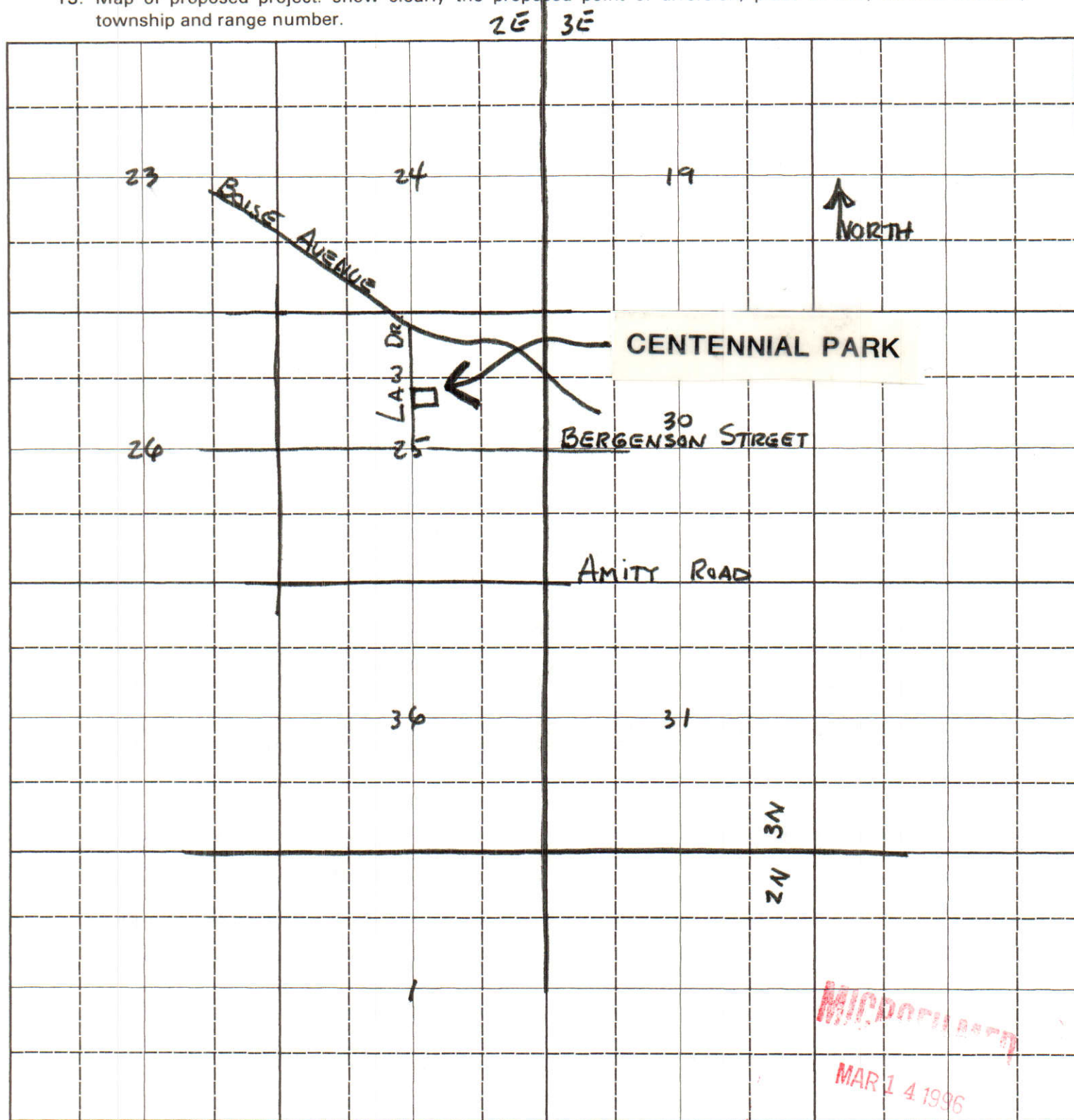


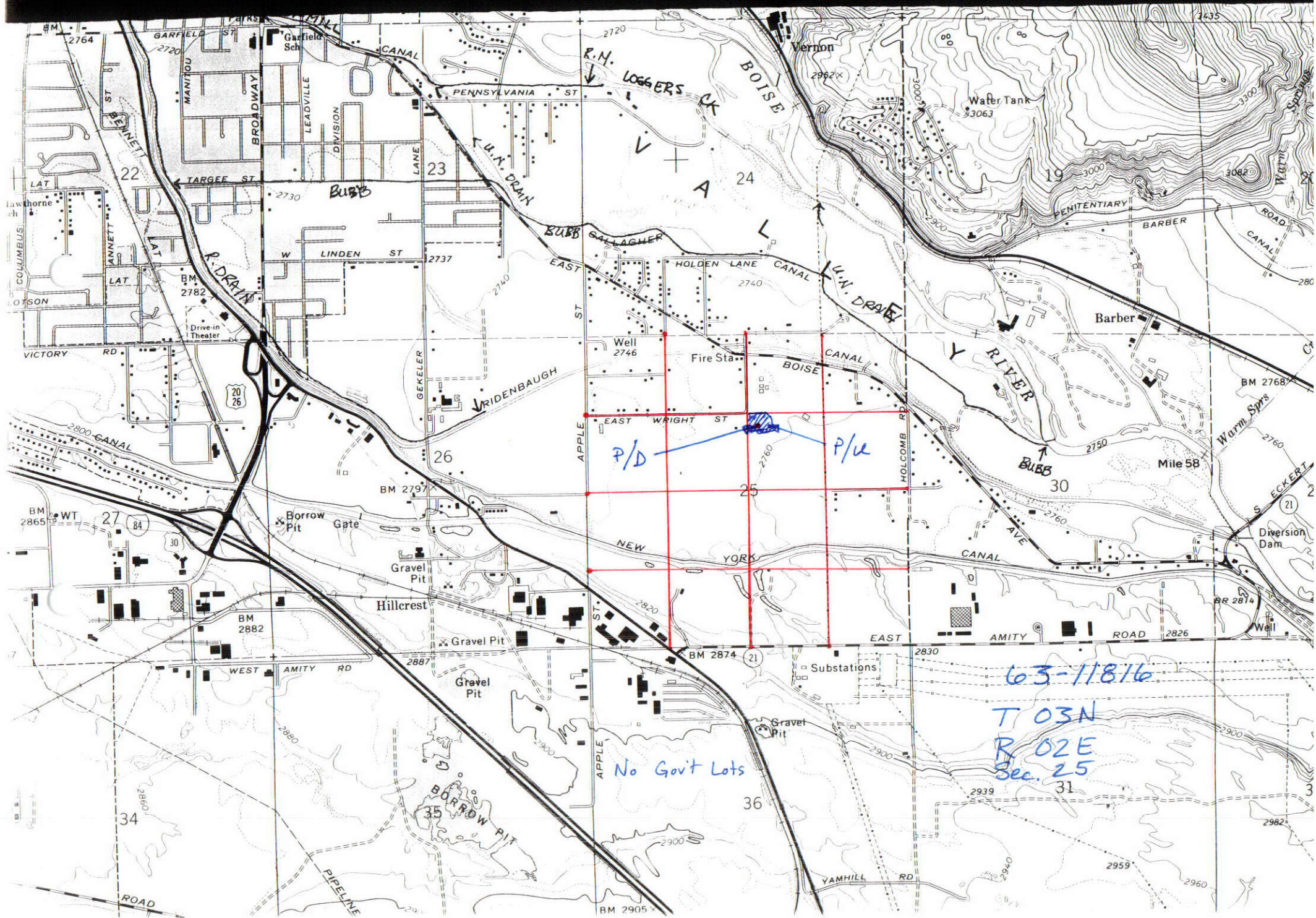
13. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Scale: 2 inches equal 1 mile.

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

James R. Hall
 (Applicant)
 JAMES R. HALL, Director
 Boise Park System



IRRIGATION LEGEND

SYM	DESCRIPTION	NOTES	PSI	R.A.D.	DEPTH
1	TORO 81000-PC-45-LA	45 L.A.	50	35	4.25
2	TORO 81000-PC-45-LA	45 L.A.	50	35	4.25
3	TORO 81000-PC-45-LA	45 L.A.	50	35	4.25
4	TORO 81000-PC-45-LA	45 L.A.	50	35	4.25
5	TORO 81000-PC-45-LA	45 L.A.	50	35	4.25
6	TORO 81000-PC-45-LA	45 L.A.	50	35	4.25
7	TORO 81000-PC-45-LA	45 L.A.	50	35	4.25
8	TORO 81000-PC-45-LA	45 L.A.	50	35	4.25

VALVE LOCATIONS
SHOWN AS SYMBOLS

VALVE SCHEDULE

Valve	Depth	Valve Size	Valve	Depth	Valve Size
A	50	1/2"	I	50	1/2"
B	50	1/2"	J	50	1/2"
C	50	1/2"	K	50	1/2"
D	50	1/2"	L	50	1/2"
E	50	1/2"	M	50	1/2"
F	50	1/2"	N	50	1/2"
G	50	1/2"	O	50	1/2"
H	50	1/2"			



Centennial
Neighborhood
Park

Boise Parks & Recreation
Department

Boise Parks & Recreation
Department

Boise Parks & Recreation
Department

Boise Parks & Recreation
Department

63-11816

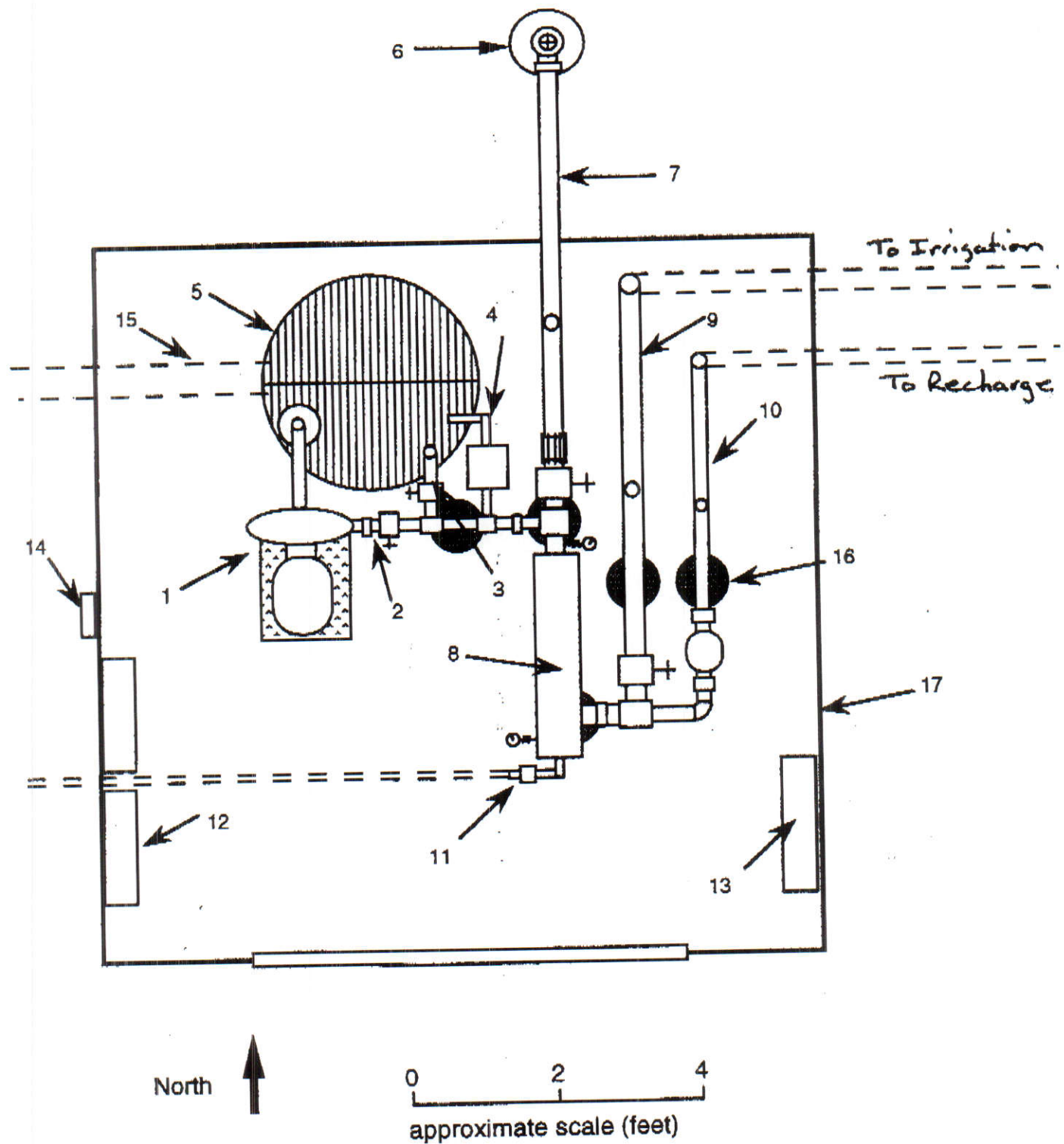


FIGURE 1
CENTENNIAL PARK IRRIGATION PUMP STATION
PLAN VIEW

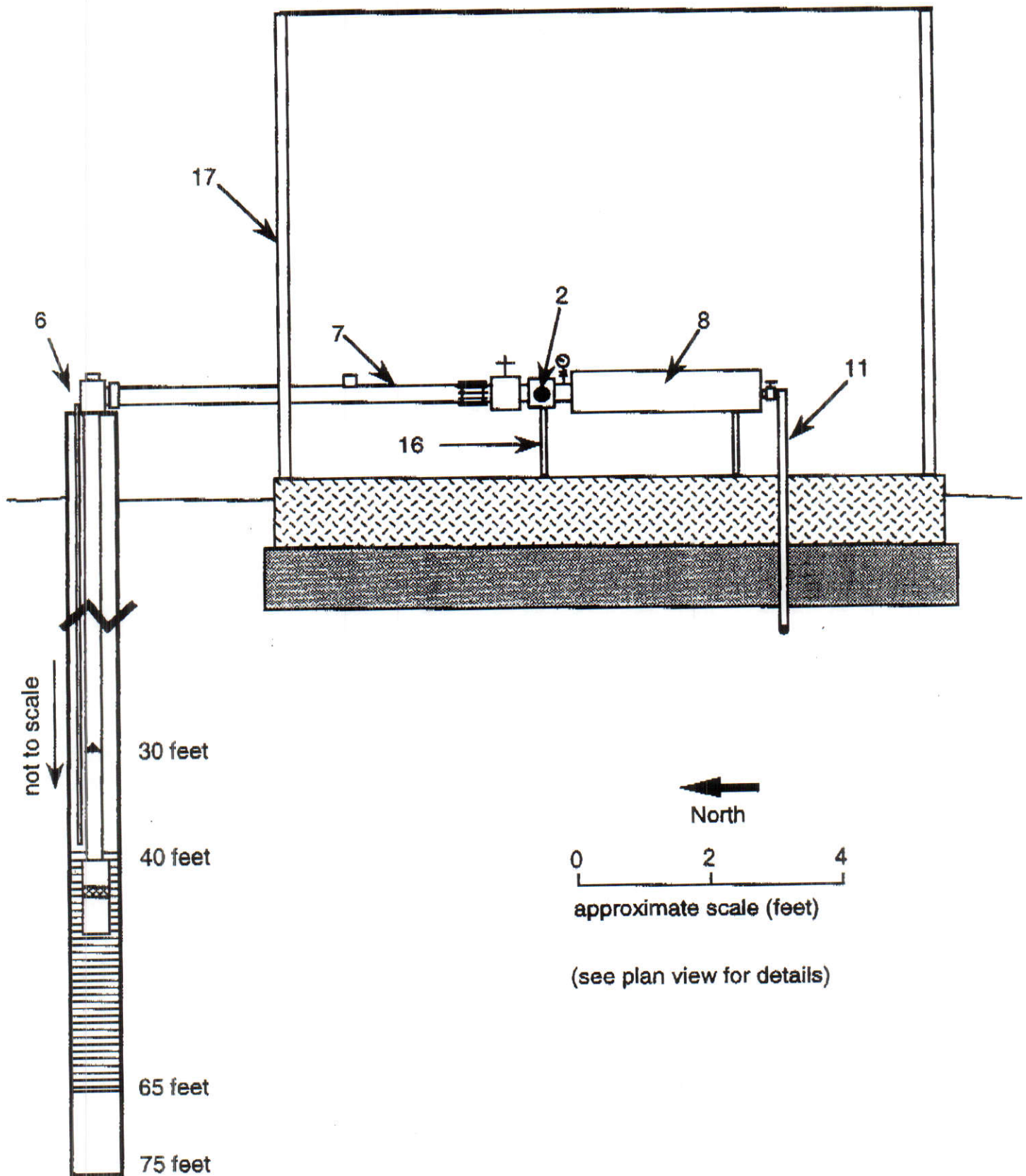


FIGURE 2
CENTENNIAL PARK PUMP STATION
SECTION VIEW THROUGH WELL AND PRESSURE FILTER

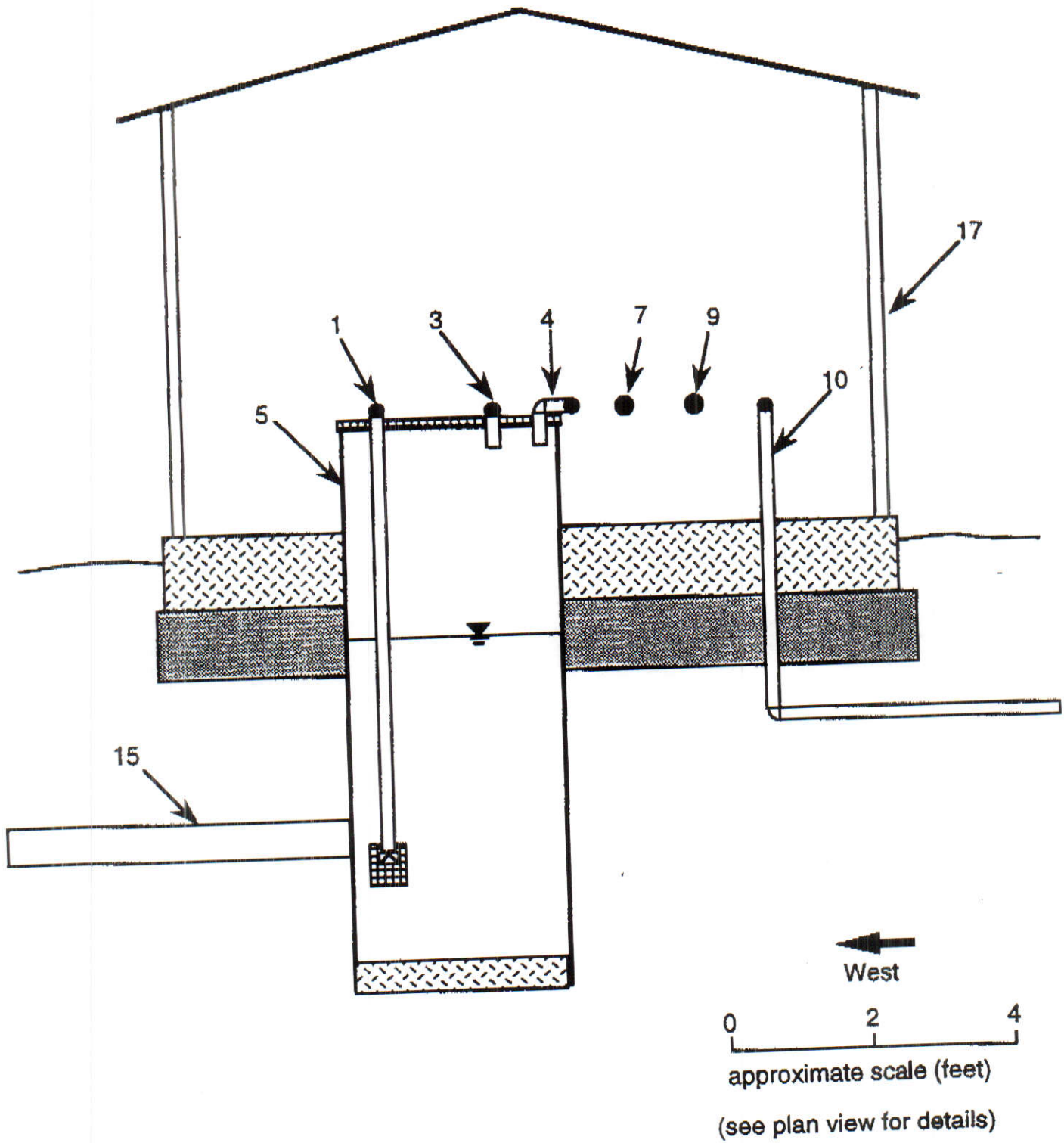
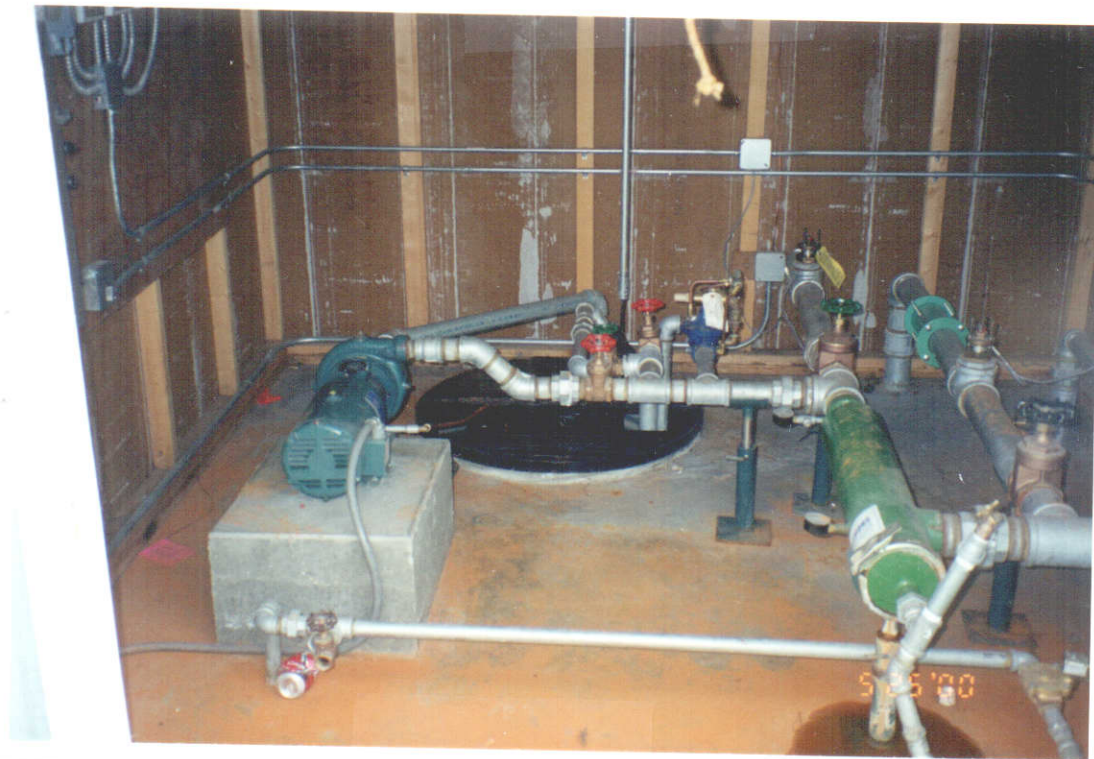
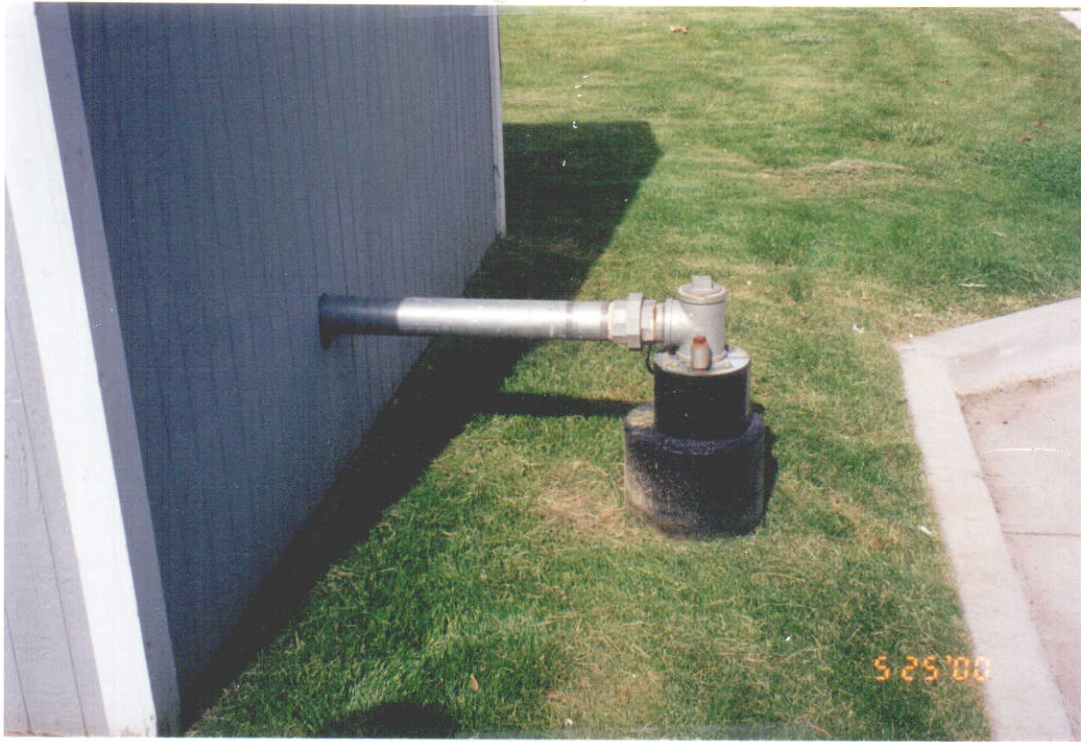
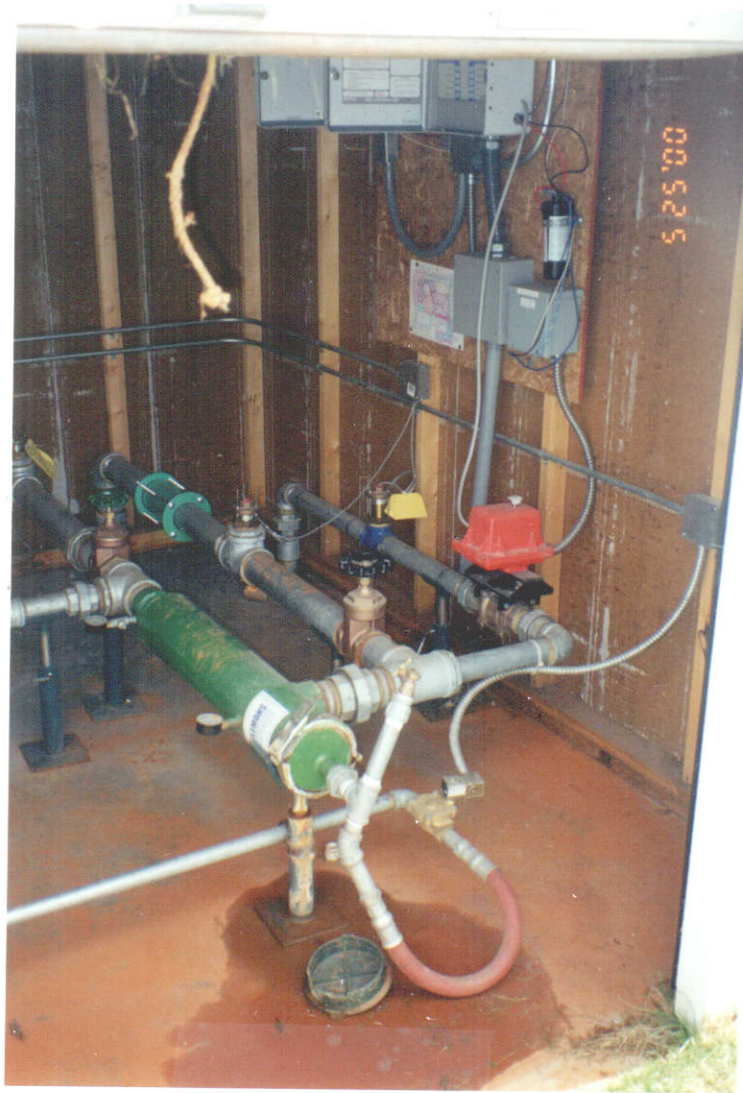


FIGURE 3
CENTENNIAL PARK PUMP STATION
SECTION VIEW THROUGH DITCH PUMP INTAKE SUMP

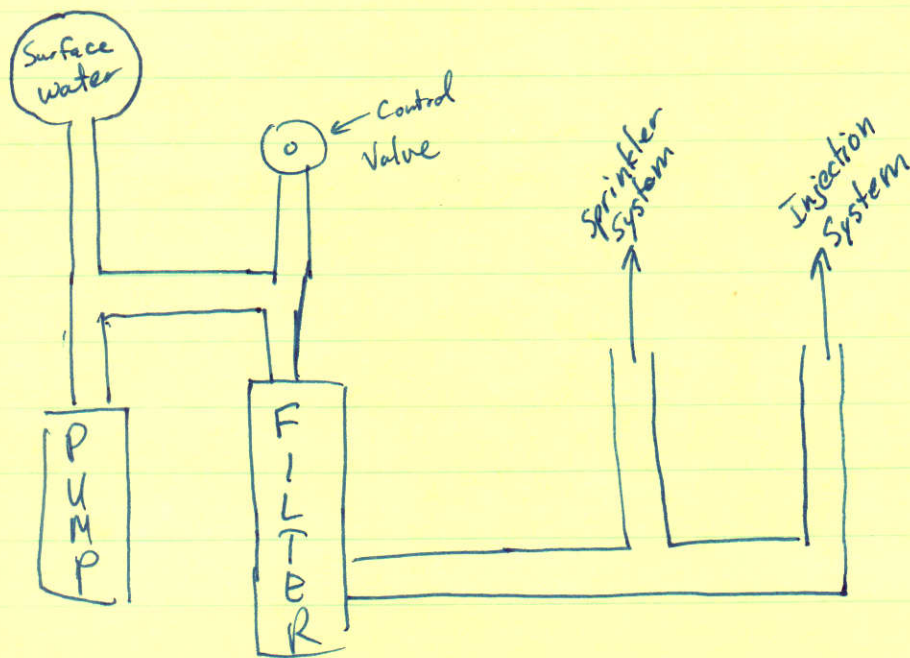
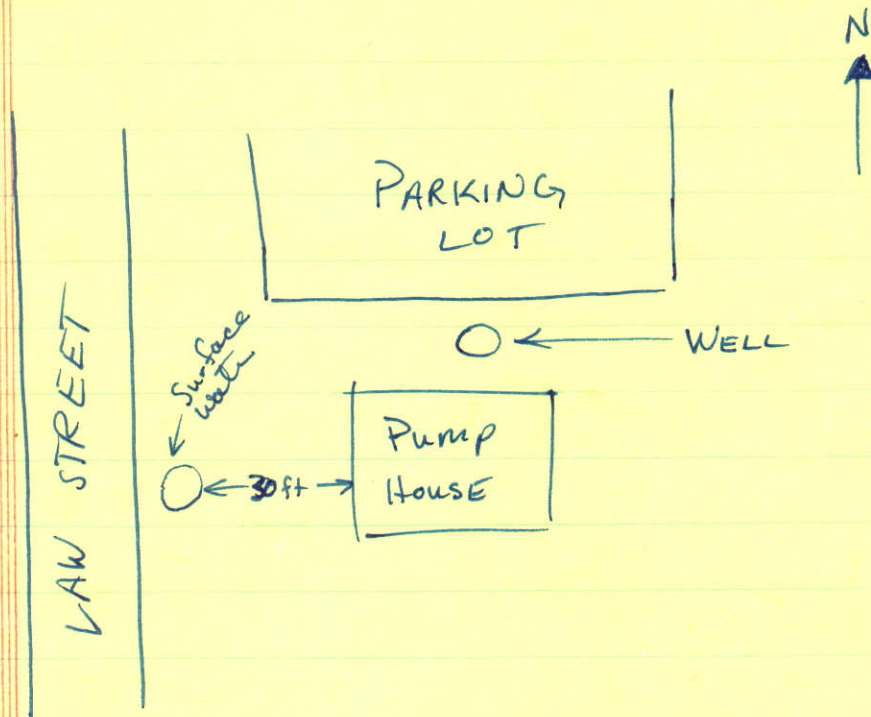


63-11816



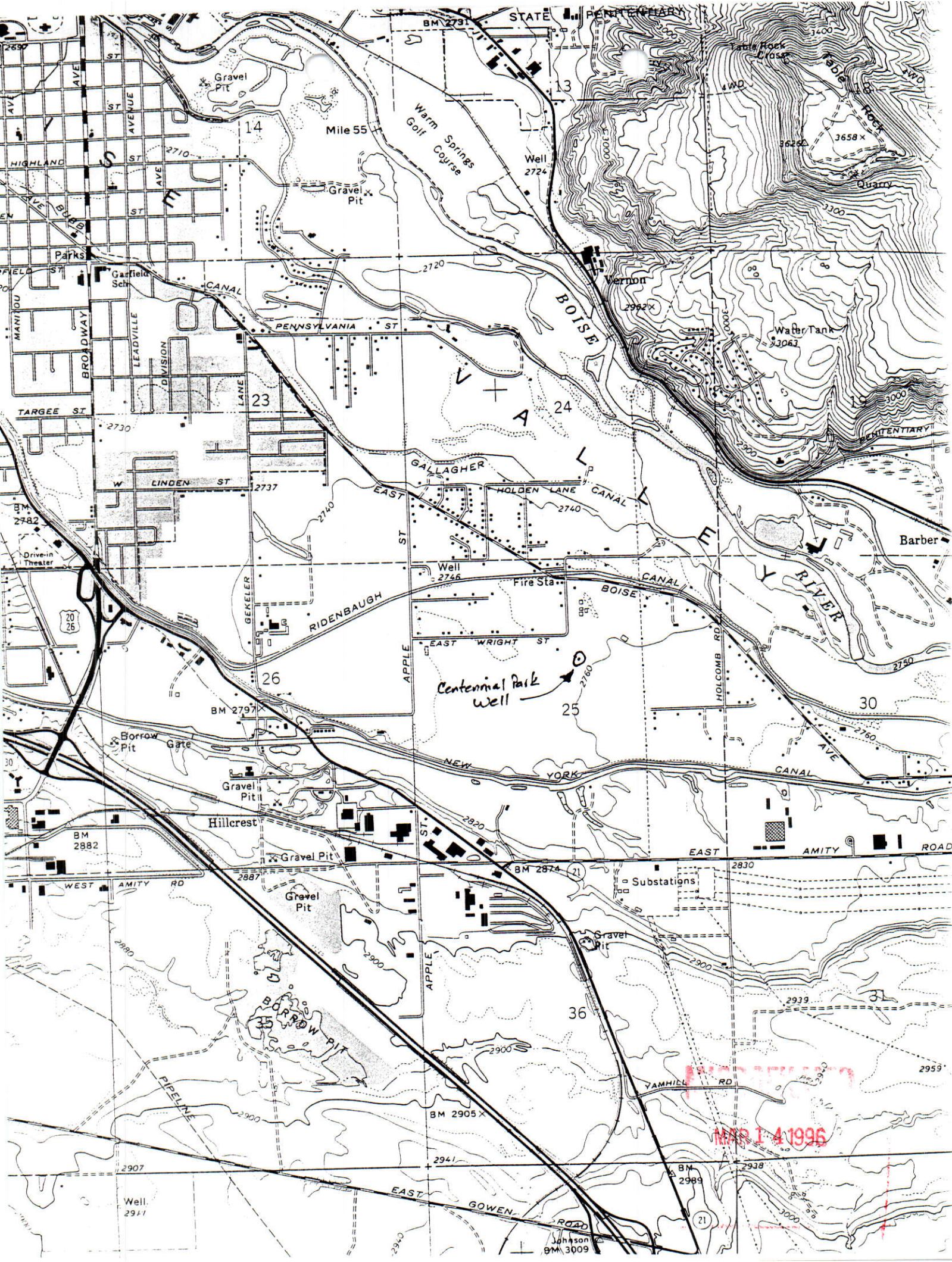
63-11816

CENTENNIAL PARK



3 flow meters

- 1) WELL
- 2) MAXICOM - CENTRALIZED CONTROL COMPUTER
- 3) INJECTION



EXPLANATION

— 2600 —
 Water-table contour
 Shows altitude of the water table
 November 18-19, 1971
 Dashed where approximately located
 Contour interval 20 feet (6.1 meters)
 Datum is mean sea level

•
Observation well

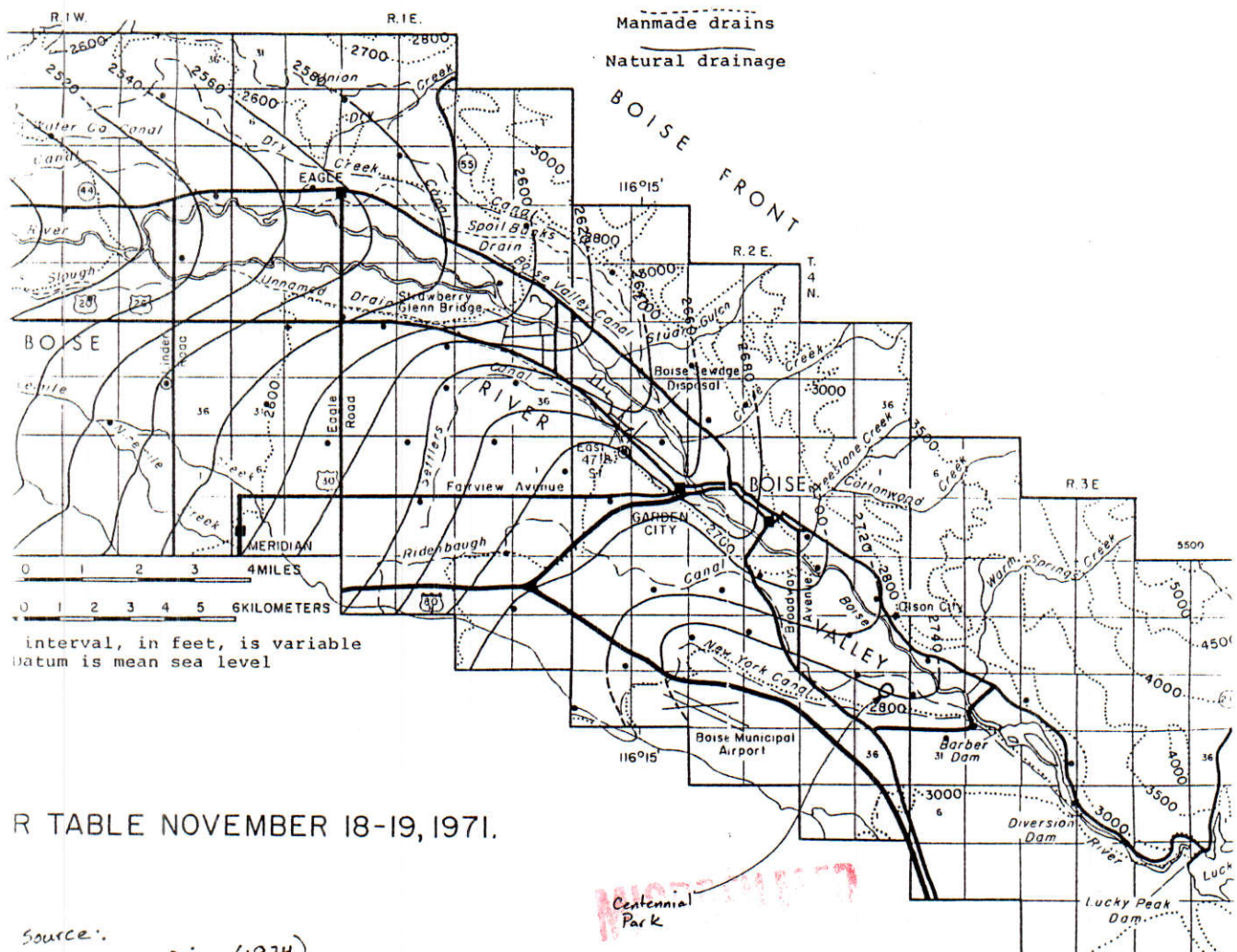
⊙
Observation well
with hydrograph

.....3000.....
Land-surface contour

Principal canals

Manmade drains

Natural drainage

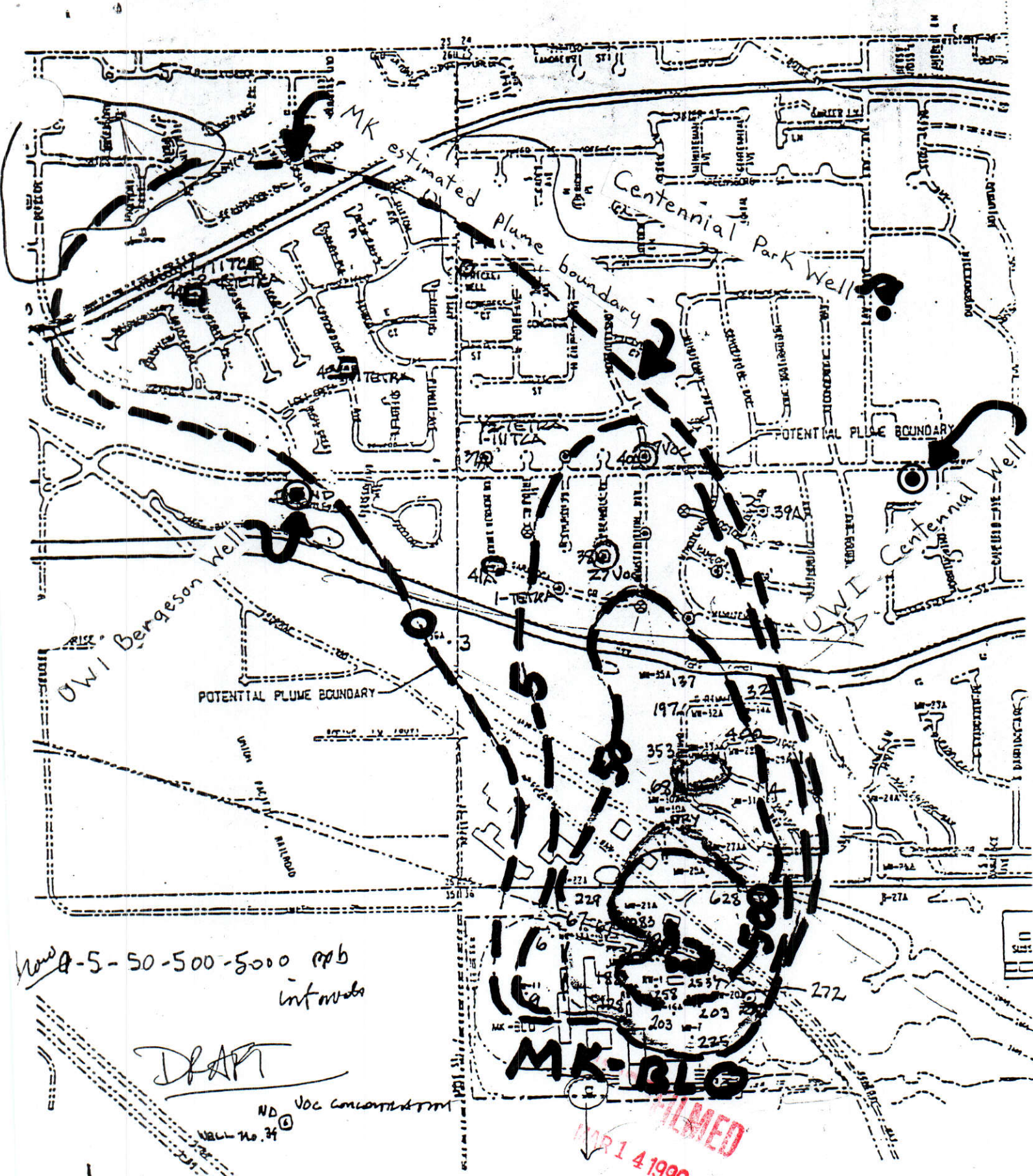


interval, in feet, is variable
 datum is mean sea level

R TABLE NOVEMBER 18-19, 1971.

Source:
 Figure 5, Pion (1974)

MAR 14 1996



now 5-50-500-5000 mpb
int mds

DRAFT

ND VOC concentration
well No. 34

LEGEND

- EXISTING MONITOR WELL
- PROPOSED MONITOR WELL

FILMED
APR 14 1996



BOISE LOGGERS OPERATIONS



RECEIVED

JUL 31 1995

WATER RESOURCES
WESTERN REGION

The Idaho
Statesman

P.O. BOX 40, BOISE, IDAHO 83707

LEGAL ADVERTISING INVOICE

Amount Due

\$212.25

Account Number 04762800		Identification Notice of Application for Water Right	
Ordered By Sue Taylor	P.O. Number	Rate NT	Run Dates July 20 & 27, 1995
Sue Taylor IDAHO DEPARTMENT OF WATER RESOURCES Western Region 2735 Airport Way Boise, Idaho 83705-5082		Estimated Inches	Real Inches
		# Affidavits 1	Legal Number 2446

LEGAL NOTICE

NOTICE OF APPLICATION FOR WATER RIGHT

The Following application(s) have been filed to appropriate the public waters of the State of Idaho:

BOISE PARK SYSTEM
1104 ROYAL BLVD
BOISE, ID 83706

Source: GROUNDWATER
Diversion Pt: SWNE Sec 25 T03N R02E in ADA County.
Use: IRRIGATION (0.250 CFS)
Total Diversion: (0.250 CFS)

Date Filed: 4/28/1992
In: ADA County

T03N R02E S25 SWNE
5.0 ACRES TOTAL

Water bearing zone to be appropriated is 40 to 65 feet within SE Boise Ground Water Mngt. Area; applicant seek waiver based on documentation submitted.

63-11822

BOISE PARK SYSTEM
1104 ROYAL BLVD
BOISE, ID 83706

Source: GROUNDWATER
Diversion Pt: NESW Sec 35 T04N R01E in ADA County.
Use: IRRIGATION (0.250 CFS)
Total Diversion: (0.250 CFS)

Date Filed: 4/28/1992
In: ADA County

T04N R01E S35 NESW
5.0 ACRES TOTAL

Water bearing zone to be appropriated is 230 to 261 feet.

63-11774

BERMENSOLO, MICHAEL S
1970 CANONERO WAY
BOISE, ID 83709

Source: GROUNDWATER
Diversion Pt: SENW Sec 22 T03N R01E in ADA County.
Use: IRRIGATION (0.120 CFS)
Total Diversion: (0.120 CFS)

Date Filed: 4/7/1992
In: ADA County

T03N R01E S22 SENW
4.0 ACRES TOTAL

Water bearing zone to be appropriated is 200 to 400 feet.

63-11777

PANCHERI, DUANE
19010 S CAN ADA
MELBA, ID 83641

Source: GROUNDWATER
Diversion Pt: NESE Sec 20 T01S R01W in ADA County.
SESE Sec 20 T01S R01W in ADA County.
NWNE Sec 29 T01S R01W in ADA County.
NWNW Sec 29 T01S R01W in ADA County.
Use: IRRIGATION (8.100 CFS)
Total Diversion: (8.100 CFS)

Date Filed: 4/17/1992
In: ADA County

T01S R01W S19 Lot 4(SWSW) SESW SESE
S20 NWSE SWSW SESW
S30 SWNE SENE NENW Lot 1(NWNW)
Lot 2(SWNW) SENW
405.0 ACRES TOTAL

Water bearing zone to be appropriated is 360 to 680 feet.

63-12228

MEIER, EUGENE J
MEIER, HOLLY D
695 PARKINSON
EAGLE, ID 83616

Source: GROUNDWATER
Diversion Pt: NENENW Sec 15 T04N R01E in ADA County.
Use: COMMERCIAL (0.160 CFS)
IRRIGATION (0.030 CFS)
Total Diversion: (0.190 CFS)

Date Filed: 7/6/1995
In: ADA County

T04N R01E S15 NENW
1.0 ACRES TOTAL

Permits will be subject to all prior water rights. Protests may be submitted based on the criteria of Sec. 42-203A, Idaho Code. Any protest against the approval of this application must be filed with the Director, Dept. of Water Resources, Western Region, 2735 Airport Way, Boise, Idaho 83705 together with a protest fee of \$25.00 on or before AUGUST 7, 1995. The protestant must also send a copy of the protest to the applicant.

KARL J. DREHER, Director

Pub. July 20 and 27, 1995

2446

LINDA PORTER

, being duly

sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto; that said notice was published in The Idaho Statesman in conformity with Section 60-108, Idaho Code as amended, for TWO

☒ consecutive weekly ☐ consecutive daily ☐ single ☐ odd skip

insertion(s) beginning with the issue of JULY 20, 1995

and ending with the issue of JULY 27, 1995

Linda Porter

STATE OF IDAHO)

ss.

COUNTY OF ADA)

On this 27th day of JULY in the year of 1995, before me, a Notary Public, personally appeared LINDA PORTER, known or identified to

me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that she executed the same.

Notary Public for Idaho

Residing at Boise, Idaho

My commission expires:

MAR 14 1996

11-27-99

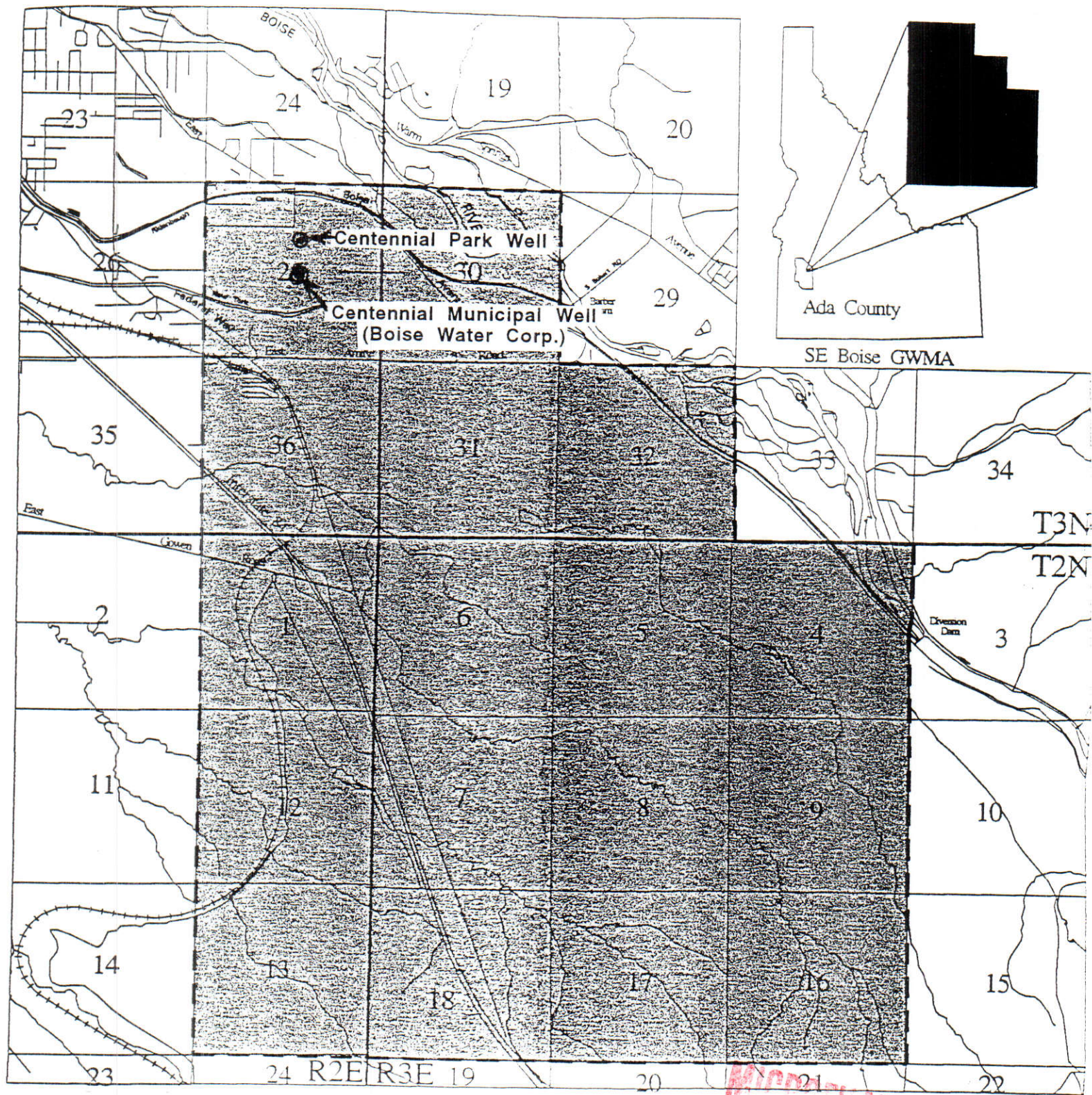


FIGURE 1

MAR 14 1996



IDAHO GEOGRAPHIC
INFORMATION CENTER

Idaho Department of Water Resources
1301 North Gannett Street
Boise, Idaho 83708
(208) 337-7600

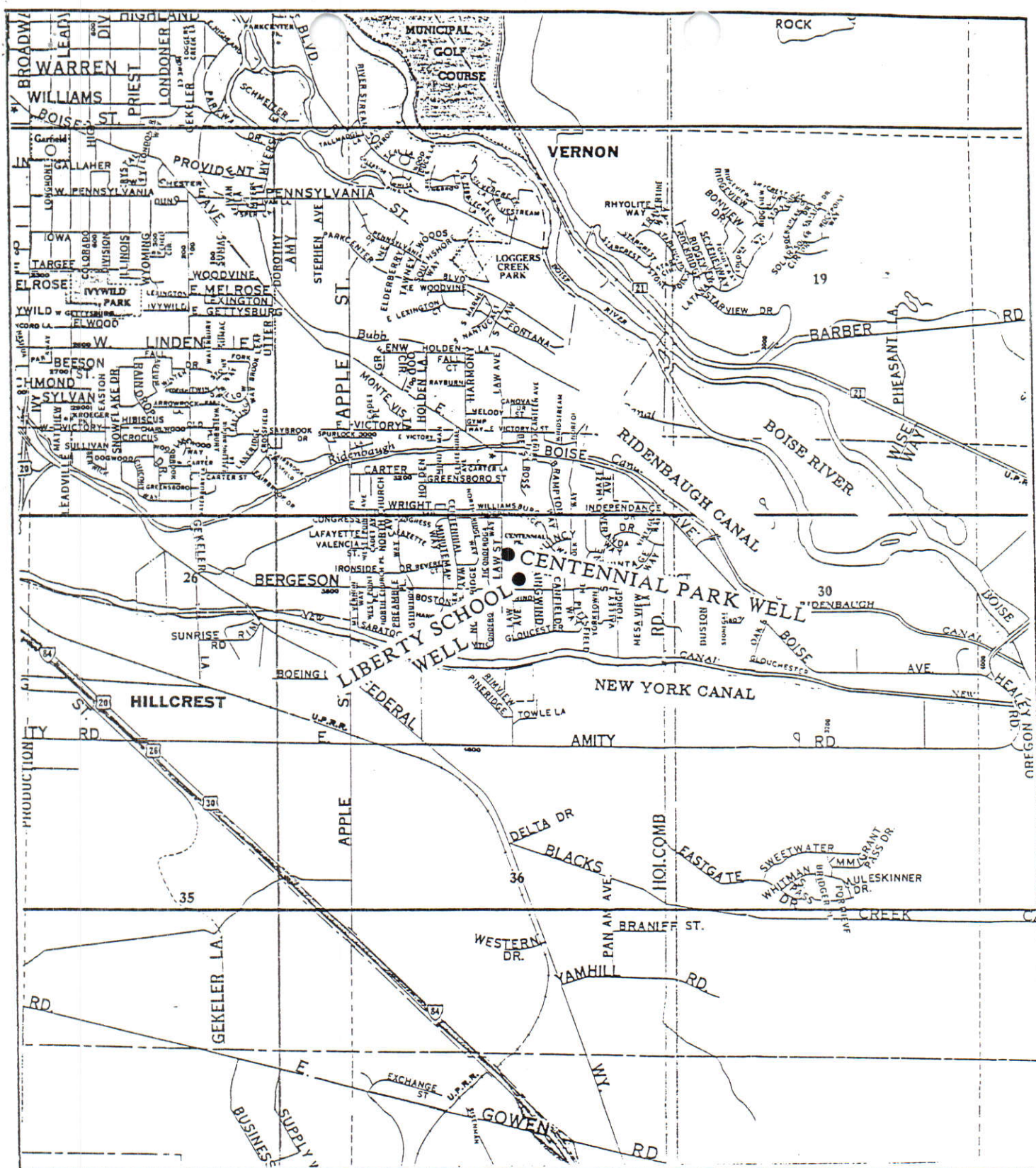
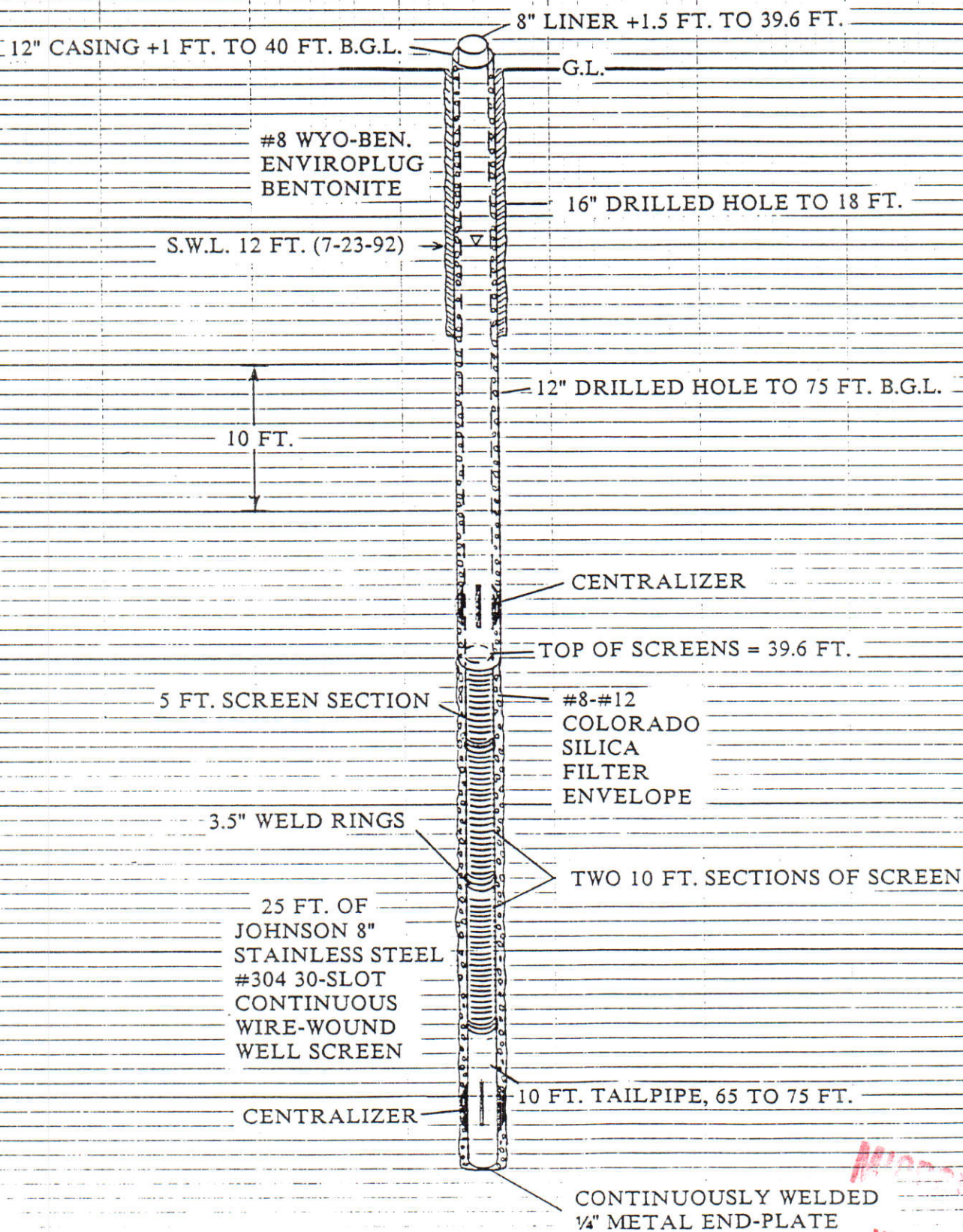


FIGURE 1
MAP SHOWING LOCATION OF CENTENNIAL PARK WELL

Microfilm
MAR 14 1996

FIGURE 2
CENTENIAL PARK WELL
WELL CONSTRUCTION



MAR 14 1996

STATE OF IDAHO
IDAHO DEPARTMENT OF WATER RESOURCES
NOTICE OF CHANGE OF WATER RIGHT OWNERSHIP

RECEIVED

MAR 25 1999

WATER RESOURCES
WESTERN REGION

Please print or type. Attach pages with additional information. Instructions are on the back of this page.
 Incomplete forms will be returned.

Water Right or Adjudication Claim No(s): See Attached Sheet

The following **REQUIRED** information must be submitted with this form:

A. A copy of the most recent **DEED, TITLE POLICY, CONTRACT OF SALE** or other legal document indicating your ownership of the property and water rights or claims in question, **WITH ATTACHED LEGAL DESCRIPTION.**

AND

B. **PLAT OF PROPERTY** or **SURVEY MAP** for parcel of ten acres or less. (These are usually attached to your deed or on file with the county.)

OR

C. For water rights or adjudication claims involving ten or more irrigated acres, a USDA Farm Service Agency **AERIAL PHOTO** with irrigated acres outlined and point(s) of diversion clearly marked.

Name and Address of Former Owner/Claimant See Attached Sheet

4. New Owner/Claimant(s) City of Boise

Name Connector (Check one): ☐ and, ☐ or, ☐ and/or

New Mailing Address Parks & Recreation Dept.

City, State and ZIP Code 1104 Royal Blvd.

Boise, ID 83706

New Telephone Number (208) 384-4060

5. Date you acquired the property _____

6. If you have acquired only a portion of the former owner's property, IDWR may need to split the water right(s) or adjudication claim(s). If this applies, describe in detail your portion of each water right or adjudication claim in the spaces below. If necessary, attach additional pages.

Number of acres you irrigate _____ Number and type of stock _____

Diversion rate in CFS _____ Number of homes _____ Other uses _____

If a water right or adjudication claim is being split and you are not sure how to identify your portion of the original right or claim, please contact the nearest IDWR office for assistance.

7. Signature of New Owner or Claimant(s) James R. Ball

Director -

Corporations or other organizations must submit a list of directors and/or officers demonstrating authority to sign this form.

8. For Snake River Basin Adjudication Claims: Please attach a Notice of Appearance completed by your attorney, if you wish IDWR to correspond with him or her for all matters related to your claims.

City of Boise
Parks & Recreation Department
Water Rights/Adjudication Claims

Names are those found on adjudication profile reports, if water right has been claimed. In many instances different names appear on water right profile reports. The water right names also need to be changed to the corrected name and address.

A63-00164A	City of Boise Parks and Recreation Dept. 1104 Royal Blvd. Boise, ID 83706	A63-03116	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-00164C	City of Boise Parks and Recreation Dept. 1104 Royal Blvd. Boise, ID 83706	A63-03132	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-02792	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-03147	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-02841	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-03413	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-02843	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-03565 ✓	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-02925	Boise Parks System 1104 Royal Blvd. Boise, ID 83706	A63-07034 ✓	City of Boise Parks and Recreation Dept. 1104 Royal Blvd. Boise, ID 83706
A63-02933	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-07179 ✓	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-02971	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-07523	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-02972	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-07524	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-03069	Boise Parks and Recreation 1104 Royal Blvd. Boise, ID 837062898	63-07549	City of Boise Park Dept. City Hall Boise, ID 83701

E.C. Underhill

63-07728	City of Boise Dept. of Parks City Hall Boise, ID 83702	A63-09670	Boise Park System 1104 Royal Blvd. Boise, ID 83706
63-07592	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-10022	City of Boise Dept of Parks 1104 Royal Blvd Boise, ID 83706
A63-07666	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-10188	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-07668	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-10246	Boise Park System Jullion Park 1104 Royal Blvd. Boise, ID 83706
A63-08025	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-10296	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-08263	Boise Park System 1104 Royal Blvd. Boise, ID 83706	✓ 63-10305	Boise City Parks Dept. 1104 Royal Blvd. Boise, ID 83706
A63-08600	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-10395A	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-09112	Boise Park System 1104 Royal Blvd. Boise, ID 83706	A63-10395B	Boise Park System 1104 Royal Blvd. Boise, ID 83706
✓ 63-09138	City of Boise c/o Louis Uranga P.O. Box 500 Boise, ID 83701	✓ 63-10750	Boise Park System Mountain View Park 1104 Royal Blvd. Boise, ID 83706
A63-09192	Boise Park System 1104 Royal Blvd. Boise, ID 83706	✓ 63-10752	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-09276	City of Boise Parks and Recreation Dept. 1104 Royal Blvd. Boise, ID 83706	✓ 63-10760	City of Boise Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-09326	Boise Park System 1104 Royal Blvd. Boise, ID 83706	✓ 63-11075	Boise Park System 1104 Royal Blvd. Boise, ID 83706
A63-09362	Boise Park System 1104 Royal Blvd. Boise, ID 83706		

✓ 63-11816

Boise Park System
1104 Royal Blvd.
Boise, ID 83706

✓ 63-11822

Boise Park System
1104 Royal Blvd.
Boise, ID 83706

A63-22375

City of Boise

A63-30418

City of Boise
Parks & Recreation Dept.
1104 Royal Blvd.
Boise, ID 83706

FOR OFFICE USE ONLY
Amt. of Fee \$: 100
Receipt No. W021981
Receipt By: OB
Date Received: 2-20-97

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

RECEIVED

FEB 20 1997

WATER RESOURCES
WESTERN REGION

PROOF OF BENEFICIAL USE

The Idaho Department of Water Resources considers this form a statement that the permit holder(s) has/have completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee, when necessary, or be accompanied by a completed field examination report prepared by a certified water right examiner who has been appointed by the department.

1. Permit No. 63-11816 Telephone No. 208-384-4060 Ext. 325
2. Name(s) of Permit Holder(s): Boise Parks and Recreation Department (Boise Park System)
3. Mailing Address: 1104 Royal Boulevard, Boise, ID 83706 *Boise Parks & Recreation Dept.*
4. Source of Water: groundwater If **GROUNDWATER** (well), Date Drilled: mo. 7 / yr. 92
 - a. Well Driller: Stevens & Sons Well Drilling Drilling Permit Number: 63 - 92 - C - 195
 - b. **OPTIONAL:**
Pump Horsepower: 7.5 Pressure (psi): 75 Dynamic pumping level (ft): 20
5. Use(s) (as authorized by the water right permit):
Domestic (No. of households): _____ Stockwater (No. and type of stock): _____
Irrigation (No. of acres): 5 Other: _____
6. Total rate of diversion and/or volume for which proof is submitted: 0.25 cfs OR _____ acre feet
7. Measuring Device Requirement: (refer to the approval conditions on your permit and respond accordingly)
(This question is not optional. Please check either yes or no. Proofs returned not checked accordingly, will be considered incomplete)

Measuring Device:	Is a measuring device required?	Yes <u>X</u>	or	No _____
	Has the measuring device been installed?	Yes <u>X</u>	or	No _____
Flow Measurement Port:	Is a flow measurement port required?	Yes _____	or	No <u>X</u>
	Has the measurement port been installed?	Yes _____	or	No <u>X</u>
8. Fee Enclosed: \$ 100.00 (See Fee Schedule on back of the instructions for filing proof of beneficial use)
9. Person to contact to accompany the Department representative during field examination of the water system.
Name: Paul Philbrook Telephone Number: 208-384-4060 ext 325
Address: 1104 Royal Boulevard, Boise, ID 83706
10. The information given on this form is my true statement of the extent to which the above numbered permit has been developed and I relinquish any undeveloped portion of the permit to the State of Idaho.

Signature of permit holder:

Paul Philbrook
(include your title, if on behalf of company or organization)
Property Administrator

Date:

2/20/97

MICROFILMED

MAR 11 1997

State of Idaho
Department of Water Resources
Permit To Appropriate Water
NO. 63-11816

Proposed Priority: April 28, 1992

Maximum Diversion Rate:

0.25 CFS

This is to certify, that **BOISE PARK SYSTEM**
1104 ROYAL BLVD
BOISE ID 83706

has applied for a permit to appropriate water from: **GROUNDWATER**

and a permit is **APPROVED** for development of water as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
IRRIGATION	03/15 to 11/15	0.25 CFS

LOCATION OF POINT(S) OF DIVERSION:

SWNE , Sec. 25, Township 03N, Range 02E
ADA County

PLACE OF USE: IRRIGATION

<u>TWN</u>	<u>RGE</u>	<u>SEC</u>	<u>ACRES</u>	<u>ACRES</u>	<u>ACRES</u>	<u>TOTAL</u>
03N	02E	25	SWNE	5.0		5.0

Total number of acres irrigated:

5.0

CONDITIONS OF APPROVAL AND REMARKS

1. Proof of construction of works and application of water to beneficial use shall be submitted on or before March 1, 1997.
2. Subject to all prior water rights.
3. Prior to diversion of water under this right, the right holder shall install a suitable measuring device or shall enter into an agreement with the department to use power records to determine the amount of water diverted from each point of diversion listed under this right.
4. The right holder shall measure and annually report diversions of water and other pertinent hydrologic and system information as required by Section 42-701(5), Idaho Code.
5. The right holder shall use the full allotment of appurtenant surface water rights in conjunction with groundwater diverted under this right and shall only divert groundwater under this right when water from the appurtenant surface water rights cannot be delivered to the right holder.
6. This approval does not authorize the construction of any new well or the deepening or enlargement of any existing well.
7. Failure to comply with any condition of approval is cause for the Director to cancel this right.

Minidocuments

MAR 14 1996

State of Idaho
Department of Water Resources**Permit To Appropriate Water**

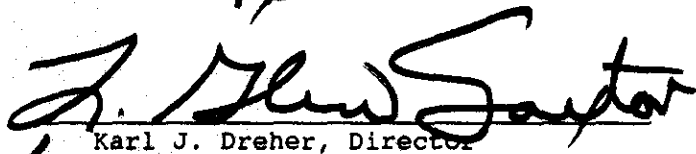
NO. 63-11816

CONDITIONS OF APPROVAL AND REMARKS

8. The rate of diversion of water for irrigation under this right and all other water rights on the same land shall not exceed 0.05 cubic feet per second for each acre of land.
9. Place of use is located within Centennial Park.
10. This right shall not be used if the surface water right(s) appurtenant to the place of use is sold, transferred, leased, or used on any other place of use.
11. The point of diversion is located within the Boise Front Low Temperature Geothermal Resource Groundwater Management Area and use of water with a temperature greater than 85 degrees Fahrenheit is not authorized under this permit.
12. The volume of water annually pumped from the well shall be intentionally recharged into the ground water system from the surface water right.
13. The water right holder is required to contract for the conduct of a study to compute the effectiveness of the project.
14. Water bearing zone to be appropriated is 40 to 65 feet.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code.
Witness the signature of the Director, affixed at Boise, this

4th day of March, 1996.


Karl J. Dreher, Director


RECEIVED
MAR 14 1996

RECEIVED
APR 28 1992

Form 202
6/85

Department of Water Resources

RECEIVED
APR 29 1992

STATE OF IDAHO Department of Water Resources

DEPARTMENT OF WATER RESOURCES

APPLICATION FOR PERMIT

63-11816
Ident. No.

To appropriate the public waters of the State of Idaho

1. Name of applicant Boise Park System (Centennial Park) Phone 384-4240

Post office address 1104 Royal Boulevard, Boise, Idaho 83706

2. Source of water supply Ground water which is a tributary of ---

3. Location of point of diversion is --- 1/4 of SW 1/4 of NE 1/4, Govt. Lot ---

Sec. 25 Township 3N Range 2E B.M. Ada County; additional

points of diversion if any: NA

4. Water will be used for the following purposes:

Amount .25 for irrigation purposes from March 15 to Nov. 15 (both dates inclusive)
(cfs or acre-feet per annum)

Amount --- for --- purposes from --- to --- (both dates inclusive)
(cfs or acre-feet per annum)

Amount --- for --- purposes from --- to --- (both dates inclusive)
(cfs or acre-feet per annum)

Amount --- for --- purposes from --- to --- (both dates inclusive)
(cfs or acre-feet per annum)

5. Total quantity to be appropriated is (a) .25 and/or (b) -
cubic feet per second acre feet per annum

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. Deep well with submerisable pump
supplying buried sprinkler irrigation system in this park.

b. Height of storage dam - feet; active reservoir capacity - acre-feet; total
reservoir capacity - acre-feet; period of year when water will be diverted to storage:
- to - inclusive.

c. Proposed well diameter is 10 inches; proposed depth of well is 150 feet.

d. Is ground water with a temperature of greater than 90°F being sought? No

7. Time required for the completion of the works and application of the water to the proposed beneficial use is
1 years (minimum 1 year).

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8. Description of proposed uses (if irrigation only, go to item 9):

- a. Hydropower; show total feet of head and proposed capacity in KW. _____
- b. Stockwatering; list number and kind of livestock. _____
- c. Municipal; show name of municipality. _____
- d. Domestic; show number of households. _____

Remarks: Other; describe fully. Place of use also known as Centennial Park.

9. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
3N	2E	25			5														5

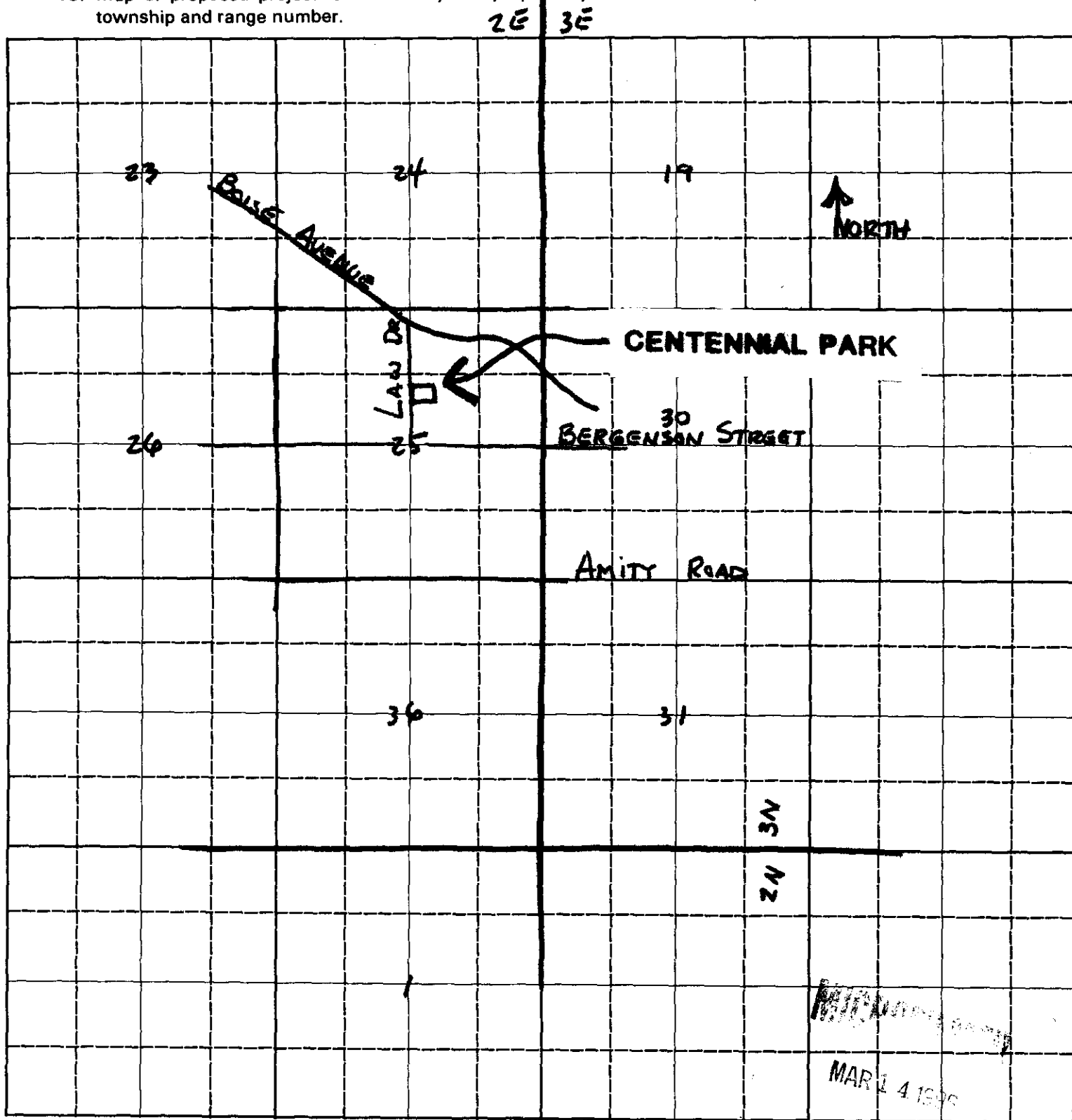
Total number of acres to be irrigated 5

10. Describe any other water rights used for the same purposes as described above. _____

11. a. Who owns the property at the point of diversion? Applicant
- b. Who owns the land to be irrigated or place of use? Applicant
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing. _____

Comments: Water will be used for night irrigation of Centennial Park lawn and planting areas. The amount applied far exceeds that normally used for irrigation but this is necessary to insure minimum public inconvenience during daylight hours and is consistent with previous applications approved for city parks. The high application rate is necessary to provide peak irrigation requireme during the maximum growing season within the limited time available for night irrigation during long daylight hour days in the summer.

13. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Scale: 2 inches equal 1 mile.

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

James R. Hall
 (Applicant)
 JAMES R. HALL, Director
 Boise Park System

Received by MM Date 4-29-92 Time 2:25 pm Preliminary check by CY
Fee \$ 45- Receipted by D. Bilbao # C023954 Date 4/28/92
Publication prepared by GG st Date 5-13-92 Published in ID Statesman
Publication approved st Date 6-10-92

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. _____, and said application is hereby _____.

1. Approval of said application is subject to the following limitations and conditions:

- a. SUBJECT TO ALL PRIOR WATER RIGHTS.
- b. Proof of construction of works and application of water to beneficial use shall be submitted on or before _____, 19 ____.
- c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.
- d. The water right acquired under this permit if for hydropower purposes shall be junior and subordinate to all rights to the use of water, other than hydropower, within the State of Idaho that are initiated later in time than the priority of this permit and shall not give rise to any right or claim against any future rights to the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this permit.
- e. Other:

MAR 14 1996

Lester, Steve

From: Lester, Steve
Sent: Tuesday, May 01, 2001 11:35 AM
To: 'Paul Philbrook'
Cc: Peppersack, Jeff
Subject: RE: Centennial ditch water

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MAY - 2 2001

Department of Water Resources

Paul:

I reviewed Permit No. 63-11816 for the Centennial Park well and understand your dilemma. Apparently the park will have a greatly reduced surface water supply this year. The well use was not considered exempt from the SE Boise Ground Water Management Area but was approved based on mitigation via ditch water. Condition of Approval #12 states:

"The volume of water annually pumped from the well shall be intentionally recharged into the ground water system from the surface water right."

Furthermore, condition #7 states that "failure to comply with any condition of approval is cause for the Director to cancel this right."

It is clear that approval of the irrigation well limits annual ground water volume to the amount of water available from the surface water supply. Failure to comply with this limitation would jeopardize the water right. Should you seek a waiver from condition #12, my recommendation to IDWR administration would be to run the proposal through the management area advisory committee first. I do not see how we could approve such a waiver but one never knows.

Is it possible to get more shares delivered to the park by the current delivery organization to tide you over this year? If so, that could probably be viewed as an acceptable detail not subject to IDWR review.

Another option is the "drought emergency" route. If Ada County is declared a drought emergency by the IDWR Director, I. C. Section 42-222A ("Temporary Changes") could allow an expedited transfer of other surface water (from another delivery organization) to the park. This could provide the "missing mitigation water" to allow additional ground water to be used within the limits of Permit 63-11816. Maybe an irrigation organization could spare some water for a few months this year to help you out.

Request for a drought emergency declaration should come from the County Commissioners to the Director &/or to the Governor. In this part of Idaho, Canyon & Elmore Counties have been declared as drought emergencies so far. Last Friday we approved the first temporary transfer of surface water from one land to another under these emergency conditions. It only took a few days to complete the temporary change process (legal notice and detailed analysis generally not required). I do not know if Ada County Commissioners have been approached by water users regarding this process. This option might be your best bet.

I wish things were simpler but that is not the case. I will be glad to visit with you about the situation if you need more information.

Good luck.

Steve Lester, IDWR Western Region

copy to file
63-11816

-----Original Message-----

From: Paul Philbrook [mailto:PPHILBROOK@cityofboise.org]
Sent: Monday, April 30, 2001 8:53 AM
To: slester@idwr.state.id.us
Subject: Fwd: Centennial ditch water

steve, see attached for a couple of questions about surface water and this well and our recharge requirements. please advise and thanks.....paul

Lester, Steve

From: MIKE WOODWARD [MWOODWARD@cityofboise.org]

Sent: Monday, April 30, 2001 6:42 AM

To: Paul Philbrook

Cc: TED KINNEY

Subject: Centennial ditch water

Paul,

Mark Holt has been working on getting surface water going at Centennial park. On Friday Mark spoke with the association representative, according to the rep. they don't know when the water will be on. Apparently there is problems with the ditch leaking near the church, and they are working on repairs. Mark was also told that allotments have been reduced from the normal 3.5 acre ft. to 1 acre ft. As of now we are irrigating off of the well.

Two questions;

Can we confirm the reduction in water allotment?

Can we continue to use the well if ditch is off? I am not sure if we have ever been able to catch up with recharging water into the ground, if the allotment is reduced as indicated we for sure won't be able to recharge the amount taken from the well this year.

*This is the Attachment in Philbrook's
4/30/01 Email.*

-JL

5/1/01

MEMORANDUM

TO: 63-11816
FROM: Dave Tuthill *DT*
DATE: February 12, 1996
RE: Recommendation to Issue Permit

This Application for Permit has special circumstances which require that it be considered for issuance of a permit even though the point of diversion is located within the Boise River basin in the Southeast Boise Ground Water Management Area.

As documented in the file, the applicant has provided engineering information which demonstrates that the system can be operated in a manner that will result in no net depletion to the ground water system. This is possible because the primary irrigation system will be a surface water system, and the well will be used for irrigation purposes only during periods when surface water is unavailable. Also, the water user will intentionally allow a portion of the surface water system to recharge the ground water system to the extent that ground water is anticipated to be used.

The mechanism for ensuring no net depletion will be compliance with the following conditions of approval, which have been accepted by the applicant:

1. Standard condition requiring full use of surface water rights.
2. Standard condition prohibiting sale or removal of surface water rights from irrigated property.
3. Standard condition requiring installation and maintenance of a totalizing measuring device.
4. The volume of water annually pumped from the well shall be intentionally recharged into the ground water system from the surface water right. [This is possible using the existing surface water right without injury to other surface water users because installation of sprinkler systems will save more water, compared to gravity irrigation, than will be recharged.]
5. The water right holder is required to contract for the conduct of a study to compute the effectiveness of the project.

These conditions were discussed at the December meeting of the Southeast Boise Ground Water Management Area Advisory Committee, and were found to be acceptable to the Committee.

*prior file history ... well not exempt
from SEBGWMA considerations but can
be mitigated
-JL 5/1/01*

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AUG 11 2000

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

Department of Water Resources

A. GENERAL INFORMATION

Permit No. 63-11816

1. Owner: Boise Park System Phone No. 208-384-4060 ext. 325

Current Address: 1104 Royal Blvd., Boise, ID 83706

2. Accompanied by: Kelly McDaid EXAM DATE : 5/25/2000

Address: Same as above Phone No. 384-4326

Relationship to Permit Holder: Employee of Parks and Recreation Dept.

3. Source: Groundwater

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 63-02388, 63-02392

2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

[illegible]

2. Place(s) of Use:

Indicate Method of Determination USGS Topo Map

[illegible]

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable.

SEE ATTACHED SHEET.

X Copy of USGS Quadrange Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

 Aerial Photo Attached (required for irrigation of 10+ acres).

X Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Centennial Park Well	Franklin Electric Motor	7.5		Berkeley 6T 90	3"

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: None – A pump performance curve and pump data were provided by Terry Scanlan.

E. NARRATIVE/REMARKS/COMMENTS

The well is located in SWNE of T03N, R02E, Sec. 25 at the South end of the parking lot that serves Centennial Park. The well is immediately adjacent to the pump house. The pump is a Berkeley 6T 90, 7.5 hp submersible, rated to produce 100 gpm at 75 psi. The park is irrigated using the groundwater from the well. Surface water is diverted from a culvert approximately 30 feet West of the pump house. The surface water is then pumped through a filter and intentionally recharged into the ground. There are three flow meters in the pump house. They measure the amount of water from the well, the surface water recharge, and the water used for irrigation. The irrigation system is centrally controlled and operated. The annual diversion of water has not been reported as specified in the conditions of approval for the permit.

Have conditions of permit approval been met? yes ☒ no

F. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

Theoretical

$$Q = [7.5 \text{ hp} \times 8.814 \times 0.70] / [25 + (75 \text{ psi} \times 2.308)] = 0.23 \text{ cfs}$$

Pump Curve

Q = 100 gallons per minute

$$100 \text{ GPM} \times (1 \text{ cfs} / 448.83 \text{ GPM}) = 0.22 \text{ cfs}$$

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5.0 \times 4.5 = 22.5 \text{ AFA}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 0.22 \times 260 \times 1.9835 = 113.5 \text{ AFA}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 22.5 \text{ AFA}$$

2. Volume Calculations for Other Uses:

*NONE***H. RECOMMENDATIONS****1. Recommended Amounts**

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Irrigation	3/1	11/15	0.22 cfs	22.5 AFA
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Totals:			0.22 cfs	22.5 AFA

2. Recommended Amendments

___ Change P.D. as reflected above ___ Add P.D. as reflected above ☒ None
___ Change P.U. as reflected above ___ Add P.U. as reflected above ___ Other

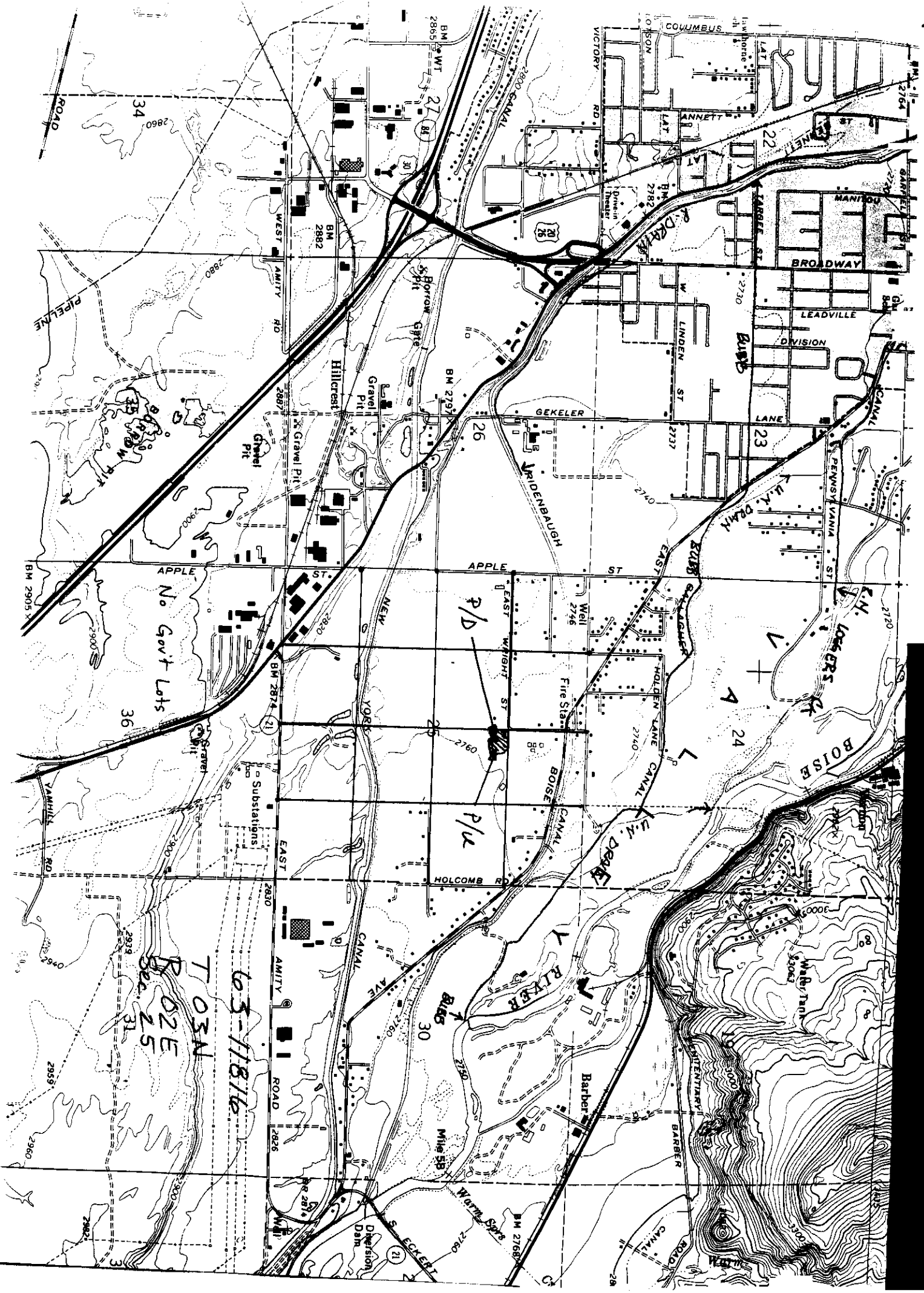
I. AUTHENTICATION

Richard D. Hansen – Field Examiner

Field Examiner's Name Richard D. Hansen Date 6/12/00

Reviewer _____ Date _____

SEAL



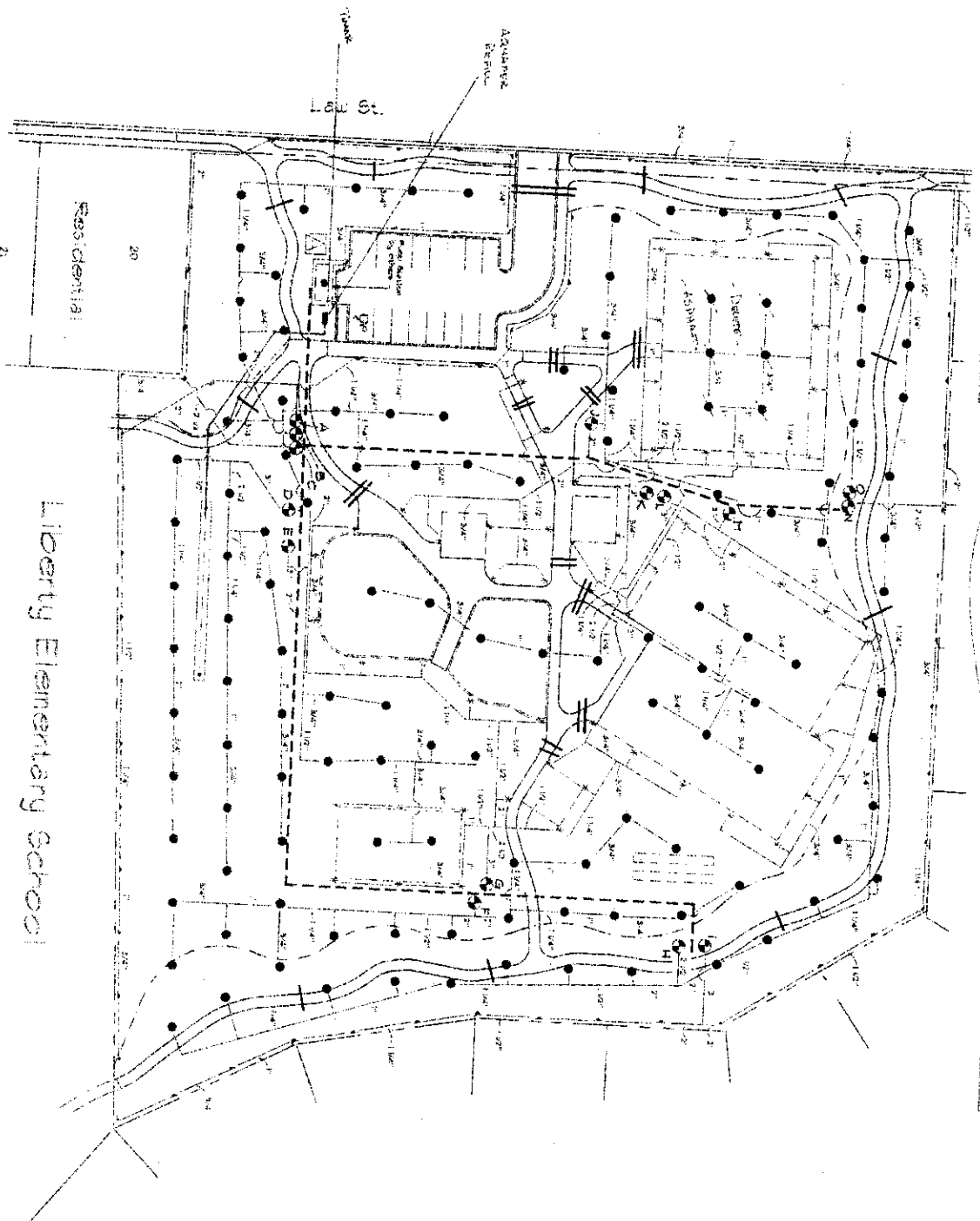
IRRIGATION LEGEND

SYM.	DESCRIPTION	NOZZLE	PS	RAD.	GPM
●	10000 81000C PC-45-LA	45 LA 50	30		423
▲	10000 81000C PC-45-LA	45 LA 50	30		423
△	10000 81000C PC-45-LA	45 LA 50	30		423
▽	10000 81000C PC-45-LA	45 LA 50	30		423
×	10000 81000C PC-45-LA	45 LA 50	30		423
+	10000 81000C PC-45-LA	45 LA 50	30		423
•	10000 81000C PC-45-LA	45 LA 50	30		423
◊	10000 81000C PC-45-LA	45 LA 50	30		423

VALVE SCHEDULE
 VALVE NO. 1
 VALVE NO. 2
 VALVE NO. 3
 VALVE NO. 4
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 VALVE NO. 96
 VALVE NO. 97
 VALVE NO. 98
 VALVE NO. 99
 VALVE NO. 100

VALVE SCHEDULE

Valve	Start	End	Valve	Start	End
A	80	100	I	80	100
B	80	100	J	80	100
C	80	100	K	80	100
D	80	100	L	80	100
E	80	100	M	80	100
F	80	100	N	80	100
G	80	100	O	80	100
H	80	100	P	80	100



CENTENNIAL
 NEIGHBORHOOD
 PARK

Irrigation
 "As-Built"

63-11816

IDAHO DEPARTMENT OF WATER RESOURCES

WELL INSPECTION FORM

1. DRILLING PERMIT NO: _____ OTHER APPLICABLE NO: 63-11816
2. OWNER: City of Boise Parks & Recreation Dept Phone: _____
Address: _____
3. WELL LOCATION: Twp 03 N, Rge. 02 E, Sec. 25, SW 1/4 NE 1/4
County Ada (Provide sketch map and photo on reverse.)
4. DRILLER: Stevens & Sons Lic. No. _____
When Drilled? 1992
5. WELL CONSTRUCTION:
Casing Diameter 12 inches Water tight cap? ☒ Yes ☐ No Access Port: ☒ Yes ☐ No
Casing $\geq$ 12 inches above ground? ☒ Yes ☐ No - Describe _____
Depth of Casing 75 ft. Method Drilled Cable
Condition of Well Casing: ☒ Good ☐ Fair ☐ Poor Describe _____
Control Valve? ☒ Yes ☐ No Pressure Gauge: ☐ Yes ☐ No
Condition of Piping and Valving Good
Auger to a depth of _____ ft. Evidence of Annular Seal ☐ Yes ☐ No
Are there obvious construction problems that may be a source for contamination or waste of water?
☐ Yes ☒ No (Describe in Remarks and Attach Photo - On Reverse)
6. HYDROLOGIC INFORMATION:
Depth to Static Water 14 ft. Water Temperature c/d °F
Flowing Artesian ☐ Yes ☒ No Pressure: _____ (psi)
Water Sample Taken? ☐ Yes ☒ No If yes, describe purpose _____
Water Quality Measurements/Observations (Describe) _____
7. WELL USE:
☐ Domestic ☒ Irrigation ☐ Stock
☐ Test ☐ Municipal ☐ Industrial
☐ Abandoned ☐ Waste Disposal/Injection ☐ Not Used
☐ Other: _____

8. POSSIBLE CONTAMINATION SOURCES:

Is there evidence of Chemigation? ☐ Yes ☒ No

If yes, is there a check-valve present? ☐ Yes ☐ No

Is there a possible source of contamination nearby? ☐ Yes ☒ No

If yes, what Type? _____

How far away from the well is this source? _____

9. REMARKS:

Richard D. Hansen - Field Examiner
Signature of Dept. Representative & Title

5/25/2000
Inspection Date

PHOTOS, DRAWINGS, OTHER ATTACHMENTS:

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

I. WELL OWNER

Name Boise Park System (Centennial Park)
Address 1104 Royal Blvd. Boise Id. 83706
Drilling Permit No. 63-92-C-195
Water Right Permit No. 63-11816

II. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase ☐ Modification
☐ Abandoned (describe abandonment or modification procedures such as liners, screen, materials, plug depths, etc. in lithologic log, section 9.)

III. PROPOSED USE

☐ Domestic ☒ Irrigation ☐ Monitor
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

IV. METHOD DRILLED

☐ Rotary ☐ Air ☐ Auger ☐ Reverse rotary
☒ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)

V. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____
Thickness .250 inches Diameter 12" inches From 1' feet To 39'6" feet
.250 inches 8" inches +1'6" feet 39'6" feet
.250 inches 8" inches 65' feet 75' feet

Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation? _____ inches by _____ inches
Number _____ From _____ To _____
_____ perforations _____ feet _____ feet
_____ perforations _____ feet _____ feet
_____ perforations _____ feet _____ feet

Well screen installed? ☒ Yes ☐ No
Manufacturer Johnson Type Stainless Steel
Top Packer or Headpipe +1'6"
Bottom of Tailpipe 75'

Diameter 8" Slot size 30 Set from 39'6" feet to 65' feet
Diameter _____ Slot size _____ Set from _____ feet to _____ feet
Gravel packed? ☒ Yes ☐ No ☐ Size of gravel 8-12 Sand
Placed from _____ feet to _____ feet

Surface seal depth 20 Material used in seal: ☐ Cement grout
☒ Bentonite ☐ Pudding clay ☐ _____
Sealing procedure used: ☐ Slurry pit
☒ Temp. surface casing ☒ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded
☐ Solvent Weld ☐ Cemented between strata

Describe access port Well Cap

VI. LOCATION OF WELL

Sketch map location must agree with written location.

Subdivision Name _____
Lot No. _____ Block No. _____
County Ada
Address of Well Site Centennial Park Law St.
(give at least name of road)
T. 3 N ☒ or S ☐
S.W. 1/4 N.E. 1/4 Sec. 25 R. 2 E ☒ or W ☐

7. WATER LEVEL

Static water level 12 feet below land surface.
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature 58 °F. Quality _____
Describe artesian or temperature zones below.

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
100	18'6"	1/2
160	22'6"	1/2
250	31'6"	1/2
350	35'0"	1/2

9. LITHOLOGIC LOG

Bore Diam.	Depth		Material	Water	
	From	To		Yes	No
16"	0	4	Topsoil		X
	4	20	Cemented Sand & Gravel		X
12"	20	35	Cemented Sand & Gravel	X	
	35	65	Sand & Gravel	X	
	65	69	Cemented Sand & Gravel	X	
	69	75	Sand & Gravel	X	

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JUL 31 1992

Department of Water Resources

10.

Work started 7/8/92 finished 7/21/92

11. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name Stevens & Sons Firm No. 153
Address 3709 Hawthorne Date 7/22/92
Signed by Drilling Supervisor Wayne Stevens
and
(Operator) Don Stevens
(If different than the Drilling Supervisor)

63-11816

FAX**Scanlan Engineering**600 East River Park Lane, # 105
Boise, Idaho 83706**Date:** May 24, 2000**Tel:** 208 383-4140**Fax:** 208 383-4156**To:** Lori Graves**Fax No:** 334-2348**From:** Terry Scanlan**Reference:****Subject:** Boise Park Department**No. of Pages:** 2
(including cover)

Lori –

The pump for the Centennial Park well is a Berkeley 6T 90, 7.5 hp submersible, rated to produce 100 gpm at 75 psi. Static water level is about 14 feet and pumping water level is about 25 feet. The pump is set at 40 feet. A curve is attached.

My records show that the pump for Jullion Park well is a Jacuzzi S6HZ-S2, 7.5 hp, submersible, set at 176 feet. The pump is designed to produce 200 gpm. A 10 hp booster pump at the surface (Jacuzzi DMZ 753H) is designed to produce 200 gpm at 65 psi. I don't have curves for these pumps. Park staff measured a pumping rate of 194 gpm at 66 psi during their annual evaluation on October 5, 1999. This suggests that performance is close to design point. Static water level at that time was 20 feet and pumping water level was 48.5 feet.

Call me with any additional questions.

Terry

Cc: Paul Philbrook

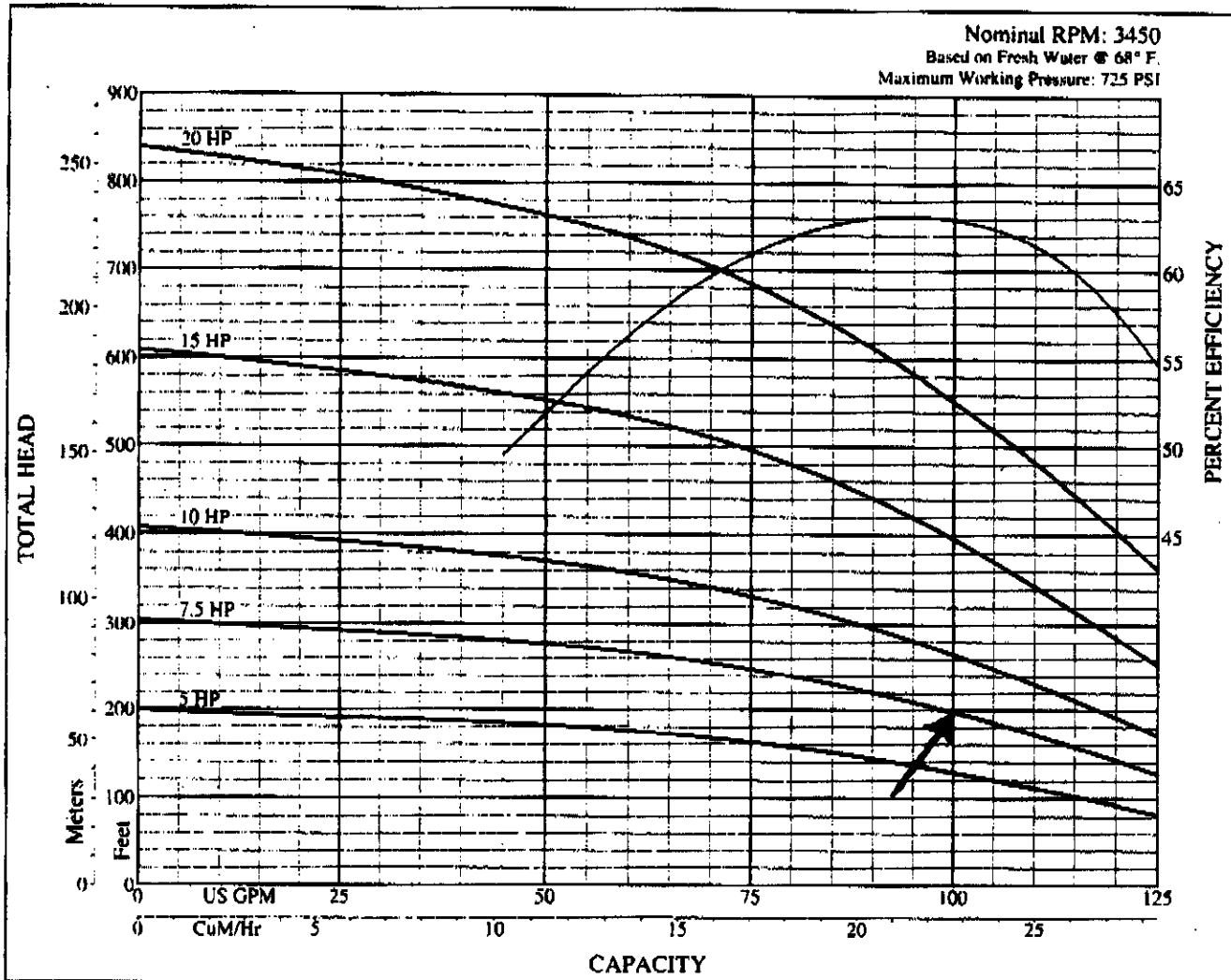
If you do not receive all pages, or if there are any problems with this transmission, please call at 208 383-4140



SUBMERSIBLE TURBINE

Centennial Park

6T-90



OUTLINE DIMENSIONS / WEIGHTS

HP	stages	Motor size	P length	M* length	MD* dia.	Mtr. wt.	Pump wt.
5	4	6"	29.73	25.44	5.38	105	79
7.5	6	6"	37.60	28.00	5.38	120	103
10	8	6"	45.48	30.56	5.38	135	127
15	12	6"	61.22	33.13	5.38	146	175
20	16	6"	76.97	30.56	5.38	135	222

Note: dimensions = inches; weight = U.S. lbs.

M* Maximum length (Franklin Electric Motor)

MD* Motor diameter (Franklin Electric Motor)

SPECIFICATIONS

Minimum Well I.D.	6.0 Inches
Minimum Submergence @ BEP (above inlet)	10.0 Feet
Capacity Range	45 - 125 GPM
Discharge	3" F NPT
See manufacturer's data for motor cooling requirements	

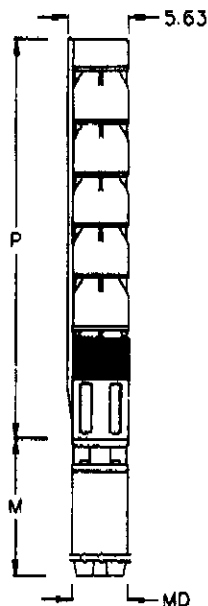
SUPERSEDES

All Previous

Date 04/15/96

Section **ST**

Page 9.01



FAX

Scanlan Engineering600 East River Park Lane, # 105
Boise, Idaho 83706**Date: May 26, 2000****Tel: 208 383-4140****Fax: 208 383-4156**

To: Lori Graves**Fax No: 334-2348****From: Terry Scanlan****Reference:****Subject: Boise Park Department****No. of Pages: 5**
(including cover)

Lori -

The pump house schematic for Centennial Park follows. The drawing is not to scale, but the as-built pump house contains all the components shown.

I checked my Jacuzzi catalog but was unable to find an exact match for the pumps at Jullion.

Call me with any additional questions.

Terry

Cc: Paul Philbrook

If you do not receive all pages, or if there are any problems with this transmission, please call at 208 383-4140

CENTENNIAL PARK IRRIGATION PUMP STATION SCHEMATIC DETAILS

1. 7.5 hp centrifugal ditch pump (Cornell 1.5W) mounted on reinforced-concrete pump base; 2-inch suction pipe with foot valve and basket strainer (1/2-inch mesh); foot valve inlet approximately 6 feet below the pump
2. 2-inch ditch pump discharge piping; galvanized steel; 2-inch gate valve for isolation; unions at each end
3. 2-inch waste/test discharge pipe; 2-inch gate valve; galvanized steel; 90° elbow into sump
4. 1.5-inch pressure relief valve (Cla-Val 50-01) and galvanized steel piping; 90° elbows into sump
5. 36-inch diameter galvanized steel CMP sump for ditch pump intake; steel grate cover, hinged in center for clean out access; top of pipe approximately 1.5' above well house floor; bottom of pipe at 6.5' below well house floor; 6-inch concrete bottom plug; suction pipe supports at top; saddle for 6-inch inlet pipe from irrigation lateral
6. irrigation well, 8-inch casing; 7.5 hp submersible pump set at 40 feet on 3-inch galvanized steel pipe; column check valve 10 feet above pump; galvanized tee for discharge head; 1-inch PVC sounding tube to 40 feet
7. 3-inch galvanized steel discharge pipe from well to pressure filter; one union; one sleeve-type (Dresser) coupling; 3-inch gate valve for isolation; 2-inch threadolet port and Data Industrial flow sensor; tee to 2-inch pipe from ditch pump
8. pressure filter (Clemons M150) with 1-inch ball valve for purge; 1/32-inch stainless steel screen; horizontal discharge
9. 3-inch galvanized steel pipe to irrigation; union at pressure filter connection; tee to 2-inch recharge pipe; 3-inch gate valve for isolation; 2-inch threadolet port and Data Industrial flow sensor; two 90° elbows; shown on plan view as dashed line where buried; stub out 10 feet beyond pump house wall
10. 2-inch galvanized steel pipe to groundwater recharge facility; 2-inch electric valve; unions on both sides of valve; 2-inch threadolet port and Data Industrial flow sensor; two 90° elbows; shown on plan view as dashed line where buried; stub out 10 feet beyond pump house wall
11. 1-inch filter purge discharge pipe to 1-inch stub at irrigation lateral; shown on plan view as dashed line where buried; galvanized steel above ground; Schedule 40 PVC or polyethylene below ground; approximately 50 feet total pipe length
12. motor control center with pump panels and miscellaneous electrical items
13. irrigation controller (by others)
14. power meter base
15. inlet pipe from irrigation lateral; approximately 30 feet of 6-inch Class 160 PVC; connect to PVC pipe stubbed by others
16. adjustable pipe support location (typical of 5)
17. 10'x10' gable-style pump house (prefabricated by Stor-Mor Systems) with 6-foot wide steel roll-up door on the south side, reinforced concrete slab floor (10'2" x 10'2" x 12") sloped to drain to south through doorway; top of slab 4 inches above existing grade

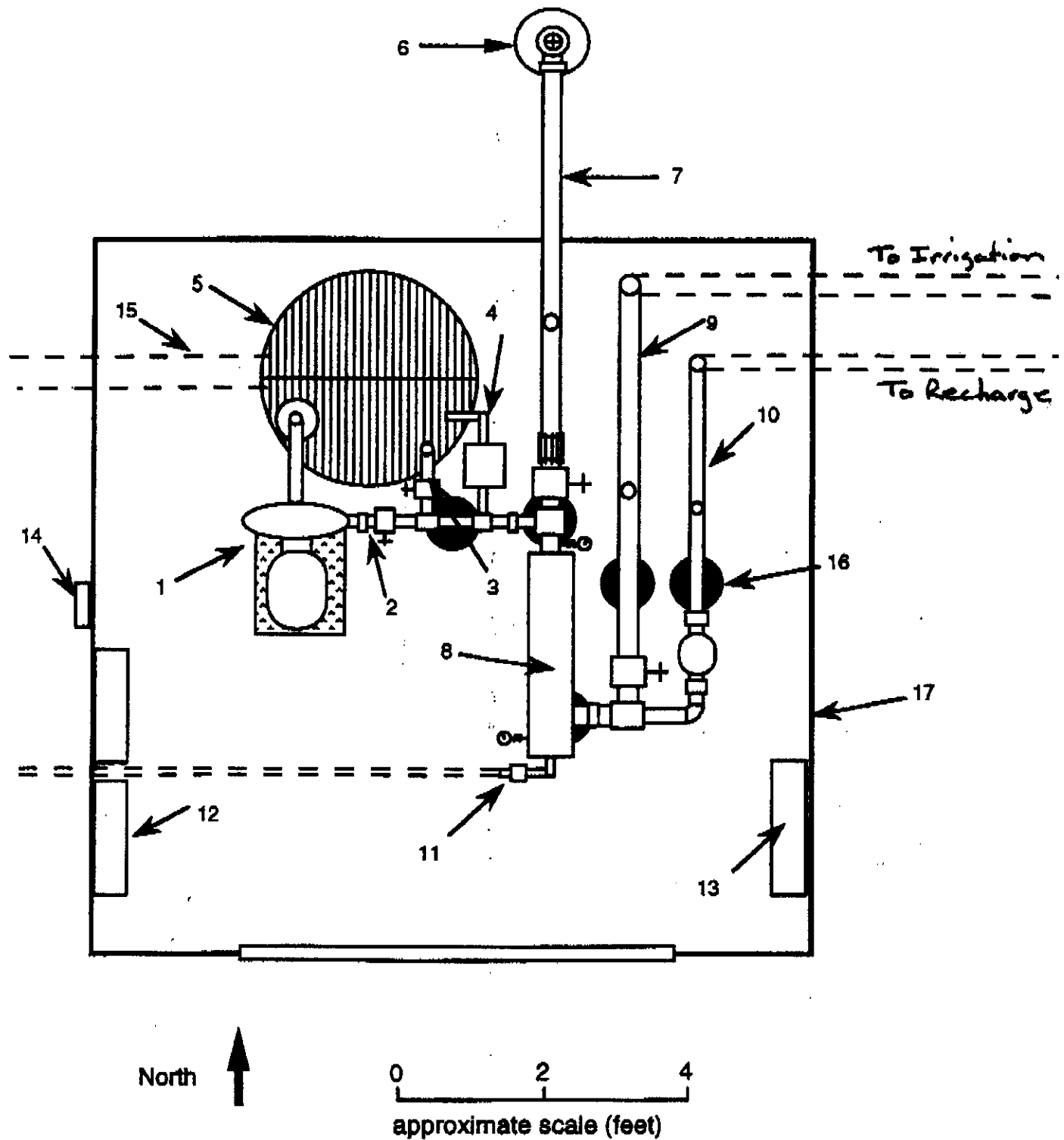


FIGURE 1
CENTENNIAL PARK IRRIGATION PUMP STATION
PLAN VIEW

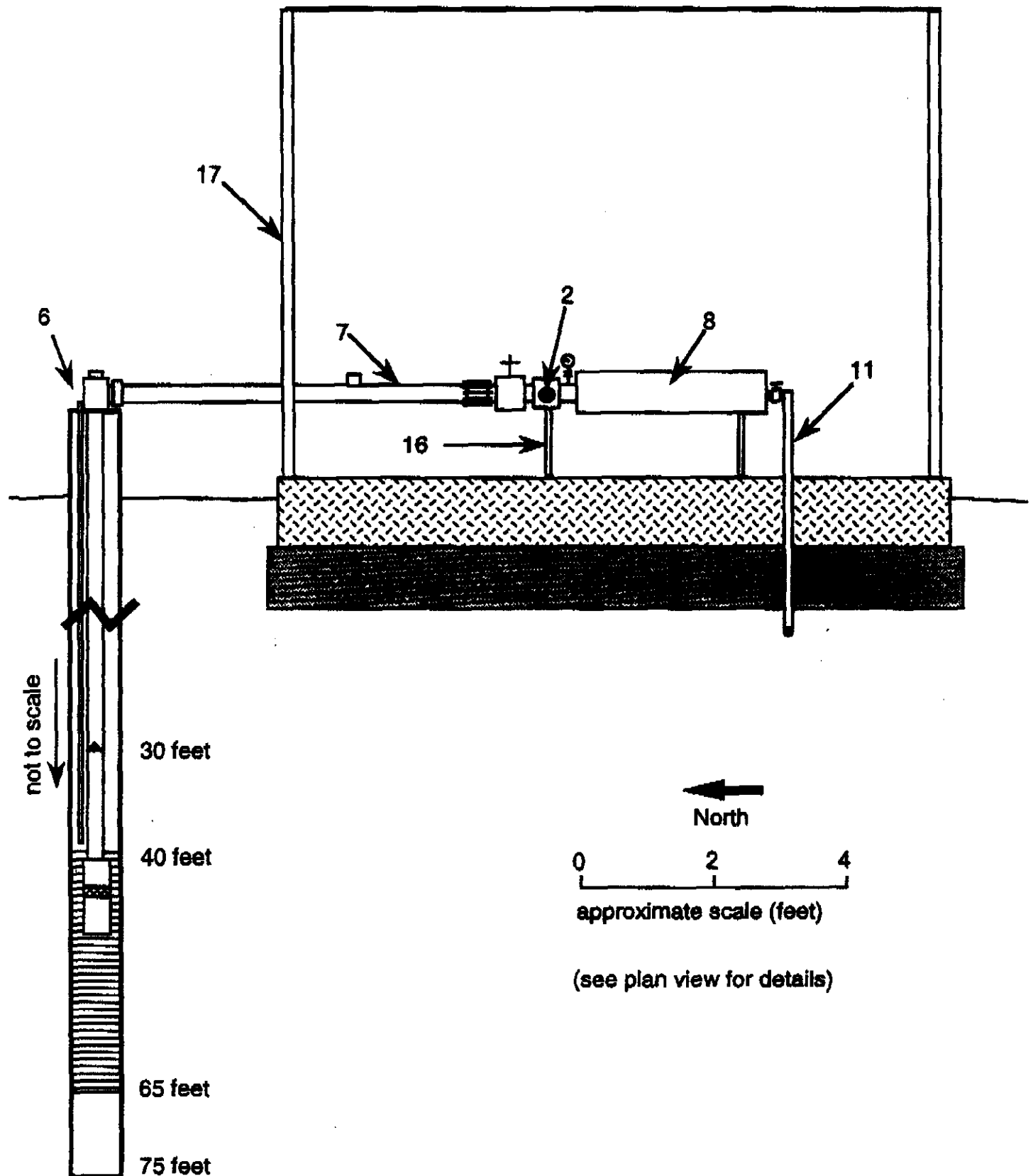


FIGURE 2
CENTENNIAL PARK PUMP STATION
SECTION VIEW THROUGH WELL AND PRESSURE FILTER

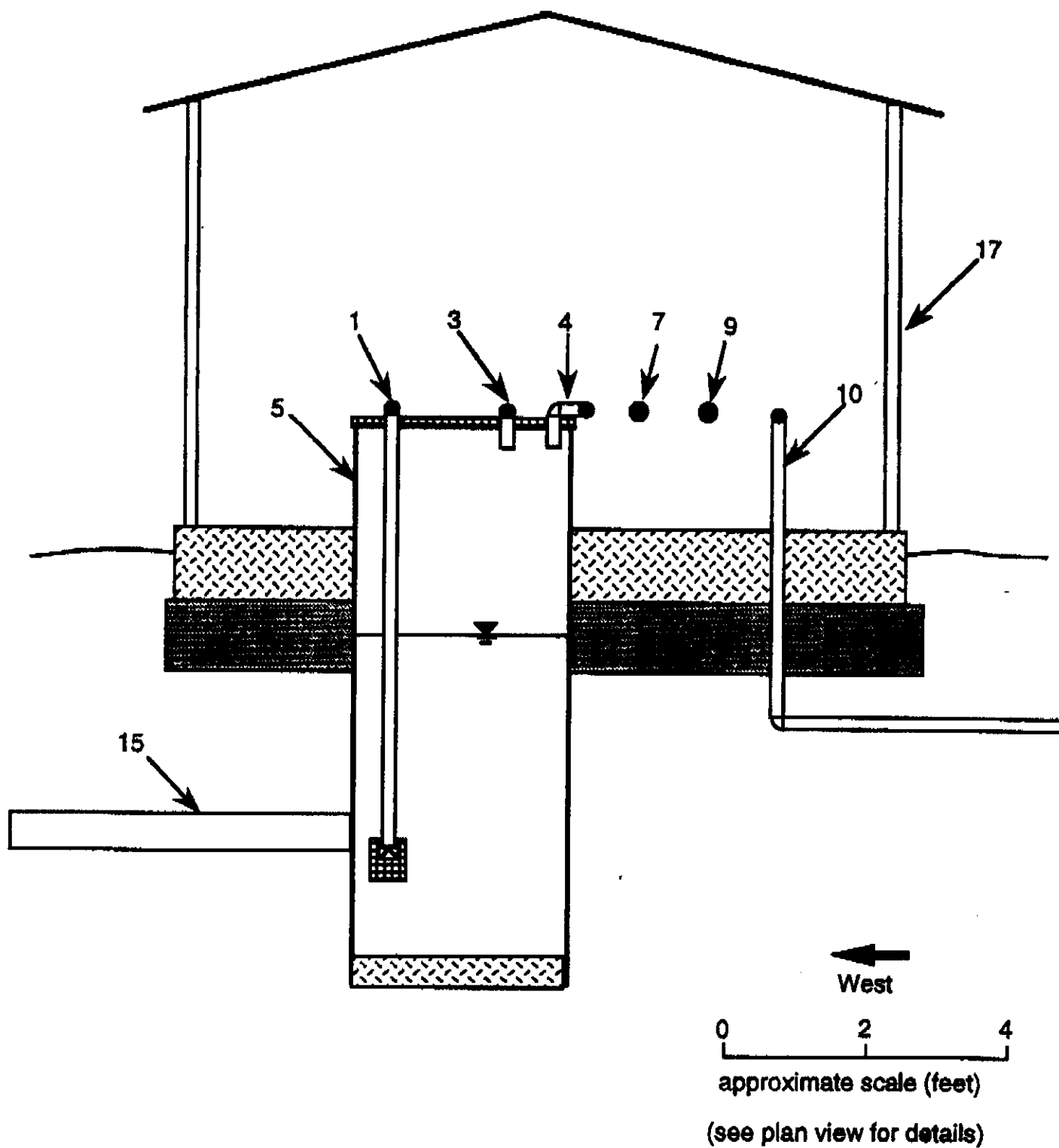
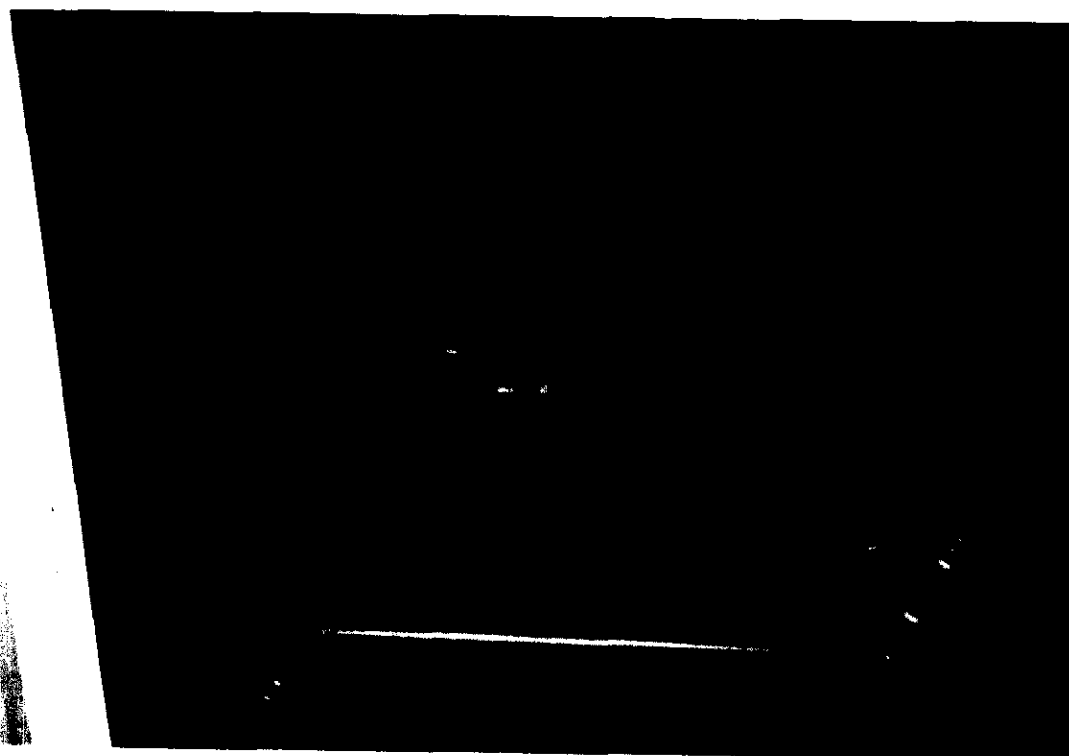
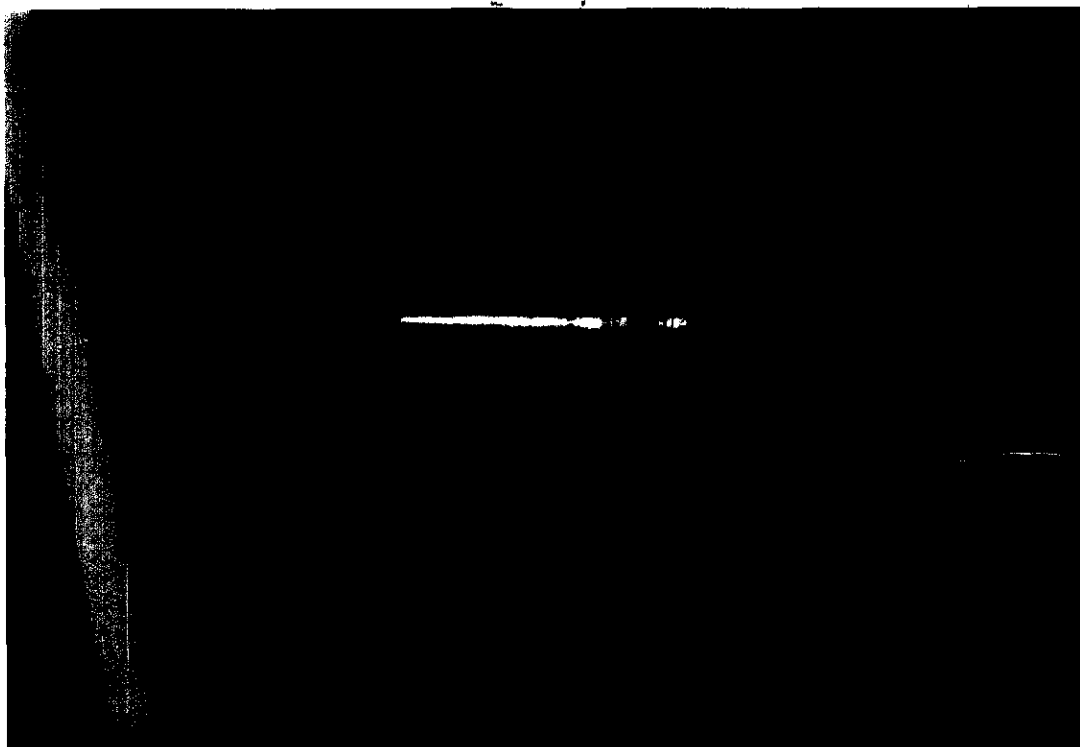
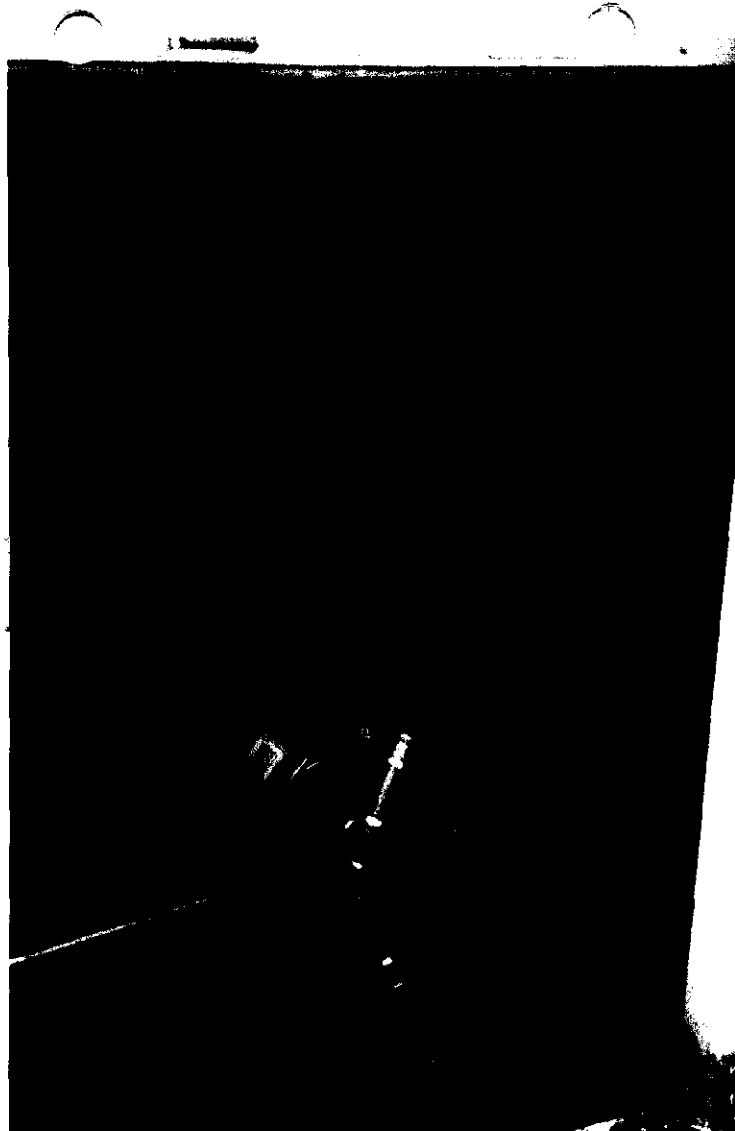


FIGURE 3
CENTENNIAL PARK PUMP STATION
SECTION VIEW THROUGH DITCH PUMP INTAKE SUMP



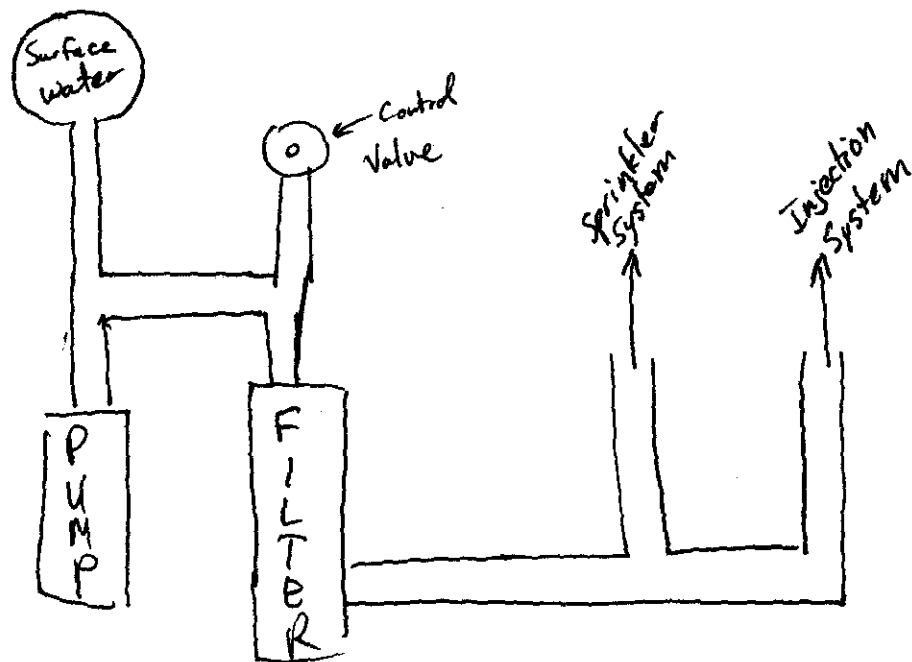
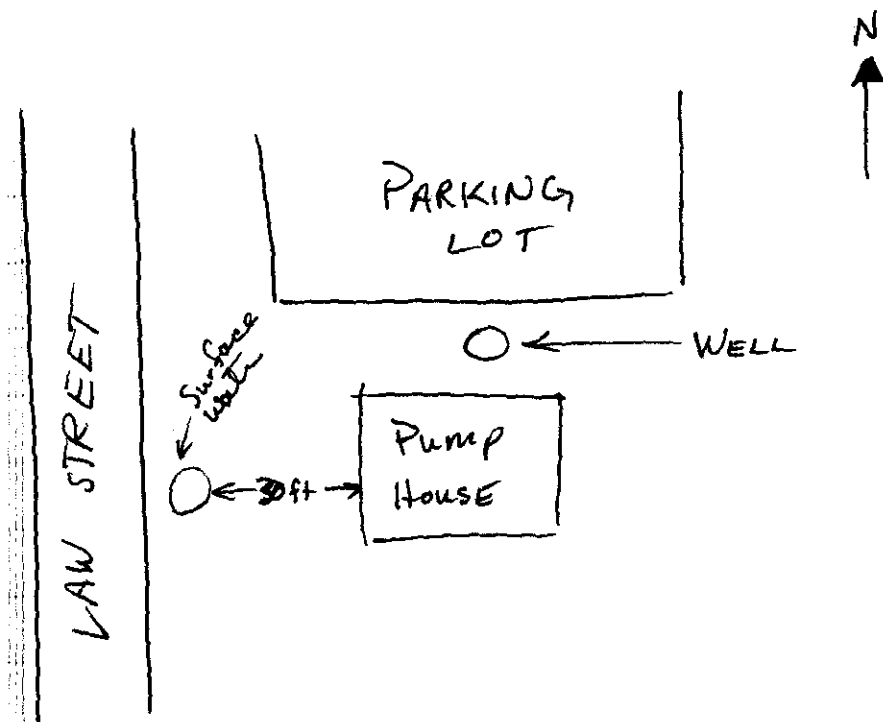
63-11816



63-11816

FIELD REPORT NOTES

CENTENNIAL PARK



3 flow meters

- 1) WELL
- 2) MAXICOM - CENTRALIZED CONTROL COMPUTER
- 3) INJECTION



State of Idaho
DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190
FAX (208) 334-2348

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

June 21, 2000

Boise Parks & Recreation Dept.
Attn: Paul Philbrook
1104 Royal Blvd.
Boise ID 83706

COPY

Re: Permit No. 63-11816 (Centennial Park Well)

Dear Paul:

Richard Hansen and I met with Kelly McDaid 5/25/2000 and conducted the field exam for the above referenced permit. One of the objectives of the field exam is to make sure that the conditions of approval listed on the permit have been met. Condition of Approval #4 requires that the diversion be measured and annually reported to the Idaho Department of Water Resources (IDWR). Reports were not filed, although the diversion system was designed and measuring devices were installed for compliance.

As a courtesy reminder, IDWR annually sends out water measurement report forms to users within the Southeast Boise Ground Water Management Area who are required to annually report. Unfortunately, the Centennial Park well was overlooked in the past but has been added to the list for future mailings.

Before permit 63-11816 can be licensed, your office must submit an adequate plan to demonstrate the intent to comply with condition #4 beginning with this year. Enclosed is a copy of the 1999 report form to illustrate the type of data to be gathered. The reporting form for the 2000 calendar year will be mailed to you early next year.

Please submit the requested plan within 30 days from the date of this letter. If you have questions, Paul, please contact me at this office.

Sincerely,

Lori Graves
Sr. Water Agent

Encl: 1999 report form

BOISE PARKS & RECREATION



H. BRENT COLES
MAYOR

COUNCIL MEMBERS

CAROLYN TERTELING-PAYNE
COUNCIL PRESIDENT

MIKE WETHERELL
COUNCIL PRO TEM

SARA BAKER
PAULA B. FORNEY
M. JEROME MAPP

RECEIVED

JUL 27 2000

WATER RESOURCES
WESTERN REGION

July 26, 2000

Lori Graves
Senior Water Agent
Idaho Department of Water Resources
Western Region
2735 Airport Way
Boise, Idaho 83705

Subject: Centennial Park Water Measurement - Permit No. 63-11816

Dear Lori:

This letter is in response to your call of June 30, 2000 where you wanted more information to attach to the 1999 Water Measurement Annual Report for the above mentioned permit. I will give a little background, explain the readings that are on the report and then make a request of your department.

For irrigation purposes, development of this park was equipped with a well pump and a surface water pump to utilize New York Irrigation District (NYID) water. This pump system was first used in the Fall of 1996. The pump system includes three flow meters. All three meters are paddle-wheel insertion-type meters with electronic digital displays.

- Meter No. 1 records the rate and volume of groundwater pumped from the well.
- Meter No. 2 records the rate and volume of groundwater and surface water pumped into the irrigation system.
- Meter No. 3 records the rate and volume of surface water pumped to the groundwater recharge facility.

Total groundwater volume pumped is determined based on the Meter No. 1 totalizer reading. Net groundwater volume pumped is determined by subtracting the Meter No. 3 totalizer reading from the Meter No. 1 totalizer reading. The meters were read this year in June and the readings are respective of the total usage from the Fall of 1996 to this last Fall of 1999. Those readings are as follows:

Meter No. 1 8,142,896 gallons
Meter No. 2 11,159,780 gallons
Meter No. 3 1,881,486 gallons

Condition No. 12 of permit 63-11816 requires "The volume of water annually pumped from the well shall be intentionally recharged into the ground water system from the surface water right" We are aware of the fact that we are negligent with this condition and would like to present our explanation and ask for your assistance to remedy this dilemma.



MISSION STATEMENT

Boise Park & Recreation's mission is to enhance Boise's quality of life by working in partnership with the community to foster and support citizen well-being and healthy community environments.

1104 ROYAL BOULEVARD • BOISE, IDAHO 83706-2898 • 208/384-4240 • FAX 208/384-4127

An Equal Opportunity Employer

Printed on recycled paper

July 26, 2000

Page 2

Centennial Park is part of the lateral 22.13 delivered by the NYID and managed by a local water users group. As other lateral water users, this group does not want to use up their allotment of water and fall short at the end of the irrigation season. Knowing this they order their water late in the Spring and have it turned off early in the Fall. In addition, they have the water turned off for two days in the middle of each week. Even though we recharge for two hours a day for five days, this still leaves us with two major problems. 1) We are obligated to use the well (groundwater) for long periods of time in the Spring and Fall, and 2) We have very little time to recharge the aquifer when the surface water is available, since we are using it most of the time to irrigate.

I have contacted Phil Comegys of the Boise Project Board of Control (BPBC) to ask that we have a special early delivery of surface water in the Spring. This would allow us to get a jump on the recharging of the aquifer and shorten our well irrigation time. His answer to me was that the delivery to lateral 22.13 was controlled by the lateral water users association and he could not deliver it to us without them asking for it. Upon request, they have told us they do not want to order the water early. This illustrates our dilemma and the point where we feel you can help us out.

Is there a possibility that Idaho Department of Water Resources (IDWR) can intervene and persuade BPBC to deliver water, separate from the lateral water users, earlier in the Spring, later in the Fall and the two days in the middle of each week for Centennial Park? As I am sure you are aware, until we have the surface water for longer periods of time, we will not be able to meet the requirement of Condition No. 12 of the permit. I would appreciate any help in this area that you can provide.

Please call me at 384-4060 ex 325 if there is anything else needed of me or if you have any questions to do with this letter. I look forward to an easy solution to our request and continued cooperation with IDWR.

Sincerely,



Paul Philbrook
Property Administrator
Boise Parks & Recreation

c: Mollie Holt, Superintendent of Administration, BPR
Mike Woodward, Horticulture Manager, BPR
Terry Scanlan, Scanlan Engineering

RECEIVED

JUN 30 2000

WATER RESOURCES
WESTERN REGIONSTATE OF IDAHO
DEPARTMENT OF WATER RESOURCESTHIS IS YOUR **1999** WATER MEASUREMENT ANNUAL REPORTFor the Water Measurement Program -
MEASURING DEVICE METHOD FOR TOTALIZING FLOW METERS
IRRIGATION WELLSATTENTION: Year end data must be submitted to Idaho Department of Water Resources,
2735 Airport Way, Boise ID 83705, on or before:March 1, 2000.NOTE: A separate reporting form must be submitted for each diversion.

This report form may be used for the following diversion:

Name:	Boise Parks & Recreation <i>Centered Park</i>
Water Right Nos:	63-11816
Legal Description:	T 3N R 2E Sec 25 SW 1/4 NE 1/4 1/4
Site Tag No:	
Diversion Name:	

SECTION I Water Right Holder/Operator information

Name and Address of Water Right Holder

Please check for address correction. ☐

Current Owner

Name Boise Parks & Recreation Dept
Last, First, MIPhone 384-4060 ex 325Address 1104 Royal Blvd.Fax 384 4127City BoiseState & Zip ID 83706

Original Owner (if sold within last year)

Name _____
Last, First, MI

Phone _____

Address _____

Fax _____

City _____

State & Zip _____

Operator or Contact Person

Name _____
Last, First, MI

Phone _____

Address _____

Fax _____

City _____

State & Zip _____

SECTION II Well Information

Depth to water. Record the date, if the pump was on or off, or if other nearby pumps were on.

Static Water Level (pump off, water level stable): 14.3 ft Date Oct. 7, 99

Dynamic Water Level (pump on): 22.0 ft Date Oct. 7, 99

SECTION III Rate of flow and volume diverted

Meter information:

Make Data Industrial Model No. 1500-04 Serial No. _____

Does the meter totalizer measure in acre-feet or gallons? What is the multiplier? _____

(circle one)

Does the meter rate of flow indicator show gpm or cfs? What is the multiplier? _____

(circle one)

For meters without rate of flow indicators, check here ☐ and see page 4 for rate measurement methods.

(meter information on page 4)

Note: Reading of the meter totalizer, flow rate and discharge pressure should be taken and recorded once each month on or near the same day.

Date (date of reading)	Totalizer Reading	Flow Rate circle: cfs or gpm	Discharge Pressure
January ()			
February ()			
March ()			
April ()			
May ()			
June ()			
July ()			
August ()			
September ()			
October ()			
November ()			
December ()			

Does totalizer reading above include meter multiplier? ☒ Yes ☐ No

Total Acre-feet 25 OR Total Gallons 8,142,896 total
(there are 325,850 gallons per acre feet) 6,261,410 Net.
19,22

Comments: (If the flowmeter was installed, calibrated, or replaced during 1999, please note the date.)

SECTION IV Crop information and method of irrigation for land being served by this pump.
List each type of crop, the number of acres grown, and the number of acres irrigated with each of the irrigation system methods.

Crop	Acres	How irrigated? (no. of acres each method)	
		Sprinkler (acres)	Surface (acres)
grass	5	5	
**	**		
Total acres		5	

**** Show the numbers of acres which is irrigated cropland but was NOT irrigated for some reason this year.**

SECTION V Modifications made in 1999

Describe in the space below any major modifications made to the diversion works or piping system which would affect system capacity or accuracy of the flow measurements during 1999. Attach drawings, sketches, photographs, notes or design information if needed

SECTION VI Certification

I hereby certify that the above reported information is correct to the best of my knowledge and that I recognize that willful submittal of false or inaccurate data is a violation of law subject to the penalty provisions of Sections 42-311, 42-350 and 42-351, Idaho Code.

Signature Samuel H. Hook Property Title Administrator Date 6/27/00

Note: Each reporting form shall be accompanied by a report processing fee in the amount of twenty-five dollars (\$25) per diversion made payable to the Idaho Department of Water Resources (Section 42-701(6), Idaho Code). Report fee is not required if no water was diverted during 1999.

For Department Use Only

Received by _____ Date _____ Time _____
Fee amount submitted * Correct? yes _____ no _____
Receipted by _____ Receipt No. _____
Reveiwed by _____ Date _____
Data entry by _____ Date _____

* waived due to special circumstances.

82 6/27/00

Graves, Lori

From: TMSANLAN@aol.com
Sent: Thursday, July 27, 2000 3:02 PM
To: PPHILBROOK@cityofboise.org
Cc: MWOODWARD@cityofboise.org
Subject: Re: Centennial Park Groundwater Recharge

Paul -

Is the two hours per day an arbitrary number, or does the recharge facility start to overflow if filled for more than two hours? My thought is that maybe we should be pumping water 24-hours per day when it is available, and that the water can go to recharge whenever the sprinklers are not running.

Terry

Graves, Lori

From: MIKE WOODWARD [mwoodward@cityofboise.org]
Sent: Thursday, July 27, 2000 5:04 PM
To: TMSCANLAN@aol.com
Subject: Re: Centennial Park Groundwater Recharge

yes there are hours in the day where we could still be pumping into the recharge, we were never quite sure how long we could pump into the recharge before it would quite taking the water. If you think it will handle more than what we are giving we can increase.

>>> <TMSCANLAN@aol.com> 07/27/00 02:08PM >>>
Paul -

How many hours per day is the ditch water being pumped to recharge? Are there times when water is available in the ditch but the pump is not operating? Can maxicom be used to maximize the amount of water pumped into the recharge facility?

Terry

Graves, Lori

From: TMSANLAN@aol.com
Sent: Thursday, July 27, 2000 5:50 PM
To: pphilbrook@pobox.ci.boise.id.us
Cc: mwoodward@pobox.ci.boise.id.us
Subject: Fwd: Centennial Park Groundwater Recharge



Re: Centennial Park
Groundwater...

Paul -

It sounds like we should try pumping to recharge a bit longer each day and see what happens.

Terry

Graves, Lori

From: MIKE WOODWARD [mwoodward@cityofboise.org]
Sent: Saturday, July 29, 2000 8:20 AM
To: TMSANLAN@aol.com; Paul Philbrook
Subject: Re: Centennial Park Groundwater Recharge

we have increased the time we are pumping and regulated the flow down some by closing the flow control on the valve. We are now pumping six hours 5 days a week, at around 130 g.p.m. We will monitor the recharge facility to see if it will handle the increased flows.

>>> Paul Philbrook 07/28/00 08:10AM >>>

terry, mike told me that he has never seen the recharge facility overflow.. but then again i am not aware of the extent of the hours it has received. at what point would it overflow?? another item to discuss with mike. mike, what do you say?? are we on a schedule and only can pump 2 hours during our allotted time?? paul

>>> <TMSANLAN@aol.com> 07/27/00 03:01PM >>>

Paul -

Is the two hours per day an arbitrary number, or does the recharge facility start to overflow if filled for more than two hours? My thought is that maybe we should be pumping water 24-hours per day when it is available, and that the water can go to recharge whenever the sprinklers are not running.

Terry

Graves, Lori

From: TMSANLAN@aol.com
Sent: Saturday, July 29, 2000 3:22 PM
To: mwoodward@cityofboise.org; PPHILBROOK@cityofboise.org
Subject: Re: Centennial Park Groundwater Recharge

Mike, that sounds great. Let us know what happens. If we can maintain 30-hours per week at 130 gpm, we can recharge about 1 million gallons per month.

**ANALYSIS SHEET
FOR
PROOF OF BENEFICIAL USE**

Permit No. 63-1186 Reviewed by [Signature] Date 2-28-97

GENERAL CONSIDERATIONS

TYPES OF USE

yes Name same as permit?
yes Address same as permit?
yes Proof timely received? Correct Uses? yes
If not, complete calculation below.

SOURCE OF WATER

 Surface water source
✓ Ground water source
yes Drilling permit required?
yes Copy in the file? Drilling Permit No. 63-92C-0195-000
200 Amount paid for permit yes Correct?
no Well log in the file?

LICENSE EXAMINATION FEE

MEASURING DEVICE

yes Required?
100 - Amount Submitted
yes Correct?
yes Required?
yes Installed?
 Waiver requested?

PRIORITY CALCULATION

Date proof received	<u> </u>
Date proof due	<u> </u>
No. of days late	<u> </u>
Priority Date	<u> </u>
New Priority Date	<u> </u>

DEFICIENCIES OR ACTION ITEMS

Proof acceptable

DATA ENTRY

New Address X Proof Made 2-20-97

March 3, 1997

BOISE PARK SYSTEM
1104 ROYAL BLVD
BOISE ID 83706

PROOF ACKNOWLEDGMENT LETTER

RE: PERMIT NO. 63-11816

Dear Permit Holder:

The department acknowledges receipt of the proof of beneficial use form submitted for the above referenced permit. The next step in the process of developing a water right is for the department to conduct a field examination to determine and confirm the use being made of the water.

If you have questions concerning this matter, please feel free to contact the WESTERN Regional Office in Boise at (208)334-2190.

Sincerely,

JULIE L. YARBROUGH
Senior Secretary

c: IDWR - Region

MICROFILMED
MAR 11 1997

December 31, 1996

BOISE PARK SYSTEM
1104 ROYAL BLVD
BOISE ID 83706

PROOF DUE NOTICE

RE: PERMIT NO. 63-11816

Dear Permit Holder:

One of the conditions of approval of the above referenced water permit was that proof of the extent of your beneficial use must be submitted to this office on or before March 1, 1997.

(See last page of your approved permit or your last approved extension request.) Enclosed is a form which when accompanied by the license examination fee or a complete field examination report prepared by a certified water right examiner may be used to submit the required proof.

If you have not fully completed your project, and you or a previous owner of this permit have not received a prior extension of time, you may request an extension of time if the delay is for reasonable cause as provided in Section 42-204, Idaho Code. If you have been prevented from proceeding by a governmental agency or by litigation which might bring title to the water in question, more than one extension of time can be granted. An extension of time request form is enclosed for your convenience.

Either an acceptable proof of beneficial use submittal or an acceptable request for an extension of time must be received by this department on or before the above described proof due date. If neither is received, the department will send you a lapse notice. Within sixty (60) days of the mailing of the lapse notice, the permit will no longer be of any force nor effect.

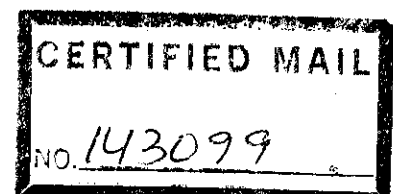
SINCERELY,

JULIE L. YARBROUGH
Senior Secretary

Enclosures

MICROFILMED

MAR 11 1997





State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

MARCH 4, 1996

P63-11816
BOISE PARK SYSTEM
1104 ROYAL BLVD
BOISE

ID 83706

PERMIT APPROVAL NOTICE

RE: Basin 63 Approved Permit

Dear Permit Holder:

Enclosed is a copy of your approved application for permit. Please be sure to thoroughly review the "CONDITIONS/REMARKS:" listing on the permit.

Enclosed is a form entitled "Instructions for Proof of Beneficial Use". Please read the instructions carefully since you must take further action to develop this permit into a licensed water right. Also enclosed is a form entitled "Proof of Beneficial Use". If your project is already completed, you should complete and submit this form immediately.

Please note that one of the conditions of approval on your permit requires that you install a measuring device or sign an agreement with the department to determine your diversion using power records prior to diverting water. You may choose to install a measuring device, or you may ask the department to review your system to determine whether your diversion can be estimated with power records.

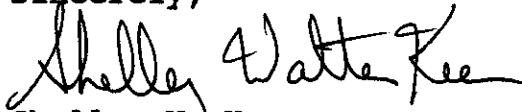
Another condition of approval requires that you measure your diversion and record other important hydrologic and physical features and report them annually to the department. The department will shortly send you further information about measuring devices, flow estimation using power records, and annual reporting forms.

MAR 14 1996

Page 2

If you have questions about the measuring and reporting requirements, please call the department at (208)327-7900 and ask for someone in the Water Distribution Section. If you have questions about other elements of your permit, call me at (208)327-7946.

Sincerely,



Shelley W. Keen
Water Rights Supervisor

SK:rl

Enclosures

MAR 14 1996

**BASIN 63 MORATORIUM APPLICATION
STATE OFFICE REVIEW**

by Cindy Zimmerman

Date: 3/8/96

No.: 63-11816

Name: Boise Parks System (Centennial Park)

Ad OK? ✓ /Gvmt Lts: ✓

Correct Fee? ✓ Receipt #: 6023954 Priority: 4/20/92

PROTESTED: - 020 (Protest Agr) or W19 (See Final/Prelim Order)

SYSTEM COMPLETED: - Yes-P16/No (if no put in order on hold)
-OK per Jim

GROUNDWATER SOURCE:

+ 5 acres <POU> - 066-P55, 067, 065, 03A
=/- 5 acres <POU> - 066-P55, 067, 065, ~~057~~ 060

DRILLING PERMIT

Number - P/D same (Yes) No (if no show Shelley)
Existing well - 63-92-_____, drilled _____
- 068

LOCATION:

Boise Front LoGeo - ~~052~~ (-85° GW temp only) Existing cold water well. (58°)
Swan Falls Flag - B <SEE CODE CHART>
Trust - 051-052-053-P74 (Consumptive Uses), NA

CONDITION CODES: - 069, _____

OWNERSHIP: Non-land owner - 004 (PD/PU) _____

PARAGRAPH CODES: - _____

STANDARD REMARKS: - 1) WB8, ~~2) W06~~, 3) Water Zone 40' - 65',
(4) W09 (5) Volume recharge (6) Study

BENEFICIAL USE DUE: - 3-1-1997 (per Jim)

COMMENTS: - _____

MEMORANDUM

TO: Application for Permit No. 63-114/6
FROM: Dave Tuthill *DT*
DATE: February 20, 1996
RE: Review of Application

In accordance with Order Condition No. 3 of the Boise River Basin Amended Moratorium Order dated May 3, 1995, this application has been reviewed and screened by the Department. The review committee consisted of the following personnel:

Mark Slifka, representing well construction concerns.
Janet Crockett, representing water quality concerns.
Shane Bendixsen, representing hydrologic concerns.
Jim Johnson, representing water allocation concerns.
Dave Tuthill, representing reg. office regulatory concerns.

Any additional conditions of approval found to be needed have been added to the supplemental staff analysis sheet which has been prepared and is included in this file.

RECEIVED

MAR 14 1996

RE-ADVERTISING FOR SUPPLEMENTAL
IRRIGATION RIGHT (MORATORIUM BACKLOG)

APPLICATION NO. 63-11816

FINAL REGIONAL PROCESSING REVIEW

YES NO

☒ ☐ Affidavit of publication received:
☒ ☐ Application published correctly: If not, record action taken.

☒ ☐ Publication dates and paper recorded on application:
☐ ☒ Protests received. Final date for protest 9-7-95
☐ ☒ Protest dates, resolution of protest recorded on application:
☐ ☒ Recommendations attached:
☐ ☒ Measuring device required:
☐ ☒ Measuring port required:
☐ ☒ Water delivered by water master? District # _____
☒ ☐ Special conditions of approval or cover letter: _____

See attached

See below for additional information.

Recommended Date or Priority 4/29/1992

Recommended by: DW Date 2/23/96

STATE OFFICE REVIEW _____

See below for additional information. By _____ Date _____

ADDITIONAL INFORMATION

NOTE Applicant's 3/16/95 documentation seeking waiver from
SEBGWMA issues.
Excessive flow for city park requested.
Drilling Permit already issued per request but conditional use.
(63-92-C-195)

MEMORANDUM

TO: 63-11816

FROM: Dave Tuthill *DT*

DATE: February 12, 1996

RE: Recommendation to Issue Permit

This Application for Permit has special circumstances which require that it be considered for issuance of a permit even though the point of diversion is located within the Boise River basin in the Southeast Boise Ground Water Management Area.

As documented in the file, the applicant has provided engineering information which demonstrates that the system can be operated in a manner that will result in no net depletion to the ground water system. This is possible because the primary irrigation system will be a surface water system, and the well will be used for irrigation purposes only during periods when surface water is unavailable. Also, the water user will intentionally allow a portion of the surface water system to recharge the ground water system to the extent that ground water is anticipated to be used.

The mechanism for ensuring no net depletion will be compliance with the following conditions of approval, which have been accepted by the applicant:

1. Standard condition requiring full use of surface water rights.
2. Standard condition prohibiting sale or removal of surface water rights from irrigated property.
3. Standard condition requiring installation and maintenance of a totalizing measuring device.
4. The volume of water annually pumped from the well shall be intentionally recharged into the ground water system from the surface water right. [This is possible using the existing surface water right without injury to other surface water users because installation of sprinkler systems will save more water, compared to gravity irrigation, than will be recharged.]
5. The water right holder is required to contract for the conduct of a study to compute the effectiveness of the project.

These conditions were discussed at the December meeting of the Southeast Boise Ground Water Management Area Advisory Committee, and were found to be acceptable to the Committee.

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Form No. 202a.
10/90

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPROPRIATION APPLICATION ANALYSIS SHEET

INITIAL REVIEW BY: Cyt DATE: 5/11/92 APPLICATION: 63-11816
Bose Parks

REQUIRED INFORMATION

Name: (If applicant is a corporation or partnership, names and addresses for the director, officers, and other partners must be included.)
Address:
Source: (See USGS Quad for names of water sources)
Point of Diversion: (10 acres for spring, lot & block descriptions for Subdivisions, local name)
County:
Quantity: (flow and/or volume)
Period of use:
Nature of proposed use: (Include description of use)
Description of diverting works:
Time required for beneficial use of water:
Place of use or acres irrigated:
Map:
Signature: (If applicant is corp., partnership, or municipality, title of signatory is required)
Fee:
Yes ☐ No ☐ In form to receipt:

Gov't. Lots:

2 P/D
9 P/U

ADDITIONAL INFORMATION

YES NO

☒ ☐ Overlapping place of use: (Describe source & relationship to present application on the back.)
☐ ☐ Overlapping point of diversion:
☐ ☐ Field check required: Field check by: _____
☐ ☐ Field report attached:
☒ ☐ Critical groundwater area:
☐ ☐ Groundwater management area:
☐ ☐ Diversion within interim protected river area
☐ ☐ Send dam safety information:
☐ ☐ Send power requirement letter:
☐ ☐ Send fish farm requirement letter:
☐ ☐ Power residency affidavit:
☐ ☐ Power efficiency form:
☐ ☐ Within trust water boundary: (If yes, attach Trust Water Supplementary Analysis Sheet.)
☐ ☐ Diversion greater than 5 cfs or 500 af or irrigation greater than 200 acres: (If yes, attach Large Diversion supplementary analysis sheet.)
☐ ☐ *REQUEST ADDITIONAL INFORMATION FROM THE APPLICANT

DATE REQUESTED: _____

Additional information on reverse side:

Drought monitoring } "hold" issues
+
SG Boise gwna }

-JL 3/22/95

PROCESSING

APPLICATION NO.

63-11816

YES NO

☒ ☐
☐ ☒
☒ ☐

In form for advertising:

Statewide advertising:

Fee amount, receipt number and date recorded on application:

SEND COPIES TO

YES NO

☐ ☒
☐ ☒
☐ ☒
☐ ☒

I.D. Health and Welfare

I.D. Fish and Game

I.D. Lands

Adjudication Bureau

YES NO

☐ ☒
☐ ☒
☐ ☒
☐ ☒

U.S. BLM

U.S. Forest Svc.

Water Dist. #

Other

FINAL REGIONAL PROCESSING REVIEW

YES NO

☒ ☐
☒ ☐

Affidavit of publication received:

Application published correctly: If not, record action taken.

☒ ☐
☐ ☒
☐ ☒
☒ ☐
☒ ☐
☐ ☒
☐ ☒
☒ ☐

Publication dates and paper recorded on application:

Protests received. Final date for protest

7 June 8, 1992

Protest dates, resolution of protest recorded on application:

Recommendations attached:

Measuring device required:

Measuring port required:

Water delivered by water master? District #

Special conditions of approval or cover letter:

See attached

See below for additional information

Recommended Date or Priority 4/29/92Recommended by: Ors Date 2/12/96

STATE OFFICE REVIEW

See below for additional information. By _____ Date _____

ADDITIONAL INFORMATION

P/W overlap with drainage districtExcessive rate (.05/ac) consistent with previous applications
Drilling Permit approved (63-92-C-195) 7/8/92 per Applicant's explanation
of budgetary need to drill - plus agreement not to use water.
- PER TELECON with J. Takahara 7/8/92 - EC

CONVERSATION MEMORAND

DA 2/27/96

FILE 63-11816

NAME OF PARTY Dave Meyers

EMPLOYEE Dave Tuttle

RE: Status of Application

At the request of Director Karl Dreher,

I called Mr. Meyers to describe to him the status of this

file, at his request.

Dut

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MAR 14 1996

Date: 07/07/95
Time: 15:02:28

FIRST PAGE

13. Remarks: Property also known as Centennial Park.

Water bearing zone to be appropriated is 40 to 65 feet within SE Boise Ground Water Mngt. Area; applicant seek waiver based on documentation submitted.

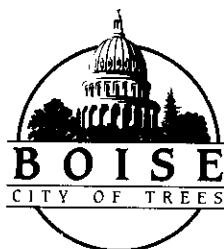
(GOLD2=Update)	(GOLD4=Prev Screen)	(GOLD1=Export Remarks)	(Enter=Exit)
(GOLD3=Add Std Rmk)	(GOLD5=Next Screen)	(GOLD7=Import Remarks)	(GOLD8=Cancel)
	(GOLD6=End of Data)		

MICROFILMED BY

MAR 14 1996

SN

BOISE PARKS & RECREATION



H. BRENT COLES
MAYOR

COUNCIL MEMBERS

PAULA FORNEY
COUNCIL PRESIDENT

CAROLYN TERTELING
COUNCIL PRO TEM

SARA BAKER
ANNE STITES HAUSRATH
M. JEROME MAPP
MIKE WETHERELL

January 29, 1996

David Tuthill *DT*
Idaho Department Of Water Resources
Western Region
2735 Airport Way
Boise, Idaho 83705

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JAN 31 1996

WATER RESOURCES
WESTERN REGION

Re: Centennial Park Water Right Permit #63-11816

Dear Mr Tuthill:

Thank you for the opportunity to present our unique groundwater situation to the Southeast Boise Ground Water Management Area Advisory Committee on December 12, 1995. In this letter I will be describing the way the Boise Parks and Recreation Department will be approaching the groundwater and surface water use for this park.

First of all, we are in agreement that whatever we do should not result in a net depletion of groundwater under Centennial Park. To accomplish this, there are several things that we propose to do:

- 1) During the months the Law St. lateral is running, we will only be using its surface water to irrigate the park.
- 2) The well will only be used when the lateral is not running. This will be our "backup system".
- 3) We will be placing a "totalizing" flow meter on the well to measure the volume of water pumped. Water levels will also be monitored during these times.
- 4) With these calculated water quantities, the volume needed for recharging can be established. It has been decided this volume can be recharged back to the aquifer by surface water through grade work, "over" irrigation, perforated pipes and /or an underground infiltration gallery.

The grade of this park has been designed to catch the run off in low areas, from all park features.

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Document: H:\WP\IN\CENT\WATERRGT Date: January 29, 1996

We traditionally do not like to promote "over" watering of the parks, because it creates many challenges such as a public perception of water wastefulness, mosquito breeding areas, grass too wet for the users, and very difficult mowing routines for our maintenance crews. In this case we will avoid over watering though will try adding a few minutes to each station on the time clock, while monitoring the effect to the turf.

The perforated pipe concept will not be achieved in this first year of development, due to limited budget now available. Therefore the only change to the lateral along Law St. will be placing a culvert under the parking lot entrance. This will leave the water seepage recharging back into the aquifer as it has in the past.

When the perforated pipe is installed in future development, though proves to be unsuccessful, we would like to propose a infiltration gallery below ground be constructed. One station of the irrigation system could be routed to this gallery and be metered to match the volume of water pumped from the well.

5) We will be working with either a BSU student or a local Engineer to do a study on the effectiveness of this process. This can be accomplished during the time the permit is being processed and be finalized before the license is approved.

We anticipate your response to this proposal in the very near future. We had previously scheduled Centennial Park development for early spring, prior to awareness of these needs. Therefore, we now have mounting public pressures to proceed, pending your approval.

Sincerely,



Paul Philbrook, Property Administrator
Boise Parks & Recreation Department

cc: Terry Scanlan, Scanlan Engineering; Consultant

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SCANLAN ENGINEERING

Groundwater and Environmental Engineering

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JAN 19 1996

WATER RESOURCES
WESTERN REGION

January 17, 1996

Mr. Paul Philbrook
Boise Parks and Recreation Department
1104 Royal Boulevard
Boise, ID 83706

Subject: Response to Ed Squires' Letter of January 2, 1996

Dear Paul:

I have reviewed Ed Squires' January 2, 1996 letter to David Tuthill related to Centennial Park. Ed offered alternative views related to items discussed in my letters to you of January 23 and December 11, 1995. The following is my response.

1. My view is that the Boise Valley is underlain by a single groundwater body, that is more or less in continuous hydraulic connection. On a broad scale, the "fan aquifer", "deep aquifer", or "shallow aquifer" are all interconnected zones within the Boise Valley aquifer. The transition from one aquifer zone to another can be marked by a change in geology, chemistry, or hydraulic head, and the transition can be abrupt or gradual. Thus, the geology, chemistry, or hydraulic characteristics of the "fan aquifer" zone in southeast Boise differ from the more confined aquifer zones further north or west. Similarly, the shallow aquifer zones throughout the valley typically differ from the deep aquifer zones a few hundred feet below. The Boise Valley aquifer, like most large aquifers, can be subdivided into numerous zones based on various criteria, but all of the zones are part of the same aquifer system. As the shallow aquifer zone at Centennial Park "is in continuous hydraulic connection with the deepest parts of the Boise-Fan Aquifer", it also follows that the Boise-Fan Aquifer is in continuous hydraulic connection with the remainder of the Boise Valley Aquifer (both deep and shallow zones) throughout the city and westward into Canyon County.
2. With regards to the term "perched", Ed might be correct in his assertion that there is no unsaturated zone between the shallow aquifer zone tapped by the Centennial Park well and deep zone tapped by the United Water wells. If there is no unsaturated layer between the deep and shallow zones beneath Centennial Park, I used the term "perched" incorrectly in my January 23, 1995 letter. However, some sort of hydraulic barrier, separation, or aquitard between the deep and shallow aquifer zones is clearly demonstrated by the static water-level difference of more than 100 feet over a vertical distance of approximately 200 feet.

Microfilm

MAR 14 1996

3. Although I agree in part with Ed's opinion that a downward vertical gradient indicates a recharge area, I do not believe that the large vertical gradient beneath Centennial Park is indicative of a high rate of recharge. Steep vertical gradients do not indicate high rates of flow; they more commonly indicate low vertical permeability and corresponding low rates of vertical flow. The steep vertical gradient between the deep and shallow aquifer zones at Centennial Park is a sign that aquitards impede recharge to deep aquifer zones.

To better understand my point, you might consider if this water-level difference was reversed (i.e., if the deep aquifer head was 100 feet higher than the shallow). In such a situation, the deep aquifer would certainly be considered confined due to nearly 100 feet of artesian shut-in pressure at the ground surface. The high upward vertical gradient would indicate a discharge area. However, a high rate of discharge from the deep to shallow aquifer would probably not be present, because a high discharge rate would result in equalization of pressures between the two zones.

4. Due to the significant difference in water level between deep and shallow aquifer zones, I still believe that the aquifer zone tapped by the Centennial Park Well does not match the description of the "Boise Fan Aquifer" given in the 1993 report by Squires and others. As an example, page 9 of the 1993 report (enclosed with this letter) indicates that the fan aquifer is characterized by (1) "the lack of significant confining units", (2) "no change in static water level in the well bore as wells were deepened or when first water was encountered", and (3) "water-levels of deep wells were essentially the same elevation as water-levels of relatively shallow wells in the immediate vicinity". Items 2 and 3 certainly do not occur in the Centennial Park vicinity, and while the logs do not indicate "significant confining units" (such as clay layers that are several tens of feet thick), the clay layers shown on local well logs are aquitards that maintain shallow aquifer zone water levels at more than 100 feet above the deep aquifer zone water levels. Thus, although Centennial Park is found within the boundaries of the Southeast Boise Groundwater Management Area, I do not believe that the shallow aquifer zone at the park matches the fan aquifer description in the 1993 report.
5. My point with regards to water-level decline at United Water's Centennial well was that the shallow aquifer (with a 12-foot static water level) has not experienced a water-level decline of the magnitude recorded for the deep aquifer (i.e., 25 to 60 feet). This supports my contention that the shallow zone does not match the description of the fan aquifer that was described by the 1993 report. More significantly, if there has been no long-term water-level decline in the shallow zone, and the shallow zone water levels do not significantly decline as a result of Centennial Park pumping, then the hydraulic head that drives recharge from the shallow aquifer zone to deep aquifer zone will not change. If the hydraulic head in the shallow zone remains relatively constant, then the rate of leakage (i.e., recharge) to the deep zone should not change significantly.

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If Ed has good data that supports 2.8 feet of annual decline at United Water's Centennial well, then I apologize to him for pointing out what appeared to be an arithmetic error in the 1993 report. However, please note the following.

- I calculated a 27-foot decline over about 15.2 years based on (1) the static water level reported on the driller's log (98 feet below ground level, October 1976) and (2) the static water level reported in the test data in the 1993 report by Squires and others (123.6 feet below ground surface, January 1992). These were the only measurements available to me.
 - With respect to comparing an October measurement to a January measurement, I assumed that the seasonal water-level fluctuations in 1976-77 were not large because most of the large capacity wells in southeast Boise (such as Micron Technology wells, Les Bois Sports Park well, and United Water's Logger, Oregon Trail, River Run, Bergeson, J.R. Flat, Market, and Gowen wells) had not yet been constructed. Thus, I reasoned that the difference between an October 1976 water level and a January 1977 water level would have been only a few feet.
 - I did not assume that the January 1992 water-level was measured at a time when the water levels were "artificially high". Instead, I take a contrary view that January 1992 could be considered to have been the first time in several years that the water levels in southeast Boise were not artificially low. In other words, turning off most of the southeast Boise municipal wells should have reduced the amount of well interference drawdown in the area, thereby allowing a better measurement of actual water-level decline rather than measurement of the combined effect of water-level decline plus well interference from wells constructed after 1976.
6. I strongly disagree with Ed's statement "...discharge from the shallow aquifer does not occur to drain ditches and/or the Boise River in east Boise (water-levels are always less than river level)". While I have always maintained that the shallow aquifer in the Centennial Park area provides recharge to the deep aquifer zone, I still believe that the shallow aquifer zone in the southeast Boise area also discharges to drain ditches, and that the drain ditches discharge to the Boise River, and that the Boise River is a gaining stream within the City. Arguments supporting my position are listed below.
- At least two open drain ditches are found between Boise Avenue and the Boise River, east of Division Street. These drain ditches flow year-around. I believe that the primary source of flow to these drain ditches is shallow groundwater discharge. In addition to these two drains, I suspect that there may be other buried drains within the subdivisions east of Broadway Avenue, as I recall the existence of drain ditches in the Triangle Dairy vicinity prior to the development of the Lakewood Subdivision.

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- Note that the July 1992 Centennial Park well water-level elevation was approximately 2743 feet (estimated from the static water level of 12 feet below ground level on the well log and the USGS quad map elevation of approximately 2755 at the park site). The December 29, 1995 water-level measurement of 19.0 feet below measuring point (17.5 feet below ground level) suggests a current water-level elevation of about 2738 feet. A drain ditch located about 2,500 feet north-northwest of Centennial Park (now a buried drain within the Regatta Subdivision) had an elevation of 2730 feet prior to burial of the ditch by subdivision construction. This drain was (and probably still is) capable of acting as a point of groundwater discharge for the shallow aquifer in the Law Avenue area. Note also that the USGS quad map shows the elevation for the Boise River directly north of the park is 2720 feet (i.e., 18 feet below the December 1995 Centennial Park water level). The river is in direct hydraulic connection with the shallow aquifer zone, and the water-level elevations appear to support a flow direction toward the river rather than away from the river. These elevations support my contention that the shallow aquifer in southeast Boise discharges to drain ditches and the Boise River, in addition to leaking downward to the deep aquifer zone.
 - The USGS report by Dion (Characteristics of Streamflow and Ground-Water Conditions in the Boise River Valley, Idaho, USGS Water Resources Investigations 38-74) supports the contention that shallow groundwater flow is toward the Boise River. The groundwater contour map for the shallow aquifer (portion enclosed) shows a flow direction toward the Boise River at the location of Centennial Park.
 - Table 2 of Dion's report (enclosed) indicates that the Boise River gains approximately 7.8 cfs between Barber Dam and the Broadway Avenue Bridge. Nearly all of this gain is from seeps or very short drains (i.e., groundwater inflow).
 - You should also note that Dion's groundwater contour map shows an approximate water-table elevation at Centennial Park of 2740 in mid November 1971. This water-table elevation suggests no shallow aquifer water-level decline in the past 25 years.
7. While I think that a seepage test of the irrigation lateral that flows past Centennial Park would be interesting, I am doubtful that there will be a high rate of leakage as I have noticed that rainwater puddles in the bottom of the ditch. However, if such a test were to show even a moderate leakage rate (i.e., 2 gpm), then the Park Department might attempt to assert that they are mitigating for groundwater pumping during the few weeks each year when a surface water irrigation supply is not available. However, it could be argued that the leakage

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from lateral leakage is an existing source of recharge and, therefore, does not offset the new discharge resulting from the pumping of the Centennial Well.

8. My interpretation of the pumping test recovery data is that the response is characteristic of delayed yield or leakage. Direct connection to surface waters is not necessarily indicated. I would be very surprised to find that the earthen lateral near the well is in direct hydraulic communication with the well, particularly since it appears to be perched 10 feet or more above the water table. Furthermore, direct communication with the Ridenbaugh Canal, located more than 1,500 feet distant, is unlikely to result in stabilization of drawdown or residual drawdown within 10 minutes of starting or stopping the pump (i.e., the response measured during the pumping test).

Ed suggested a test to demonstrate interconnection to surface water sources. While I am not opposed to a test, I would be surprised if direct communication with the earthen lateral can be demonstrated. There also may be some risk in trying to prove a connection (direct or indirect) between the well and the Ridenbaugh Canal. While I doubt that there is a direct communication between the well and the canal, I do believe that the Ridenbaugh Canal is the most significant source of recharge to the shallow aquifer tapped by the Centennial Park well. If the test demonstrates connection to the Ridenbaugh Canal, I think that the results would invite a protest of the application by the Nampa-Meridian Irrigation District and potential denial of the application by the Department of Water Resources.

9. My personal opinion with regards to open irrigation laterals in neighborhood parks is that they are a hazard to small children. Although it has become fashionable to assert that groundwater recharge should be maintained at any cost, I feel that the benefits are questionable when compared to safety considerations.

The Parks and Recreation Department has attempted in the past to utilize laterals as an aesthetic feature on park properties, while also maintaining groundwater recharge. As an example, I understand that safety considerations required broad slopes and widening of the lateral at Mountain View Park; these efforts apparently increased seepage and evaporation losses, which prompted the canal company to subsequently pipe the lateral through the park. I would anticipate a similar response from the New York Irrigation District if you intend to increase the rate of seepage from the lateral. Canal companies and irrigation districts spend thousands of dollars each year trying to reduce seepage losses; attempting to increase leakage might not make sense to them.

Rather than promoting seepage losses from the lateral (which could not be accurately measured and accounted), I recommend a direct metered diversion from the lateral into a recharge facility. The recharge facility could be a buried infiltration gallery (as described in my letter of December 11) or a leaky water way (separate from the lateral) with gently sloping banks. A recharge facility

MAR 14 1996

January 17, 1996

would allow the Park Department to take possession of a measurable volume of water each year for recharge. The accounting of groundwater recharge and discharge at the park would be simple and not subject to challenge.

In summary, it is still my belief that pumping of the Centennial Park Well would have little impact on the rate of groundwater recharge to deep aquifers in southeast Boise. The rate of recharge is controlled by aquitards which impede flow between the shallow and deep aquifer zones. Flow rates through the aquitards should not change significantly if the hydraulic head in the shallow aquifer does not decline.

If the Southeast Boise Groundwater Management Area Advisory Committee and the Department of Water Resources require that pumping of the Centennial Park well must have no negative impact on the shallow aquifer water balance, then I recommend that you mitigate for your pumping impacts by on-site recharging with measurable quantities of surface water. The amount of water recharged must equal or exceed the amount of water pumped.

I hope this clarifies some of the issues discussed in my letters of January 23 and December 11, 1995, and clarifies my position on the issues discussed in Ed's letter of January 2, 1995. Please contact me if you have any questions or comments.

Sincerely,

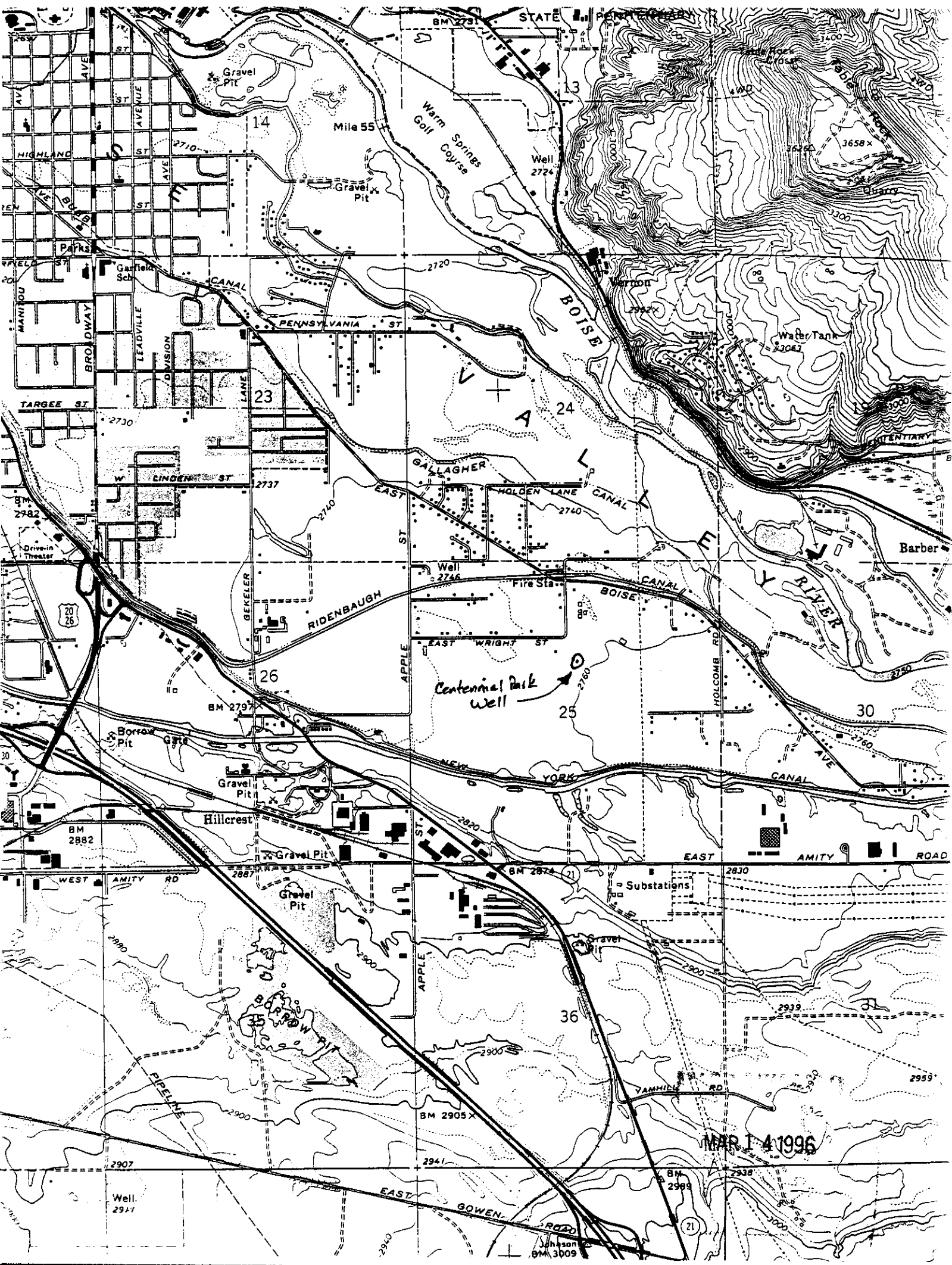


Terry M. Scanlan, P.E., P.G.

cc: Ed Squires
David Tuthill
SEBGWMA mailing list

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Source: Squires and others (1993)

boundary adds to the deviation, resulting in an ever-steepening semi-log plot until all boundaries have been encountered. Potential negative hydraulic boundaries for this area include the Boise Front fault-zone and other pumping wells.

Increased drawdown:

The overall effect of the boundary conditions, discussed above, is that relatively low yielding wells (400-700 gpm) experience drawdown exceeding 150 feet. Long-term pumping water-level for the 400-gpm River Run well is 185 feet. Owing to documented water-level declines (Table 1), severe boundary effects, and hydraulic connection with rapidly declining water-levels to the south, it is recommended that this area also be considered for inclusion in a Groundwater Management Area.

Water-table as upper boundary:

The upper boundary of the Boise-Fan Aquifer is stated here to be the water-table. This is to say that the upper portion of the aquifer is unconfined and that a significant hydraulic connection or cross-bed permeability exists between the lower, semi-confined parts of the aquifer and the water-table. Water-table conditions and long-term hydraulic connection throughout the Boise-Fan Aquifer were suggested by Squires and others (1992) based on the following observations; 1) the lack of significant confining units (aquitards) as evidenced from examination of drill-cuttings and geophysical logs, 2) no change in static-water-level in the well bore as wells were deepened or when first water was encountered, and 3) water-levels of deep wells were essentially the same elevation as water-levels of relatively shallow wells in the immediate vicinity (Figure 10). Additional supporting evidence for unconfined conditions within the Boise-Fan Aquifer is provided by hydraulic testing of the BWC Oregon Trail well and the State of Idaho, Department of Transportation, Blacks Creek Rest Area well (Squires and Derricott, 1992), where drawdown curves were interpreted to show "delayed yield" effects characteristic of unconfined aquifers.

85°F isotherm boundary:

The 85°F isotherm constitutes a regulatory lower depth to which aquifers of the Boise area may be developed. The 1982 Idaho Geothermal Resources Act (Idaho Code Section 42-230) restricts the use of "low temperature geothermal" waters in excess of 85°F. Within the Boise-fan Aquifer, 85°F waters are typically encountered at 1000-to-1100 feet below surface thus placing a limit on the depths to which water-wells can be completed. For example, the Micron #3 well ceased drilling at 1045 feet and at a bottom hole temperature of 83.5°F. During drilling of the 1993 Simplot Columbia Village well, mud bailed from the bottom of the well at 1200 feet, was measured at 92°F. Closer to the Boise Foothills and/or the East Boise Fault, 85° F waters are encountered at shallower depth (450-to-650 feet). The 1992 Warm Springs Mesa municipal-supply well encountered 88° F water at 450 feet below land surface.

EXPLANATION

— 2600 —
 Water-table contour
 Shows altitude of the water table
 November 18-19, 1971
 Dashed where approximately located
 Contour interval 20 feet (6.1 meters)
 Datum is mean sea level

•
Observation well

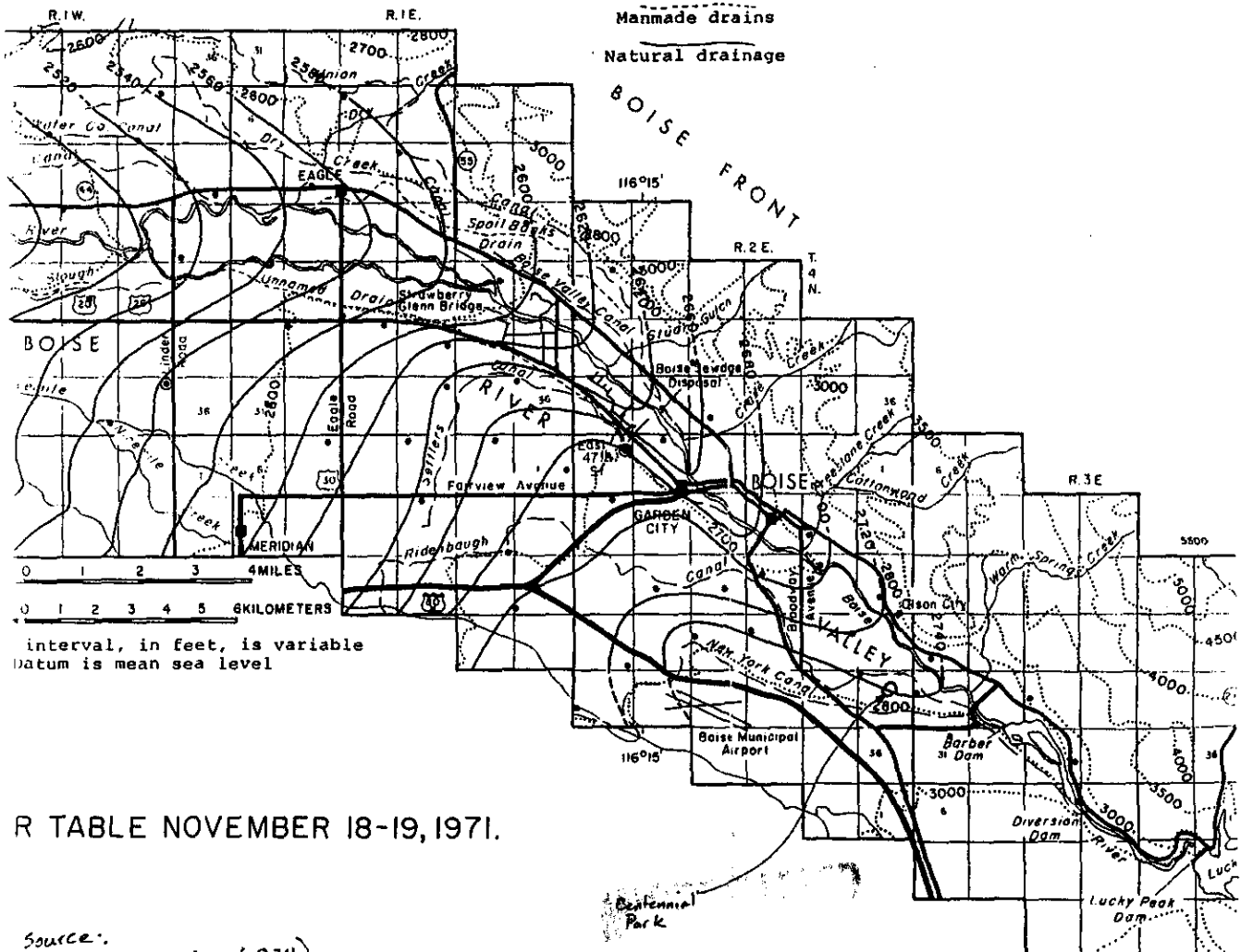
⊙
Observation well
with hydrograph

— 3000 —
Land-surface contour

Principal canals

Manmade drains

Natural drainage



Source:

Figure 5, Dion (1974)

MAR 14 1996

Source: Dion (1974)

Table 2. Summary of surface-water flow (ground-water discharge) in the Boise River valley, November 18-19, 1971.

Section	River mileage	Measured dis- charge (ft ³ /s)	Increase in discharge (ft ³ /s)		
			From major drainage channels	From seeps or very short drains	Total
near Boise (13202000)	63.8	0.99			
			0	4.94	4.94
below Barber Dam (13203700)	58.8	5.93			
			1.0	0.96	1.96
near Olson City	56.3	7.89			
			0	5.8	5.8
at Broadway Ave. bridge	53.7	13.7			
			3.0	1.0	4.0
at Capital Blvd. (13205500)	52.8	17.7			
			0	5.7	5.7
at Fairview Ave. bridge	51.5	23.4			
			6.60	26.5	33.1
at E. 47th St. in Garden City	49.4	56.5			
			9.3	9.0	18.3
at Strawberry Glenn bridge	47.1	74.8			
			24.0	8.2	32.2
at Eagle Road	42.8	107			
			5.3	23.7	29.0
at Linder Road	39.1	136			
			14.9	20.1	35.0
at Star Road	33.9	171			
			126	0	126
at Middleton Road	26.7	297			
			129	16.0	145
at Highway 20-26 near Caldwell	21.1	442			
			289	41.0	330
at Notus (13212500)	13.8	772			
			102	37	139
Gaging station nr Parma (13213000)	3.8	911			
			99	0	99
at mouth (Snake River)	0	1,010			
Totals	-	-	809.1	199.9	1,009

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MAR 14 1996



BOISE STATE UNIVERSITY • 1910 UNIVERSITY DRIVE • BOISE, IDAHO 83725

DEPARTMENT OF GEOSCIENCES

TELEPHONE: (208) 385-1631
FAX: (208) 385-4061

January 2, 1996

Mr. David R. Tuthill Jr., P.E. *DM*
Manager
Western Regional Office
Idaho Department of Water Resources
2735 Airport Way
Boise, ID 83705

RECEIVED

JAN 22 1996

Department of Water Resources

RECEIVED

JAN 09 1996

WATER RESOURCES
WESTERN REGION

Re: Requested Exemption to the Southeast Boise Groundwater Management Area by Boise Parks and Recreation Department for the Centennial Park Irrigation Well and Potential Effects on the Boise-Fan Aquifer.

Dear Mr. Tuthill:

I am writing to express my thoughts on the Boise Parks Department's (BPR) request for exemption from the Southeast Boise Groundwater Management Area (SEBGWMA) for their Centennial Park irrigation well. The Water-Right Application for the Park was in the advertisement stage when the Snake River Basin Moratorium was ordered. By the time the moratorium was lifted, the Centennial Park site had been incorporated into the SEBGWMA. The request for exemption, by BPR, is the first to come before the SEBGWMA Advisory Committee, and so, is a precedent setting case.

My interpretation of the groundwater conditions, effects to the aquifer, and mitigatory solutions are somewhat different from those expressed in the reports and presentations by BPR's consultant and, so, I would like to advance another perspective for consideration by Idaho Department of Water Resources (IDWR). I would also offer comment with respect to inferences, within those consulting reports, that certain data contained within our paper on the Boise-Fan Aquifer (Squires and others, 1993) are incorrect and/or misreported.

Relationship Between the Shallow Aquifer and the Boise-Fan Aquifer

First, I do not believe that the shallow aquifer beneath this part of Boise is "perched" above the Boise-Fan Aquifer. A perched water-table is a body of unconfined groundwater separated from an underlying main body of groundwater by an unsaturated zone. Use of the term here implies that a vadose or unsaturated zone exists which separates the two aquifer units. The shallow aquifer (the Boise River floodplain gravels) at the Centennial Park location is in continuous hydraulic connection with the deepest parts of the Boise-Fan Aquifer. The Boise-Fan sediments are fluvial in origin and many of the complexly interbedded sub-units are indistinguishable from Boise River floodplain gravels. This is to say that the saturated floodplain gravels of the present day Boise River are simply part of the Boise-Fan Aquifer.

MAR 14 1996

Secondly, the difference in pressures (water-levels) between deep and shallow wells at this location does not demonstrate hydraulic separation, but rather, is indicative of a recharge area. Decreasing potential with depth means that the vertical gradient is downward. This is also why discharge from the shallow aquifer does not occur to drain ditches and/or the Boise River in east Boise (water-levels are always less than river level)

Interconnection of the Centennial Park Well to Surface Water Sources.

From the conceptual stage, and throughout the supervision of the drilling process, my design for the Centennial Park well had planned for the structure to draw from the shallow aquifer waters known to be in direct hydraulic connection with surface waters. This is in keeping with my conviction that irrigation for parks should be from the shallowest zones available and/or from surface sources. As I carried out the hydraulic testing and compiled the well-completion report, it was my intention to demonstrate to BPR that shallow, low-cost wells could be constructed for park irrigation. My involvement was as a sub-contractor to Forsgren and Associates who undertook the project for BPR and later modified the report and presented it under their letterhead. The available test data were not intended for quantitative aquifer characterization. Cost considerations and site constraints, at the time, necessitated that the hydraulic testing be limited to well completion testing for pump requirement. Given the low specific capacity of the well and fluctuations in discharge during testing, the relatively small variations in the drawdown data do not lend themselves to quantitative interpretation. The limited recovery data, however, do suggest that a positive (recharge) boundary was encountered by the expanding cone of depression within minutes of turning on the well. The recharge boundary may be indication of a surface water source coming in contact with the expanding cone of depression or it may be a delayed yield (gravity drainage from lowering the unconfined water table) response. Either scenario would support the interpretation that the well has a nearly direct connection to surface waters and perhaps to the small ditch located 47 feet away. I would be surprised if this were not the case and this provides the basis for my recommendations pertaining to a mitigation plan.

Effects of the Centennial Park Well on Recharge Mechanisms.

The SEBGWMA has been the catalyst for precedents in water management policy for the Boise Basin. It now seems that a mitigation plan for the Park holds potential for a precedent to surface/groundwater recharge mitigation.

Apparently, surface water supplies, and water-rights, are available for irrigation of Centennial Park. BPR has suggested mitigation options using surface water when it is available and using the well only during early and late season use when demand is small and the surface supplies are not available. If the park can be irrigated with surface water, concern over the Centennial Park's net effect on recharge to the Boise-Fan Aquifer is lessened considerably. While it is certain that groundwater recharge occurs as a result of flood irrigation and leakage from canals (groundwater-levels have increased in response), we do not fully understand to what degree that recharge will be diminished by the conversion to pressurized irrigation practices.

MAR 14 1996

Pressurized irrigation infiltration.

If losses to the groundwater system from pressurized irrigation were better understood, the Centennial Park issue would be more easily resolved. If infiltration (groundwater recharge) occurs from pressurized sprinkler irrigation, then the renewed irrigation of the Centennial Park acreage should offset groundwater withdrawals. Infiltration studies may have been accomplished in other areas of the West and written up. Pressurized irrigation seepage studies will be needed for other applications/requests for exception to the SEBGWMA which will likely follow. I am aware of only one study, by the Soil Conservation Service, conducted near Burley, Idaho which showed the wetting front from pressurized irrigation did not infiltrate beyond the upper 18-inches of soil. With the cooperation of Paul Philbrook and the BPR it may be possible to carry out the pressurized-irrigation seepage study suggested at the SEBGWMA meeting. Having thought about this type of study, however, I don't think it is relevant to BPR's immediate needs for Centennial Park. Moreover, BPR may have reservations to over-irrigation because of mold, moss, fungi, aesthetics, park use, and/or insect considerations. This type of study needs to be done and I have discovered that we now have portable potentiometers that do not require any type of permanent placement within the soil. The portable units are pushed into the soil only momentarily to obtain periodic measurements. If the opportunity presents itself, and if funding for a graduate project were available, I would be glad to coordinate or directly supervise an MS thesis through BSU. Pressurized irrigation seepage studies would benefit, both, BPR's and IDWR's long range management plans. The BPR Comprehensive Plan has proposed other parks within the SEBGWMA and similar issues will have to be resolved for that to happen.

Centennial Park well as diversion works for surface water-right.

As previously mentioned, there is a likelihood that the Centennial Park well is under the direct influence of surface water. It may be a relatively easy task to carry out hydraulic testing, water-level monitoring and/or water quality analyses to establish surface water interconnection as fact. If it can be shown that the well is, in effect, drawing from surface sources, could BPR be allowed to draw their surface water right through the well? This would eliminate the need for an additional diversion structure and pumping station.

Effects on recharge from tiling the canal.

The most significant impact to recharge at the park site may not be as a result of well withdrawals, but rather, from tiling the ditch which borders the park. As a member of the community, I am disappointed that this surface water course cannot be incorporated into the park's aesthetic design and, at the same time, remain as a source of recharge to the groundwater system.

Effects on the Centennial Park well from tiling the canal.

I believe that enclosing the ditch will have an adverse effect upon the Centennial Park well, also. All existing data have been obtained during the irrigation season when the ditch is full. Terry Scanlan's calculations have all assumed that the water level in the well will be the same when the canal(s) is(are) empty. The water level in the well will probably lower significantly after the canal is turned off, and I would expect the hydraulic test results to be different as well. I am not sure what changes have occurred in the shallow aquifer since 1975, but I do not consider a well which is located 47 feet from an unlined canal, completed within the unconfined gravel aquifer, and

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MAR 14 1996

measured during the height of the irrigation season to be a good indicator. I have measured the Centennial Park well on 11/1/95 and 12/29/95 at 15.1 and 19.0 feet below measuring point respectively. I predict that the water level could drop to 26 feet by March with the New York Canal full all winter. BPR would be well advised to carry out a quantitative constant discharge test prior to refilling of the irrigation canals. This is the condition on which any pump selection should be made and may somewhat simulate the near-term effects of tiling the lateral. This will be a good time to monitor the Liberty School irrigation well also.

MK-Rail off-site contaminant plume.

With good (non-irrigation season) hydraulic test data, the effects of pumping the Centennial Park well, and/or tiling of the canal on the nearby MK-Rail (A-Zone) off-site VOC contamination plume could be assessed. Using MK-Rail's estimates, the plume appears to be present within about 1700 feet of the Centennial Park well (sketch attached). Several of MK-Rail's monitoring wells could be utilized during Centennial Park testing to obtain aquifer coefficients and the Park well should be screened for VOC's. I am not suggesting that there would be a problem or liability, however, it is in the best interest of the City to confirm that there is not.

Estimation of ditch leakage.

The amount of leakage from the ditch might be estimated simply by filling it behind a headgate, turning off the water, and measuring the decline over time. The amount of water needed to fill the ditch and to keep it full could be metered by pumping it from the Centennial Park well. It is clear that a pre-irrigation-season pump-test needs to be conducted anyway and it is not inconceivable that the results from this simple experiment might quickly resolve the mitigation issue if the canal tiling can be accomplished with planned leakage.

Conclusion

My suggestion would be that the BPR roll the early season hydraulic testing of the well, the ditch seepage study, aquifer characterization, and water chemistry/quality analyses into one concerted effort. It is my hope that the BPR could retain the ditch in its present open condition or enclose it within a perforated or open-bottomed tile. As long as surface water and surface water rights are available, concern over the wells effects on recharge are lessened. **If hydraulic testing can demonstrate surface water interconnection, if canal leakage is significant, or some combination of the two, perhaps the well could be the only pumping station required.**

Regardless of the final solution, I would discourage the BPR from abandoning the well before there is consensus on the state of the SEBGWMA. It is not yet known whether additional withdrawals will be possible. It is conceivable that a small demand such as that needed for Centennial Park could be approved in the future.

UWI Centennial Supply Well Water-Level Declines

In Terry Scanlan's report to BPR (1/23/1995) he made an assessment of the long-term water level decline in the UWI Centennial well documented by Squires, and others (1993). The authors believe Terry's assessment of the decline is incorrect. He used the driller's reported water-level at

MAR 14 1996

the time of completion in comparison with our measurement prior to the Oregon Trail Aquifer test (1992). Speculation on water-level decline, based upon pulling two measurements out of the annual fluctuation, is somewhat questionable. The driller's measurement was taken near the end of the deep aquifer pumping season (the low of the annual fluctuation). Water-levels measured in the Southeast Boise wells at the time of the aquifer test were artificially high owing to our manipulation of the system and the fact that all major wells were maintained off for over a month near the peak of the recovery season. These measurements did not accurately reflect the true state of the system under the current level of development. To compare "apples-to-apples" we used data obtained by Spence Wood and I during the month of January 1989, when the Centennial pump was removed from the well, in comparison to other spot measurements (from camera surveys, etc.) over the period of many years. Figure 30 of Squires and others, (1993) approximates the trend. Using our measured water levels of 135 feet below casing we calculated a 37-foot decline for the 13-year period and this seemed a best fit to the other intermediate measurements we had obtained. Such calculations are always somewhat subjective owing to annual fluctuations and the pronounced interference effects between wells in southeast Boise. Since the report was released, I have accessed more reliable UWI data which show that at least 2.8 feet per year of decline has occurred in the Centennial well. The significance of the rate of water-level decline in the UWI Centennial well to Scanlan's report on the Centennial Park well is not clear to me, but we stand behind our reported findings which are based upon careful consideration of a wide range of reported values and many of our own measurements. The authors were not contacted as to the source of our data nor were we aware of the consulting report until it came before the SEBGWMA in December, 1995.

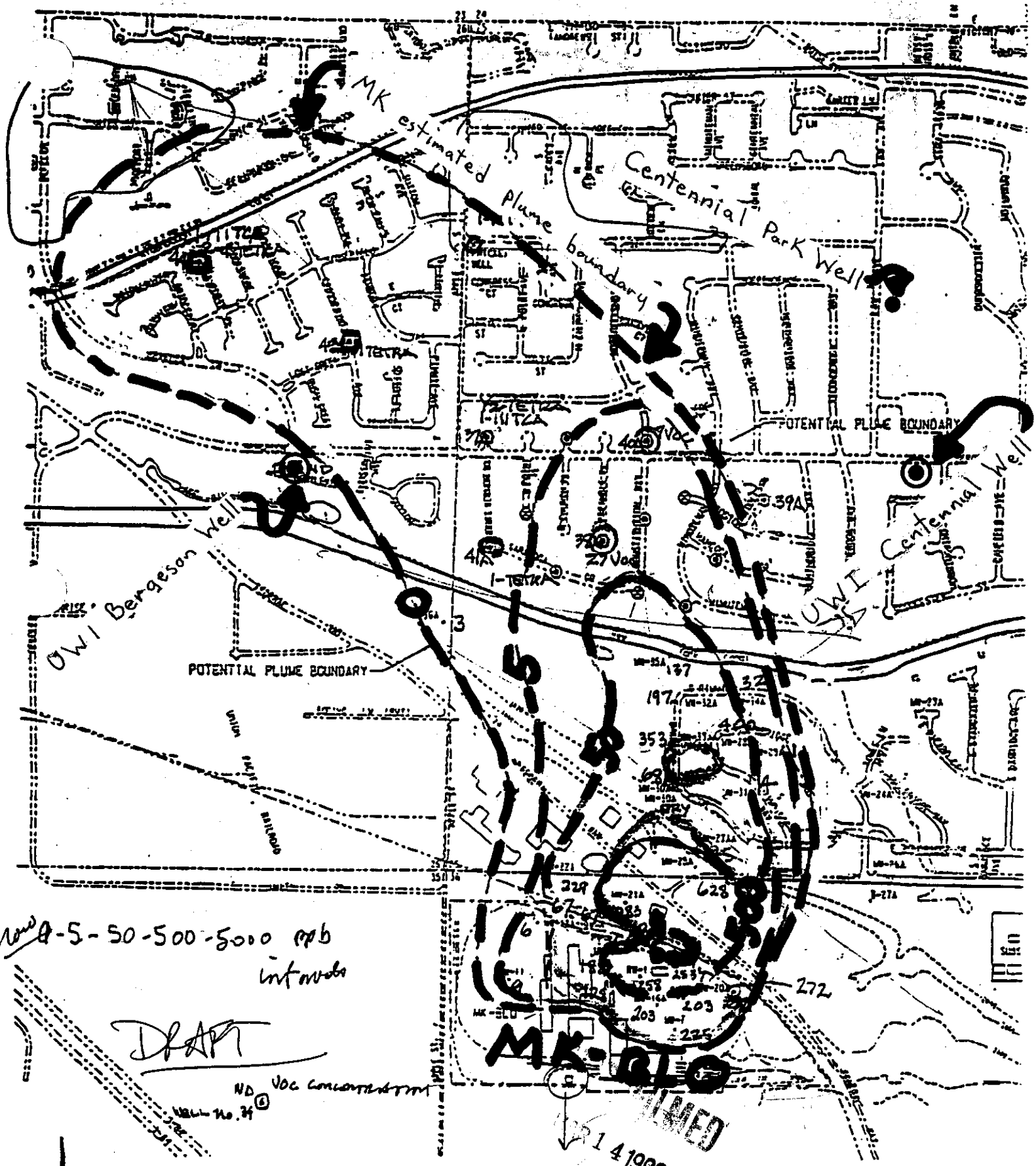
Thank-you for the opportunity to comment on these matters. I hope that the BPR can be successful in their attempt to create Centennial Park and, in particular, to utilize the well which they have spent considerable time, effort, and money to develop. Please call if I can be of further assistance to this effort or if you have additional questions.

Sincerely,

Ed Squires

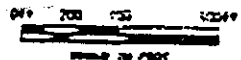
c: Paul Philbrook
S.H. Wood
Roger Dittus
Jim Osiensky
SEBGWMA mailing list
Scanlan Engineering

REPROFILMED
MAR 14 1996



LEGEND

- EXISTING MONITOR WELL
- PROPOSED MONITOR WELL





RECEIVED

JUL 31 1995

WATER RESOURCES
WESTERN REGIONThe Idaho
Statesman

P.O. BOX 40, BOISE, IDAHO 83707

LEGAL ADVERTISING INVOICE

Amount Due

\$212.25

Account Number 04762800		Identification Notice of Application for Water Right	
Ordered By Sue Taylor	P.O. Number	Rate NT	Run Dates July 20 & 27, 1995
Sue Taylor IDAHO DEPARTMENT OF WATER RESOURCES Western Region 2735 Airport Way Boise, Idaho 83705-5082		Estimated Inches	Real Inches
		# Affidavits 1	Legal Number 2446

LEGAL NOTICE

NOTICE OF APPLICATION FOR WATER RIGHT

The following application(s) have been filed to appropriate the public waters of the State of Idaho:

SE PARK SYSTEM
ROYAL BLVD
SE, ID 83706

Source: GROUNDWATER
Version Pt: SWNE Sec 25 T03N R02E in ADA County.
Use: IRRIGATION (0.250 CFS)
Total Diversion: (0.250 CFS)

Filed: 4/28/1992
ADA County
T03N R02E S25 SWNE

5.0 ACRES TOTAL
The bearing zone to be appropriated is 40 to 65 feet within SE Boise Groundwater Mngt. Area; applicant seeks waiver based on documentation submitted.

SE PARK SYSTEM
ROYAL BLVD
SE, ID 83706

Source: GROUNDWATER
Version Pt: NESW Sec 35 T04N R01E in ADA County.
Use: IRRIGATION (0.250 CFS)
Total Diversion: (0.250 CFS)

Filed: 4/28/1992
ADA County
T04N R01E S35 NESW

5.0 ACRES TOTAL
The bearing zone to be appropriated is 230 to 261 feet.

MENSOLO, MICHAEL S
CANON WAY
SE, ID 83706

Source: GROUNDWATER
Version Pt: NW Sec 22 T03N R01E in ADA County.
Use: IRRIGATION (0.120 CFS)
Total Diversion: (0.120 CFS)

Filed: 4/7/1992
ADA County
T03N R01E S22 SENW

4.0 ACRES TOTAL
The bearing zone to be appropriated is 200 to 400 feet.

ANCHER, DUANE
110 S CANADA
ELBA, ID 83641

Source: GROUNDWATER
Version Pt: NESE Sec 20 T01S R01W in ADA County.
SESE Sec 20 T01S R01W in ADA County.
NWNE Sec 29 T01S R01W in ADA County.
NWNW Sec 29 T01S R01W in ADA County.
Use: IRRIGATION (8.100 CFS)
Total Diversion: (8.100 CFS)

Filed: 4/17/1992
ADA County
T01S R01W S19 Lot 4(SWSW) SESW SESE
S20 NWSW SWSW SESW
S30 SWNE SENE NENW

Lot 1(NWNW)
405.0 ACRES TOTAL
The bearing zone to be appropriated is 360 to 680 feet.

PIER, EUGENE J
PIER, HOLLY D
PARKINSON
GLE, ID 83616

Source: GROUNDWATER
Version Pt: NENENW Sec 15 T04N R01E in ADA County.
Use: COMMERCIAL (0.160 CFS)
IRRIGATION (0.030 CFS)
Total Diversion: (0.190 CFS)

Filed: 7/6/1995
ADA County
T04N R01E S15 NENW

1.0 ACRES TOTAL

LINDA PORTER

, being d
sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto; that said notice was published in The Idaho Statesman in conformity with Section 60-108, Idaho Code as amended, for TWO

☒ consecutive weekly ☐ consecutive daily ☐ single ☐ odd skip

insertion(s) beginning with the issue of JULY 20, 1995

and ending with the issue of JULY 27, 1995

STATE OF IDAHO)

ss.

COUNTY OF ADA)

On this 27th day of JULY, 1995, before me, a Notary Public, personally appeared LINDA PORTER, known or identified to me to be the person whose name subscribed to the within instrument and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that she executed the same.

Notary Public for Idaho
Residing at Boise, Idaho

My commission expires: 11-27-99

MAR 14 1996

RESPONSE FORM

Boise River Basin Moratorium Application

RECEIVED

MAY 3 1 1995

WATER RESOURCES
WESTERN REGION

Name of Applicant: Boise Park System

Address: 1104 Royal Blvd.
Boise, ID. 83706
208-384-4240

Water Right No.: 63-11816 (Centennial Park)

Do you wish to proceed with development of the water right as proposed in the application?

X Yes No

(If the response is no, please complete and return the enclosed withdrawal form.)

If the source of water that you propose to appropriate is ground water, what aquifer level do you propose to develop to obtain water? 40 ft to 65 ft

Signature: Paul Philbrook

Printed Name: PAUL PHILBROOK

Please return this form to:

Idaho Department of Water Resources
Western Regional Office
2735 Airport Way
Boise, ID 83705

RECEIVED

MAY 4 1996

Requests exemption from SERGMA per 3/16/95 info submitted -
ok to advertise; ~~the~~ evaluate
then

JL - 7/7/95



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

FAX (208) 334-2348

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

May 19, 1995

Distribution: Applicants Whose Water Right Applications Were Held Without Action Under the Boise River Basin Moratorium

Dear Applicant:

As you might be aware, on May 3, 1995 the Director of the Department of Water Resources, Mr. R. Keith Higginson, signed an Amended Moratorium Order which provides for the processing of previously held applications within the Boise River Basin, with certain restrictions. Enclosed for your information is a copy of the Order.

As provided in the Order, this office will resume the processing of these applications in order of priority at a rate of 30 applications per month. Depending on how many applicants wish to proceed with development of their projects, the processing of the 338 presently-held applications could require as much as a year. To enable you to make an estimate as to when your application(s) will be processed, please be advised that 244 of the applications have priority (receipt) dates of 1992; 32 are dated 1993; 37 are dated 1994; and 25 are dated 1995.

As new applications are received, they are sorted into two groups. Those that would not have been held back under the moratorium are processed immediately. To assure fairness in processing, those that would have been held back under the moratorium, such as irrigation applications, are placed at the end of the moratorium processing line.

Note that the Order requires that all applications held under the moratorium will be advertised (or re-advertised if previously advertised), in order to enable neighboring water users to examine the proposed uses in view of water availability information gained during recent drought years. There will be no additional charge to the applicants for this process. For applications that propose use of ground water, the advertisement must include an indication of the depth interval from which the applicant proposes to withdraw water.

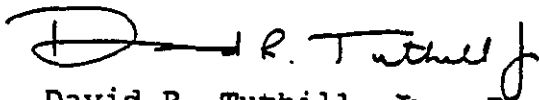
Please find enclosed a Profile Report which provides information from our water rights data base describing each of your moratorium-held applications. In addition we have included one response form for each application, which enables you to indicate whether you wish to proceed with processing of your water right application(s).

May 19, 1995

In case you no longer intend to develop a water use as described on an application, please complete and return the enclosed Withdrawal Form. Because of the time and effort already devoted to researching water availability in the Boise River basin, the Department will not be able to provide refunds of fees for applications that are withdrawn.

If you have questions about this process, or if you need assistance in completing the response form, please feel free to contact this office at (208) 334-2190. Response forms received no later than May 31, 1995, will be used in compiling the applications that will be advertised during June.

Sincerely,



David R. Tuthill, Jr., P. E.
Manager, Western Region Office

Enclosures

Amended Moratorium Order
Profile Report(s)
Response Form(s)
Application Withdrawal Form(s)

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MAR 14 1996



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190
FAX (208) 334-2348

PHILIP E. BATT
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

March 30, 1995

Mr. Paul Philbrook, Park Designer
Boise Parks & Recreation Dept.
1104 Royal Blvd.
Boise, ID 83706-2898

RE: APPLICATION FOR PERMIT NO. 63-11816 (CENTENNIAL PARK)

Dear Paul:

I reviewed your recent letter regarding the issues of the Southeast Boise Ground Water Management Area (GWMA) and Snake River (drought) Moratorium as applied to the above-referenced water right application.

Your letter and the consultant's report addressing GWMA items will be forwarded to the GWMA Advisory Committee coordinated by Mr. Dave Tuthill, Western Regional Manager. As you are undoubtedly aware, a new irrigation application cannot be approved in a GWMA unless the applicant can show that the new use will have no adverse impact on existing users and aquifer conditions. The committee, in conjunction with department staff, will review the report to determine if adequate information exists to provide an exception to GWMA restrictions.

The drought moratorium is currently undergoing department review based on extensive public input and consideration of technical information collated by department staff. It is conceivable that the moratorium might be revised in some manner to allow further consideration of your application assuming that GWMA issues are adequately addressed. I have no information at this time to let you know when a decision will be made one way or the other regarding the drought moratorium.

This office will keep you posted on developments in the GWMA and Snake River Moratorium aspects related to application no. 63-11816. Please let me know if you need additional help with this or any other water right matters.

Sincerely

Steve Lester
Water Rights Supervisor

MAR 14 1996

✓ Dave T.



BOISE PARKS & RECREATION

H. BRENT COLES
MAYOR

COUNCIL MEMBERS

PAULA FORNEY
COUNCIL PRESIDENT

CAROLYN TERTELING
COUNCIL PRO TEM

SARA BAKER
ANNE STITES HAUSRATH
M. JEROME MAPP
MIKE WETHERELL

March 16, 1995

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MAR 17 1995

WATER RESOURCES
WESTERN REGION


Steve Lester
Sr. Water Resource Agent
Western Region
Idaho Dept. of Water Resources
2735 Airport Way
Boise, Idaho 83705

In Re: Centennial Park Well Water, Water Right Permit No. 63-11816
Drilling Permit no. 63-92-C-195

Dear Steve:

In this letter I am going to ask for an exemption from the Southeast Boise Ground Water Management Area for the development of the well in this park. I want to give a little narrative and then attach a couple of other documents, for reference.

We filed an application for permit to appropriate water for this park in April of 1992. In July of that year we had the well drilled. In the same month you wrote a letter informing us of the, now infamous, "moratorium" on consumptive uses of public water. Last year, the Southeast Boise Ground Water Management Area was formed, further restricting development of the ground water supply for this park. At that time development money was transferred to other parks.

We would now like to pursue the idea of developing this park. Since the water issue is the first item to deal with I contacted our water consultant, Terry Scanlan, and had him do an analysis of the situation of this park, its well and the possibility of getting the water permit approved. We did not want to be left with the only option of having to use Boise Water Corp. water for this park. Terry's report is enclosed and you can see that he brings out the situation of our well drawing from a different aquifer than the Boise Fan Aquifer.

For your information I am also enclosing a report by Jack Gantz of Forsgren Associates, our consultant for the well. In October 1992 he put together a full report of the well drilling and testing process. The report shows that during the testing of the well, it did not interfere with the neighboring Liberty School well at all.

MAR 14 1996

In summary I would like your department to consider our request to give us an exemption from the Southeast Boise Ground Water Management Area for the development of this well. It has been shown that the well does not tap the same aquifer as the Boise Fan Aquifer and thus should be exempt from the Management Area. This would give us the opportunity to develop the irrigation supply for this neighborhood park by either transferring a water right to the park or waiting for the moratorium to be lifted.

Thank you for your consideration on this subject. Please call me any time if you have and questions to do with this request.

Sincerely,

A handwritten signature in cursive script that reads "Paul Philbrook".

Paul Philbrook, Park Designer
Boise Parks & Recreation Department

Enclosures

cc: Terry Scanlan, Scanlan Engineering

MAR 14 1996

SCANLAN ENGINEERING

Groundwater and Environmental Engineering

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MAR 17 1995

WATER RESOURCES
WESTERN REGION

January 23, 1995

Mr. Paul Philbrook
Boise Parks and Recreation Department
1104 Royal Boulevard
Boise, ID 83706

Subject: Centennial Park Well

Dear Paul:

At your request, I have briefly investigated the hydrology of the aquifer tapped by the Centennial Park Well. The purpose of this investigation is to determine if the well might qualify for an exemption from the Southeast Boise Ground Water Management Area because the well taps an aquifer separate from the Boise Fan Aquifer. The purpose of the Southeast Boise Ground Water Management Area is to protect existing uses of the Boise Fan Aquifer. The Boise Fan Aquifer has experienced water-level declines in recent years, prompting the formation of the Ground Water Management Area. The Ground Water Management Area designation restricts additional development of the aquifer. If the Idaho Department of Water Resources determines that the Centennial Park Well is exempt from development restrictions related to the Boise Fan Aquifer in the Southeast Boise Ground Water Management Area, then the well might potentially be developed for irrigation use either (1) through transfer of an existing water right or (2) through approval of a new water right (if the Boise River Basin moratorium is lifted). The results of this investigation are described below.

Description of the Well

The Centennial Park Well is located near the northwest corner of the Southeast Boise Groundwater Management area (Figure 1). The well has a total depth of 75 feet.

Water Levels

The static water level in the Centennial Park Well was 12 feet below ground surface in 1992. The approximate ground surface elevation at the site is 2755 feet, resulting in an approximate groundwater elevation of 2743 feet.

Comparison of water levels between the 75-foot deep Centennial Park Well and the nearby 416-foot deep Boise Water Corporation Centennial Municipal Supply Well suggests that the Centennial Park Well taps a shallow aquifer that is perched above the Boise Fan Aquifer. The Centennial Municipal Supply Well is in hydraulic connection

with the Boise Fan Aquifer, as demonstrated by the water-level response detected in the well during the 1992 Oregon Trail Well Test (Squires and others, 1993).

The Centennial Municipal Supply Well had a 1992 static water level of approximately 125 feet (Squires, 1993, Figure 14). The approximate ground surface elevation at the well is 2760 feet, resulting in a 1992 static water-level elevation of approximately 2635 feet. This water level is approximately 108 feet lower than the water level in the Centennial Park Well, located about 1,000 feet to the north of the Centennial Municipal Supply Well. This large difference in water level elevations at the two wells suggests that the Centennial Park Well taps a shallow aquifer that is perched above the Boise Fan Aquifer.

According to Squires (1993, Figure 30), the Centennial Municipal Supply Well has experienced a water-level decline of about 2.8 feet per year, from a static water level elevation of approximately 2675 in 1975 to a static water-level elevation of approximately 2625 feet in 1988. My review of the data suggests only about 1.6 feet per year of decline, from a static of 98 feet in 1976 (driller's log) to a static of 125 feet in 1993. These data suggest about 27 feet of decline rather than the more than 50 feet of decline suggested by Squires. However, regardless of the actual amount of water-level decline in the Centennial Municipal Supply Well, it is obvious that there has been no large decline at the Centennial Park site. Static water level when the site was being farmed (before about 1975) was probably no higher than about 5 feet below ground surface, resulting in a maximum possible decline of only about 7 feet. This is further evidence that the Centennial Park Well does not tap a part of the Boise Fan Aquifer.

Description of the Shallow Aquifer

The shallow aquifer tapped by the Centennial Park Well consists of sand and gravel as shown on the attached well log. Comparison of the Park Well log with the Centennial Municipal Supply Well log (also attached) suggests that the geology above 75 feet is similar at both locations. The Municipal Supply Well log indicates that intermittent clay layers begin below 75 feet. These clay layers are probably the mechanism that promotes the perched shallow water table above the regional water table of the Boise Fan Aquifer.

Recharge to the shallow aquifer is primarily derived from infiltration of local irrigation and leakage from the Ridenbaugh Canal. Although the New York Canal is lined through much of this area, it also probably contributes to local shallow groundwater recharge.

Discharge from the shallow aquifer occurs to drain ditches, wells, and leakage to the deeper aquifers. Discharge from the aquifer also occurs to the Boise River where the river is a gaining stream.

1995
JAN 24 1995

Potential Impact to the Boise Fan Aquifer

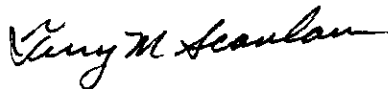
A portion of the recharge to the Boise Fan Aquifer probably occurs as leakage from the overlying shallow aquifer. The amount of this recharge to the Boise Fan aquifer would decrease if the water level in the shallow aquifer were to decline significantly. There does not appear to be any decline in the shallow aquifer at the present time, nor would we anticipate any decline as a result of pumping the Centennial Park Well for irrigation. Therefore, groundwater production by the Centennial Park Well should have no significant impact on recharge to the Boise Fan Aquifer.

Summary

The Centennial Park Well taps a shallow aquifer perched above the Boise Fan Aquifer. No significant water-level declines have occurred in this shallow aquifer. Development of the Centennial Park Well for irrigation use should not have a significant impact on recharge to the Boise Fan Aquifer. Therefore, I recommend that the Boise Park Department apply for an exemption from the Southeast Boise Groundwater Management Area for this well. If the exemption is granted, the well could then be developed by either transferring an existing water right to the park or through approval of a new water right (if the Boise River Basin moratorium is lifted).

Please call me with any questions.

Sincerely,



Terry M. Scanlan, P.E., P.G.
Engineer/Hydrogeologist

Enclosures

2000-01-23
2000-01-23

Southeast Boise Ground Water Management Area

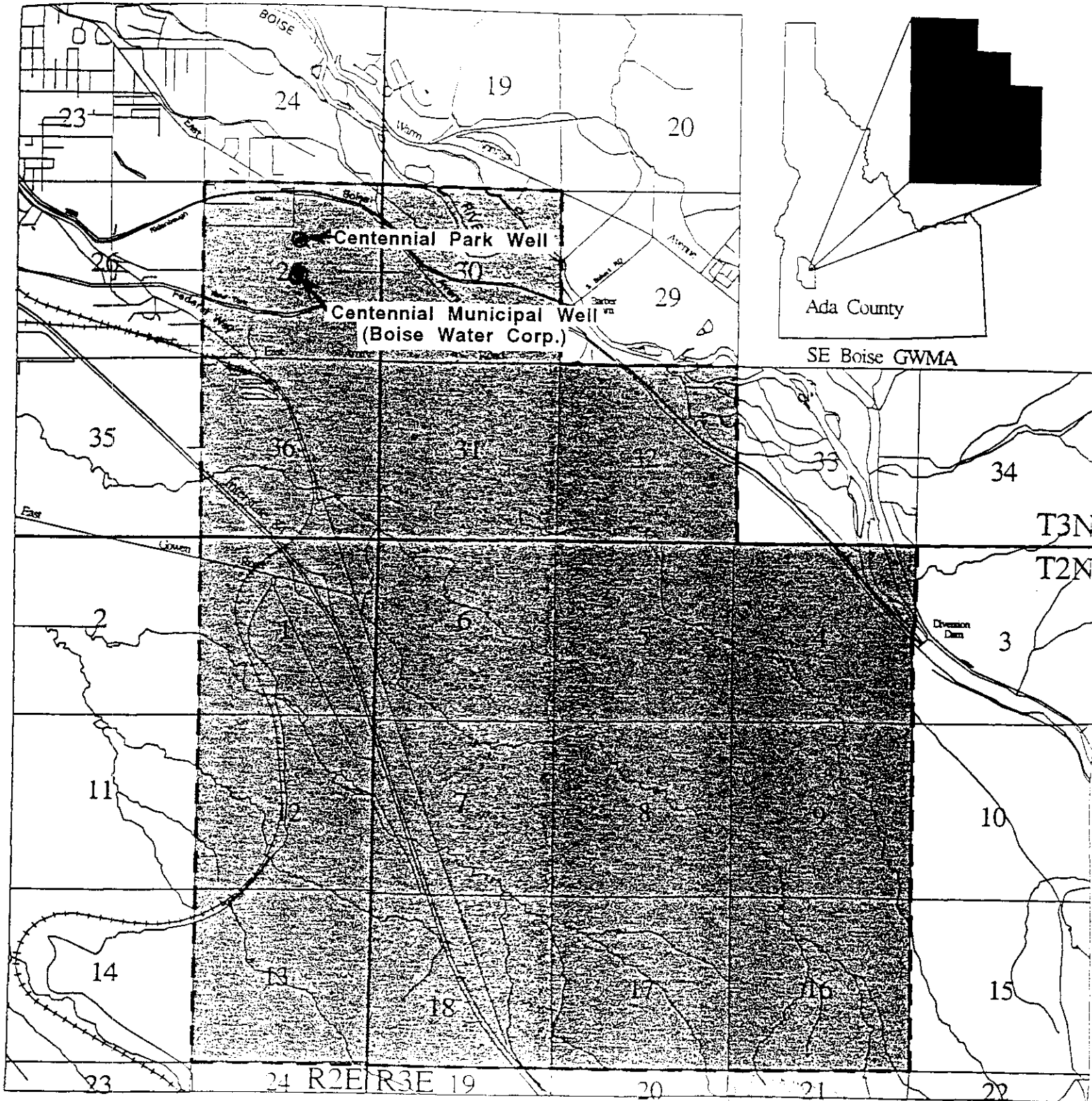
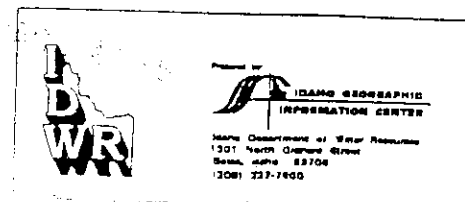


FIGURE 1



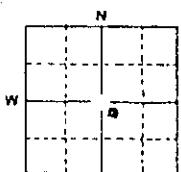
WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

[illegible]

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1. WELL OWNER BALLANTYNE BOISE PROPERTIES Name <u>Boise Water Corp. - Centennial Subdivision</u> Address _____ Owner's Permit No. _____	7. WATER LEVEL Static water level <u>99</u> feet below land surface Flowing? ☐ Yes ☐ No G.P.M. flow _____ Temperature _____ ° F. Quality _____ Artesian closed-in pressure _____ p.s.i. Controlled by ☐ Valve ☐ Cap ☐ Plug																																																																																																																																																																																																																																								
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe method of abandoning) _____	8. WELL TEST DATA ☒ Pump ☐ Bailer ☐ Other <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th>Discharge G.P.M.</th><th>Draw Down</th><th>Hours Pumped</th></tr></thead><tbody><tr><td>1400</td><td>215' Pumping level</td><td>33 hrs.</td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>	Discharge G.P.M.	Draw Down	Hours Pumped	1400	215' Pumping level	33 hrs.																																																																																																																																																																																																																																		
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5. WELL CONSTRUCTION Diameter of hole <u>28</u> inches Total depth <u>416</u> feet Casing schedule: ☒ Steel ☐ Concrete See attached sheet <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th>Thickness</th><th>Diameter</th><th>From</th><th>To</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></tbody></table> Was casing drive shoe used? ☐ Yes ☐ No Was a packer or seal used? ☐ Yes ☐ No Perforated? ☐ Yes ☐ No How perforated? ☐ Factory ☐ Knife ☐ Torch Size of perforation _____ inches by _____ inches <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th>Number</th><th>From</th><th>To</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table> Well screen installed? ☒ Yes ☐ No Manufacturer's name <u>Johnson</u> Type _____ Model No. <u>SS 404</u> Diameter _____ Slot size _____ Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☒ Yes ☐ No Size of gravel <u>3/8</u> Placed from <u>0</u> feet to <u>416</u> feet <u>116' 24" x .375 Csg.</u> Surface seal depth <u>116</u> Material used in seal ☒ Cement grout ☐ Puddling clay ☐ Well cuttings Sealing procedure used ☐ Sherry pit ☐ Temporary surface casing ☒ Overbore to seal depth	Thickness	Diameter	From	To																					Number	From	To																																																																																																																																																																																																														
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6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name <u>CENTENNIAL</u> Lot No. _____ Block No. _____ County <u>ADA</u> <u>NW 1/4 SE 1/4 Sec. 25, T. 3, N. 2, E. 1/4</u>	11. DRILLERS CERTIFICATION Firm Name <u>PETE COPE DRILLING CO., INC</u> Firm No. <u>213</u> P.O. Box <u>561</u> Address <u>Meridian, Idaho 83642</u> Date <u>10/1/76</u> Secretary Signed by (Firm Official) <u>[Signature]</u> and (Operator) <u>[Signature]</u>																																																																																																																																																																																																																																								

WELL REPORT CENTENNIAL IRRIGATION WELL BOISE PARK SYSTEM

October, 1992

INTRODUCTION

In July, 1992, Wayne E. Stevens and Sons Well-Drilling, Inc. was contracted by the Boise City Parks Department to drill an irrigation well for the presently undeveloped Centennial Park (Figure 1). A preliminary discussion between Jim Keller (Forsgren Associates), Paul Philbrook (Boise Parks), and Dr. Spencer Wood and Ed Squires (Boise State University, Department of Geosciences) reached the conclusion that the target yield of 150 gallons per minute (gpm) could be obtained from a relatively shallow well completed into the floodplain gravel aquifer of the present-day Boise River. A 12-inch diameter boring was decided upon to provide for future deepening of the well in the unlikely events that: 1) the surface gravel aquifer cannot supply the target yield, or 2) future declines in the static water level of the area would limit the drawdown potential of the well.

DRILLING METHOD

A Bucyrus-Erie 22-L cable-tool rig was moved on site and Ron Stevens commenced drilling a 16-inch over bore while driving a 16-inch temporary steel casing to the required seal-depth of 18-feet below ground level. After the 18-feet of temporary surface-casing was installed, 12-inch steel casing was installed to 40-feet below surface using the "drill and drive" technique as a bentonite slurry was continuously added to the 16-inch/12-inch annulus (bentonite slurry is added here in an attempt to seal the casing/formation contact which has been disturbed by the drilling process). Below 40-feet, the borehole was drilled open-hole (no casing) to 75-feet below ground with a 12-inch standard spade bit. The driller encountered the following lithologies, or rock types, during drilling:

0	to	4	feet	=	soil
4	to	35	feet	=	cemented sand & gravel
35	to	65	feet	=	clean sand & gravel
65	to	75	feet	=	cemented medium to coarse gravelly sand

COMPLETION

Examination of the drill-cuttings in concert with the driller's observations indicated that the interval from 40-feet to 65-feet below surface should be screened as the production interval for the well. An 8-inch liner/pump chamber was installed to depth and which consisted, from bottom-to-top, of 10-feet of tailpipe, 25-feet of Johnson #304 continuous wirewound stainless steel well screen, and 41-feet of 8-inch steel casing. Centralizing splines were welded to the 8-inch casing above and below the screened section to center the screens to ensure that an even thickness of filter

pack material would envelop the screened section (Figure 2). The formation/screen annulus was filled with a Colorado Silica Inc. #8-#12 filter sand and swabbed with a rubber surge block to develop the formation (remove fines) and to settle the filter sand envelope. After the development process, #8-#12 Colorado Silica Inc. filter sand was used to fill the 12-inch/8-inch casing annulus to ground level (Figure 2). At this time, the driller began to pull back, or extract the 16-inch temporary surface casing, while keeping the 16-inch/12-inch annulus full of a bentonite slurry made using Wyo-Ben #8 Enviroplug bentonite chips.

HYDRAULIC TESTING

Step Drawdown Test: To further develop the well, to determine the efficiency of the well, and to estimate specific capacity for pump-setting, a step drawdown test of the Centennial Park Well was carried out on July 23, 1992 by Mr. Ed Squires of S.H. Wood and Associates. A water level versus time plot of the step drawdown test is included as Figure 3, and the actual measurements are tabulated and included as Table 1. Static water level in the well prior to the test was at 11.99-feet below ground level. Several water level measurements made over a period of a half hour prior to the test showed the water level to be constant at this level even though the Liberty School irrigation well, located 548-feet away, was operating at the time (estimated discharge 100-150 gpm). The Liberty School well was pumped continuously throughout the step drawdown testing of the Centennial Park Well. Water level measurements were obtained using a Powers electric water level sounder. The well was pumped using a 4-stage submersible 20 hp pump, powered by a trailer mounted 3-phase power generator. Flow was measured with a 4-inch Badger MDIM impulse flowmeter which was installed in the discharge pipe. Flow was regulated by means of a 4-inch gate valve in the discharge pipe. Discharge from the well was directed, by means of 4-inch flex pipe, into an irrigation ditch which is located at a distance of 47-feet from the well head.

The step drawdown test consisted of six, 30-minute steps at approximate pumping rates of 100, 150, 200, 250, 300, and 350 gallons per minute (gpm). A fourth step at a pumping-rate of 400 gpm was interrupted when personnel from J.U.B. Engineers, who were surveying the park site, drove over the discharge line. The great pressures created when the passing truck tires constricted the flow in the line, caused the discharge hose to become disconnected at the pump. At this time, the pump was shut off and water level residual drawdown measurements were commenced (Figure 3). Pumping steps were carried out throughout the range of the target yield of 150 gpm. The original plan for steps lasting 2-hours was abandoned when the water level in the well stabilized within minutes of increasing the discharge. Pumping steps were continued through 500 gpm to determine the efficiency of the well. Specific capacity (discharge/drawdown) values were calculated for each step and are plotted on Figure 3. The linear relationship of the plotted specific capacity data (Figure 4) shows that drawdown in this well, at these pumping rates, is directly proportional to pumping rate. This linear relationship is an indication that at discharges up to 400 gpm, laminar flow to the well exists and that the well is efficient (no well loss). 400 gpm is probably close to the maximum potential of the Centennial Park Well because at this pumping rate, only one foot of water remained above the screened interval in the well. However, since 400 gpm is nearly three times the anticipated production from the well, this should not pose a problem.

Table 2 is included to show pumping water level in the Centennial Park well at various discharge rates as a guide for pump setting.

At the beginning of each step (increase in discharge), the well produced some fine material. This cloudiness was short lived in every case, and the well produced essentially sand free water throughout the test. The over pumping development provided by this step test, at discharge rates far in excess of the anticipated production for irrigation of the Centennial Park, shows: 1) the screen/filter envelope combination to be effective, 2) the development of the well by the driller was adequate, and 3) that sand free production for the life of the well may be expected at the desired pumping rate.

CONSTANT DISCHARGE DATA

Based upon data obtained from the step drawdown test, a 12-hour constant discharge pumping test of the Centennial Park Irrigation Well was commenced at 7:30 a.m. on July 24, 1992. The Liberty School Well, which had been turned off the previous day and allowed to recover, was used as an observation well for the test. The Liberty School Well is located 548 feet away from the Centennial Park Well (Figure 5) and is completed within the same aquifer. Measurements taken in the school well prior to the test showed the water level to be stable. On the day prior to the constant discharge testing of the Centennial Park Well, arrangements were made with the Liberty School maintenance staff to ensure that the school's well would remain off for the duration of the test so that any interference effects between the two wells could be accurately measured. Using the same testing equipment described above for the step drawdown testing, the Centennial Park Well was pumped at 400 gpm. Water levels were measured continuously in both the school and park wells using electric tape well sounders. The 400 gpm discharge rate was chosen in an attempt to more quickly produce measurable drawdown in the observation well. Observed drawdown in the Liberty School Well would allow the aquifer coefficients of transmissivity and storativity to be calculated from the test data.

Water level versus time for the constant discharge test is plotted on Figure 5, and actual water level readings/observations are included as Table 3. Within minutes of commencement of pumping, the water level in the well appeared to stabilize at just below 38-feet. This represents just over 26-feet of drawdown from the pre-test static water level of 12.02-feet below ground level (the water level in the well had completely recovered from the previous day's step testing). Three hours and 45 minutes later, the water level in the well had only declined an additional 0.5-feet. Because the well was capable of production almost 3-times the target yield over a 4 -hour pumping period with relatively stabilized drawdown, and because pumping of the Centennial Park Irrigation Well produced no measurable effect on the Liberty Elementary School Irrigation Well (less than .01-feet), further testing was deemed unnecessary and the pump was turned off after 90,000 gallons of pumpage. Residual drawdown measurements were taken for 105 minutes after the pump was turned off at which time the water level in the well had recovered to within .04-feet of the pre-test level.

INTERPRETATION

The floodplain gravel aquifer, drawn upon by the Centennial Park Well, is recharged by irrigation canals which dissect the modern floodplain of the Boise River and by the river itself (Figure 1). That these gravels are very permeable (high transmissivity) is evidenced by the very flat water table between the Centennial Park and Liberty School Wells (Figure 6). With the assistance of J-U-B Engineers' surveying equipment, it was determined that the elevation of the water table at the Centennial Park site is about 2-inches higher than the water table elevation at the Liberty School site. The clean, coarse grained nature of the sandy river gravel drill cuttings is further testimony to the great permeability of this aquifer unit.

At the anticipated pumping rate of 150 gpm (for park irrigation), pumping water level in the well will be about 22-feet below ground level (18-feet of water above the screens). Some decline in static water level in the well may occur in response to early closing of the irrigation canals (as is the case this year - 1992). *Because the irrigation of park land will probably continue for several months after such early closings, an additional 10-feet of pump intake setting should be planned for when the well is outfitted for a pump*. For this reason, it is our suggestion that the water level in the Centennial Park Well be measured once a month throughout the remainder of this pumping season to determine the extent of any such decline.

Interference effects in adjacent wells from Centennial Park pumpage will be negligible. High volume pumping from nearby production wells (Boise Water Corporation Centennial and Bergeson production wells), which are completed at much greater depth should not effect the water level in the Centennial Park Well. The greatly lower static water level in the BWC Centennial projection well (Figure 6) is indication that this well is completed within separate aquifer units under differing pressure levels.

Meaningful values for the aquifer coefficients of transmissivity and storativity should not be calculated from a short term test of a water table aquifer with no observation well data.

The Centennial Park Irrigation Well, as conceived during the pre-drilling discussion mentioned above, has turned out exactly as planned and cannot be considered less that a total success.

CONCEPTUAL PUMP DESIGN

Purpose: This irrigation water supply well will be used to irrigate the proposed Centennial Park located in the southeast section of Boise. Centennial Park is located adjacent to Law Avenue, near the intersection of Independence and Law Avenue. The site is currently undeveloped and will be developed over a period of the next five years, according to the Boise Park System Development Plan. Once developed, this irrigation well pump assembly will be used to irrigate the proposed lawn areas, shrubs and trees within the park.

Well Pump: The proposed well pump will be of the submersible vertical turbine type, located within the well casing at a depth of approximately 42-feet. The anticipated pressure requirement at the well head is 75 pounds per square inch. It is felt that this will provide adequate pressure to operate the proposed sprinkler irrigation zones, while accounting for head loss through the

system in order to deliver 55-65 psi at the sprinkler heads. The design of the sprinkler zones and piping is outside the scope of this report.

Initially, the well pump will be controlled by a hands-off automatic control system until such time that a future automatic irrigation controller can be installed to operate the well pump automatically on a timer based system.

Well Pump Vault: The well and pump assembly will be located within a buried concrete vault. This vault will contain miscellaneous valving and other equipment to ensure the proper operation of the irrigation well.

In order to monitor the amount of water being pumped from the well, a propeller type meter will be installed with a totalizer-indicator to record this data. Also, an air release valve will be installed to allow air to enter and exit the piping system to prevent air binding. A bypass piping assembly will be installed to allow purging or draining of the well to a discharge source. The discharge line will be piped to a nearby irrigation ditch and an air gap will be provided as per State regulations. In addition, a pressure relief valve will be installed on the bypass line to automatically vent excessive pressure build-up in the main piping system. The top of the vault will be at ground level to minimize visual impact in the park area. Access to the pump and piping within the vault will be through ground level double swing doors. Power to the well pump facility will be supplied from existing power lines located parallel to Law Avenue.

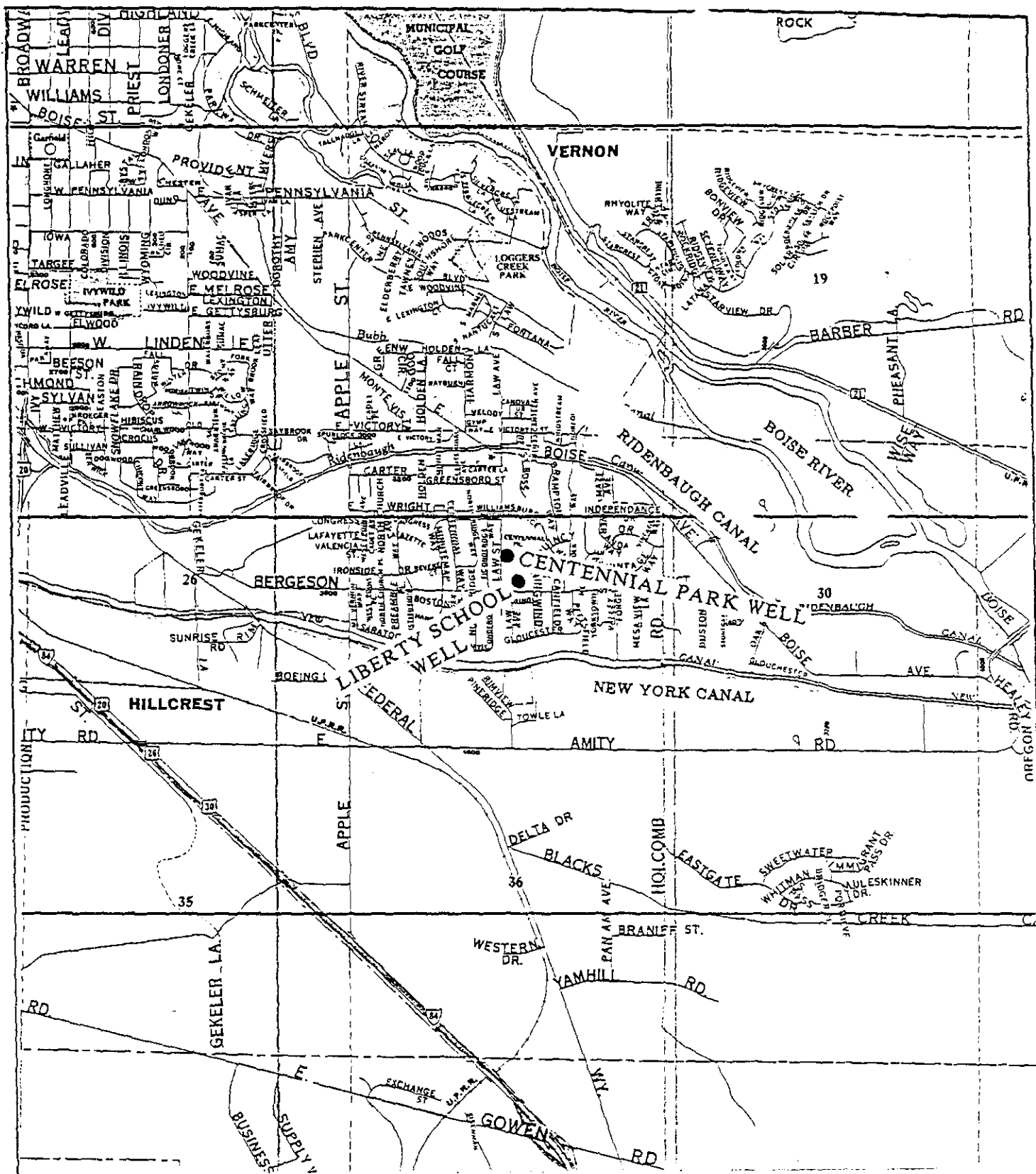
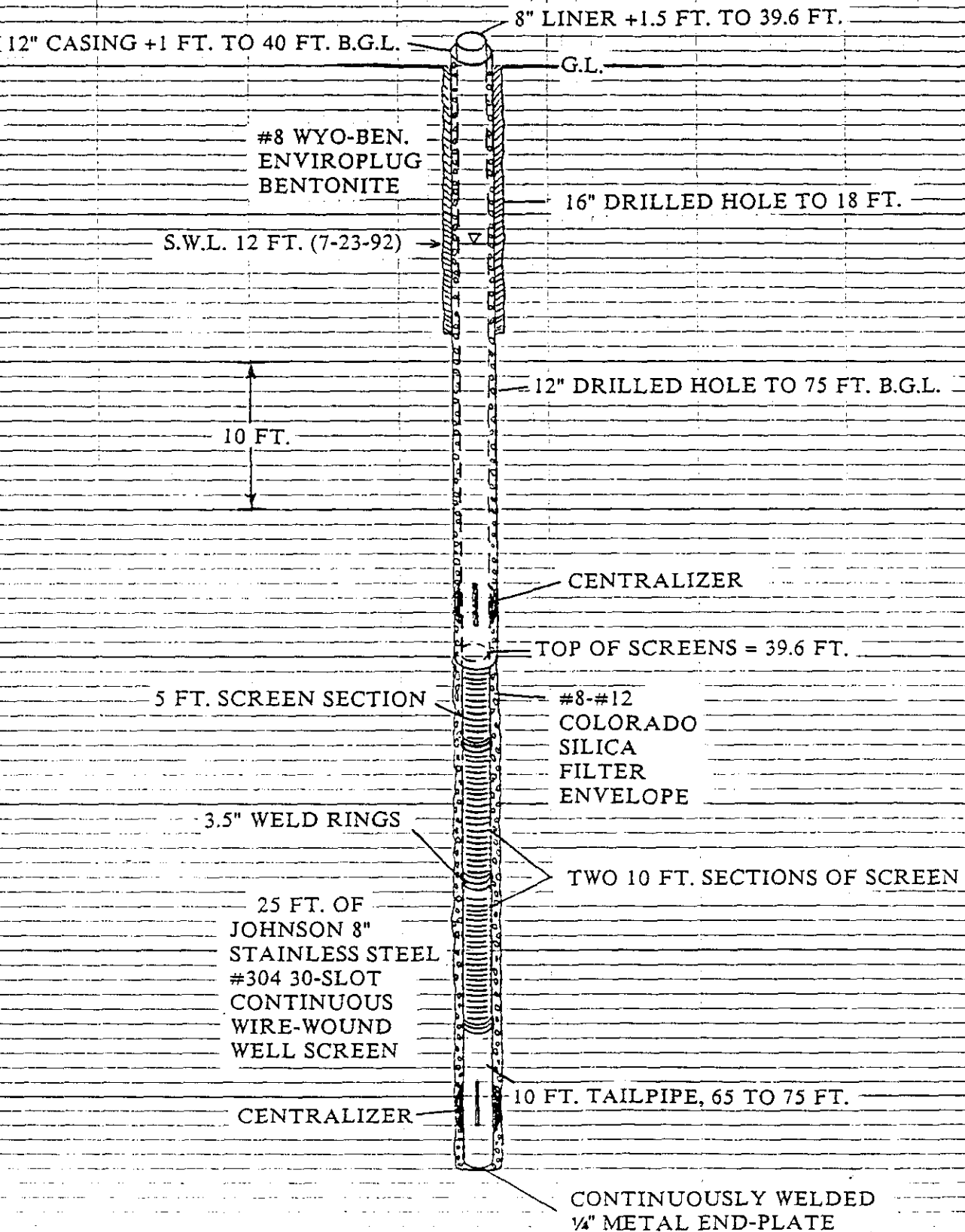


FIGURE 1
MAP SHOWING LOCATION OF CENTENNIAL PARK WELL

1997

FIGURE 2
CENTENIAL PARK WELL
WELL CONSTRUCTION



6-23-92 4:19PM

Water Level (feet below ground)

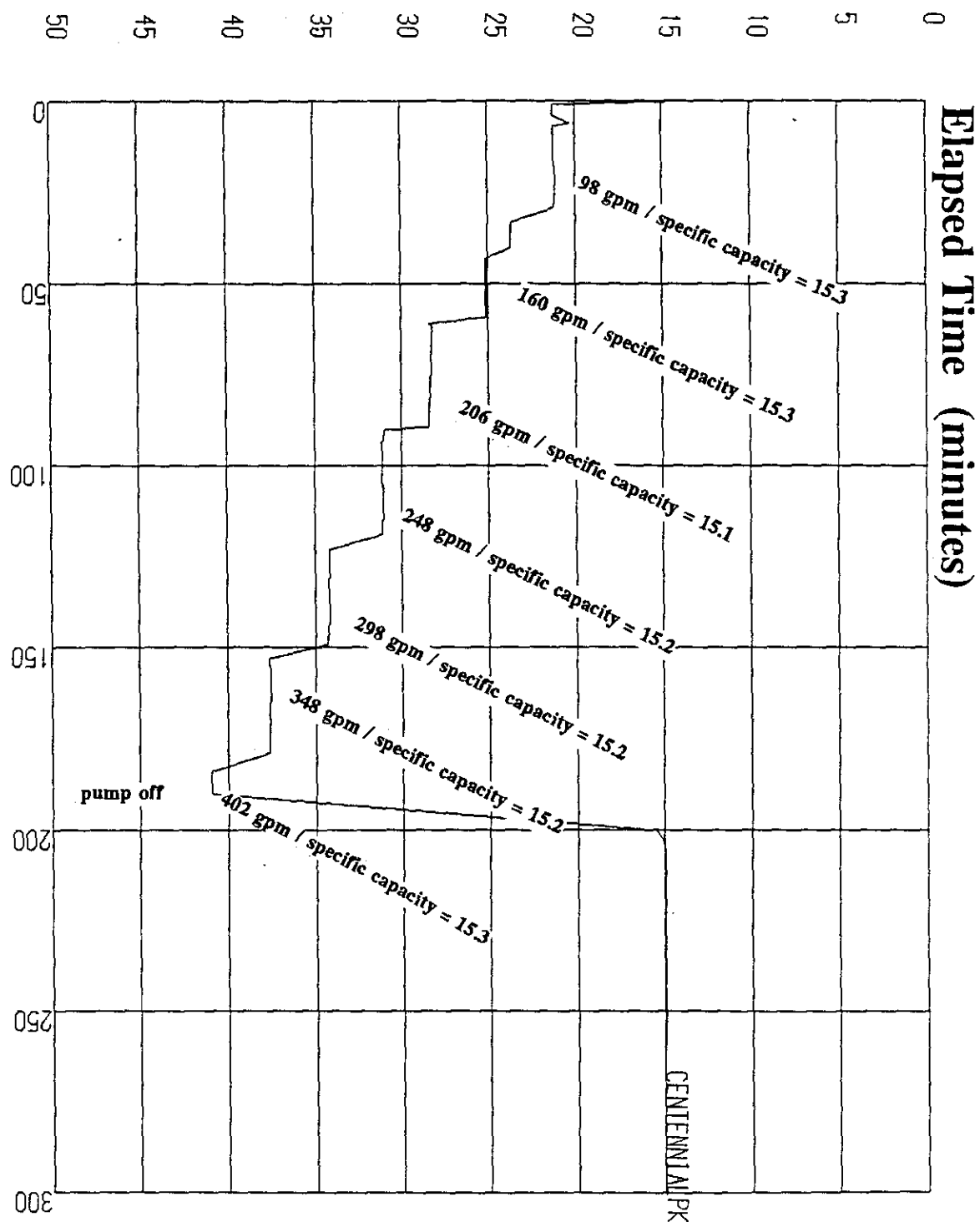
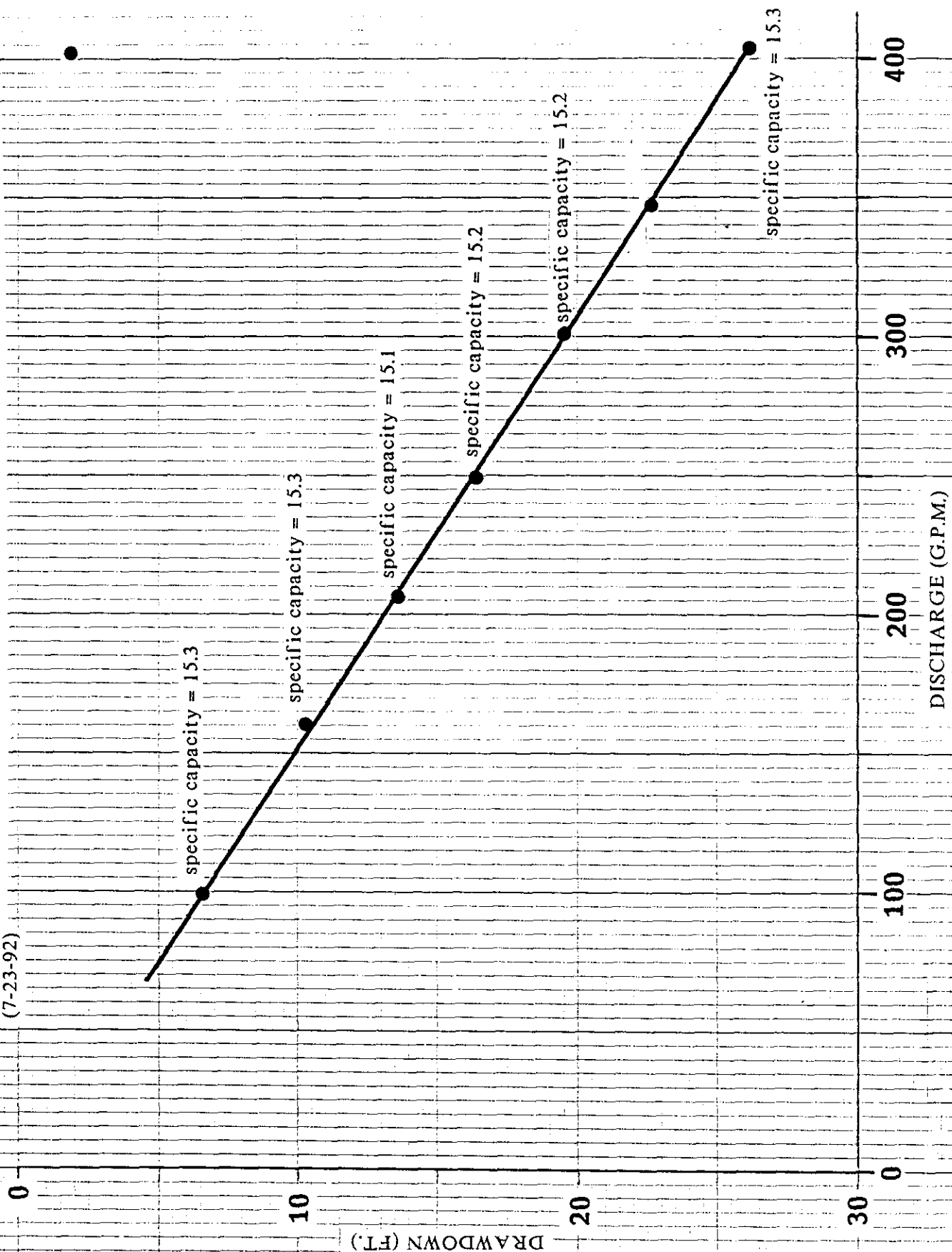


Figure 3. Water-level versus time for the step-drawdown testing of the Centennial Park irrigation well on 7/23-1992.

FIGURE 4

DRAWDOWN VS. DISCHARGE FOR THE CENTENNIAL WELL STEP-DRAWDOWN TEST
(7-23-92)



Water Level (feet below measuring point)*

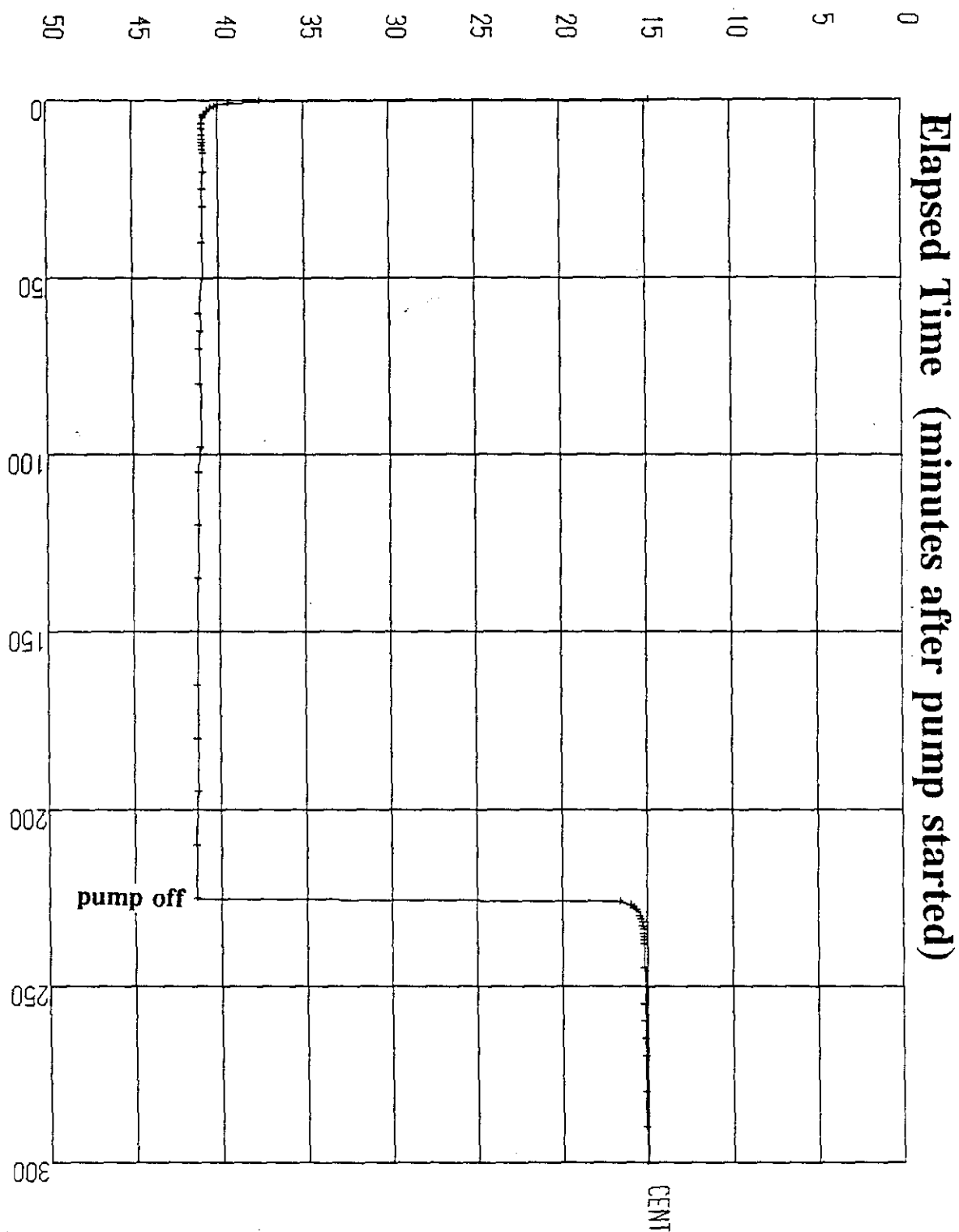


Figure 5. Plot of water-level versus time for the constant-discharge test of the Boise Parks' Centennial Park irrigation well. (* note - water-level in feet below measuring point. Measuring point was top of 8-inch casing or 2.7 feet above ground level.

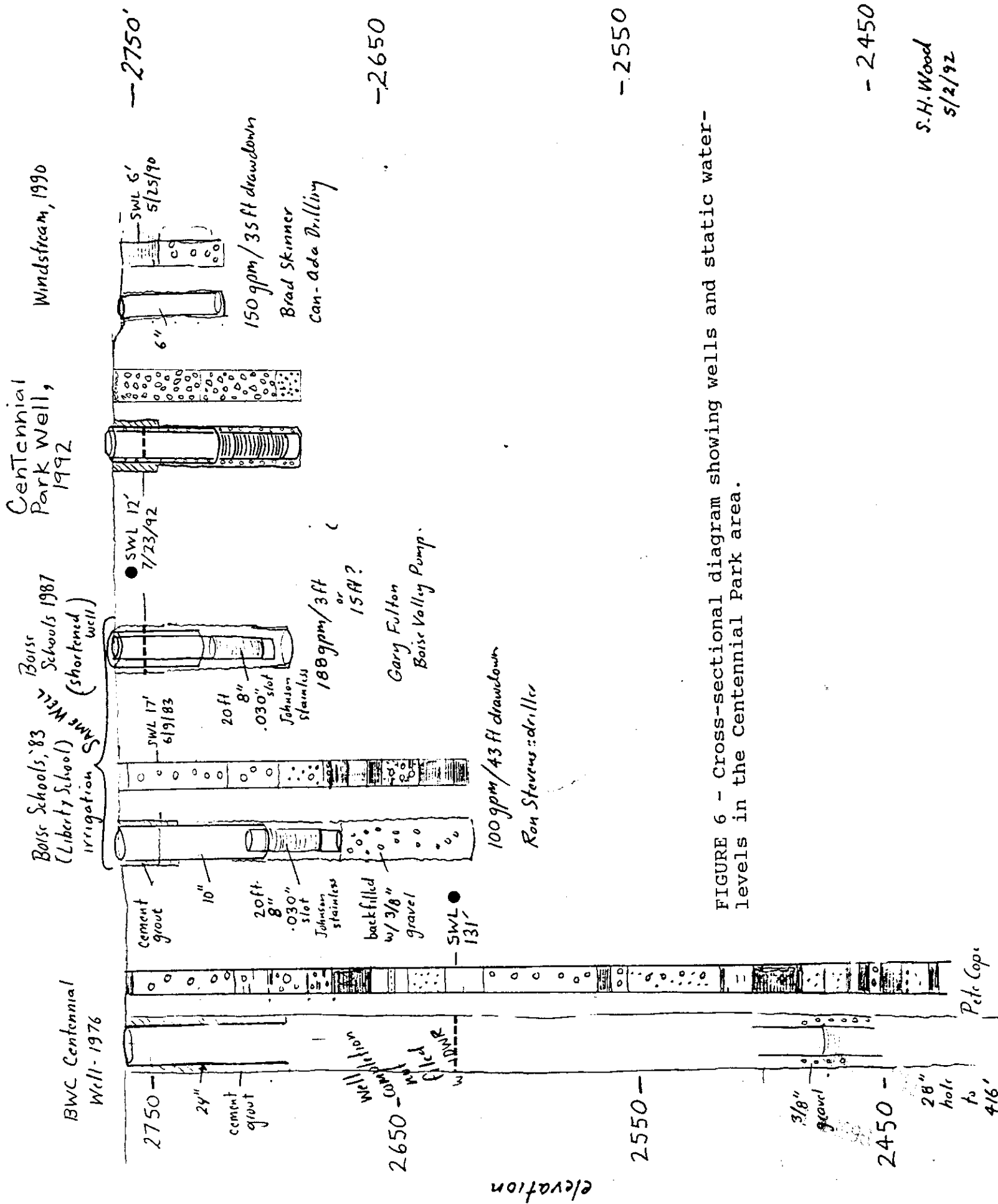


FIGURE 6 - Cross-sectional diagram showing wells and static water-levels in the Centennial Park area.

S.H. Wood
5/2/92

STEP- DRAWDOWN TEST

Page 1

YY/MM/DD hh:mm:ss.s
 Date 92/07/23 09:00:00.0
 Well I.D. CENTENNIALPK

BOISE STATE UNIVERSITY DEPT OF GEOSCIENCES

STEP TEST

JULY 23 1992

DATUM = GROUND LEVEL

Liberty well pumping

Badger flow meter = 81586 gal.

UNIQUE Elapsed - TIME - Real MINUTES YY/MM/DD hh:mm:ss			WATERLEVEL feet BGL
0.00	92/07/23	09:00:00	11.99 pump on
1.00	92/07/23	09:01:00	18.52 97 gpm turbid & tan
2.00	92/07/23	09:02:00	18.61
3.50	92/07/23	09:03:30	18.63
4.00	92/07/23	09:04:00	18.61 99 gpm clearing
6.00	92/07/23	09:06:00	18.59
7.00	92/07/23	09:07:00	18.51 Badger = 81593 gal
8.00	92/07/23	09:08:00	18.52
10.00	92/07/23	09:10:00	18.52 more clearing
13.00	92/07/23	09:13:00	18.52
15.00	92/07/23	09:15:00	18.50 slight cloudiness
18.00	92/07/23	09:18:00	18.50 97 gpm
20.00	92/07/23	09:20:00	18.49 clear 58°F
23.00	92/07/23	09:23:00	18.45
26.00	92/07/23	09:26:00	18.49
28.00	92/07/23	09:28:00	18.47
29.00	92/07/23	09:29:00	18.50 8165 gal 98 gpm
33.00	92/07/23	09:33:00	20.90 increase flow 154 gpm
35.00	92/07/23	09:35:00	20.96 157 gpm
37.00	92/07/23	09:37:00	20.95 160 gpm
40.00	92/07/23	09:40:00	20.95
43.00	92/07/23	09:43:00	22.40 160 gpm
44.00	92/07/23	09:44:00	22.43
45.00	92/07/23	09:45:00	22.43
46.00	92/07/23	09:46:00	22.43
48.00	92/07/23	09:48:00	22.43
50.00	92/07/23	09:50:00	22.43 specific capacity
52.00	92/07/23	09:52:00	22.42 = 15.3
55.00	92/07/23	09:55:00	22.42 57.33°F 160 gpm
58.00	92/07/23	09:58:00	22.41
59.00	92/07/23	09:59:00	22.41
61.00	92/07/23	10:01:00	25.68 increase flow 206 gpm
62.00	92/07/23	10:02:00	25.48 slight clouding
63.00	92/07/23	10:03:00	25.50
65.00	92/07/23	10:05:00	25.57 clearing
68.00	92/07/23	10:08:00	25.58 206 gpm
72.00	92/07/23	10:12:00	25.57 clear
75.00	92/07/23	10:15:00	25.58
78.00	92/07/23	10:18:00	25.60
81.00	92/07/23	10:21:00	25.59

----- TIME LOGS REPORT -----

Page 2

YY/MM/DD hh:mm:ss.s
 Date 92/07/23 09:00:00.0
 Well I.D. CENTENNIALPK

BOISE STATE UNIVERSITY DEPT OF GEOSCIENCES
 STEP TEST
 JULY 23 1992
 DATUM = GROUND LEVEL

UNIQUE Elapsed - TIME - Real MINUTES YY/MM/DD hh:mm:ss			WATERLEVEL feet BGL
85.00	92/07/23	10:25:00	25.65
87.00	92/07/23	10:27:00	25.65 57.3°F
89.00	92/07/23	10:29:00	25.65 increase flow
90.00	92/07/23	10:30:00	28.28 248 gpm
93.00	92/07/23	10:33:00	28.35 slight cloudiness
94.00	92/07/23	10:34:00	28.47
96.00	92/07/23	10:36:00	28.46
98.00	92/07/23	10:38:00	28.44
100.00	92/07/23	10:40:00	28.42 clear
101.00	92/07/23	10:41:00	28.46
104.00	92/07/23	10:44:00	28.45
105.00	92/07/23	10:45:00	28.45 249 gpm
109.00	92/07/23	10:49:00	28.34
112.00	92/07/23	10:52:00	28.36
115.00	92/07/23	10:55:00	28.37 specific capacity
119.00	92/07/23	10:59:00	28.40 = 15.25 57.3°F
123.00	92/07/23	11:03:00	31.45 increase flow 298 gpm
125.00	92/07/23	11:05:00	31.48 Badger = 81804 gal
131.00	92/07/23	11:11:00	31.51 spec. cap. = 15.28
134.00	92/07/23	11:14:00	31.54 298 gpm
138.00	92/07/23	11:18:00	31.53
140.00	92/07/23	11:20:00	31.52
144.00	92/07/23	11:24:00	31.53 56.75°F
149.00	92/07/23	11:29:00	31.63 Badger = 81889 gal
153.00	92/07/23	11:33:00	34.86 increase flow 350 gpm
155.00	92/07/23	11:35:00	34.94
158.00	92/07/23	11:38:00	34.87
160.00	92/07/23	11:40:00	34.89
165.00	92/07/23	11:45:00	34.88
170.00	92/07/23	11:50:00	34.91 348 gpm
175.00	92/07/23	11:55:00	34.91 spec. cap. = 15.17
178.00	92/07/23	11:58:00	34.94 56.5°F
179.00	92/07/23	11:59:00	34.92 Badger = 81999 gal
184.00	92/07/23	12:04:00	38.20 clear flow
185.00	92/07/23	12:05:00	38.24 clear flow
190.00	92/07/23	12:10:00	38.27 Line break-pump off
200.00	92/07/23	12:20:00	12.74 Badger = 82057 gal
202.00	92/07/23	12:22:00	12.48
205.00	92/07/23	12:25:00	12.30
220.00	92/07/23	12:40:00	12.25

TABLE 2

Estimated pumping water-levels for specific pumping rates
(Assuming a static water-level of 12 ft. B.G.L.)

DISCHARGE RATE (G.P.M.)	PUMPING WATER-LEVEL (FT.)
100	18.5
150	22.0
200	25.0
250	28.0
300	31.5
350	34.5
400	38.0

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MAY 1 9 1950

Lab File

Drilling Permit No. 63-92-C-195
Water Right Permit No. 63-11816 (PENDING)
Injection Permit No. _____

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JUL 8 1992

State of Idaho
Department of Water Resources

APPLICATION FOR DRILLING PERMIT

Department of Water Resources

1. Applicant (please print) Boise Park System (Centennial Park)
2. Mailing Address 1104 Royal Blvd.
City & State Boise, Idaho Zip Code 83706 Telephone 208 384 4240
☒ Well Owner () Well Operator () Other, specify _____
3. Proposed well location SW 1/4 NE 1/4, or Gov't Lot No. _____
Sec. 25, Twp. 3N, Rge. 2E, County Ada
Street Address of Well Site _____
Lot, block and subdivision _____
4. Proposed use of well:
() Domestic: The use of water for homes, organization camps, public campgrounds, livestock and for any other purpose in connection therewith, including irrigation of up to 1/2 acre of land, if the total use is not in excess of 13,000 gpd; or any other uses, if the total use does not exceed a diversion rate of 0.04 cfs and a diversion volume of 2500 gpd.
Domestic does not include water for multiple ownership subdivisions, mobile home parks, commercial or business establishments, unless the use does not exceed a diversion rate of 0.04 cfs and a diversion volume of 2500 gpd.
☒ Non-Domestic: Any beneficial use not included within the definition of domestic.
() Injection
() Monitoring - A well bore schematic and map is required for each well.
No. of proposed wells: _____
() Other _____ (Describe)
5. Well construction information:
A. ☒ New well () Deepen () Modify () Replace - See Condition 9
B. Proposed Casing Diameter 16" Proposed Maximum Depth 80 feet
C. Anticipated bottom hole temperature:
☒ 85°F or less (Cold water well)
() 85°F to 212°F (Low temp. geothermal well)
() 212° or more (Geothermal well)
6. Construction Start Date July 8, 1992
7. Anticipated Well Driller Stevens and Sons Drilling
NOTE: The actual well driller must be identified prior to drilling.
8. Applicant's signature Paul Philbrook Date 7/8/92
Title Park Designer
(Owner, Firm Representative, Other)

MAR 14 1996

ACTION OF THE DEPARTMENT OF WATER RESOURCES

This Permit is Approved

Date 7-8-92

If approved, this permit authorizes the construction or modification of a well subject to the following conditions. **READ CAREFULLY!**

GENERAL CONDITIONS:

1. The well must be constructed in compliance with the applicable statutes, specific conditions of approval shown on the water right permit, injection well permit, transfer or amendment and the rules and regulations of the Department for water appropriation, injection wells and well construction standards.
2. This drilling permit is valid for two (2) months from the above approval date for the start of construction and is valid for one (1) year from the approval date for completion of the well unless an extension has been granted.
3. This permit does not constitute an approval of the District Health Department or the Idaho Department of Health and Welfare which may be required before construction of this well.
4. The well shall be constructed by a driller currently licensed in the State of Idaho who must maintain a copy of the drilling permit at the drilling site.
5. Approval of this drilling permit does not authorize trespass on the land of another party.
6. This permit does not constitute other local, county, state or federal approvals which may be required for construction of a well.
7. This drilling permit does not represent a right to divert and use the water of the State of Idaho.
8. If a bottom hole temperature of 85° or greater is encountered, well construction shall cease and the well driller and the well owner shall contact the Department immediately.
9. If this permit is for a replacement well, the well being replaced must be abandoned in accordance with Department Rules and Regulations.

SPECIFIC CONDITIONS:

Mark B. Shiff, Manager
Signature of Authorized Department Representative

Groundwater Protection Section
Title

Receipt No. 024842 Received by [Signature] Fee 200.00 Date 7-8-92

EXTENSION OF DRILLING PERMIT

Extension approved by _____ Approval Date _____

This extension expires: _____

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MAR 14 1996

ACTION OF THE DEPARTMENT OF WATER RESOURCES

This Permit is Approved

Date 7-8-92

If approved, this permit authorizes the construction or modification of a well subject to the following conditions. **READ CAREFULLY!**

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SPECIFIC CONDITIONS:

Mark B. Shiff
Signature of Authorized Department Representative

Groundwater Protection Section
Title

Receipt No. 024842 Received by [Signature] Fee 200.00 Date 7-8-92

EXTENSION OF DRILLING PERMIT

Extension approved by _____ Approval Date _____

This extension expires: _____

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MAR 14 1996



State of Idaho
DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

July 8, 1992

Attn. James R. Hall, Director
Boise Park System
1104 Royal Blvd.
Boise, ID. 83706

RE: Application for Permit Nos. 63-11816 (Centennial Park) and 63-11822
(Jullian Park)

Dear Applicant:

Your applications for permit to appropriate irrigation water from ground water were received on 4/29/92. Due to continued drought and the need to protect existing water rights and water supplies, the Director of this agency declared a moratorium on 5/15/92 concerning water right applications proposing new consumptive uses of public water. Your applications cannot be processed for possible approval until the moratorium ends. Delays related to department decisions do not affect the date of priority or seniority of an application.

This office will hold the applications pending future developments in the water supply situation and will inform you of any changes. You might be able to locate someone with a valid water right with available water to sell or lease for your needs if necessary. If so, an Application for Transfer of Water Right should be filed at this office to legally change the right(s) prior to any sale or lease.

Please let me know if you need additional information.

Sincerely,

Steve Lester
Water Rights Supervisor

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MAR 14 1996

The Idaho Statesman

P.O. BOX 40, BOISE, IDAHO 83707

LEGAL ADVERTISING INVOICE

Amount Due

Account Number

47628

Identification

NOTICE OF APPLICATION FOR WATER RIGHT

NOTICE OF APPLICATION FOR WATER RIGHT

The following application(s) have been filed to appropriate the public waters of the State of Idaho:

63-11808

LEE, MONROE M
LEE, RITA F
2701 N. MERIDIAN RD
KUNA, ID 83634
Source: GROUNDWATER
Diversions Pt: NESENE Sec 13 T 02N R 01W in ADA County
Use: IRRIGATION (1.600 CFS)
Total Diversions: (1.600 CFS)
Date Filed: 5/ 5/1992
In: ADA County
T02N R01W S 13 NENE SENE
80.0 ACRES TOTAL

63-11810

DUDLEY, ELIZABETH M
DUDLEY, JR, ORIE L
2686 PARK LANE
EAGLE, ID 83616
Source: GROUNDWATER
Diversions Pt: LOT 3 (NENENW) Sec 1 T 04N R 01W in ADA County
Use: IRRIGATION (3.340 CFS)
Total Diversions: (3.340 CFS)
Date Filed: 5/ 7/1992
In: ADA County
T04N R01W S01 Lot 3(NENW) Lot 4 (NWNW) SWNW SENW
S02 NESE
167.0 ACRES TOTAL

63-11811

MORRISON KNUDSEN CORP
720 PARK BLVD
BOISE, ID 83729
Source: GROUNDWATER
Diversions Pt: Lot 3 (NWNW) Sec 15T 03N R 02E in ADA County
Use: IRRIGATION (.150 CFS)
Total Diversions: (.150 CFS)
Date Filed: 5/ 7/1992
In: ADA County
T03N R02E S 15 Lot 3 (NWNW)
S 16 NENE
5.0 ACRES TOTAL

63-11816

BOISE PARK SYSTEM
1104 ROYAL BLVD
BOISE, ID 83706
Source: GROUNDWATER
Diversions Pt: SWNE Sec 25 T 03N R 02E in ADA County.
Use: IRRIGATION (.250 CFS)
Total Diversions: (.250 CFS)
Date Filed: 4/28/1992
In: ADA County
T03N R02E S25 SWNE
5.0 ACRES TOTAL

63-11817

AMUNDSON, WALTER
1730 SUZAN
MERIDIAN, ID 83642
Source: GROUNDWATER
Diversions Pt: NWSWNW Sec 32 T 03N R 01E in ADA County.
Use: DOMESTIC (.040 CFS)
Total Diversions: (.040 CFS)
Date Filed: 4/29/1992
In: ADA County
T03N R01E S32 SWNW

63-11820

MACK, J FREDERICK
1117 S. OWYHEE
BOISE, ID 83705
Source: GROUNDWATER
Diversions Pt: NESW Sec 16 T 03N R 02E in ADA County
Use: IRRIGATION (.010 CFS)
Total Diversions: (.010 CFS)
Date Filed: 5/ 5/1992
In: ADA County
T03N R02E S16 NESW
1.0 ACRES TOTAL

Run Dates

May 21, 28, 1992

Estimated Inches

Real Inches

Affidavits

Legal Number

1

2239

63-11822

BOISE PARK SYSTEM
1104 ROYAL BLVD
BOISE, ID 83706
Source: GROUNDWATER
Diversions Pt: NESW Sec 35 T 04N R 01E in ADA County
Use: IRRIGATION (.250 CFS)
Total Diversions: (.250 CFS)
Date Filed: 4/28/1992
In: ADA County
T04N R01E S35 NESW
5.0 ACRES TOTAL

63-11823

BOISE RESEARCH CENTER
12301 W EXPLORER DR
BOISE, ID 83704
Source: GROUNDWATER
Diversions Pt: NENE Sec 28 T 04N R 01E in ADA County.
Use: IRRIGATION (1.120 CFS)
Total Diversions: (1.120 CFS)
Date Filed: 5/ 8/1992
In: ADA County
T04N R01E S28 NENE NWNE SWNE SENE
160.0 ACRES TOTAL
The permit(s) will be subject to all prior water rights. Protests must be filed with the Director, Dept. of Water Resources, Western Region, 2735 Airport Way, Boise, Idaho 83705 on or before JUNE 8, 1992.
R. Keith Higginson, Director
Pub. May 21, 28, 1992

2239

Issue of MAY 28, 1992

ss.

MAY

day of MAY in the year of
before me, a Notary Public, personally appeared
AY, known or identified to
in whose name subscribed to the within instrument,
rst duly sworn, declared that the statements therein
owledged to me that she executed the same.

Notary Public for Idaho

Residing at BOISE, ID.

My commission expires: 11 27 93

63-11816

BOISE PARK SYSTEM
1104 ROYAL BLVD
BOISE, ID 83706

Source: GROUNDWATER

Diversion Pt: SWNE Sec 25 T 03N R 02E in ADA County.

Use: IRRIGATION (.250 CFS)
Total Diversion: (.250 CFS)

Date Filed: 4/28/1992

In: ADA County
T03N R02E S25 SWNE

5.0 ACRES TOTAL

RECORDED

MAR 14 1996

63-11816

BOISE PARK SYSTEM
1104 ROYAL BLVD
BOISE, ID 83706

Source: GROUNDWATER

Diversion Pt: SWNE Sec 25 T 03N R 02E in ADA County.

Use: IRRIGATION (0.250 CFS)
Total Diversion: (0.250 CFS)

Date Filed: 4/28/1992

In: ADA County
T03N R02E S25 SWNE

5.0 ACRES TOTAL

~~Property also known as Centennial Park.~~

Water bearing zone to be appropriated is 40 to 65 feet within
SE Boise Ground Water Mngt. Area; applicant seek waiver based on
documentation submitted.

MAR 14 1993