant Secretary, but as I understand the law no private individuals are bound by the acts of the thirteen local stockmen's organizations except those signing or those who become successors to one of the groups. On May 24, 1937, Acting Custodian Heaton advised the Superintendent that there were "some 15 owners of the one-third of the spring. . . . . There are other stockmen using this water that are not owners, but own water at some other place and the stockmen just trade water regardless of whose cattle water at their places . . . . Then we have some 11 families living west of us that come to the Monument for water which I presume is used for domestic purposes - or maybe to water a milk cow or horse."

There seems to be a potential danger of private appropriation if any of the local people have access to the water. In a quotation, to follow, it is evident that a right may be established even if only intermittent access is available. (Sec. 75-101 of water code of 1939). On this basis you and Mr. Taylor have repeatedly questioned whether the spring flow ever left the monument or Indian reservations. Custodian Heaton advises that a channel does extend from the spring to land leased by Charles C. Heaton in Sec. 32, T. 40 N., R. 4 W., about 2.25 miles away, but that he has never seen the surface flow extend more than 1.25 miles below the spring.

We should recognize that the ponds at the monument were built about 1863 and water has been used and dissipated ever since. No one can now state how far the water would flow under natural conditions, but it is quite possible that it would reach Section 32 at times. If so, the ponds and other local use can be protested unless they are covered by a territorial right or by prescription. I think both may exist.

Also, from the letter of Custodian Heaton of May 24, 1937, the Office of Indian Affairs built 2.25 miles of 2-inch pipe from the springs to the Heaton tract in Section 32 in August 1934, including about 800 feet on the monument area. This gives access to the spring from said Section 32. I quote certain parts of the water code of 1939 to show that as long as there is any stream flow, even though only on the monument, the stockmen may perfect a water right to cover their beneficial use.

Quoting Section 75-101 of the water code of 1939:

"The water of all sources, flowing in streams, canyons, ravines or other natural channels, or in definite underground channels, whether perennial or intermittent, flood, waste or surplus water, and of lakes, ponds and springs on the surface, belongs to the public, and is subject to appropriation and beneficial use, as herein provided. Beneficial use shall be the basis, measure and limit of the use of water. Whenever the owner of a right to the use of water shall cease or fail to use the water appropriated



P.S. Springs 4

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for five (5) successive years, the right to use shall cease, and the water shall revert to the public and be again subject to appropriation. (Laws 1919, ch. 164, sec. 1, p. 278; 1921, ch. 64, sec. 1, p. 118; rev., R. C. 1928, sec. 3280.)"

Quoting page 58 of same water code:

"When one has complied with the local laws for the appropriation of water and has constructed upon public vacant land of the United States the works for the diversion of that water, he thereby acquires a vested and accrued right superior to that of a subsequent entry-man upon such lands. Gila Water Co. vs. Green, 27 Ariz. 318, 232 Pac. 1016."

Quoting Sec. 75-140 of same code:

"The owner of arable and irrigable lands may construct public or private canals for the carrying of water, and, whenever the same is necessarily run through the land of another, the right-of-way therefore through such land may be acquired by condemnation, under the laws of eminent domain. (R. S. 1901, secs. 4176, 4177; 1913, secs. 5346, 5347; cons. & rev., R. C. 1928, sec. 3319.)"

These quotations are intended to show that a person may perfect a water right on the public domain superior to those perfected by a later entry-man, that he may evoke the right of eminent domain (except against the United States) to perfect a right, and the only way to lose it is by 5 years of non-use. I wonder if we cannot also state that any use continuing since prior to 1907, 1916, or 1917, is vested and superior to Indian or water reserve claims.

If these statements are true the United States needs to perfect, or protect, all its potential rights. From Acting Custodian Heaton's letter of May 24, 1937, and monument attendance records I have prepared the following estimate of water demand to comply approximately with the tri-party agreement. Messrs. Rose, Cowell and an Office of Indian Affairs engineer have all agreed that just under 0.1 sec. ft. or 64,632 gpd is the normal spring flow:



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Water Demand

| Item: | Park Service | Indian Service | Stockmen |
|---|---|---|---|
| 1 Custodian's family,4 @ 50 gpd | 200 gpd | | |
| 3 Indian families, 15 @ 50 gpd | | 750 gpd | |
| 13 stockmen & families, 52 @ 50 gpd | | | 2600 gpd |
| 3000 tourists per year average, max. August = 75 @ 15 gpd | 1125 gpd | | |
| Maintenance crew & rangers | 1000 gpd | | |
| 10 families west of monument | 310 gpd | | |
| 1582 head of stock @ 12 gph | | | 18984 gpd |
| 100 head of stock @ 12 gph | | 1200 gpd | |
| 4000 head of stock over 6 mos. ∠ = 20 head stock ∠ @ 12 gpd at peak | 240 gpd | | |
| 2 head @ 12 gpd | 24 gpd | | |
| 3.11 acres of irrigation @ 2.5 AF/A/A on 200 day season | | 12,690 gpd | |
| 4.39 acres of irrigation @ 2.5 AF/A/A on 200 day season | 17,912 gpd | | |
| Evaporation on 2 ponds at Fort(av.) | 677 gpd | | |
| Evaporation on Indian Service Pond (av.) | | 677 gpd | |
| Total | 21,488 gpd | 15,317 gpd | 21,584 gpd |
| Allowable quota | 21,439 gpd | 21,439 gpd | 21,439 gpd |
| Deficit | 49 gpd | | 145 gpd |
| Surplus | | 6,122 gpd | |

I also attach prints of drawing NM-PS-4952 which I prepared in 1937.

The map shows that the monument has about 17.21 acres which it would like to irrigate, but the estimated water demand will only permit the irrigation of 4.39 acres. No provision is made for the demand of the former CCC camp -- nominally 10,000 gpd in excess of the 1000 gpd provided for maintenance crew and rangers. I have provided for the watering of 4000 head of transient stock and the water which 10 families have been hauling away, on the assumption that historically and by Park Service policy a public service is desired. On the same basis, I allow for the cow, calves and other stock of Acting Custodian Heaton. An apparent deficit of 49 gpd is not necessarily real, but at one time, about 1925, the attendance was 24,000 per year, and on the basis of full attendance to date I provide for only 3000 per year. I have ruled out the duck pond.

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Although the Indian Reservation had 89 Indians and 25 facilitating whites in 1937, according to records in the San Francisco offices of the Office of Indian Affairs, Mr. Heaton reports only three families using the water as shown. The Indian Reservation is seen to have a surplus or waste of 25% or 6000 gpd. In fact, although I have estimated a demand of 15,317 gpd, the profile of the Indian Service pipe line, on the map, gives a capacity of only 13,831 gpd. Clearly, the Indian Reservation has not made use of more than 65% of its one-third of the spring flow since the pipe was installed, unless it hauled water or brought its stock onto the monument.

Acting Custodian Heaton advised that the stockmen ran from 2000 to 2500 head of cattle on their land near Section 32. The profile on the map shows their pipe capacity to be about 21,587 gpd. Even this capacity is probably high, as the ground probably flattens out as it progresses from the spring. I have had to assume that no more cattle could be watered than the water would permit, and that some domestic supply was needed. Mr. Heaton said nothing about kitchen gardens for the stockmen, so I have omitted them. The stockmen, like the Park Service, have a nominally fully used third of the spring flow on this basis, but may in reality have an unused surplus like the Indians.

Except as the monument irrigates more of its meadow than I have allowed, at least 7608 gpd of Indian Reservation water is going to waste, is unappropriated, and subject to appropriation.

Either the Indian Service or stockmen can put in larger pipes, but they cannot prove up on more water than the pipe capacity and any right to more than this capacity seems to have lapsed during the 9 years between 1934 and 1943. Four questions are still debatable: First, do the Indians have the valid right to more water than they now use when they care to divert it; second, is the Indian population likely to increase to justify more demand; third, would their potential increase in living standards and occupation require more or less water? Fourth, since it is reported that the Office of Indian Affairs built the pipe line for the stockmen, does this pipe line establish a right of way across monument and reservation land for perpetual access by the stockmen?

With a total available supply of not over 64,632 gpd from Pipe Springs, somewhere between 7600 gpd and 15,000 gpd which belongs to the Indians and stockmen by the tri-party agreement is wasted and unappropriated unless used on the monument. This extra water may have been the past allotment to the CCC. It would also permit the Park Service to increase its irrigated area from 4.39 acres to somewhere between 6.25 acres and 8.00 acres.

If my data on the population of man and stock and areas of irrigation are correct, the tri-party agreement is not so far out of balance but there is need for a more accurate determination of pipe capacities and development plans of all three parties. This study should include a study of range



Pipe Springs 7

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capacity and agricultural potentialities. It seems possible that the Indians, and perhaps the stockmen, might then have surplus water under the present agreement to be reallocated to the Park Service.

Unless you can determine it from the legal codes, we should find out from the State Water Commissioner just what codes were used prior to 1919 and what their status was immediately after adoption of the 1919 code. We should also find out how the quantity of water in these early rights is now determined.

I think it may be hard to prove that the full spring flow was used prior to 1919, particularly on the monument area and Indian Reservation. Therefore, there may be unappropriated water as of 1919. This is subject to appropriation at the present time.

The Office of Indian Affairs may not need to follow the normal appropriative procedure to acquire such water, but I think it is risky for the Park Service or stockmen to follow any course other than that prescribed by the code. Since the Indians cannot now use all their quota, any temporary loan to the Park Service would also be subject to criticism if not appropriated properly.

In one sense there is no reason why the stockmen should not file their own application, but this might result in complicated joint interest in pipe line and right of way across the federal land. It would seem better for the United States to perfect such rights as are necessary, including those to deliver such water to Section 32 as may be required by present or future agreements.

Between the Office of Indian Affairs and the Park Service, both in the Department of the Interior and part of the United States of America, we should be able to arrange proper agreements for full use of the water not needed for stockmen demands and keep State claims as a unit. For instance, if the Park Service uses water on the area north of the Indian pipe line and the drainage ditch is essential with the application of just the beneficial quantity of water, the Indians should be able to make re-use of the water from that ditch in addition to the water to which they are entitled by permit.

The tri-party agreement has much the status of a decree. The meeting at which it was signed was an informal adjudication. We might be able to have it recognized by the State without the use of normal application, permit and license, but it is weak for such recording because it does not show that all potential claimants are parties, and it might fix allocations to the three parties enough to complicate future amendments.

The application I drafted in 1937 does not entirely satisfy me. I think I can do better, but for the moment the only objection of the Office of Indian Affairs seems to be the form of the clause to permit the Indians to retain their favored rights. Borrowing in part from Mr. Worth Allen's recent claim for the Mancos Project, I offer the following:

Pipe Springs 8



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By this claim, the United States does not waive, or consent to surrender, any rights to Pipe Springs perfected under water codes existing before 1919, which rights are covered by an agreement between the National Park Service, Bureau of Indian Affairs and certain local stockmen, a copy of which is submitted herewith.

Neither does the United States waive, or surrender any rights owned by the Indian wards of the United States on the Kaibab Indian Reservation, or by the United States as trustee for such Indians.

Any final draft of an application should be worked out between engineers of the Office of Indian Affairs and ourselves with more complete data on the hydraulics of the various pipe lines; and if possible, the alignment and profile of the whole stockmen's pipe line. It may also be that the Department of the Interior will want a supplemental agreement redistributing its two-thirds of the spring flow.

Although not cited in this memorandum, I have drawn heavily on the Report on Water Resources and Administrative Problems at the Pipe Spring National Monument, by Mr. Rose, and dated September 19, 1933.

A. van V. Dunn

A. van V. Dunn,
Hydraulic Engineer.



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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
WATER RIGHTS SECTION
SAN FRANCISCO, CALIF.

February 6, 1943.

MEMORANDUM for Attorney Albert L. Johnson.

This is to suggest that the water rights at Pipe Spring National Monument may need reconsideration.

We prepared to make a formal appropriation of these springs during 1937. By letter of March 12 of that year the Assistant Commissioner of Indian Affairs objected, or at least refused to concur in the Director's plan to authorize us to file a claim in Arizona.

The Indian Service was then in court to define its water rights in the Walker River Reservation, although the Commissioner did not so state, and the Park Service filing to include use for the Indians at Pipe Spring might have had disastrous effects. Since then the Walker River case has been settled to the satisfaction of the Indian Service. However, I am not sure that the Walker River case gave the Indian Service any claim to rights at Pipe Spring, and I am quite certain that it did not provide any protection of the claims of the United States or the local stockmen.

On April 17, 1916, the area within one-fourth mile of the springs was proclaimed Public Water Reserve No. 34. The whole township was withdrawn on July 17, 1917, for the Kaibab Indians, and an adjusted interpretation of the water reserve was made by the Secretary on May 31, 1922. On March 3, 1920, Charles C. Heaton and the Pipe Spring Live Stock Company filed application to locate Valentine scrip on the SE¼ SE¼ Sec. 17, which is the monument, and nominally also the water reserve since the springs are near the center thereof. This was rejected as being in conflict with the withdrawals, but a letter from the Director to President Grant of the Mormon Church, of Oct. 29, 1924, advises that the Secretary had just accepted a quitclaim deed from Mr. Heaton to cover the area. The area was proclaimed a national monument in 1923. By 1933 the local stockmen and Park Service were so dissatisfied with the meager amount of water they obtained after the Indian Service made its diversions that it became necessary for the Assistant Secretary to issue regulations to divide the water equally three ways. By decision approved June 15,1942, Acting Solicitor W. H. Flanery ruled that water reserves were void when superseded by national parks or monuments.

All of this suggests that if past correspondence and proclamations are intended to show Park Service water rights protected, the protection was supposed to be under the water reserve. However, the ruling of June 15, 1942, seems to nullify the basis for earlier contentions.

(Copies mailed Director, Region Three, and Supt., S.W.Mons, Mar. 4, 1942.
All copies through Region Three.)

The present Arizona water code took effect in 1919. Any use initiated by individuals before that date are vested. On this basis, the stockmen and Indian Service might have vested rights, but the Park Service does not unless by the quitclaim deed to the United States from Charles C. Heaton in 1924.

In past correspondence the point has been brought up that no appropriation might be needed if the natural stream flow did not leave the Park Service area. This seems to need interpretation. A spring does not have to be formally appropriated in Arizona if its flow does not leave the claimant's land. On this basis, it would not have to be appropriated even if it left the monument area if it did not further leave the Indian and other adjacent federal land.

If you look at this Arizona statute from the practical side it says you do not have to file on a spring to which others do not have access because those others cannot introduce conflicts without your consent by providing access. At Pipe Springs the private access has been provided by a pipe line, a tri-party agreement and regulations by the Assistant Secretary. The stockmen may have a perfected vested right now, and if not, there seems to be nothing to prevent them from perfecting one by filing and proof unless there are implied bans in the agreement and regulations. Since the regulations seem to be based on the existence of a water reserve, they may not have any standing at this time. In that case, the agreement is a division of the property of a fourth party, the State of Arizona.

I feel that we should file on one, two, or three thirds of the flow to get title from the State for ourselves, and for the stockmen and Indians if necessary. If we file on all, we can state in the claim that the United States does not waive any rights which may accrue from past reserves or vested rights. We can also specify that the filing is merely to strengthen the tri-party agreement.

A. Ward Dunn

Hydraulic Engineer.

Pipe Spring N M.

EXCERPTS FROM A. VAN V. DUNN'S MEMORANDUM OF JUNE 15, 1939.

Denver, Colorado,
June 15, 1939.

Memo to Joseph E. Taylor, Regional Attorney:

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On an inclosed subject, Mr. Allen just called my attention to:

U. S. vs. Walker River Irrigation Dist.
Case #8779
U. S. Circuit Court of Appeals - 9th Dist.
Decision June 5, 1939.

This case is worth your study as it applies to the Pipe Springs National Monument. I pointed out the similarity to Mr. Allen who said it would apply except for the fact that the Whites had appropriated water at Pipe Springs before the Indian Reservation was established.

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A. van V. Dunn,
Associate Engineer.

(Original letter in Rocky Mountain Water Rights file.)

06-22-1937: letter to director of the national park service from superintendent regarding information as to whether any water from t

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HEADQUARTERS, SOUTHWESTERN MONUMENTS
COOLIDGE, ARIZONA

June 22, 1937.

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

Reference is made to Mr. Demaray's letter of May 21 concerning water rights at Pipe Spring National Monument. Custodian Heaton reports as follows in reply to your request for information as to whether any water from the spring in Pipe Spring National Monument flows in a natural channel outside the lands of the United States.

> There is no water ever get off lands of the United States as it does not run that far, though it sometimes in the winter gets off the Monument onto the Indian Reservation when I am not using it for irrigation. In the winter time it runs about 1½ miles down a wash which is very sandy and thus does not get off U. S. lands.

We were able to secure a copy of the quitclaim deed from Charles C. Heaton only by visiting the County Record Office in Kingman, Arizona. We have, however, finally secured copy of this deed and are enclosing it.

Cordially,

(Filed at back of this file under date of April 28, 1924.)

Frank Pinkley

Frank Pinkley,
Superintendent.

cc: Taylor
Moskey
Brooks

05-29-1937: letter to branch of land acquisition and regulation from superintendent regarding stockmen's use of water and addition

REC'D JUN 1 1937

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HEADQUARTERS, SOUTHWESTERN MONUMENTS
COOLIDGE, ARIZONA

May 29, 1937.

Mr. A. L. Johnson, Associate Attorney,
Branch of Land Acquisition & Regulation,
National Park Service,
Legal Division, 110 Sutter Street,
San Francisco, California.

Dear Mr. Johnson:

In response to your request for certain information concerning the water situation at Pipe Spring National Monument, we are enclosing copy of a letter from Mr. Heaton, the acting custodian, which gives, we think, approximately the information you requested concerning the stockmen's use of the water and additional corroborative information concerning the other parties to the division.

Cordially,

Frank Pinkley

Frank Pinkley,
Superintendent.

05-24-1937: letter to superintendent, southwestern monuments from acting custodian regarding use of water at stockmen's one-thi

NATIONAL PARK SERVICE
PIPE SPRING NATIONAL MONUMENT
Moccasin, Arizona.

C
O
P
Y

May 24, 1937.

Superintendent,
Southwestern Monuments,
Coolidge, Arizona.

Dear Boss:

In answer to your letter and questions about the usage of the water at Pipe Spring National Monument, I am not sure just what you mean, whether all of it, or just the stockmen's one-third. At any rate I will give you the information in three parts and as the public uses it.

The Park Service uses their third for the irrigation of trees and meadow. In this way we hope to develop shade and a place of rest for the traveling public.

The Indian Service, or Albert Frank, an Indian, has tried for the past several years to do some irrigation and raise some crops, but has been unable to get enough crop returns to pay for the seed and work put onto the ground.

The first time the Indians permitted their cattle to water at their pond was last summer, about July when some of their other springs dried up. There were about 75 to 100 head of stock watering there for three or four months; none at present.

The stockmen, some 15 owners of the one-third of the Spring, use the water exclusively for stock purposes. Throughout the summer months, beginning about May 1 until November or until such time as the winter storms come, there are some 2,000 to 2,500 head of stock using this water.

There are other stockmen using this water that are not owners, but own water at some other place and the stockmen just trade water regardless of whose cattle water at their places. I would say about ten other stockmen other than the owners use the water.

In August, 1934, the Indian Service put in 2.25 miles of 4-inch pressed steel, tarred pipe carrying the stockmen's wateroff the Monument across two miles of the Indian Reservation Sections 20 and 29, T. 40 N., R. 4 W., and about 250 yards on the land owned through lease by Charles C. Heaton, Moccasin, Arizona, NE $\frac{1}{4}$, Sec. 32, T. 40 N., R. 4 W., where the stock are permitted to come and get a drink.

Then we have some 11 families living west of us that come to the Monument for water which I presume is used for domestic purposes or maybe to water a milk cow or a horse.

These ranchers all drive from 6 to 20 miles for the water, bringing 54-gallon barrels, having 1 to 8 on their trucks. They average a trip about once a week and sometimes twice, during the summer.

Then there are the usual local travelers by horseback and team that stop here for water. Sometimes we have the cowboys with their bands of horses. I estimate the number of stock using water throughout a year to be 3,500 to 4,000.

It is understood by all parties interested in the water at Pipe Spring that water used by the public was to be taken out before any division be made or that is the impression that I got when Dr. Farrow and Mr. Hall of the Indian Service, Charles C. Heaton of the stockmen, Messrs. Cowell and Langley of the Park Service were here when the division was made in 1933.

When I asked some of the stockmen about the number of cattle using their water, the first question that came up was: "Is the Government trying to take our water away from us again?" I suggest that you write some of them for information regarding the usage their water is being put to. They are rather sore at the way the Government has treated them.

I believe you have the names of the owners in Pipe Spring. There has been only one change in this ownership; that of B. P. Sorensen, St. George, Utah, to Leonard Heaton, Moccasin, Arizona, who is owner of Sorensen share.

For my own information I would like to know if the rights of the stockmen are being questioned again and by whom, if so? And is their water being taken from them? As to the Indian Service you know how I feel about them getting the water from the Monument.

I trust that what I have written will serve your purpose and that we can soon get the water rights settled.

Sincerely yours,

(SGD) LEONARD HEATON
ACTING CUSTODIAN

B-N

REC'D JUN 1 1937

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

May 21, 1937.

Mr. Joseph E. Taylor,
Attorney, National Park Service,
Branch of Land Acquisition and Regulation,
110 Sutter Street,
San Francisco, California.

Dear Mr. Taylor:

This refers to your letter of April 7, enclosing two copies of a specimen application for appropriation of the waters of Pipe Spring National Monument, and including your discussion of the advisability of filing the application with the State Water Commissioner.

The proposed application appears the best that could be devised, in view of the reservations necessary to satisfy the Office of Indian Affairs.

In view of your recommendation that no filing be made if no channel from which water from the springs might be appropriated extends beyond the lands of the United States, it is considered inadvisable to file the application. Our sole object in making a filing is to prevent the vesting of any water rights in private parties which would be adverse to those of the United States. Since there appears to be no danger of the establishment of additional adverse rights, the existing complications render a filing inadvisable.

Your recommendation is taken to mean that the application should not be filed unless water from the springs actually runs in the channel. We can find no definite statement on this point in our files. The report of Mr. Rose, dated September 19, 1933, seems to account for all of the water of the springs. The township plats in the General Land Office show a natural channel beginning on the monument and running southwesterly for about a mile where it joins a larger wash which extends southeasterly about two miles across the southern boundary of the Indian Reservation in the SE¼ of sec. 31, T. 40 N., R. 4 W. There are several tracts of privately-owned lands lying south of the reservation in that vicinity. There are no privately-owned lands within the reservation along the channel shown on the plat. Superintendent Pinkley will be requested to report whether any water from the springs runs off the reservation at any time. If he confirms our impression that it does not, the application should not be filled.

The application was not intended to affect the present distribution of the water among this Service, the Indians, and the cattlemen.

The question whether the rights of the cattlemen might be asserted as adverse to those of the United States may require consideration at some future time. For the present, they appear satisfied with the distribution made to them under the regulations of the Secretary.

In the fourth paragraph of your letter you observed some confusion regarding the source of title to the monument lands ($SE\frac{1}{4}$ $SE\frac{1}{4}$ sec. 17, T. 40 N., R. 4 W.). The confusion is understandable, because, as a matter of local reputation, the tract was owned and occupied by the persons claiming title for many years. However, the title of the persons occupying the property and using the water was never recognized by the United States. The property was occupied by Daniel Seegmiller about 1888, who claimed it as a scrip location. Since a scrip location could not be final until a survey was had, Seegmiller's rights were never recognized. Charles C. Heaton later occupied the property, claiming an assignment of scrip from Daniel Seegmiller, who died in 1899. The survey was completed in 1916. In 1920, Charles C. Heaton filed an application on behalf of himself and the Pipe Spring Live Stock Company for the 40 acre tract. The application was denied, partly on the ground that the previous withdrawals prevented a valid scrip location. He appealed, and the denial was upheld. In the mean time, several persons interested in the monument purchased Heaton's claim and paid him $5,000. He executed a quitclaim deed to the United States on April 28, 1924 and withdrew his application. There is enclosed a copy of a memorandum of May 23, 1923, from the Commissioner of the General Land Office to Mr. Cammerer, containing additional data on the status of the monument lands and other lands in the Kaibab reservation.

Our records do not show whether the occupation of the premises was continuous from 1888, but it appears that Seegmiller and, later, the Heatons, used the water of the springs for irrigation on the monument tract or near it, and considered themselves under some sort of obligation to furnish water for the cattle of their neighbors as well as for their own. During the negotiations for the purchase of Charles C. Heaton's claim of title, he insisted that he had sold to the cattlemen the right to the use of one-third of the water from the springs. We have not been able to find his deed to the United States in the files of this Service or those of the General Land Office, and we do not know whether it mentions any water rights. Since it was a quitclaim deed, it probably did not. However, we are requesting Superintendent Pinkley to secure a copy of the deed, which, presumably, is recorded in Mohave County, Arizona. The reported sale to the cattlemen appears not to have been a transfer of any definite water right, but a mere continuance of a license to water stock, for which Heaton received compensation.

It may be doubted whether the occupants of the monument tract, being technically trespassers, could acquire water rights. We know of no authority on this point, although the Arizona law does not appear to make the vesting of a water right dependent upon the lawfulness of occupancy of lands.

It also may be left to the future to determine whether the present use of water by the cattlemen is a license to them, or to the public, or is a recognition of previously established rights.

One copy of the specimen application is returned to you for your files.

Sincerely yours,

A. E. Demaray,
Acting Director.

Enclosure 656132

CC: Superintendent, Southwestern National Monuments, Coolidge, Arizona. (with copy of Memorandum)

Mr. Moskey.

REC'D MAY 21 1937

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HEADQUARTERS, SOUTHWESTERN MONUMENTS
COOLIDGE, ARIZONA

May 19, 1937.

Mr. Albert L. Johnson,
Deputy Assistant Director,
Branch of Land Acquisition and Regulation,
Legal Division, 110 Sutter Street,
San Francisco, California.

Dear Mr. Johnson:

Mr. Gastellum handed me your request for certain additional information with respect to the Pipe Spring water problem.

Your note "Whether dry wash or extension beyond Indian lands" is not fully understood. The waters from the Spring have not, since a very early day at any rate, flowed off the Monument through the Indian lands in a defined channel.

"Is there any pump in Fort? Existing and proposed pump systems in Monument; division made at Fort." There are no pump systems in the Fort or on the Monument. At present we are relying entirely on gravity for delivery. It is proposed to install a pump at the existing weir box to force a portion of the waters from the spring into a 10,000-gallon concrete reservoir at an elevation of approximately 50 feet above ground level on the hill behind the Fort to provide proper pressures for gravity flow in domestic use, comfort station, etc. Waters for this purpose will, presumably, come from the Park Service share of the flow of the spring. Division of flow between the various parties at interest is made by weirs installed at the Fort which are fully described in the file you have.

"Number of ranchers that actually use domestic supply? Number of people and number of stock run on land." We are endeavoring to secure satisfactory information from the custodian and will forward it to you when received.

"Actual quarter section of land in which the three mile pipe line ends?" We assume that this refers to the pipe line supplying the stockmen. In this case, also, our information is not complete. Our maps show this line only to the Monument boundary. We are endeavoring to secure this information for you and will forward it as soon as received.

Cordially,

Frank Pinkley

Frank Pinkley,
Superintendent.

cc: Heaton

April 15, 1937.

MEMORANDUM TO MR. TAYLOR:

The attached drawing NM/PS-4952 and rough draft of the application for appropriation of waters for Pipe Springs National Monument cover all the data, I believe, that is necessary.

The map of course is not intended for filing in its present form, and will need:

1. A modification of the title to tie it in more specifically with the diversion of Pipe Springs.

2. Tabulations by bearings and distances of the various pipe lines and ditches.

3. Slight modification of the wording at points of Park Service distribution at S3 and B2 on pipe lines to stockmen and Indian Service.

The application is somewhat irregular in that the stockmen and Indian Service use is not explained in detail as usually required by the State Water Commissioner. It is believed, however, that the Inter-Departmental Agreement may serve as the necessary substitute for such information without committing the United States too definitely on justifications for non-Federal use by the stockmen. In the second place, at the present time we lack sufficient data to make such justifications.

The application is based on the total appropriation by the three interests of .2 second foot, although so far as present developments are concerned .1 second foot is the flow of the combined springs. Such treatment is intended to protect all interests in case future developments by extending tunnels or digging down at springs should increase the flow. It should be noted, however, that this double capacity, or two-thirds of the total present flow, would actually seem to be the ultimate need of Pipe Springs National Monument if all land lower than the springs is irrigated and the annual attendance at the monument returns to that of 1929, both of which conditions seem quite probable.

With regard to the Indian Service use, the annual report of the Commissioner of Indian Affairs claims an Indian population of only 89 people in the Kaibab Indian Reservation, and engineers from the Park Service who have made surveys in the monument report that the area under irrigation by these Indians is only 3.11 acres. We do not know what stock, if any, these Indians have on the Reservation. Neither do we know exactly what white population there may be for administrative purposes. The point is that actually nothing in the available data will really justify even the use of the third of the present flow of the Pipe Springs, or .03 second foot. It is a question whether we should throw ourselves open to possible justifications by the Indian Service for double this amount, due to our own policy of filing with the justification for double the quota apparently available for us at the present time.

If the State Water Commissioner requires full justification for the Indian and stockmen's use, it will be necessary that the Indian Service and stockmen supply us with total land that can be irrigated in the case of the Indian Service, the total head of stock to be watered both in the case of the Indian Service and the stockmen, and more reliable data regarding the population served by domestic use in each case.

Encl.

A. van V. Dunn,
Associate Engineer.

April 14, 1937.

MEMORANDUM TO MR. TAYLOR:

I have checked the typing of my memorandum of April 9 regarding Pipe Springs water system.

In general, I believe that the insertion of the data beginning on page 3 on the standard form is all that you require, in accordance with our telephone conversation yesterday. I circled in pencil the portion to be typed by Miss Hicks on one of the copies. This is merely a guide so that you will not get extraneous notes into the application.

In order to be consistent and meet more specifically your suggestions of yesterday, I left out of the domestic, irrigation, and stock watering use, any reference to anything but the Park Service, and suggest that we type in an item to be known as No. 12½ as follows:

12-1/2. Service to Stockmen and Indian Service in Accordance with an Inter-Departmental Agreement Signed by the Interested Parties June 9, 1924. (a) Indian Service use by pipe line with point of Park Service distribution at B2 as shown on map, 42,500 gallons per day for domestic use, irrigation, and stock watering. This use is for present population of 89 Indians, and approximately 25 white supervisory personnel and families, and for 3.11 acres of irrigation. These figures can very easily be, and are very likely to be increased during the next five years.

(b) By pipe line with point of Park Service distribution to stockmen at S3 as shown on the map, 42,500 gallons per day, in accordance with the said inter-Departmental agreement of June 9, 1924. This supply is for 13 stockmen, their families, and employees, for use in stock watering and other activities related to the convenience of the raising of cattle, approximately 3 miles south of Pipe Springs National Monument.

This additional item in the application will eliminate the need for full justification of the water for the Indian Service and stockmen -- at least, until such time as advised to the contrary by Mr. Stewart, the State Water Commissioner. It also makes the application primarily one for the National Park Service, but fully recognizing all interests.

A preposterous feature of the whole scheme is the proportion of water for the Indian Service. With only 89 Indians, there is very little justification for anywhere near the proportion of water to which they are entitled by the agreement unless they go into stock raising and agriculture in a very extensive manner for commercial purposes.

Also note that the stockmen may possibly be able to justify far more than their third quota, or may, like the Indian Service, have insufficient proof to justify even their third. The whole scheme of the application as drawn is based on twice the known flow at the present moment on the assumption that:

(1) The Park Service curve definitely indicates a possible need for that much water during the next five or ten years.

(2) The fact that additional water might be developed by extending tunnels or digging down at the springs, and such water should be fully protected now rather than left for a filing with a late priority in the future.

A. van V. Dunn,
Associate Engineer.

P.S.-- Note that in applying for double the quantity of water for Pipe Springs use, we set a precedent for the Indian Service and stockmen to do likewise, and in accordance with the inter-Departmental agreement my application for appropriation of water incorporates such possible double use.

One question arising would be the future outcome if either the stockmen or the Indian Service were able to prove a senior priority and leave us with only 14 gallons a minute while they claimed double or $2\frac{1}{2}$ times this amount and the balance of.2 second foot of flow.

April 9, 1937.

MEMORANDUM TO MR. TAYLOR:

In reply to your request (memorandum of April 6, 1937) for an application to be drawn up for Pipe Springs, I feel that there are so many possibilities that you should first settle certain questions from the legal aspect. The following analysis offers the questions which should be decided:

1. A. E. Cowell, Associate Engineer, and Robert H. Rose, Assistant Superintendent of the Southwestern Monuments, have each measured the flow at Pipe Springs, and agree very closely on a total of approximately 0.1 cubic feet per second. Since it is intended to appropriate all possible water, I feel that we should assume a possible flow of more nearly 0.2 cubic feet per second to take care of what may later be developed by extending tunnels or installing collecting tile.

O.K.

On this basis, do we wish to include any future anticipated increases for the Indian Service and stockmen?

2. Referring to the attached map, I can justify approximately double the Park Service quota on the basis of possible attendance, and total area suitable for irrigation. I lack data, however, on which to really justify even the minimum quota for the Indian Service and stockmen. But if we do justify an equal share to the Indian Service and stockmen, we make the present Inter-departmental Agreement binding over an infinite period.

Is it desirable to fix the distribution of this agreement for all times?

3. I have never seen the Inter-departmental agreement, but from the Cowell report of May, 1934, it seems that one-third of the spring flow was to go to each -- the Park Service, Indian Service, and stockmen. By the Rose report of September 19, 1933, this division was not being made up to the fall of 1933, and I find no records of whether this condition has been corrected since or not. The condition in 1933 was as follows:

| Recipient | Amount Received | Inter-Departmental Allotment |
|---|---|---|
| Park Service | 8.36 g.p.m. | 14.05 g.p.m. |
| Indian Service | 25.08 g.p.m. | 14.05 g.p.m. |
| Stockmen | 7.7 g.p.m. | 14.05 g.p.m. |

Is it certain that the Interdepartmental Agreement does provide for a one-third division equally?

17

Pipe Springs 16

4. By justifying water for the stockmen in an appropriation, we will not be following normal Government procedure. It is not customary to give something away. On the other hand, if we justify this use by demand on the monument, unless we made the Government a "public utility" by recognizing a non-profit commercial pipe line supply, we leave ourselves open to a possible loss of water needed for actual monument use in the future.

how?

Would it not be better to make our filing only on the Government quota?

why?

5. If we left this stockmen's quota out of our filing, but leave their pipe line in, is there a danger of uncontrolled appropriation by these stockmen, which might be detrimental to the Park Service rights?

6. The Indian Service has signified a desire to base their water right on the provisions of a "treaty reservation", even though the Kaibab Reservation was not established by treaty. They have also expressed a refusal to approve our filing unless their water is recognized as excluded.

where does this info. come from.

If we were to omit the stockmen's quota in our filing, why not also omit that for the Indian Service? (The weak point I see is that we might be interpreted as recognizing the Indian Service contention of a prior claim.)

7. The unused pond in the southwest portion of the monument is reported to be used primarily as a duck pond. As such, it is not a possible "beneficial use" on which to file. Neither can we justify it for stock watering. Yet if it fills up in with "return water" in our irrigation, and is not appropriated, the Indian Service or stockmen can demand its drainage.

Should this pond be provided with a drain and used in the irrigation of the southwest portion of the monument? (As such storage, we should obtain its capacity.)

what about existing Publicity about this

8. According to the Rose report, the method of dividing the water among users, makes a 16-inch storage a feature of the two ponds near the Old Fort (Windsor Castle). Actually, all Park Service irrigation is by a repeated storage and release of this water, and amounts to a large total over the year.

Do you agree that we can overlook this feature, and treat these reservoirs purely as regulating basins?

yes



Pipe Springs 17

18

10. We have been signing applications "The United States of America, by .....".

Should the Pipe Springs application be signed by Superintendent Pinkley, or by the Director?

On the basis of available data, and subject to the above questions, the following is the answer to specific questions in the application form -- so far as I have them -- with my comments.

1. The United States of America, by Frank Pinkley, Superintendent of the Southwestern National Monuments, of Coolidge, County of Yavapai, State of Arizona, do hereby ******

1. The source of supply is Pipe Springs which consists of "Historic Spring" and "Tunnel Spring" and is tributary to ********** ("Big Spring" has been proved to be merely a pipe outlet from "Historic Spring. I have found a map showing springs as sources of definite stream, but have not learned name of stream to date.)

2. The amount ******

For Domestic (by National Park Service) use, 6000 gals. per day.
For Irrigation (by National Park Service)use,
43.AFA 2.5 AF/A/annum.
For Stock watering use..... see last item.
For Power use..... none

For Domestic, Irrigation, and Stock Watering (by Indian Service and local stockmen in accordance with an inter-Departmental agreement dated June 9, 1924, and signed by representatives of the Park Service, Indian Service, and local stockmen)..... 85,000 gals. per day

(Note: Provision for the Indian Service and Stockmen's rights is not in accordance with State practice. It should be broken up into Domestic and Irrigation and Stock Watering, separately, and included with Park Service quotas. This is impossible without data from each agency regarding the quantity of water they expect to put to each use. The total quantity is based on one-third of spring flow being allotted to Park Service, and an equal quantity to each of the other two interests.)

Pipe Springs NM

3. The points of diversion are located: #1, "Historic Spring" N 36°33'-20" W 1021 feet from the SE corner of Section 17; #2, "Tunnel Spring" N 41°04'48" W 1014 feet from the SE corner of Section 17; being within the SE¼ of SE¼ of Section 17, T 40 N, R 4 W, G & S R B & M, in the County of Mohave.

4. The three main pipe lines to be a total of 0.37 miles in length, terminating in the SE¼ of SE¼ of Section 17, T 40 N, R 4 W, G & S R B & M, the location **********

5. Diversion Works: (a) Diversion is by gravity, the diverting tunnels being 40, 60, and 130 feet in length ~~(stream-bed-to-overflow)~~ .....~~long-on-top~~, and lined with galvanized iron pipe.

(b) Description of headgate: The 40' & 60' tunnels from Historic Spring discharge into small flumes which discharge into two connecting control ponds with an overflow wier and short piece of pipe to a distributing wier with valves for distributing and metering flow. The main pond also has a valve and drainage pipe for additional control of water and release for part of the Park Service irrigation. The 130' tunnel from Tunnel Spring discharges directly into the manhole intake supplying the pipe for the stockmen's use.

(c) If water is to be pumped ***** (This very complicated diversion may have to be described in more detail when submitted to the State Water Commissioner.)

6. Conduit System. (a) ~~Canal~~,ditches, ~~flume~~: Are of variable size and grade, but will carry the full flow of the Historic Spring.

(b) Pipe Line: Diameter 2"; length 1950 total feet; gradient
(Park Service 17.5 )
(Indian Service 18.3 ) feet per 1000 feet; total fall from
(Stockmen's 33.4 )

intake to lowest outlet 35 feet; kind galvanized iron. (Rose report states 4" pipe to Indian Service, but maps in Chief Engineer's office give only 2". It would be well to send copy of this report to Mr. Pinkley for check on such matters, before final preparation for filing.)

7. Distribution Works: ~~Tanks-or-Troughs~~: There is no storage on the monument except as previously described ponds retain approximately a one-day flow from the Historic Spring as a control measure in diversion of the water. Ponds are excavated in earth.

regulation



Pipe Springs 19

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8. Cost and Construction Schedule: The estimated cost of the existing project is $7500.

It is proposed to begin construction within.. System Complete .... to complete construction within....System Complete.. thereafter... ..... to the proposed use 10 years after the ~~beginning of construction~~ present date. (A very rough estimate, as no figures are available on most parts.)

9. Domestic Use.....as follows: The Pipe Springs National Monument has an annual attendance of 25,000 people and one permanent family. The Indian Reservation has a population of 89 Indians and 20-25 white employees. There are 13 interested stockmen with families and employees.

(The justification for Park Service use is clear. The justification for stockmen use is unknown. The justification for Indian use is absurd,as Indians do not use much water compared with whites, and the whole population should not want 10,000 gallons per day.)

10. Municipal Use.....

11. Irrigation Use: (a) ******** an area of 33 acres; is located in Mohave County, Arizona **********

| | |
|---|---|
| T40N, R4W, Section 17, SE¼ SE¼ | 17.2 Acres |
| T40N, R4W, Section 16, SW¼ SW¼ | 5 Acres |
| T40N, R4W, Section 21, NW¼ NW¼ | 10.8 Acres |

(Park Service actually irrigates about 2½ acres now, but the total of 17.2 acres is potentially irrigable. The Indian Service now irrigates 3.11 acres, but could increase this. I have provided for such an increase to keep the Indian Service justification on a par with Park Service. I assume no irrigation is done by stockmen, but this should be checked by correspondence.)

11b. ********soil? Fertile sandy loam when irrigated.

c. ********crops? 2.5 AF/A/annum.

d. ********owned by the United States of America.

e. The irrigation season will begin about March and end about November.

f. ******* applied for? No. Describe ******* supply. The Park Service has no other supply. The Indian Reservation has another small spring of inadequate quantity. (We should get a better explanation of Indian supply from Indian Bureau.)



Pipe Springs 20

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12. Stock Watering Use. (a) ***** serve: Cattle, sheep.

(b) ***** per annum? ?

(c) ******to serve? ?

(This data should be obtained locally before filing, but at 25 gallons per day, we should have 1600 head, which looks possible.)

13. Power Use.....

14. Mining.....

15...******** application? Yes.

16. ******* land of the United States of America -- Pipe Springs National Monument.

17. ******* land of the United States of America.

18. ******* owned by the United States of America except that the stockmen, pipe their supply from point of delivery (S3 on map) to an area approximately 3 miles away.

1 9. Post office ********** Moccasin, Arizona.

20. ********** others? Yes. If so,**********. See statement.

21. ********** See statement.

Statement of other claims:

The old fort at Pipe Springs, locally called Windsor Castle, was built by Morman stockmen in the pioneer days. Later, the area was included in the Kaibab Indian Reservation. In 1923, the SE¼ SE¼ of Section 17, including the Pipe Springs, was proclaimed a national monument. On _____ 1924, representatives of the Indian Service, National Park Service, and stockmen, met at Pipe Springs and arranged an Inter-departmental agreement, signed by representatives of each interest, and giving one-third of the spring flow to each.

The stockmen make claim by use since 1863, without a filing.

The Indian Service also claims actual use prior to 1919, with no filing.

The National Park Service claims use since 1923 with no filing.

Pipe Springs 21



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The following constitute a list of the interested parties:

The Director, National Park Service, Washington, D. C.

The Commissioner, Bureau of Indian Affairs, Washington, D. C.

For the Stockmen:

| | |
|---|---|
| Bullock Brothers, | Cedar City, Utah |
| Leheigh Jones, | Cedar City, Utah |
| John A. Adams, | Cedar City, Utah |
| H. J. Meeds, | Kanab, Utah |
| B. A. Riggs, | Kanab, Utah |
| David H. Esplina, | Orderville, Utah |
| Ed Lamb, | Orderville, Utah |
| E. Foremaster, | St. George, Utah |
| John Schonitz, | St. George, Utah |
| John Finlay, | St. George, Utah |
| Mrs. Andrews, | St. George, Utah |
| Ben Sorenson, | St. George, Utah |
| Heaton Brothers, | Moccasin, Arizona. |

Nothing in this statement is intended to change the above mentioned Inter-departmental agreement.

Nothing in this application is intended to reflect adversely on any title to said water, which the Indian Service may have by virtue of the claims and existence of the Kaibab Indian Reservation.

The purpose of this application is to record an existing appropriation and transfer of portions, thereof, in accordance with State requirements since 1919. All interests are based on use since the 1860's since Indians, stockmen, and the public have made such use, with the "Windsor Castle" serving as a hotel and station on the Arizona Desert Telegraph line.

(It may be desirable to submit a copy of the Interdepartmental agreement.)

A. van V. Dunn,
Associate Engineer.



Pipe Springs 22

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03-30-1937: memorandum to attorney from associate engineer regarding settlement established in 1863 and first station of the de

March 30, 1937.

MEMORANDUM TO MR. TAYLOR:

From the Pipe Springs Proclamation I find that a settlement was established in 1863, including a large dwelling place known as Windsor Castle and several other buildings used as a refuge by the early settlers against the hostile attacks of Indians. It was also later used as the first station of the Desert Telegraph in Arizona.

I also looked in the Glimpses of the National Monuments where it explains in a little more detail that the early stockmen settled in this vicinity and used Windsor Castle as a sort of a fort. In neither case is there any reference to a private land, but every one in Mr. Kittredge's office feels certain that at some time it was patented for private occupatiom.

The Proclamation designates the area as the SE¼ of the SE¼ of Section 17, T 40 N, R 4 W, G & S R B & M, as a "Part of Kaibab Indian Reservation". No reference here to private land of any sort.

The Proclamation also states that the reservation of the monument is made, provided that the Indians of the Kaibab Reservation shall have the privilege of utilizing water from Pipe Springs for irrigation, stock watering, and other purposes under regulation to be prescribed by the Secretary of the Interior. The whole Proclamation is dated May 31, 1923.

This is all the information I was able to find in Mr. Kittredge's office. Probably Mr. Pinkley or Mr. Heaton (if he is still Acting Custodian) could give further information on the original private land status.

A. van V. Dunn,
Associate Engineer.

e-10

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

REC'D MAR 30 1937

March 26, 1937.

Mr. Joseph E. Taylor,
Branch of Land Acquisition and Regulation,
110 Sutter Street,
San Francisco, California.

Dear Mr. Taylor:

This refers to your letter of January 25, relating to the proposal to file an application for appropriation of the waters in Pipe Spring National Monument. A letter was prepared, authorizing you to make a filing for the appropriation of all the waters of the springs. The proposed letter was submitted for the concurrence of the Commissioner of Indian Affairs, with the intention of securing the further approval of the Assistant Secretary.

There is enclosed a copy of the reply of March 12 from the Assistant Commissioner of Indian Affairs, in which he refuses to concur in the proposed authorization to file for all the waters of the springs. It appears that the Office of Indian Affairs prefers to depend upon rights vested under the ruling in Winters v. United States. The wisdom of such a course may be questioned, in view of the uncertainty of the ruling as affected by later decisions. Your opinion is requested whether it is advisable to file an application specifically reserving all rights which may have vested merely by reason of the establishment of the Indian Reservation. The Office of Indian Affairs will probably not object to the filing of the application if such reservation is made. If you consider it advisable to file the application for appropriation, you may prepare an application containing the reservations which the Office of Indian Affairs has indicated will be acceptable, and submit it to this Office. It will be transmitted to the Office of Indian Affairs for approval before it is returned to you for filing.

It seems that if any rights are already vested in the United States under the ruling in Winters v. United States, such rights may include all the waters within the boundaries of the Kaibab Indian Reservation. Therefore, it seems useless to make any filing for less than the total flow of the springs.

Sincerely yours,

Associate Director.

Enclosure 1223935.

cc: Supt., Southwestern Nat'l Monuments
(with copy of enclosure)

e-9

COPY

REC'D MAR 30 1937

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF INDIAN AFFAIRS
WASHINGTON

Forestry and Grazing
9897-37

March 12, 1937.

Mr. Arno B. Cammerer,

Director, National Park Service.

Dear Mr. Cammerer:

Reference is made to your letter of February 11 submitting for our concurrence a letter to Joseph E. Taylor, Water Rights Attorney for the National Park Service, authorizing and instructing him to file an application in the office of the State Water Commissioner of Arizona for the appropriation by the United States of all of the waters within Pipe Spring National Monument.

Before agreeing to the proposed letter to Mr. Taylor, we would like to know the purpose of such filing and also have the opportunity of examining and approving the form of the application to be filed with the State Water Commissioner of Arizona. As you no doubt are aware, the Department of the Interior withdrew from settlement an area including the springs in 1907, which was conformed and established as an Indian reservation by executive order of July 17, 1917. At that time there were reserved by implication sufficient waters of the reservation for the use of the Indians. See Winters v. United States (207 U.S., 564). Therefore there appears to be no reason for the United States at this late date to file on the waters pursuant to the State laws. In view of this we have not concurred in the letter proposed by your office. There probably would be no harm in making a filing if the prior water rights were properly safeguarded. If, therefore, you still are desirous of having a filing made this Service would want an opportunity to examine all papers prepared for such purpose before any actual filing is made.

Your letter to Mr. Taylor is returned herewith without our concurrence.

Sincerely yours,

/s/ William Zimmerman, Jr.,
Assistant Commissioner.

Enclosure 1191001

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

February 11, 1937.

File ma

Joseph E. Taylor, Esq.,
Branch of Land Acquisition and Regulation,
110 Sutter Street,
San Francisco, California.

Dear Mr. Taylor:

This refers to your letter of January 25, relating to a proposal to file an application for appropriation of the waters in Pipe Spring National Monument.

In Mr. Moskey's letter of January 27 you were informed that the question was being separately considered. You were also furnished copies of the Regulations issued by the Assistant Secretary November 2, 1933, governing the disposition of water from the springs on the monument lands, and a copy of the agreement between this Service and the Office of Indian Affairs, dated October 13, 1933, and a copy of the Memorandum of Agreement signed June 9, 1924, by representatives of this Service, the Office of Indian Affairs, and the local cattlemen.

You are authorized and instructed to make the necessary filing on behalf of the United States for all the waters of the springs. When the right to the water is vested in the United States by appropriation, its future disposition will remain subject to the regulations of the Secretary. No change in the present disposition is now contemplated.

Sincerely yours,

Director.

Concurred in:

Commissioner, Indian Affairs.

Approved:

Assistant Secretary.

21

B-8 Pipe Springs

OFFICE OF
**State Water Commissioner**
ROOM 407 ARIZONA STATE BUILDING
PHOENIX, ARIZONA

EDWIN T. STEWART
COMMISSIONER

January 29, 1937.

REC'D FEB 1 1937

Mr. Albert L. Johnson, Associate Attorney,
Legal Division,
Granch Land Acquisition and Regulation,
National Park Service,
110 Sutter Street,
San Francisco, California.

Dear Sir:

This will acknowledge receipt of your letter of the 30th ultimo requesting information concerning filings in this office on waters in the $SE\frac{1}{4}SE\frac{1}{4}$ of Sec. 17, T. 40 N., R. 4 W., G. & S. R. B. & M.

We have searched our records and find no filing in T. 40 N., R. 4 W.

Yours very truly,
Edwin T. Stewart
EDWIN T. STEWART
STATE WATER COMMISSIONER.

ETS:C

Pipe Springs.
Grand Canyon
S. W. Monuments

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

REC'D FEB 6 1937

January 27, 1937.

Mr. Joseph E. Taylor,
Branch of Land Acquisition and Regulation,
Legal Division,
110 Sutter Street,
San Francisco, California.

Dear Mr. Taylor:

This will acknowledge the receipt of your letter of December 19, enclosing copies of reports and correspondence relating to water filings for Grand Canyon National Park and for the Southwestern National Monuments. Your letter of December 31, transmitting a copy of the Arizona State Water Commissioner's letter of December 29, and the opinion of the Attorney General of Arizona, dated April 30, 1936, has also been received. It is to be hoped that the Arizona law will be changed so as to provide for appropriation of water for our wildlife and fish culture uses. Your letter of January 5, transmitting Mr. Johnson's memorandum of December 14, has also been received.

Your second letter of December 19, relating specifically to Pipe Springs National Monument, has also been received. The question whether we should file upon all the waters of the springs is being considered, and will be the subject of a separate communication in the near future. There is nothing in our files to indicate that any filing has been made on behalf of the United States. It is understood from Mr. Dunn's report that none has been made by private interests. There is enclosed a copy of the regulations issued by the Assistant Secretary November 2, 1933, which govern the present disposition of water from the springs on the monument lands. These regulations are based upon an agreement between this Service and the Office of Indian Affairs, dated October 13, 1933, and upon a memorandum of agreement signed June 9, 1924, by representatives of this Service, the Office of Indian Affairs, and the cattlemen. Copies of the agreement of October 13, 1933, and of the memorandum of June 9, 1924, are enclosed for your information.

Sincerely yours,

A. A. Hoobler
Assistant Director.

Enclosure 1223745.

cc: Supt., Southwestern National
Monuments (With copy of enclosure).
Supt., Grand Canyon National Park.

Pipe Springs N. M.

Dec. 17, 1936.

See Mr. Dunn's report of Dec. 17, 1936, in Grand Canyon file, for notes regarding Pipe Springs.

Palm Springs
~~Coolidge~~ Mon.

FILE COPY

December 14, 1936.

MEMORANDUM TO MR. JOSEPH E. TAYLOR:

The following information was obtained from Superintendent Pinkley of the Southwestern Monuments at Casa Grande on December 5, 1936:

1. Montezuma National Monument, Arizona:

Source - Beaver Creek. There is a homestead above using water, though the land has not been patented. They wish to use the water as proof for the homestead. Superintendent Pinkley does not wish to have such use.

Monument needs this water for irrigation, as Reclamation Service has been unable to grant supply from Coolidge Dam system, even though these ditches bound monument on two sides. The irrigation is for 20 acres with scenery an important justification. Irrigation ditch to be between 3/4 and 1 mile in length. Map and plans for ditch and two dams is on file in Chief Engineer's office.

A complication is that creek is in monument at proposed point of diversion, leaves monument but returns at point of use, offering chance for homesteader to control most of water if he desires.

Domestic use is from wells -- ultimate attendance probably will be 25,000 per year. Flush toilets, drinking, and a caretaker's home to be served by the well.

2. Bandelier National Monument, New Mexico:

Judge Abbott developed water many years ago, and filed on Frijoles Creek, but does not own land.

Mrs. Fry wishes to irrigate her garden in monument and feels she has right as operator. Such use has been in operation for 20 years when area under Forest and later Park Service.

Supt. Pinkley wishes to get garden out.

Domestic use for monument from Frijoles Creek, same as operator.

Population (attendance) now 17,000 per year, expected to increase to 40,000 per year in next five years.

For development under ECW project #43; see drawing BAN-4, a print of which is in Chief Engineer's file.

2 miles of 2" pipe - 3' below ground.

4' x 12' rock dam.

Sand filter.

2 - 10,000 gallon concrete tanks.

Filter consists of 1/2 culvert similar to Hommon's Effluent Filter trenches - 4' x 20'.

Cost uncertain as ECW costs incomplete, but estimate $15,000.

Intake is in bottom of creek, but does collect surface water.

It is planned to reconstruct the diversion works of concrete.

3. Pipe Springs National Monument, Arizona:

Water first developed and used by Mormons about 1870.

An inter-Departmental agreement reached in 1933, but Mr. Pinkley feels the Park Service has not received proper treatment.

The Heatons, representing cattlemen, inherited their rights from Mormons.

"The Indians really Have No Rights on the Water" - according to Mr. Pinkley.

Report in our office, by Rose, and maps at Office of Chief Engineer, give most of data.

Attenance of Monument now 5000 per year, and anticipated it will reach 45,000 per year soon.

Monument wishes to irrigate 5 to 10 acres.

Indians now irrigate 40 acres with ditch 1' wide, 8" deep, and 1/2 mile long.

Water now metered by means of 2 ponds 50' square and 3' to 4' deep as described in Rose's report.

4. Arches National Monument - Utah:

Water from seep type of spring not on monument.

Park Service proposes to take in area of spring, even though flow is very small, and develop with 200 to 300 yards of pipe.

Population now negligible, but expected to reach 20,000 per year.

5. Chiricahua National Monument, Arizona:

Source: Spring (See map at Office of Chief Engineer.)

There is a 10' concrete intake underground which seems to rule out this supply for filing.

There is a small creek, but Mr. Pinkley does not care to file on this possible supply.

6. Hovenweep, Colorado and Utah:

There is a seep type spring on portion of monument in Utah, which may have been used before monument was established.

Area - 120 acres in Colorado, 165 acres in Utah.

Only spring in Utah and is not developed.

Exact location not certain, but in Section 20 or 21, T. 39 S., R. 26 E., in San Juan County.

Present attendance 125 per year; anticipate 5000 per year at end of five years.

Spring very small and all will be needed for domestic use, to be developed as masonry pit with spring in middle.

7. Tonto National Monument, Arizona:

There is very small spring with no flow beyond monument boundary. No problem now.

Forest Service used to water stock there, which might cause fight if monument were fenced.

Very little, if any, present stock watered, but farmers are interested.

Probable flow 4 to 5 gallons per minute.

8. Tumacacori National Monument, Arizona:

An irrigation ditch crosses monument, but is of no interest to monument.

Natural drainage would not bring any water to area.

Water will be obtained from well or precipitation for two families and visitors.

9. Walnut Canyon, Arizona:

Want water, but there is only an intermittent flow in canyon.

Santa Fe built dam below monument, which does not hold water.

Park plans metal catchment, but it might pay to file on possible impounding dam.

10. White Sands National Monument, New Mexico:

There is an artesian well on patented land, which it is planned to take into monument. This water is not fit for domestic use, but is being developed as Wild Fowl Refuge, and might be used for flush toilets. Negotiations are now in progress to buy by Chamber of Commerce, and give to Park Service. Title now under Recreational Demonstration Administration, as far as it has been acquired. There is no flow beyond the "Pool of Siloam". Water is warm and highly mineral.

Plan to try well for domestic use.

Travel expected to reach 150,000 per year.

Permanent population to be 12 to 15 people.

No irrigation planned.

11. Wupatki National Monument, Arizona:

A spring now discharges into pipe carrying water off of monument. Owner of pipe, Babbitt Bros. Sheep Company, wants to take up pipe, but Park Service holding up action awaiting settlement of title to pipe. Pipe in use only since 1927. To remove pipe would help monument with title to spring, but would induce stock to enter monument.

Spring flow 4 to 5 g.p.m.

Permanent population - 10.

Probable ultimate travel, 8000 per year.

Heiser Spring is in NW¼ of SW¼ section 32, T. 25 N., R. 9 E., and is owned by Babbitt Bros.

Wupatki Spring NW¼ Section 30, T. 25 N., R. 10 E., which should be appropriated by monument.

No irrigation.

2" and 1½" pipe 1/2 mile long now serves since 1927.

12. Yucca House National Monument, Colorado:

Small spring which was cleaned out for use this summer. Water now taken off of monument to patented land by pipe. Mr. Pinkley feels water can be spared now if monument can retain full right. He wishes advice on this matter.

See map YH-4933, NW corner of Area is S. 46°45' W. 1513 feet from North 1/4 corner section 35, T. 35 N., R. 17 W., N.M. P. M. and in Montezuma County.

13. Kofa and Organ Pipe, Arizona:

These monuments are to be proclaimed soon.

Water will be wanted, but possible source not yet known.

CC: Director.
CC: Mr. Kittredge.

AvVD:SH

A. van V. Dunn,
Associate Engineer.

CC: Supt. Pinkley.

C O P Y

April 15, 1935.

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

During my recent trip I visited Pipe Spring National Monument, Arizona. ********

**********

The distribution of the water has been a very difficult problem, but we hope that the present arrangement will work out satisfactorily. It does seem to give the Park Service a rather limited amount of water, but Custodian Heaton is endeavoring to take care of the most urgent needs.

The camp ground was recently planted to trees, and they must be watered if the trees are to live. It is obvious that Mr. Heaton must keep a cow and should raise sufficient vegetables, etc., for the family use. Without doubt there was a considerable grazing area and garden under way in the earlier days, and it seems only fitting that the Custodian should be allowed to irrigate a sufficient tract to provide these essentials, as well as to make a fitting camp ground for tourists. The distribution boxes were only completed the day before I arrived, and the concrete not set. Therefore all of the surplus water was flowing onto the camp ground trees. This of course will stop as soon as the concrete is set, and Mr. Heaton is going to do his best to take care of all of his needs with the water which will flow into his pipe line.

*********

*********

Very truly yours,

F. A. Kittredge,
Chief Engineer.

CC: Custodian Heaton.

C O P Y

PIPE SPRINGS NATIONAL MONUMENT
Report for Period ending April 3, 1935
By A. E. Cowell, Park Engineer
Zion National Park, Utah

**********

**********

A concrete structure for distribution of water was constructed in the summer of 1934 by the Indian Service in accordance with plan approved by the National Park Service. Water is supplied from historic reservoirs through 3" pipe installed under C.W.A.

After measurement of the spring flow was made a wier was designed by the National Park Service to divide the flow into three equal parts.

The wier is rectangular, with end contraction, cut from sheet brass. The cost of the wier plate was paid for from Indian Service funds, and it was installed by the National Park Service.

**********

04-25-1934: letter to park engineer from superintendent regarding approval of the present arrangement for dividing the flow of wat

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

HEADQUARTERS, SOUTHWESTERN MONUMENTS
COOLIDGE, ARIZONA

August 25, 1934

Mr. A. E. Cowell, Park Engineer
Zion Canyon National Park
Springdale, Utah

Dear Mr. Cowell:

In the interests of peace and amity I am willing to approve the present arrangement for dividing the flow of water at Pipe Spring National Monument. This in response to your letter of August 9. I wish to reiterate, however, my earlier statements to the effect that a quantity division is a most wasteful way of handling so small a supply of wate r for irrigation purposes, and I am convinced, that if any real value is to accrue to the Indian Service or to ourselves for irrigation purposes, the method of time division previously employed by the Custodian will have to be resorted to, and I am pleased to note in the last paragraph of your letter that the structure now installed will permit such a division if and when desired.

Cordially,

Frank Pinkley
Superintendent

cc: Mr. Heaton
Mr. Kittredge
Mr. Langley

11-15-1933: letter to director from chief engineer regarding agreement with respect to water allotment

C O P Y

November 15,1933.

The Director,
Office of National Parks, Buildings and Reservations,
Washington, D. C.

Dear Mr. Director:

Thank you very much for your letter of November 7 telling us of the agreement reached with respect to water allotment at Pipe Springs National Monument.

I think the allotment of water is very fair, and the Park Service certainly will have all it needs under this agreement. At least this is the impression that I have gained from the various reports, and especially Mr. Parker's.

I am very glad that this has reached the settlement stage, and that the Indians also are properly taken care of.

Very truly yours,

F. A. Kittredge,
Chief Engineer.

FAK:SH

11-08-1933: letter to chief engineer from assistant superintendent regarding water problem

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ZION AND BRYCE CANYON NATIONAL PARKS
UTAH

November 8, 1933

Chief Engineer
National Parks, Buildings & Reservations
409 Underwood Building
San Francisco, California

Dear Mr. Kittredge:

This is in answer to your letter of October 30 regarding the Pipe Springs National Monument water problem. I have been quite busy since your letter was received and have just gotten around to answering it.

The points that you bring up regarding the amount of water to each of the three users are very well taken. It was my intention in the original report to acquaint you and Washington with the fact that the division of water would be very difficult to make until other problems were thrashed out. Perhaps my proposal that one-third of the flow of the springs go to each user would not be a fair distribution after careful study of the needs is made. I believe it would be a little difficult to say just what amount would be needed for the monument purposes if my suggestion was followed out regarding the discontinuance of farming and livestock and poultry raising operations, as only enough water to keep the little oasis green would be needed. I would think that a small pipe carried from the pool to the head of the oasis and flowing into a small ditch where continuous irrigation could be maintained would take care of the oasis; then the remainder regardless of amount could be passed through another pipe to the Indian reservoir.

As I have stated in my previous report, I feel that the stockmen have a right, at least a moral one, to sufficient water to make it possible to graze their stock on the public domain. There is a small spring about 150 feet west of the main spring at the fort that is flowing out of a small tunnel from underneath the road. I am quite sure that sufficient water for the stockmen could be developed from this lower spring and taken to the boundary fence, either through a ditch or pipe, and stored in a reservoir just outside the monument boundary fence. This would leave the full amount of approximately 75 gallons per minute from the main spring for monumental and Indian use.

I would feel that we were jeopardizing the future of the monument if we would undertake at this time to take a definite number of gallons of water for the monument. However, the Park Service could assure the Indian Service that we would never use more than an amount sufficient to properly take care of the old oasis which is a part of the original spring and fort.

As you will note in my report to the Director, I found that Custodian Heaton was carrying on quite a farming and livestock operation which requires water for duck ponds and irrigation of crops. This, with his inclination to keep the Indians from using the water, has resulted in very wasteful methods. He has been draining the pools about once each week for irrigation purposes, and of course this left no water for the Indians except for the day or two that the pools were full and overflowing each week.

I am enclosing a sketch map made up from paced distances of the general layout. This will give you a fair picture of the situation until such time as we can make an accurate map. As you are of course aware, we are very busy at present but hope to find a day or two in the near future when Mr. Cowell or I can get away and go to Pipe Springs to make an accurate map. You will note on this sketch two small ponds. These are duck ponds and are kept full of water for the raising of ducks and are not a part of the original fort and should not be confused with the upper pools near the old fort building which were intended for reservoirs in case of long continued siege by the Indians in Pioneer days. You will also note the approximate location of the lower spring which I propose to develop for range stock watering purposes.

I feel that any attempt to settle this problem without the Park Service first determining its policy toward the administration of the monument will meet with failure. The Park Service must decide as to allowing Custodian Heaton to continue his long and bitter family feud with the Indian Service and to curtail his operations to the administration and maintenance of the national monument.

If there are any other points that I can clear up for you by correspondence, I shall be very glad to do so, and as I have already stated, I will make an effort to get an accurate map and make further study of the situation as soon as possible.

Very truly yours,

Thomas C. Parker,
Assistant Superintendent.

Inc.

10-30-1933: letter to assistant superintendent from chief engineer regarding distribution of water flow

C O P Y

October 30, 1933.

Mr. Thomas C. Parker,
Assistant Superintendent,
Zion National Park,
Springdale, Utah.

Dear Mr. Parker:

Your good report of June 6 covering the Pipe Springs National Monument was sent to me by Mr. Burney while I was on a northern trip, and in the rush of the work at the various parks I completely missed it. It is a fine report and covers very important matters very frankly.

While in Washington I had a feeling that some such condition existed, but had no information to that effect. The Indian Service at Washington are quire determined in their effort to obtain a settlement, and although I did not indicate any leaning toward their side while at Washington, still your letter bears out my feeling.

I am wondering, however, as to the use of the three pipes you propose and the dividing of the water on a one-third basis, to the Monument, Indians, and stockmen. The Indian Service are expecting a great deal more than one-third, and with the water available it would seem that the watering of stock would not require one-third.

Also it is hard to see how the park use would require one-third of the flow. It was contemplated by some that the Park Service should plan only to supply all buildings at Pipe Springs, to keep the present trees supplied, and only a small amount of other greenery around the Monument, besides taking care of the tourists. Twenty-five gallons per minute (one-third of the flow) should take care of far more than I believe is contemplated at the Monument. Shall be glad to have your further thought along these lines.

Also how would you propose to handle the distribution of the water? Would you carry the stockmen's supply to a reservoir outside of the Monument? Would you do the same for the Indians?

I would be glad to have a more detailed statement, and perhaps a sketch if you are able to make one at this time.

Sincerely yours,

F. A. Kittredge,
Chief Engineer.

CC: Supt. Patraw.

10-13-1933: letter to the secretary of the interior from commissioner regarding opinion dealing with the use of the waters located w

Refer in reply to the
Following:

B-6

RECD FEB 3 1937 COPY

FORESTRY
39446-33
26855-31
SJF

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Indian Affairs
Washington

8

OCT 13 1933

The Honorable

The Secretary of the Interior.

My dear Mr. Secretary:

Upon the request of this Service, dated April 15, 1931, concurred in by the National Park Service on April 13, the Solicitor for the Department under date of May 6, 1931, rendered an opinion dealing with the use of the waters of Pipe Springs, located within the boundaries of the Kaibab Indian Reservation.

The occasion for the opinion was due to a difference having arisen between the Indian Service and National Park Service over the right to the use of these waters. The Indian Service insisted that the water be made available for irrigation and other uses by the Indians of the Reservation, which use was being prevented by reason of the caretaker of the Pipe Springs National Monument, set aside on May 1, 1923, by Presidential Proclamation, using, in addition to the needs of the Monument, water to irrigate a garden within the area forming the Monument.

The prior legal rights in and to the use of the waters of Pipe Springs was not determined by the opinion. The pertinent parts of the opinion read:

> Succinctly stated, the problem narrows down to the right of the caretaker of the national monument to receive part or all of his pay for service rendered the United States by the use of the waters of Pipe Springs for irrigation and other purposes.
>
> The rights as referred to in the Presidential proclamation to the use of the waters of Pipe Springs apparently contemplate (a) use by travelers on the highway, (b) the privilege to the Indians of utilizing the water for irrigation, stock-watering, and other purposes, and whenever these priorities are satisfied the rights of a junior appropriator would begin. It is, however, not intended to define or determine the rights or priorities under (a) or (b) above.

> Without attempting to consider water rights other than those mentioned in the proclamation creating the national monument, it is my opinion that the use of the waters of Pipe Springs by an employee of the National Park Service for the purpose stated in the submission is not authorized.

It was and is the contention of the Indian Service that the Indian Reservation has a prior right to the use of sufficient waters of the Springs for domestic, irrigation, and other purposes, to take care of the needs of the Indians on the Reservation, with a priority date at least as of October 16, 1907, the date of the setting aside of the Reservation. The Park Service apparently by reason of the language of the Presidential Proclamation, the pertinent part of which reads,

> Provided, that in the administration of this Monument, the Indians of the Kaibab Reservation, shall have the privilege of utilizing waters from Pipe Spring for irrigation, stock watering and other purposes, under regulations to be prescribed by the Secretary of the Interior.

takes the position that the water rights are primarily under the jurisdiction of the Park Service and that the Indian rights which, under the above quoted language of the Proclamation, consitute a privilege granted to the Indians under the Order.

It is fundamental, of course, that the Presidential Proclamation legally could not divest the Indians of any water rights they may have had prior to its issuance. Furthermore, the Proclamation specifically makes the reserve subject to all prior, valid claims, which would necessarily include prior water rights of the Indians . It is also significant to point out that since the creation of the monument trees and shrubbery have been planted and maintained which increases the use of water for the irrigation of the plant life over that used for such purpose at the date of the creation of the Monument.

There is also claim by certain stockmen to the use of one-third of the water of the springs for stock purposes. In the records of this Office is a memorandum agreement dated June 9, 1924, signed by representatives of the Park Service, the Indian Service and the stockmen which in part reads,

> It was the concensus of opinion and practically agreed upon by those present as being a fair and just solution of the situation that the cattlemen had the acknowledgement of all parties present to an ownership of one-third the waters from these springs and since a permit exists over the adjacent portion of the Indian reserve that they have the right to conduct water to and upon any portion of the land covered by permit during the life of that permit and at the expiration of the permit, if said permit is not renewed, to conduct the water off the reservation.

This agreement was approved by the then Commissioner of Indian Affairs and the Park Service. It does not appear to have been formally approved by the Secretary of the Interior. Under it the stockmen may have a moral, if not a legal right to the use of one-third of the water.

It is understood that the Park Service is agreeable to the issuance of regulations providing for a division of the available waters of Pipe Springs (three springs) on the basis of one-third to the Park Service, one-third to the cattlemen, and one-third to the Indian Service. It would appear that such a division, if the water be properly measured, would under normal conditions take care of the respective needs. It is therefore recommended that in lieu of and without definitely settling the legal rights of the respective parties, that regulations along the lines above suggested be approved. A draft of such regulations is enclosed.

Sincerely yours,

(Sgd.) JOHN COLLIER

Commissioner.

Enclosure 298360.

OCT 17 1933

Concurred in:

(Sgd.) ARNO B. CAMMERER

Director, Park Service.

Approved:

NOV -2 1933

(Sgd.) OSCAR L. CHAPMAN

Assistant Secretary.

9 MES 26

Water Situation at

Pipe Spring National Monument

Source, quantity, etc., are very fully treated in a "Report on Water Resources and Administrative Problems at the Pipe Spring National Monument" by Robert H. Rose, Assistant Superintendent, Southwestern Monuments, under date of September 19, 1933. Copy of this report is in your files.

The supply is adequate for all probable needs of the monument as a monument. Provision for an adequate distribution system is sought in the current Public Works program.

The water problem at Pipe Spring National Monument arises from the following clause in the Presidential Proclamation of May 31, 1923, creating the monument:

> "Provided, that in the administration of this Monument, the Indians of the Kaibab Reservation shall have the privilege of utilizing waters from Pipe Spring for irrigation, stock watering and other purposes, under regulations to be prescribed by the Secretary of the Interior."

Local stockmen also claim a right to a share in the water, and their claims, whether legal or not, have been recognized by the Park Service as having the status at least of a moral obligation. The government's rights have not been adjudicated in court and the situation is now governed by "Regulations for the Division of the Waters of Pipe Spring," dated November 2, 1933, promulgated by the Secretary of the Interior under the authority quoted above.

I have not been quite satisfied with the method of division provided in these regulations, but since paragraph 6 of the regulations permits modifications, doubtless future needs can be taken care of by amendments or revisions.

06-06-1933: letter to director from assistant superintendent regarding division of the spring water

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ZION AND BRYCE CANYON NATIONAL PARKS
UTAH

June 6, 1933

The Director
National Park Service
Washington D. C.

Dear Mr. Director:

In compliance with your memorandum to the Commissioner of Indian Affairs dated May 26, 1933, regarding the division of the spring waters of Pipe Springs National Monument, I visited the monument with Superintendent Farrow and Custodian Heaton on June 1. The following is a report of that meeting and a later discussion of the entire matter with Custodian Heaton.

Superintendent Farrow met me at Zion and we drove to the monument and during the ride over Superintendent Farrow told me that he did not care to discuss water rights with Custodian Heaton and asked me to make a sketch map of the monument. I made the sketch and talked to Heaton for a few minutes, and soon found out that there is very bad feeling between our custodian and Superintendent Farrow. I made no attempt to get these men into a discussion of the matter, being convinced that it would only lead to an argument. I asked Heaton to meet me at Zion next day, which he did, and we discussed the matter fully in the presence of Superintendent Patraw.

Custodian Heaton brought several letters with him relating to the adjustment of the waters of Pipe Springs. These letters show that the matter is of long standing and that the difficulty is between the local farmers of Moccasin, Arizona, and Superintendent Farrow. The farmers are using Custodian Heaton to further their ends.

Heaton told me that the only reason his father had for selling Pipe Springs to the Government was to keep the water for the cattlemen as he was afraid that the Indian Service would get Pipe Springs. This thought appears to have been in the elder Mr. Heaton's mind when Mr. Demaray talked to him on July 1, 1923 (see Mr. Demaray's letter dated July 30, 1923, to Heber J. Grant, President of the Mormon Church.)

After reading all the correspondence relative to the purchase of Pipe Springs by the Government that Custodian Heaton has in his files and discussing the matter with him, I feel that the Heatons are using the custodian to assist them in their long fight with the Indian Service. No doubt Superintendent Farrow has attempted to get control of all the water of Pipe Springs in order to exclude the citizens of Moccasin from grazing cattle on public lands adjacent to the reservation. The trouble is of long standing and very bitter. You no doubt under-

stand the attitude of early pioneers toward any invasion of their communities by developments of any sort that is not under their control. This little settlement of Moccasin, which is composed almost entirely of the Heaton family, fought bitterly against their land being included in the reservation. As soon as the Indians moved in the fight for water from Pipe Springs began, which resulted in the sale of Pipe Springs to the Park Service and a member of the Heaton family installed as custodian.

I am calling your attention to the history of the locality as I feel that, although my mission was only a division of the water of the spring, it will be necessary to understand the feeling before any adjustment can be made. I will make some recommendations further along and wish to explain the situation as I find it in order to show why certain changes in the management of Pipe Springs are necessary.

(a) The Heaton family is working against the Indians through Custodian Heaton.

(b) Custodian Heaton has been allowed to fance off the little oasis (approximately 2½ acres) and is using it for the purpose of pasturing calves, sheep, chickens, ducks and geese. Several small buildings have been erected in connection with this livestock and poultry raising which have resulted in a very unsightly condition which is far below park standards. I saw dead poultry, sheep pelts and litter all over the little meadow which is a part of the monument and which could be made pleasing if the livestock operations were discontinued.

(c) If Pipe Springs Monument were brought up to park standards there would not be need for a great deal of water as the watering of the meadow by overflow from the pools would be the only need outside of that of travelers, which is not great.

(d) While the cattlemen may not have a legal right, I feel that they do have a moral right to overflow water from the springs so that their cattle may graze on the public domain.

(e) As to the Indian's needs, to be self-supporting I feel that they should be entitled to all the surplus water of the springs and that the Park Service should administer the waters with due regard for the Indian's needs by very economical use of the monument.

My estimate of the flow of Pipe Springs is approximately 75 gallons per minute. Travelers needs are supplied at the spring itself. The remainder of the water goes into two pools, which are a part of the pioneer history. Two other ponds have been recently constructed in the meadow as duck ponds by the Heatons.

My recommendations are as follows:

(1) Retain all rights of the monument springs and pools.

(2) Install three pipelines approximately one foot from the top of the walls of the pools at the same level. These pipes will be of different sizes which must be determined after further study. One pipe would go to the meadow to keep it green, one to the stockmen and the other to the Indians. A very economical pipeline for continuous irrigation of the meadow could be installed.

(3) Until further study could be made as to monument needs, I would recommend that the overflow be divided equally between the three parties, one-third to the meadow, one-third to the Indians and one-third to the stockmen. This arrangement would not be binding as it is difficult to say just what the monument needs will be after livestock is excluded from the meadow.

(4) There is a second spring flowing out of what is called the Tunnel. This is in very bad condition but I am quire sure that if properly cleaned out and piped, plenty of water for the stockmen would be assured. This would give more water to the Indians and need in no way infringe on the needs of the monument.

To sum up my thought and recommendations, I believe that first an engineer should make a topographic map of the monument and that a landscape representative should inspect the grounds. This will be the first step toward bringing the property up to park standards. Then the distribution of the water will be easy to handle.

I am convinced that the Park Service has been used to carry on a quarrel between the Indian Service and the residents of Moccasin. This will be done away with if the monument is properly administered according to park standards, as there is sufficient water for all needs.

The rough sketch accompanying this report will serve to give you a picture until a more accurate one can be made.

In conclusion I wish to state that the monument at present is a disgrace to our Service and I have gone over the matter with Superintendent Patraw and requested him to visit the monument, and I believe that you will find that the problem is not one of engineering and simple water measurement, but of an administrative nature.

Very truly yours,

Thomas C. Parker
Assistant Superintendent

05-26-1933: letter to custodian from acting director regarding water situation

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

May 26, 1933.

Mr. Leonard Heaton,
Custodian, Pipe Springs National Monument,
Moccasin, Arizona.

Dear Mr. Heaton:

This will refer to your letter of April 22 commenting on copy of letter inclosed from Superintendent Farrow of the Paiute Indian Agency to the Commissioner of Indian Affairs regarding the water situation at Pipe Springs National Monument.

As indicated by your letter this matter has been taken up with this Service by the Commissioner of Indian Affairs and there has been submitted to this office for our concurrence copy of proposed regulations to be approved by the Department with reference to the division of these waters between the Park Service and the Indians. A copy of this draft is enclosed for your information.

We have carefully reviewed these proposed regulations and have today discussed them in detail with a representative of the Indian Office here. It is our thought that these proposed regulations form a satisfactory basis for adjusting this situation but inasmuch as the same are designed to eliminate all possible future misunderstanding it is our desire that they be clarified in such particulars as may be necessary to carry out the views of both services. It has, therefore, been decided to submit these proposed regulations to you, and the Indian Service will also submit a copy to Superintendent Farrow, in order that the same may be thrashed out on the ground and either individual or joint reports submitted to the two Services for final adjustment and agreement here in Washington. It is therefore requested that you contact Superintendent Farrow for this purpose and that your report be submitted to this office accordingly.

In general these proposed regulations represent a tentative agreement between Director Albright and former Commissioner Rhoads of the Indian Service but after the final wording of the draft was submitted to this Service the same did not appear to clearly set forth exactly what uses of the waters are contemplated by the monument. It is our desire, of course, to conserve every bit of this water that is possible and to reserve for use at the monument the minimum required in its satisfactory administration. However, we would not care to reach an agreement or to approve regulations that would through lack of sufficient specification prevent us from getting sufficient water to properly administer the monument for the benefit of the public.

In this connection we understand that the Indian Service now has its pipe line installed and ready to connect. Therefore, pending the approval of regulations regarding the division of these waters it is not desired to delay the diversion of the waters for the benefit of the Indians and our previous instructions to you to release the waters should be followed. It is the desire of the Service to release to the Indians at this time and pending promulgation of definite regulations as much water as possible consistent with the minimum needs at the monument.

A carbon copy of this letter is being sent to the Superintendent of Zion National Park so that Assistant Superintendent Parker can arrange to go over this situation with you in connection with the submission of your report as requested herein.

Sincerely yours,

(SGD.) ARNO B. CAMMERER

Acting Director.

GAM:LOM

Copy to
Supt. Pinkley
Supt. Zion
Mr. Kittredge
Commissioner, Indian Affairs

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
CASA GRANDE NATIONAL MONUMENT
COOLIDGE, ARIZONA

May 18, 1931.

Field Headquarters, U.S. N.P.S.,
San Francisco, California.

Attention of Mr. Vint:

Dear Tom:

I have your letter of the 16th, in which you speak of Pipe Spring matters, and as soon as I can find out where I am going to be this summer and when, I will let you know. At present it looks like I will be over north of the Canyon some time in late July, and I will write Mr. Langley long enough ahead so we can arrange a meeting at Pipe and go over the future plans there.

We just got a body blow at Pipe a few days ago when the solicitor of the Department ruled that we had no right to the use of the spring water for irrigation: that it belonged to the Indians. Since we are paying the Custodian $12 per year and the use of the water as his compensation, this is going to force us to make other arrangements in the matter of a Custodian. It is possible it will result in us getting a full paid salary there in the next deficiency bill.

Cordially,

Frank Pinkley
Superintendent.

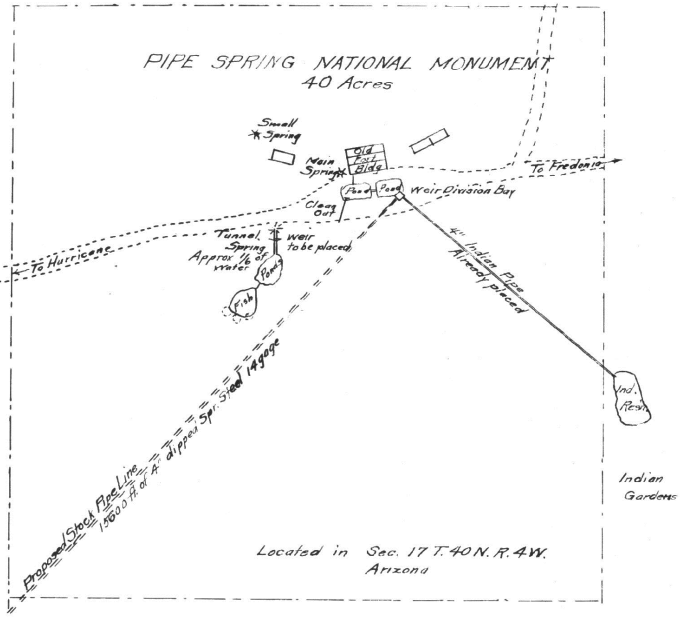
From Archive Files of Bureau of Indian Affairs
marked: 47237 1921 Kaibab File = 313

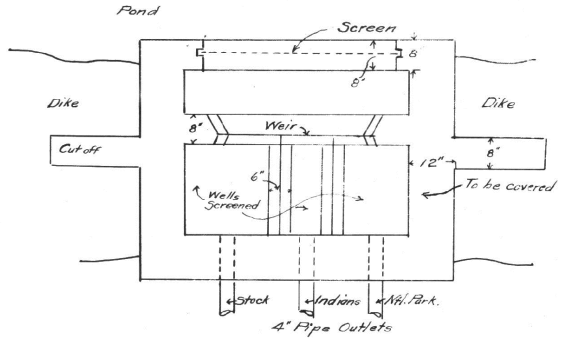
Solicitors Opinion of May 6, 1931 (M 26487) that Supt Pipe Springs is not entitled to water from springs as part of compensation for Services as Supt. even though his salary is nominal

Ltr of Dec 13 1933 to Commissioner of Indian Affairs from Supervising Engineer proposed 15,600 feet of pipe with capacity of 9.35 m.i. as 1/3 of 27 miner inches for Stock use (See ltr by same date)

Although Proc. establishing P. Jr Springs designates it as only water between Hermicane Utah + Fredonia, Ariz, the Heaton + Pipe Springs + Kaibab Reservation per report of Aug 1935.
also uses: Moccasin Springs
Upper " "
Springs claimed by Gilbert G Heaton + George N Lythe

11-00-1933: sketch of pipe springs national monument



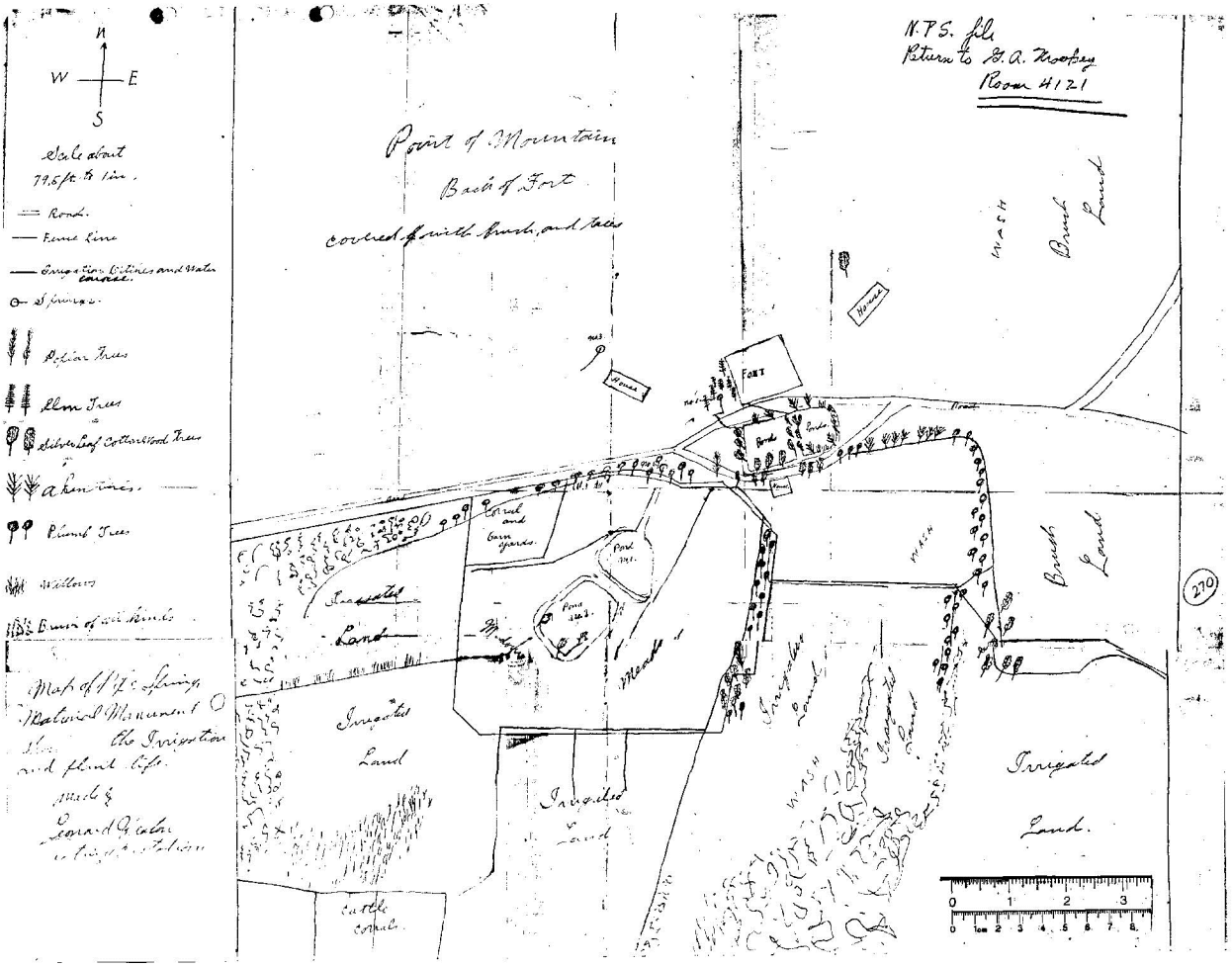



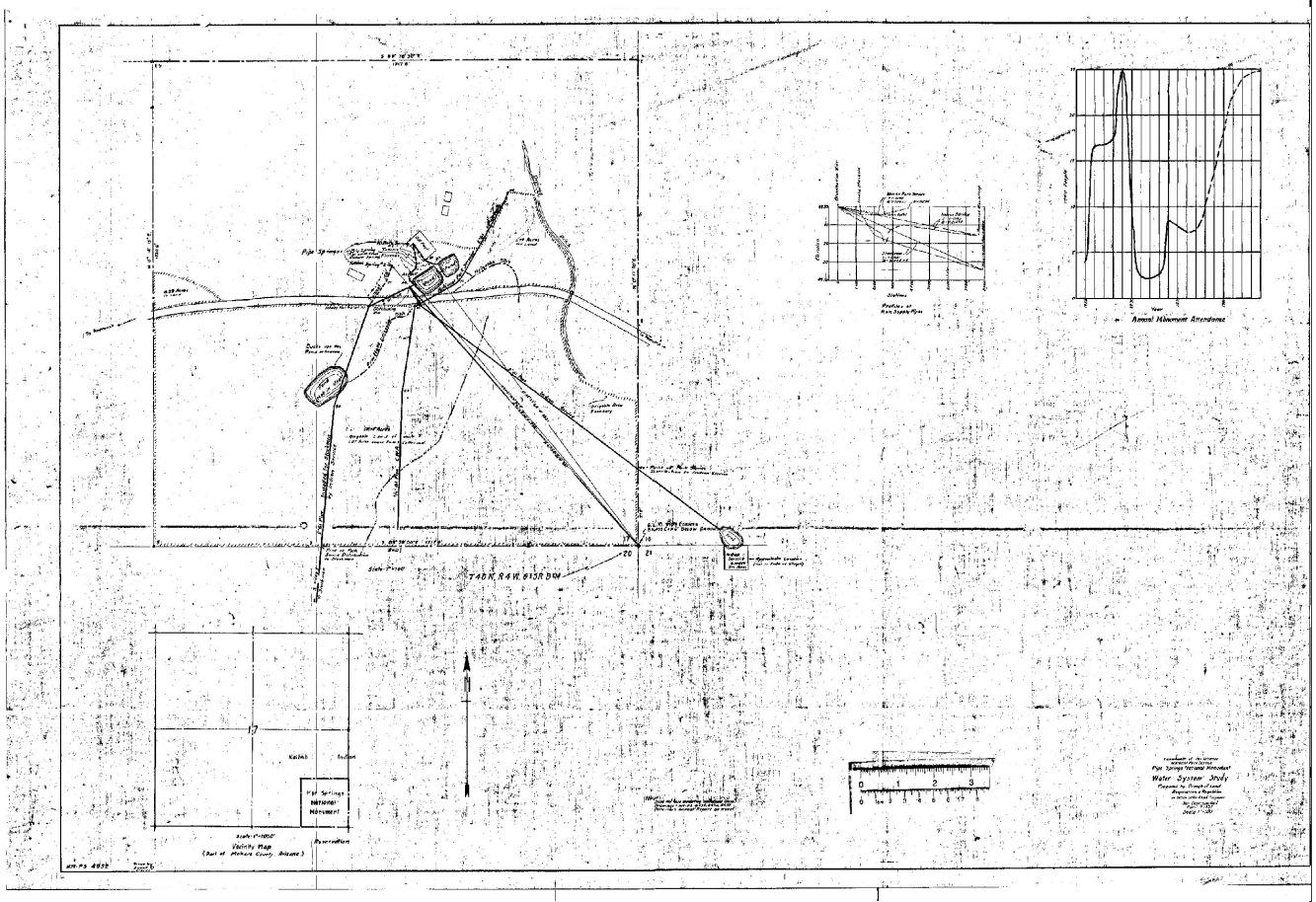

Box for division

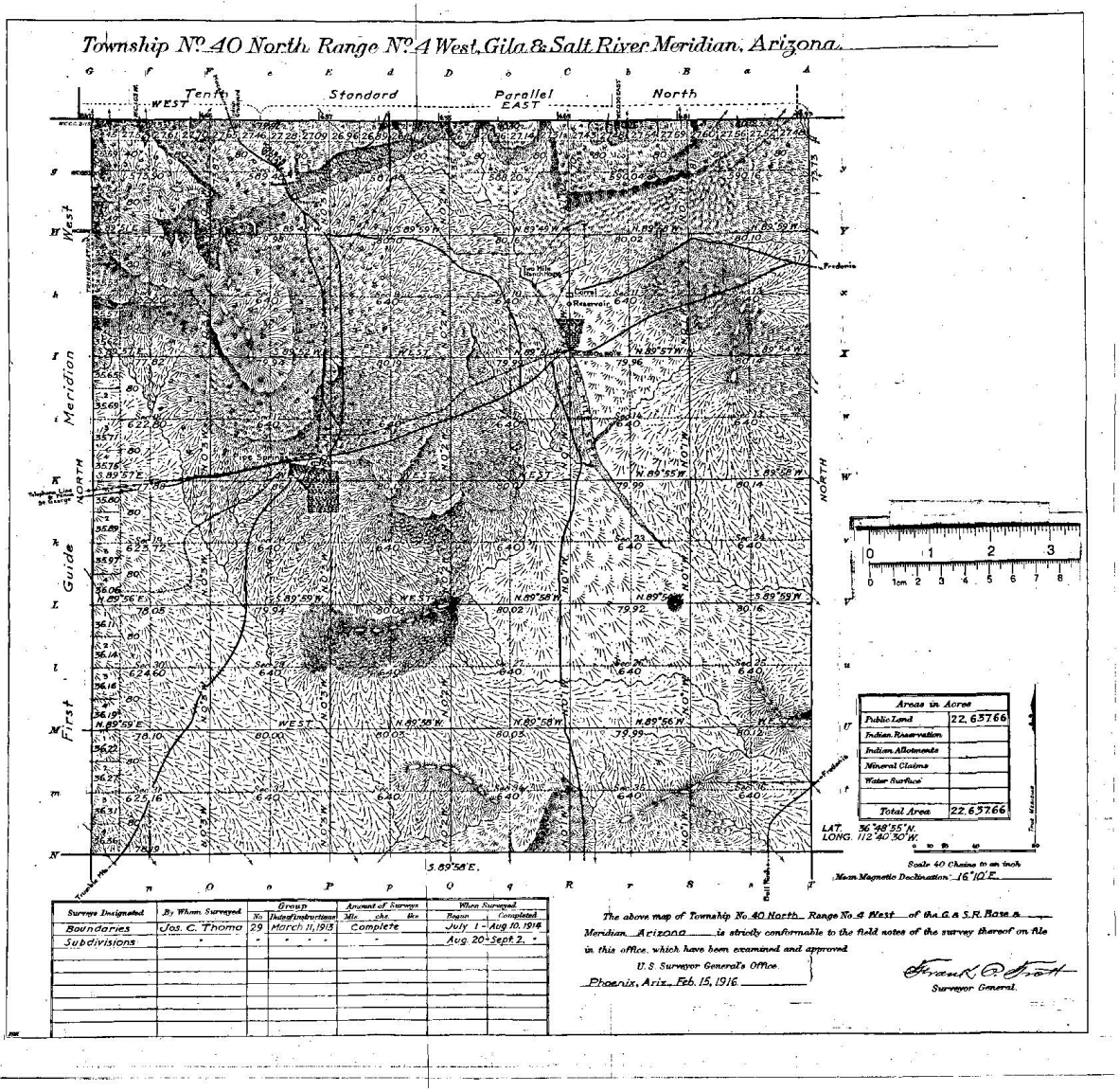
Supervising Eng
Bureau of
Indian Affairs
Date 9/14/38

Nov. 1933
Drawn by J.J.H.
Traced by L.M.H.

00-00-0000: sketch map of the plant life and irrigation of pipe springs national monument




T 40 N, R 4 W, 61 SR B&M
Annual Monument Attendance
Vicinity Map
Water System Study




Docket Information

Number of Documents in Docket 519

Documents Dated from 2/16/1856 to 9/23/2004

Docket Compiled: 6/3/2016