

COPY

APPRAISAL REPORT**CULINARY SPRING****East Fork Irrigation Company
Tropic, Utah****City of Tropic
c/o Mondell Syrett, Mayor****GREGORY E. AUSTIN, M.A.I.
PROVO, UTAH**

GREGORY E. AUSTIN, S.R.P.A., M.A.I.

APPRAISER — REALTOR

P.O. Box 110 — Telephone (801) 375-5888

PROVO, UTAH 84601

August 5, 1974

City of Tropic
c/o Mr. MonDell Syrett, Mayor
Tropic, Utah

Gentlemen:

As requested, I have completed an appraisal and submit herewith my report on the market value of the spring belonging to East Fork Irrigation Company, in the channel of the Paria River in the Bryce Canyon National Park, about three miles north of the City of Tropic.

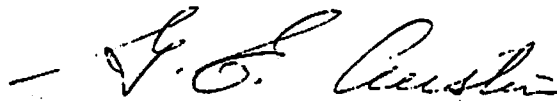
After an on-site inspection of the spring, analysis of present and potential use and marketability of water in the area, it is my opinion the market value of the water in the spring mentioned, as of August 1, 1974, is

TWO HUNDRED DOLLARS (\$200.00) PER ACRE FOOT

The attached report of 17 pages is a brief description of the location and water source, measurements, diligence claims and information abstracted from the market from which the value estimate has been made.

If we can assist further with this appraisal assignment or others, please call.

Sincerely,


Gregory E. Austin, M.A.I.

GEA/lg

SUMMARY OF IMPORTANT FACTS AND CONCLUSIONS

Property Appraised

Culinary Spring
East Fork Irrigation Co.
Tropic, Utah

Purpose of Appraisal

To estimate market value
of spring water.

Location of Spring

Channel of Paria River,
Bryce Canyon National Park
about 3 miles north of
Tropic, Utah

Diligence Claim

<u>No.</u>	<u>cfs</u>	<u>Acre Feet</u>
2878(89-360)	0.668	133.32

Value Estimate Per Acre Foot

Two Hundred Dollars
(\$200.00) per acre foot

Date of Value Estimate

August 1, 1974

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APPRAISAL REPORT

PROPERTY IDENTIFICATION

The water appraised flows from a spring or springs belonging to the East Fork Irrigation Company of Tropic, Utah, and is located in the Bryce Canyon National Park along the Channel of the Paria River approximately 3 miles north of Tropic, Garfield County, Utah.

PURPOSE OF THE APPRAISAL

The purpose of the appraisal is to estimate the market value of water flowing from the spring or springs, identified above.

By Market Value is meant the highest price estimated in terms of money which the property will bring if exposed for sale on the open market allowing a reasonable time to find a purchaser who buys with knowledge of all the uses to which it is adapted and for which it is capable of being used, with neither the purchaser compelled to buy, nor the seller being compelled to sell.

HISTORY

Under Diligence Claim No. 2878 (89-360) the East Fork Irrigation Company of Tropic, Utah, has claim on 0.668 second feet of water or 133.32 acre feet or water out of a total of 1.0 second feet or water. The water has been diverted from a stream at a point North 182 feet and West 664 feet from the East Quarter Corner of Section 22, Township 36 South, Range 3 West; and used for the stock watering of 100 horses, 400 cattle, 700 sheep and 150 swine and used from April 1 to October 31, for the supplemental irrigation of 1673.19 acre, but limited to the sold supply of 50.0 acres in parts of Section 29, 30, 31 & 32, all of Township 36 South, Range 2 West; Section 23, 24, 25, 26, 34, 35 & 36, all of Township 36 South, Range 3 West; Section 6, Township 35 South, Range 2 West; Section 1, 2 & 3, Township 37 South, Range 3 West.

PROPOSED CHANGE IN POINT OF DIVERSION AND USE

The City of Tropic proposes to purchase from the East Fork Irrigation Company the above spring or springs and the water claimed in the above diligence right to be diverted from Spring No. 10 at a point south 1735 feet and east 1750 feet from the Northwest corner of Section 22, Township 36 South, Range 3 West; and used for the domestic purposes of 180 families and used for the municipal purposes within the town of Tropic, Utah, in parts of Sections 22, 23, 26, 34, 35 & 36, all of Township 36 South, Range 3 West, and Sections 1, 2 & 3, Township 37 South, Range 3 West. The remaining amount of water will be used as heretofore.

The above point of diversion and use change was advertised in the Garfield County News, Panguitch, Utah, on April 4, 11 & 18, 1974. Protests, if any, to the application were to be submitted to the State Engineer prior to May 18, 1974. It is understood no protests were entered. (Copy of notes in Addenda)

The City of Tropic proposes to improve and stabilize the spring source, construct a catch basin (under specifications of the State Health Department) pipe the water approximately three miles to Tropic to be stored in a 150,000 gallon tank. This is to be used for domestic purposes for 180 families. There are now approximately 110 families being served by the Tropic culinary water supply.

MEASURE OF FLOW

Measurements of the spring flow were taken in February and July of 1974.

On February 19, 1974, a measure was made by the Parshall Flume by James C. Sandberg of Sandberg Engineers, Cedar City. (See Addenda for Engineers letter) This measurement was 256.6 gallons per minute or 0.57 cubic foot per second.

A measurement at about that same time by Canyonlands Engineer, as confirmed by Mr. John Ashurst, verified the measurement at about 250 gallons per minute.

On July 11, 1974, Canyonlands Engineer, Mr. John Ashurst

measured the spring flow in the presence of the appraiser at about 124 gallons per minute or 0.28 cfs. (See photos in Addenda). These measurements are summarized as follows:

Water Flow Measurements

<u>Date</u>	<u>cfs</u>	<u>gpm</u>	<u>Acre Feet</u> <u>(365 days)</u>
February 19, 1974	0.57	256.5	412.45
July 11, 1974	0.28	124.0	200.75

In this appraisal the final value estimate has not been extended as the total annual water flow is not known. The above two measurements, in my opinion, are not adequate to realistically and accurately estimate the annual flow from the springs under appraisal. These are only two measurements made of the spring, one in February, the other in July, and these, in my opinion, are not representative nor can they realistically be used to estimate the annual flow. The 1974 flow is below normal because of the exceptionally dry year. In the improvement of the spring head and the construction of the catch basin additional water might be developed and captured which would also change the total flowage.

FORMULAS USED FOR WATER MEASUREMENT AND CONVERSION

The following formulas have been used in the measurement of the conversion of water for purposes of this appraisal.

1. $\text{cfs} \times 448.831 = \text{gpm}$
2. $\text{gpm} \div 448.831 = \text{cfs} \times 1.98 \text{ ft/day}$
3. $\text{Gallons} \times .00000307 = \text{acre feet}$
4. $\text{Acre feet} \times 325,851 = \text{gallons}$

STATE BOARD OF HEALTH WATER REQUIREMENTS

It is understood the State Board of Health requirements for domestic culinary water supplies including household and yard watering area:

1. 1.11 gallons per minute per connection,
2. 800 gallon storage capacity per connection.

MARKET DATA AND VALUE ESTIMATE

The following information has been abstracted from the market correlated to the subject spring and used to arrive at the final value estimate. The market data approach is a method of estimating value by comparing, weighing and relating sales of comparable property. Water in this region is typically sold on a per share basis. As water delivery varies, the most meaningful common denominator for comparison and appraisal and used herein to estimate value, is a "per acre foot".

Tropic is about 6300 feet above sea level--a semi-arid area east of Bryce Canyon National Park. There is a limited supply and an increasing demand for water in the area--indicating a subsequent increase in water value. Mr. Doyle Cottam, Garfield County Assessor, confirmed that the price per share of actual sales, has gone from \$75 to \$600 per share. This would be indicative of the increasing values that would be consistent in this southern Utah location.

Market Data

1. Mr. Reeves Baker, Escalante, (Secretary of the Escalante Irrigation Company) confirmed that shares of irrigation water are currently selling in the range of \$500 to \$600 per share. Within the past year the company has purchased and sold fraction shares on the basis of \$500 per share. Some water has changed hands on the open market for \$600 per share which would be probably more indicative of market value. There are presently 1600 shares in the company. Each share has been delivering an estimated four cfs for one hour every

two weeks during the water season which opens in mid-April and extends through about mid-October. No actual measurement or calculation is available on acre feet delivered but an estimated four cubic foot per second for one hour 12 times during the season (two watering turns each month for May, June, July, August and September and one each for October, total 12) would be a total delivery of 0.33 acre feet per hour x 12 watering periods, which is 3.96 acre foot per share. The market value being \$600 a share would indicate \$152 per acre foot. ($4 \text{ cfs} \times 1.98 = 7.92 \text{ acre foot/day} \div 24 \text{ hours} = 0.33 \text{ acre foot/hour} \times 12 \text{ watering turns} = 3.96 \text{ acre foot/share}$). Water in the Escalante Irrigation Company originated in the Aquarius Plateau area and is part of the Escalante River drainage terminating in the Colorado River. Escalante is comparable to Tropic as to elevation, climate and growing seasons.

2. Recent transfers of water from Panguitch Lake were made on the basis of 1.68 acre foot per share. This could vary to as much as 2.5 acre foot per share which would probably be a little more realistic. Panguitch Lake water valued in the range of \$250 to \$300 per share indicates value estimate as follows:

<u>Value Per Share</u>	<u>Delivery Range (Per Share)</u>	
	<u>1.68 acre foot</u>	<u>2.50 acre foot</u>
\$250	\$149	\$100
\$300	\$179	\$120

In May of 1974, Mr. Frank Thomas (Panguitch) purchased from Mr. Bernard Henry (Panguitch) a 4.5 acre tract of land about one mile east of Panguitch on U.S. Highway 89 which included five shares of West Panguitch Irrigation Water which was valued at \$300 per share. On the above calculation this would indicate a range of somewhere in the area of \$120 to \$179 per acre foot.

3. A 15-year average of water delivered in the Sevier River Drainage is 1.8 acre foot per share. Water in these companies is presently in the range of \$300 to \$350 per share. This indicates a value estimate range as follows:

<u>Value Per Share</u>	<u>Acre Foot Per Share</u>	<u>Per Acre Foot Value Estimate</u>
\$300	1.8	\$167
\$350	1.8	\$194

The above indicates a range of \$167 to \$194 per acre foot based on a value range of \$300 to \$350 per acre and on a 1.8 acre foot per share delivery as indicated by the 15-year average for the Sevier River Drainage.

4. In the Spring of 1974, Mel Meacham sold to Roy Chlarson, (both of Tropic) a 7+ acre parcel about 1/2 mile east of Tropic. This is irrigated land, level cultivated and included 6 shares of East Fork Water. This property (land and water) sold for \$7,000.

There are 13,831 shares in this company and actual flow for three years is:

<u>Year</u>	<u>Acre Foot Flow</u>
1968	5041
1969	6438
1972	3135

While the flow naturally varies from year to year, an average 0.33 acre foot per share is indicated. This would indicate the East Fork Irrigation Company requires roughly three shares per acre foot.

In order to estimate the value of the water from the above mentioned sale the land is abstracted. Farming land bordering the communities in the small southern Utah towns is generally somewhere between \$300 and \$500 per acre--exclusive of water. This is supported by the

summer 1974 sale from Vernon Spencer, (Escalante), to Doyle Cottam, (Escalante) of 40 acres of good farm land with irrigation water being valued at \$600 per share leaving land at \$400 per acre. In this analysis, a per acre foot range is indicated as follows:

<u>Sales Price</u>	<u>Est. Land Value Per Acre</u>	<u>Value Total</u>	<u>Water Shares</u>	<u>Indicated Water Value</u>		
				<u>Total</u>	<u>Per Share</u>	<u>Per Acre Foot</u>
\$7,000	\$300	\$2,100	60	\$4,900	\$82 x 3 =	\$246
\$7,000	\$400	\$2,800	60	\$4,200	\$70 x 3 =	\$210

The above calculations indicate a per acre foot range of \$200 to \$250.

In each of the above mentioned cases, water delivery is typically mid-April to mid-October. It has been abstracted and correlated to subject on a "per acre foot" basis.

Within the past year there were two other stock transfers that I investigated:

1. Warren Frazier to Investment Group---200 shares, and
2. John Neimann to Whitmore & Goodman---450 shares.

Because of the nature of these transactions I was not able to abstract a water value estimate.

The sale used is a market transfer, but has required adjustment and abstraction and thus weakening the result. It, however, is further data for consideration in the total market study.

CONCLUSION

The purpose of the appraisal is to estimate the market value of a per acre foot of water from a spring or springs originating in the Paria River channel about three miles north of Tropic. The date of value estimate is August 1, 1974.

Two flow measurements were made in February and July of 1974. These are not conclusive, in my opinion, to estimate the potential flow. With the improvement of the catchment basin, the flowage could be increased and, therefore, I have not made an estimate of the total water flow. The value estimate in this report is made on a "per acre foot" basis.

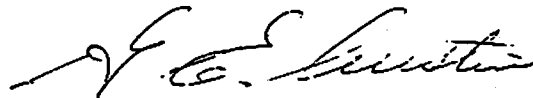
This appraisal has made no attempt to estimate the volume of water the spring or springs have produced in the past or the volume the springs are capable of producing in the future.

Tropic is located in the semi-arid region of Southern Utah. There is increasing growth, speculation and development in the area. There is an increasing demand for and subsequent value of water.

After inspecting subject spring and analyzing its potential, as it relates to demand for and market of water in the area, it is my opinion that the water under appraisal, has a market value, as of August 1, 1974, of

TWO HUNDRED DOLLARS (\$200.00) PER ACRE FOOT

Respectfully submitted,



Gregory E. Austin, M.A.I.

CERTIFICATE OF APPRAISAL

I heroby certify that I have personally inspected the property described herein, of the spring belonging to East Fork Irrigation Company, in the channel of the Paria River in the Bryce Canyon National Park, about three miles north of the City of Tropic, Garfield County, Utah.

I certify that I have no interest, past or contemplated, in the property described herein and that neither the employment to make the appraisal, nor the compensation, is contingent on the value of the property.

I have no personal interest or bias with respect to the subject matter of this appraisal report or the parties involved.

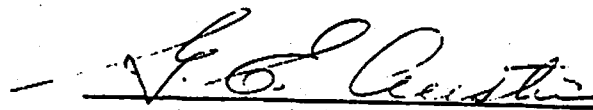
I certify also that according to my belief and knowledge, all statements of fact contained in this report, upon which the analyses, opinions and conclusions expressed herein are based, are true and correct, subject to the contingencies and limitations stated elsewhere in this report.

I also certify that the appraisal has been made in conformity with and is subject to the requirements of the Professional Standards of the American Institute of Real Estate Appraisers.

No one other than the undersigned prepared the analyses, opinions and conclusions concerning real estate that are set forth in this appraisal report.

I further certify that my estimate of market value, as of August 1, 1974, is

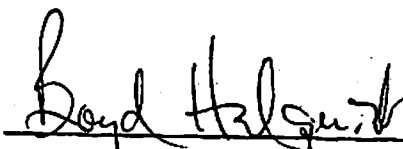
TWO HUNDRED DOLLARS (\$200.00) PER ACRE FOOT



Gregory E. Austin, M.A.I.

Date: August 5, 1974

Assisted by:



Boyd J. Helquist, RM-SRA

CONTINGENT AND LIMITING CONDITIONS

This report carries the following contingencies and limiting conditions:

1. We believe to be reliable the information which was furnished to us by others, but we assume no responsibility for its accuracy.
2. Possession of this report, or a copy thereof, does not carry with it the right of publication, nor may it be used for any purpose by any but the client for whom it was made without the previous written consent of the appraiser or the client and then only with proper qualification.
3. We are not required to give testimony or to appear in court by reason of this appraisal, with reference to the property in question, unless arrangements have been previously made therefor.
4. Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the appraiser or the firm with which he is connected, or any reference to the Amercain Institute of Real Estate Appraisers or to the M.A.I. or R.M. designation) shall be disseminated to the public through advertising media, public relations media, news media, sales media or any other public means of communication without the prior written consent and approval of the appraiser.

QUALIFICATIONS OF GREGORY E. AUSTIN, S.R.P.A., M.A.I.

Resident of Provo, Utah

Owner and manager of Gregory E. Austin Company, Real Estate Brokerage and Real Estate Appraisals.

Actively engaged in real estate business since January 1, 1944, specializing in fee appraising, brokerage and counseling.

Instructor in Real Estate Appraising, Special Courses and Conferences, Brigham Young University and Utah Technical College at Provo, Utah.

Qualified as Expert Witness on real estate values, Second, Third, Fourth and Sixth Judicial Districts, State of Utah, also the Federal Court for Utah.

Over thirty-five hundred written appraisal reports on real property in the State of Utah.

Member of

National Association of Real Estate Boards

American Institute of Real Estate Appraisers

Holds M.A.I. Designation

(Utah Chapter President, 1967)

Society of Real Estate Appraisers

Senior Real Property Appraiser - Holds SRPA Designation

Utah County Board of Realtors

(President, 1955)

Utah County Multiple Listing Bureau

(Chairman, 1954)

Some Appraisal Clients Include

General Services Administration

Utah State Department of Highways

Utah State Building Board

Mountain Bell Telephone

Utah State Attorney General

U. S. Forest Service

L. D. S. Church

Zions First National Bank

State of Utah - Division of
Wildlife Resources

State of Utah - Division of
Parks & Recreation

Brigham Young University

Firest Security Bank of Utah, N.A.

Many assignments from banks, attorneys, and individuals in the State of Utah.

QUALIFICATIONS OF BOYD JAY HELQUIST, RM-SRA
Resident of Provo, Utah

EDUCATION

Bachelor of Science, 1964, Brigham Young University
Master of Science, 1966, Brigham Young University

SPECIALIZED APPRAISAL EDUCATION

Appraisal Courses of the American Institute of Real Estate Appraisers:

Real Estate Appraisal I, "Basic Principles, Methods and Techniques", 1966, Salt Lake City

Real Estate Appraisal II, "Urban Properties", 1967, Berkeley

Real Estate Appraisal V, "Grazing Lands and Cattle Ranches", 1968, Logan

Elective Examination No. 8, "Single-family Properties", 1968, Salt Lake City

Real Estate Appraisal I-B, "Capitalization Theory and Techniques", 1972, Seattle

PROFESSIONAL MEMBERSHIP

Residential Member (RM--Certificate No. 106), American Institute of Real Estate Appraisers

Senior Residential Appraiser (SRA), Society of Real Estate Appraisers

Realtor, Utah County Board of Realtors

EXPERIENCE

Associated with Gregory E. Austin, M.A.I. (Broker and Appraiser) since 1963.

ADDENDA

- A. Newspaper Article
stating change intentions
- B. Letter from Sandberg Engineers
- C. Photographs of Subject

ADDENDA ITEM A

a-7793 (89-1105) Tropic and East Fork Irrigation Co., Tropic, Utah 84776, proposes to change the point of diversion, place and nature of use of 0.668 sec. ft. of water or 133.32 ac. ft. of water out of a total of 1.0 sec. ft. of water as evidenced by Diligence Claim No. 2373 (89-360). The water has been diverted from a stream at a point N. 182 ft. and W. 664 ft. from E $\frac{1}{4}$ Cor. Sec. 22, T36S, R3W; and used for the stockwatering of 100 horses, 400 cattle, 700 sheep and 150 swine; and used from Apr. 1 to Oct. 31 for the supplemental irrigation of 1673.19 acs. but limited to the sole supply of 50.0 acs. in parts of Secs. 29, 30, 31 and 32, all T36S, R2W; Secs. 23, 24, 25, 26, 34, 35 and 36 all T36S, R3W; Sec. 6, T37S, R2W; Secs. 1, 2 and 3, T37S, R3W.

Hereafter, 0.668 sec. ft. of water or 133.32 ac. ft. of water is to be diverted from Spring No. 10 at a point S. 1735 ft. and E. 1750 ft. from NW Cor. Sec. 22, T36S, R3W; and used for the domestic purposes of 180 families and used for the municipal purposes within the Town of Tropic, Utah in parts of Secs. 22, 23, 26, 34, 35 and 36, all T36S, R3W; and Secs. 1, 2 and 3, T37S, R3W. The remaining amount of water will be used as heretofore.

Protests resisting the granting of these applications with reasons therefore must be filed in duplicate with the State Engineer, 442 State Capitol, Salt Lake City, Utah 84114, on or before May 18, 1974.

Dec C. Hansen

STATE ENGINEER

Published in the Garfield County News, Panguitch, Utah 84759, April 4, 11 and 18, 1974.

SANDBERG ENGINEERS

99 NORTH MAIN STREET
POST OFFICE BOX 836
CEDAR CITY, UTAH 84720
Telephone 801 586-9474

NOTE
SOURCE
OF
SPRING
H₂O
PARIA
FLOOD
CHANNEL

February 21, 1974

Mr. Ken Esplin, Appraiser
Utah Properties of Cedar City, Inc.
99 North Main
Cedar City, Utah 84720

Dear Mr. Esplin:

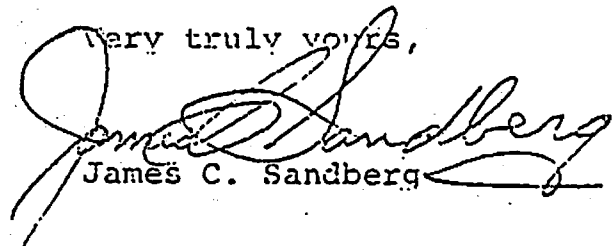
The water was measured by a Parshall Flume in the Spring in Bryce Canyon National Park along the channel of Paria River approximately 1300 feet South of N1/4 Cor., Sec. 22, T36S, R3W, S1B&M on February 19, 1974.

The flow from the springs was found to be 0.28 cfs (126 gpm) along the South Bank of the channel and 0.29 cfs (130.5 gpm) along the North Bank for a total of .57 cfs (256.5 gpm).

All of the water is springing up in the bottom of the Paria Flood Channel. The elevation of the spring is 6685. The elevation at Tropic City is 6300. The distance is 3.31 miles from Tropic City - North along U-54.

This information is to assist you in your appraisal of the spring.

Very truly yours,


James C. Sandberg

JCS:em

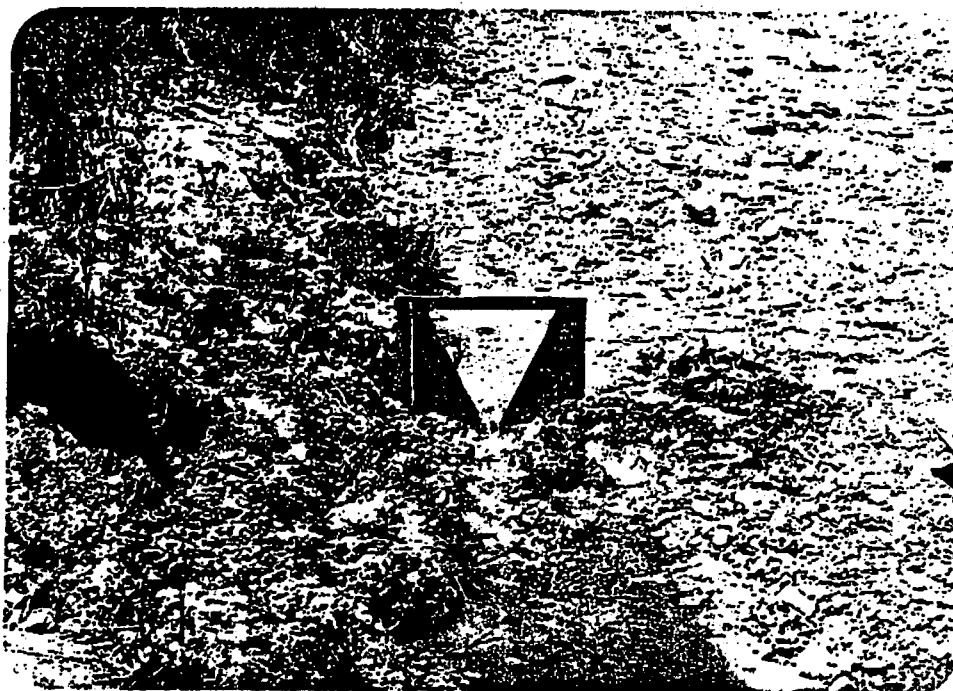
Photographs of Spring
Tropic, Utah
Taken: July 11, 1974



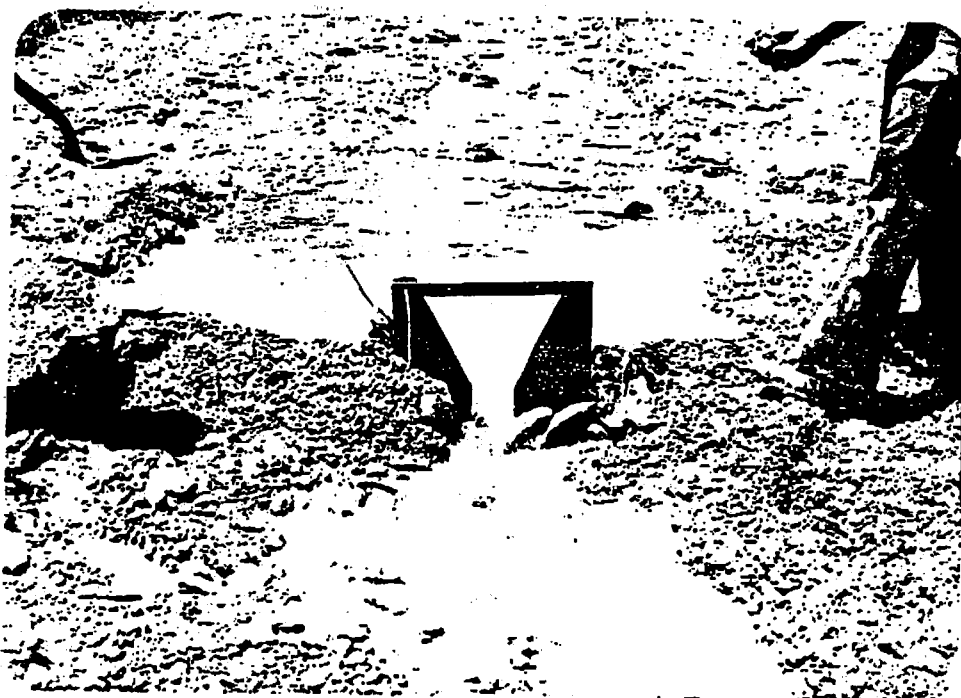
Looking along Paria River Channel
at spring head



Existing spring head



Flume measure of
stream along south side of channel



Flume measure of
stream in center of channel