

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE

License of Water Right No. 29-7322 Priority April 25, 1976 Amount 17.07 cfs
(late proof)

THIS IS TO CERTIFY, that City of Pocatello
of Pocatello, Idaho, has complied with the terms and conditions of Permit
No. 29-7322 issued pursuant to Application for Permit dated April 6, 1976,
and has submitted proof to the Department of Water Resources on May 22, 1981,
that he has applied water to a beneficial use; an examination by the Department indicates that the works have a
capacity for the diversion of 17.07 cfs of water from a groundwater source,
tributary to _____, and that the permit holder has applied to a beneficial use and
established a right to use water as follows:

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
<u>Municipal</u>	<u>from January 1 to December 31</u>	<u>at 17.07 cfs and n/a</u>	
	<u>from _____ to _____</u>	<u>cfs and _____</u>	
	<u>from _____ to _____</u>	<u>cfs and _____</u>	

(both dates inclusive)

Subject, however, to the condition that no more than 17.07 cfs of water be diverted at any one time, and
that the amount of water so diverted and to which such right is entitled and confirmed is for the purpose
aforementioned and is limited to the amount which can actually be beneficially used and shall not exceed
n/a acre feet per year, said waters to be diverted within the NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 35, NE $\frac{1}{4}$ SE $\frac{1}{4}$,
Section 15; NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 16; Twp. 6S, Rge. _____ in the County of Bannock
34E

Description and location of place of use:

Twp.	Range	Sec.	NE $\frac{1}{4}$				NW $\frac{1}{4}$				SW $\frac{1}{4}$				SE $\frac{1}{4}$				Totals
			NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	NE $\frac{1}{4}$	NW $\frac{1}{4}$	SW $\frac{1}{4}$	SE $\frac{1}{4}$	

Total number of acres irrigated _____

NOTE: Modifications to or variance from this license must be made within the limits of Section 42-222, Idaho Code, or the applicable Idaho Law. This right may be forfeited by five years of non-use.

The right to the use of the water hereby confirmed is restricted and appurtenant to the lands or place of use herein described, and is subject to all prior water rights, as provided by the laws of Idaho.

Witness the seal and signature of the Director, affixed at Boise, Idaho, this 6TH day of JUNE, 19 83.

Acting for the Director

Norman C. Young

STATE OF IDAHO

RECEIVED

DEC 29 1982

APPLICATION FOR AMENDMENT OF A PERMIT

To change the point of diversion and/or the place of use.

Comes now City of Pocatello Phone of (address) Box 4169, Pocatello, ID 83201, and represents to the Director of the Idaho Department of Water Resources:

That he is the owner and holder of Permit to appropriate the Public Waters of the State of Idaho No. 29-7322, and requests that the permit and permit map be changed as follows:

1. Point of diversion: NE 1/4 NE 1/4, Section 35, Township 6S, Range 34E, B.M., County of Bannock. Other points of diversion: NE 1/4 SE 1/4, Sec. 15; NE 1/4 NE 1/4, Sec. 16; Twp. 6S, Rge. 34E

2. Period and nature of use: (irrigation, domestic, stockwatering, industrial, etc.)

Amount 17.07 for municipal purposes from 1/1 to 12/31 (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)

3. Place of use or land to be irrigated:

No change

TWP	RGE	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTALS
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	

Total number of acres to be irrigated =

4. a. Who owns the property at the point of diversion? CITY OF POCATELLO
b. Who owns the land to be irrigated or the place of use?
c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing:

Complete the following map by showing land and point of diversion as proposed by this amendment.

Show 40-acre subdivisions, townships, ranges and ditches.

Not Necessary

Scale: 2 inches equal 1 mile.

That no one will be injured by such change, and that such change will be made at permit holder's own risk.

Signed at POCAHONTAS, IDAHO, this 22 day of DECEMBER, 1982.

Charles W. Moss
CHARLES W. MOSS CITY MANAGER
(Signature)

FOR DEPARTMENT USE ONLY

Preliminary check by [Signature] Fee = \$20.00

Received by [Signature] Date 12-30-82 #25373

Publication prepared by [Signature] Date _____

Published in _____

Publication dates _____

ACTION OF THE DEPARTMENT OF WATER RESOURCES

I, A. KENNETH DUNN, of the Department of Water Resources hereby
APPROVE the above Application for Amendment of Permit No. 29-7322.

Witness my hand this 6TH day of January, 1983.

Norman C Young
Acting for the Director

DRT

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF PERMIT NO. 29-7322
IN THE NAME OF THE CITY OF POCA TELLO

ORDER OF REINSTATEMENT

WHEREAS, on April 6, 1976, the City of Pocatello, Idaho applied to the Department of Water Resources for a permit to appropriate 20 cubic feet per second of water from a groundwater source to be diverted within the NW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 35; NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 15; SW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 9, Twp. 6S, Rge. 34E B.M., Bannock County, to be used for municipal purposes; and,

WHEREAS, on April 29, 1976, the Department approved said application and issued Permit No. 29-7322 with the condition that proof of construction of works and application of water to beneficial use be submitted on or before April 1, 1981; and,

WHEREAS, on January 31, 1981, the Department notified the permit holder by certified mail that proof was due and instructed the permit holder as to the steps to be taken to make said proof; and,

WHEREAS, on April 22, 1981, the Department notified the permit holder that Permit No. 29-7322 had lapsed for failure of the permit holder to submit proof of beneficial use; and,

WHEREAS, Section 42-218a of the Idaho Code provides that a permit may be reinstated upon a showing of reasonable cause within sixty days from the date of the notice of lapsing; and,

WHEREAS, the permit holder has provided a reasonable showing as to why said permit should be reinstated by submitting proof of beneficial use on May 22, 1981;

IT IS, THEREFORE, HEREBY ORDERED that the permit be reinstated and the priority advanced to April 25, 1976.

Dated this 11th day of June, 1981.


L. GLEN SAXTON

Chief, Operations Bureau

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF CHANGING THE MEASURING)
DEVICE REQUIREMENT FOR PERMIT NO. 29-7322)
_____)

ORDER

WHEREAS, the above numbered permit was approved with the condition that a measuring device of a type approved by the Department be permanently installed and maintained as part of the diverting works; and,

WHEREAS, on July 1, 1978, the Department adopted a new water measurement condition which states: "An access port or other device as specified by the Department shall be installed by the permit holder to provide for the installation of measuring equipment and the determination of the rate of diversion by the Department"; and,

WHEREAS, the former condition required the permit holder to purchase and install a measuring device or hire a professional engineer to certify the rate of diversion; and,

WHEREAS, the measuring device condition effective July 1, 1978, requires less capital expenditure by the permit holder; and,

WHEREAS, to be equitable to holders of permits issued prior to July 1, 1978, the new condition should be retroactive;

NOW THEREFORE, it is hereby ordered that the condition of approval of this permit related to water measurement is hereby changed as follows: "The permit holder shall either install a measuring device or provide a certified measurement by a professional engineer or install an access port or other device as specified by the Department".

Dated this 18th day of August, 1978.


C. STEPHEN ALLRED
Director

Identification No. 29 7322

Application No. _____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

APPROVED

To Appropriate the Public Waters of the State of Idaho
(TYPE OR PRINT IN INK)

1. Name of applicant City of Pocatello Phone: ²³²233-4311
post office address P.O. Box 4169
2. Source of water supply Ground Water which is a tributary of _____
3. a. Location of point of diversion is _____ 1/4 of _____ 1/4 of Section _____ Township _____
Range _____ B.M. Bannock County; additional points of diversion if any: _____
See Remarks
- b. If water is not consumed, it will be discharged into _____ at a point in _____ 1/4
of _____ 1/4 of Section _____ Township _____ Range _____ B.M. _____
4. Water will be used for the following purposes:
Amount 20 for Municipal purpose from Jan. 1 to Dec. 31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purpose from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purpose from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity to be appropriated:
a. 20 cubic feet per second and/or
b. _____ acre feet per annum.
6. Proposed diverting works:
a. Description of ditches, flumes, pumps, headgates, etc. _____
Wells, Pumps, Motors & Pipe
- b. Height of storage dam _____ feet, active reservoir capacity _____ acre feet; total reservoir
capacity _____ acre feet, materials used in storage dam: _____
Period of year during which storage will occur _____ to _____ inclusive.
(Mo. Day) (Mo. Day)
- c. Proposed well diameter is 3-20" inches; proposed depth of well is 300 feet.
7. a. Time required for the completion of the works and application of the water to the proposed beneficial use
is 5 years.
b. Estimated construction cost is \$ _____.
8. Description of proposed uses:
a. If water is **not** for irrigation:
(1) Give the place of use of water: City of Pocatello & Vicinity 1/4 of _____ 1/4 of Section _____ Township _____
Range _____ B.M. _____
(2) Amount of power to be generated: _____ hp under _____ feet of head.
(3) List number of each kind of livestock to be watered _____

(4) Name of municipality to be served City of Pocatello, or number of families to be
supplied with domestic water _____
(5) If water is to be used for other purposes describe: _____

b. If water is for irrigation, indicate acreage in each subdivision in the tabulation below:

TWP.	RANGE	SEC.	NE1/4				NW1/4				SW1/4				SE1/4				TOTALS
			NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	

Total number of acres to be irrigated_____

c. Describe any other water rights used for the same purposes as described above. 20611, G-24451,
G-27631 & G-32175 For Municipal Use

9. a. Who owns the property at the point of diversion_____
- b. Who owns the land to be irrigated or place of use_____
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing_____

10. Remarks Population of City of Pocatello using municipal water is
42,656

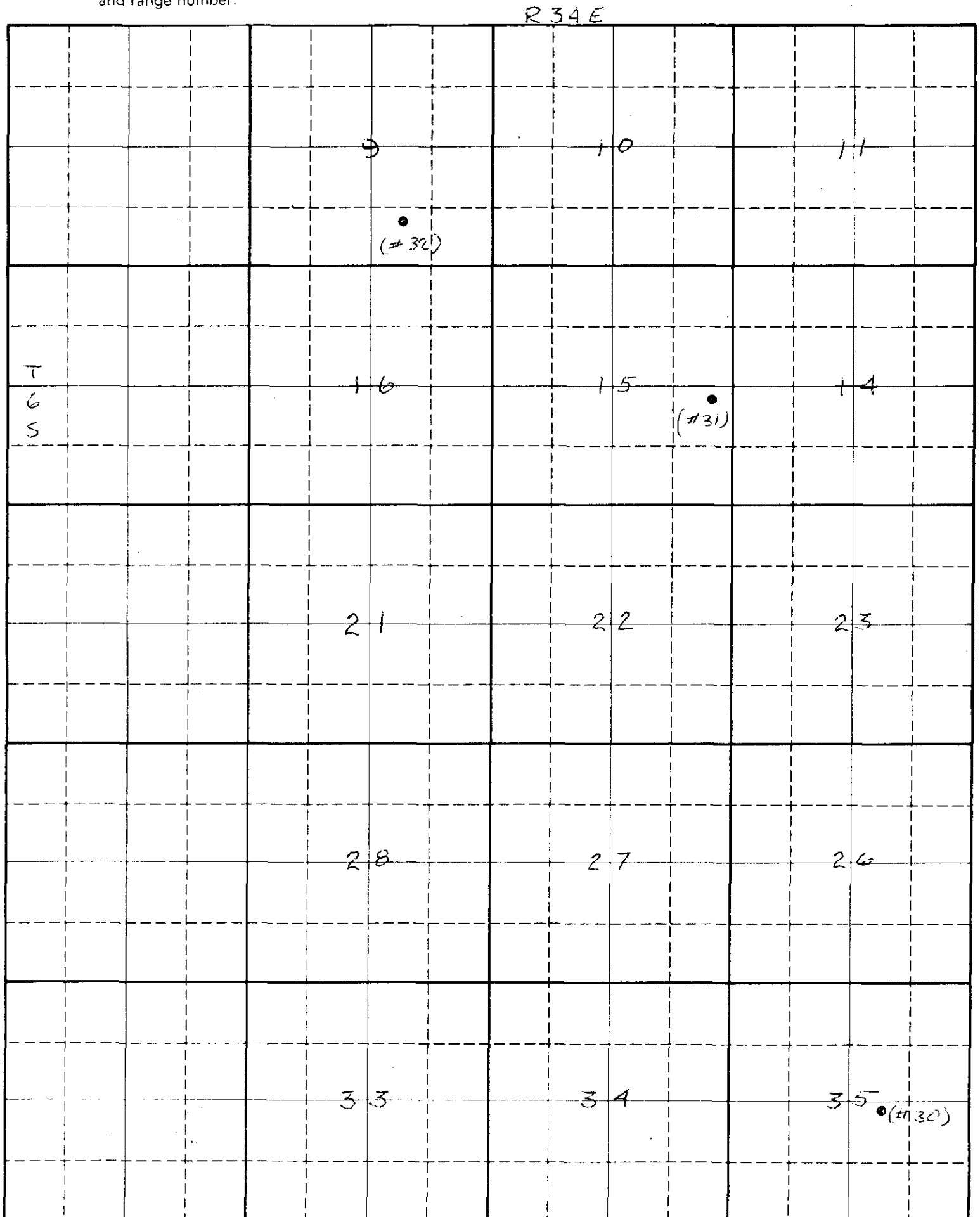
Location of point of diversion

City of Pocatello Well N.W. 1/4 of S.E. 1/4 of section 35
So. Grant (#30) Township 6S, R. 34E, B.M.

City of Pocatello Well N.E. 1/4 of S. E. 1/4 of section 15
N.O.P. Park (#31) Township 6A, R. 34E, B.M.

City of Pocatello Well S.W. 1/4 of S.E. 1/4 of section 9
Quinn Rd. (#32) Township 6S, R. 34E, B.M.

11. 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.

Charles W. Moss
(Applicant)

City of Pocatello
Charles W. Moss
City Manager

Proposed Priority 4-06-76

Received by OW Date 4-06-76 Time 9:30 A.

Preliminary check by RDC Fee \$ 215.00

Receipted by OW Date 4-06-76 # 15737

Publication prepared by OW Date 4-06-76

Published in Idaho State Journal

Publication dates April 9 + 16, 1976

Publication approved me Date 4-26-76

Priority reduced to _____ Reason _____

Protests filed by: _____

Copies of protests forwarded by _____

Hearing held by _____ Date _____

Recommended for approval denial by RDC BDF

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. 29-7322, and said application is hereby APPROVED.

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 April 1, 1981.

c. Other: A measuring device of a type approved by the Director shall be permanently installed and maintained as part of the diverting works.

2. Denial of said application is for the following reasons: _____

Witness my hand this 29 day of April, 19 76.


Director

PROOF OF PUBLICATION RECEIVED

STATE OF IDAHO
County of Bannock

SS.

APR 26 1976

Katherine Warner

Department of Water Resources
Eastern District Office

NOTICE OF APPLICATION
FOR WATER RIGHT
Notice is hereby given that the City of Pocatello, Idaho has on 4-05-76 filed application No. 257 for a right to appropriate 2.0 cfs per second of water from ground water in the SE 1/4, SEC. 15, NW 1/4, T. 15N, R. 34E, S. 1E, County of Bannock, Idaho, to be used for domestic purposes of the City of Pocatello, Idaho. It is further stated that the City of Pocatello, Idaho will be subject to the water rights. Provisions of the granting of the proposed right with the Idaho Department of Water Resources, 1515 Lincoln Road, Idaho Falls, Idaho, 83401 on or before April 26, 1976.
R. Keith Higginson
Director
April 9, 16, 1976
No. 962

being first duly sworn on oath deposes and says: That She was at all times herein mentioned a citizen of the United States of America, more than 21 years of age, and the Principal Clerk of THE IDAHO STATE JOURNAL, a daily newspaper, printed and published at Pocatello, Bannock County, Idaho, and having a general circulation therein.

That the document or notice, a true copy of which is attached, was published in the said IDAHO STATE JOURNAL, on the following dates, to-wit:

April 9, 1976	19
April 16, 1976	19
19	19
19	19
19	19

That said paper has been continuously and uninterruptedly published in said County for a period of seventy-eight weeks prior to the publication of said notice or advertisement and is a newspaper within the meaning of the laws of Idaho.

Katherine Warner

Subscribed and sworn to before me this 16th day of April, 1976.

Debra L. Leadford
Notary Public, State of Idaho
Residence: Pocatello, Idaho
Commission Expires March 5, 1977

PROOF OF PUBLICATION

STATE OF IDAHO }
County of Bannock } ss.

APR 26 1976

Katherine Warner
Notary Public, State of Idaho
Eastern District Office

NOTICE OF APPLICATION FOR WATER PERMIT

Notice is hereby given that City of Pocatello, Pocatello, Idaho has on 4-06-76 submitted application No. 29-7322 for a permit to appropriate 20.0 cubic feet per second of water from ground-water sources by means of wells and pumps within the SW $\frac{1}{4}$ SE $\frac{1}{4}$, SEC. 9, NE $\frac{1}{4}$ SE $\frac{1}{4}$, SEC. 15, NW $\frac{1}{4}$ SE $\frac{1}{4}$, SEC. 35, T. 6S, R. 34E., B.M., Bannock County; to be used from Jan. 1 to Dec. 31 for domestic purposes within City of Pocatello.

If issued, this permit will be subject to all prior water rights. Protests against the granting of the permit must be filed with the Idaho Department of Water Resources, 1515 Lincoln Road, Idaho Falls, Idaho, 83401 on or before April 26, 1976.

R. Keith Higginson
Director
April 9, 16, 1976
No. 982

being first duly sworn on oath deposes and says: That She
was at all times herein mentioned a citizen of the United States of America, more than 21 years of age, and the Principal Clerk of THE IDAHO STATE JOURNAL, a daily newspaper, printed and published at Pocatello, Bannock County, Idaho, and having a general circulation therein.

That the document or notice, a true copy of which is attached, was published in the said IDAHO STATE JOURNAL, on the following dates, to-wit:

April 9, 1976, 19
April 16, 1976, 19
19, 19
19, 19
19, 19

That said paper has been continuously and uninterruptedly published in said County for a period of seventy-eight weeks prior to the publication of said notice or advertisement and is a newspaper within the meaning of the laws of Idaho.

Katherine Warner

Subscribed and sworn to before me this 16th
day of April, 1976.

R. Keith Higginson

April 9, 1976

Notary Public, State of Idaho
Residence: Pocatello, Idaho

STATE OF IDAHO
County of Bannock

\$\$.

**NOTICE OF APPLICATION
FOR A PERMIT**

Notice is hereby given that city of Peoria has received an application No. _____ from _____ to appropriate one cubic foot per second of water from ground-water sources by means of wells and pumps within the SE $\frac{1}{4}$, SEC. 6, T. 8N., R. 10E., S. 15, NW $\frac{1}{4}$, SEC. 9, T. 8N., R. 10E., S. 15, NE $\frac{1}{4}$, SEC. 34E., T. 8N., R. 10E., S. 15 to be used from March 1 to May 31 for domestic purposes within city of Peoria.

[illegible]

being first duly sworn on oath deposes and says: That.....She.....
was at all times herein mentioned a citizen of the United States of
America, more than 21 years of age, and the Principal Clerk of THE
IDAHO STATE JOURNAL, a daily newspaper, printed and published at
Pocatello, Bannock County, Idaho, and having a general circulation
therein.

That the document or notice, a true copy of which is attached, was published in the said IDAHO STATE JOURNAL, on the following dates, to-wit:

April 9	1976		19
April 16	1976		19
	19		19
	19		19
	19		19
	19		19

That said paper has been continuously and uninterruptedly published in said County for a period of seventy-eight weeks prior to the publication of said notice or advertisement and is a newspaper within the meaning of the laws of Idaho.

Katherine Warner

Subscribed and sworn to before me this 16th
day of April, 1976

Dea L. Laddford.

Notary Public, State of Idaho
Residence: Pocatello, Idaho

PROOF OF PUBLICATION

STATE OF IDAHO
County of Bannock

ss.

NOTICE OF APPLICATION FOR WATER PERMIT

Notice is hereby given that city of Pocatello, Pocatello, Idaho has on 4-06-76 submitted application No. 29-7322 for a permit to appropriate 20.0 cubic feet per second of water from ground-water sources by means of wells and pumps within the SW $\frac{1}{4}$ SE $\frac{1}{4}$, SEC. 9, NE $\frac{1}{4}$ SE $\frac{1}{4}$, SEC. 15, NW $\frac{1}{4}$ SE $\frac{1}{4}$, SEC. 35, T. 6S, R. 34E., B.M., Bannock County; to be used from Jan. 1 to Dec. 31 for domestic purposes within city of Pocatello.

If issued, this permit will be subject to all prior water rights. Protests against the granting of the permit must be filed with the Idaho Department of Water Resources, 1515 Lincoln Road, Idaho Falls, Idaho, 83401 on or before April 26, 1976.

R. Keith Higginson
Director
April 9, 16, 1976
No. 982

Katherine Winner

being first duly sworn on oath deposes and says: That.....She.....
was at all times herein mentioned a citizen of the United States of America, more than 21 years of age, and the Principal Clerk of THE IDAHO STATE JOURNAL, a daily newspaper, printed and published at Pocatello, Bannock County, Idaho, and having a general circulation therein.

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.....April 9....., 1976....., 19.....
.....April 16....., 1976....., 19.....
....., 19....., 19.....
....., 19....., 19.....
....., 19....., 19.....

That said paper has been continuously and uninterruptedly published in said County for a period of seventy-eight weeks prior to the publication of said notice or advertisement and is a newspaper within the meaning of the laws of Idaho.

.....
Subscribed and sworn to before me this 16th
day of April....., 19..76

.....
Notary Public, State of Idaho
Residence: Pocatello, Idaho



June 7, 1983

RE: Permit No. 29-7322

City of Pocatello
P.O. Box 4169
Pocatello, ID 83201

Gentlemen

Enclosed herewith is a copy of your Water Right License issued on the above referenced permit along with a copy of your approved application for amendment.

Should you have any questions regarding these documents, please feel free to contact our office.

Sincerely

JIM JOHNSON
Water Distribution Supervisor

JJ:jvv
Enclosures

BRISTOL®
instruments

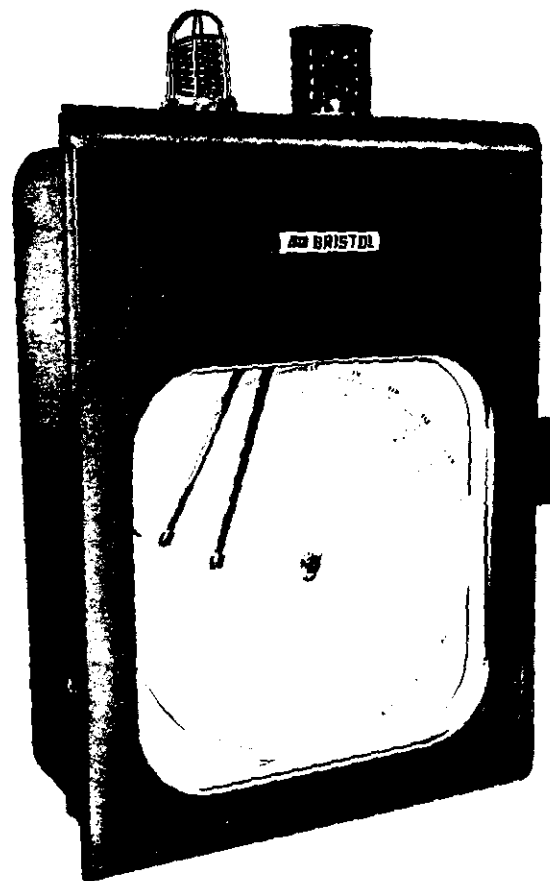
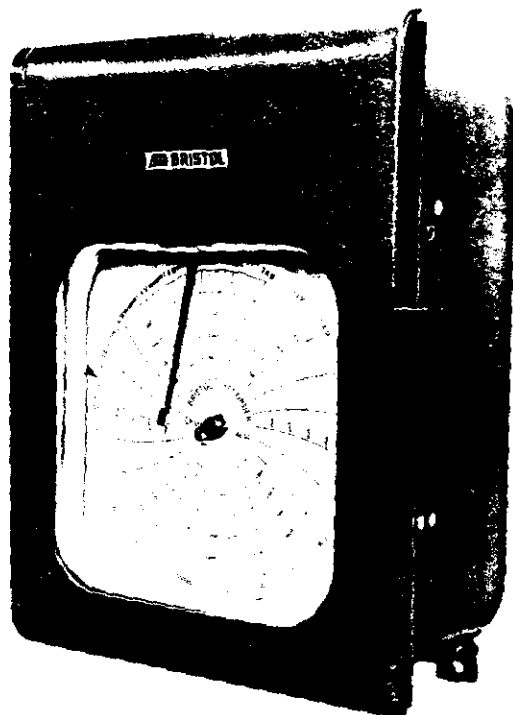
instructions

11/76 (A)

Y19798-1

ROUND CHART RECORDERS

W/ 8-IN. & 12 IN. CHARTS



Bristol Division

40 BRISTOL STREET, WATERBURY, CONNECTICUT 06720 • (203) 756-4451

American Chain & Cable Company, Inc.

Member of the Babcock & Wilcox Ltd Group of Companies

*Copies Provided at the
request of D. Tutill by
the City of Pocahontas*

Der April 6, 1983

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NOTE

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the Bristol Division of ACCO, Waterbury, Connecticut 06720. As a measurement, control or protection device or system, customer should note that a failure of this instrument or system for whatever reason, may leave the monitored process unprotected. It is suggested that the customer review the need for further redundant or other alternate means of protection.

ELECTRICAL GROUNDING OF INSTRUMENT ENCLOSURES

Enclosures of electrical instruments must be grounded in accordance with the rules and regulations of Occupational Safety and Health Standard, 1919.314(g)(3), dated May 29, 1971. Reference source: National Electrical Code, NFPA 70-1971, Section 250-123.

The grounding requirement is also applicable to mechanical instruments that include electrical devices.

1. DESCRIPTION OF RECORDERS

Round Chart Recorders record the value of a measured variable on a circular paper chart. Instruments employ either mechanical or electrical sensing devices to perform the measurement function. Both the type and range of the sensing device are furnished for the purchaser's application.

Recorder models are offered with 12-inch or 8-inch charts. A 12-inch model is shown in figure 1, while an 8-inch model is shown in figure 3. The former type -because of its larger size- provides flexibility for additional options or equipment, while the latter type is intended for more compact instruments.

Recorders are offered in one-pen or multi-pen models. A one pen model is shown in figure 3, while a two-pen model is shown in figure 1. Models having more than two pens include separate linkages and measuring systems for each pen.

Instruments may be specified with general purpose indoor cases or with weatherproof outdoor cases. Cases with carrying handles and leveling feet may also be specified for portable applications. Mounting hardware and attachments are furnished for the user's application.

2. RECORDER COMPONENTS

The operating components for sample instruments are shown in figures 1 through 4. They are described as follows:

Fountain Pen Inking systems as shown in the illustrations are supplied as standard items. Bottle-fed capillary or fiber-tip cartridge pens are optional.

Pen Lifter Rod raises pen or pens to facilitate chart changing. Rod is pulled downward to raise pens.

Time Index indicates the recording arc of the pen. On multi-pen models the index points to the arc of the #1 pen (shortest pen arm); slight error difference exist for the remaining pens.

Fine Zero Adj. This adjustment is used during calibration to calibrate the pen with a 0% input signal. See heading 6.

Chart Hub Clip. Flip-type hub clip provides positive locking action of chart paper to prevent slippage.

Chart Plate is held in place by two spring clips and is easily removed to gain access to interior components.

Guide Slot. Located at the top of the chart plate, the guide slot is used to keep the chart paper flat against the chart plate.

Chart Drive Motors. Electric types furnished for 120 vac or 240 vac (50 or 60 Hz) power operation. Mechanical spring-wound types may also be furnished in single or dual-speed types. Chart rotation is as specified by the purchaser.

Measuring Elements are supplied per instrument application and may vary from those shown in the illustrations.

Universal Conduit Connection Plate. This plate is reversible to allow bottom or back connected electrical or pressure connections.

3. THEORY OF OPERATION

Recorders employ a measuring element (figures 2 & 4) that converts a process measurement into a motion signal. The motion signal is transmitted by a four-bar linkage arrangement to a pen arm which, in turn, positions the pen on the chart. A full sweep of the input range by the measuring element produces a corresponding 0% to 100% change of chart reading.

4. SPECIFICATIONS DATA PLATE

A specifications data plate is attached to the inside door of each instrument. The plate gives the model number, serial number, operating range and other pertinent data. Always refer to this plate when installing or servicing the instrument.

5. INSTALLATION, OPERATION & SERVICE

The installation of the case, and operation & service of the chart drive and inking system are covered in separate instructions contained in this manual. The measuring system and instrument options are also detailed in separate instructions.

Piping or wiring diagrams are furnished as required with this manual.

6. CALIBRATION CHECK

In order to check calibration it is necessary to supply the input with precise signal levels of 0%, 50% and 100%. The manner in which these signals are generated is left to the discretion of the user. Proceed as follows:

6.1 Apply 0% test signal to input and note reading on chart.

6.2 Repeat same procedure using 50% and 100% test input levels, again noting corresponding readings on chart.

6.3 If readings are within $\pm 0.5\%$, no calibration adjustments are required. If not, proceed with step 6.4.

6.4 Re-apply 0% test signal to input. If reading is in error, turn fine zero adj. screw on pen arm (figure 1) to correct. Re-check readings at 50% and 100% check points. If normal, no further adjustments are required.

ROUND CHART RECORDERS

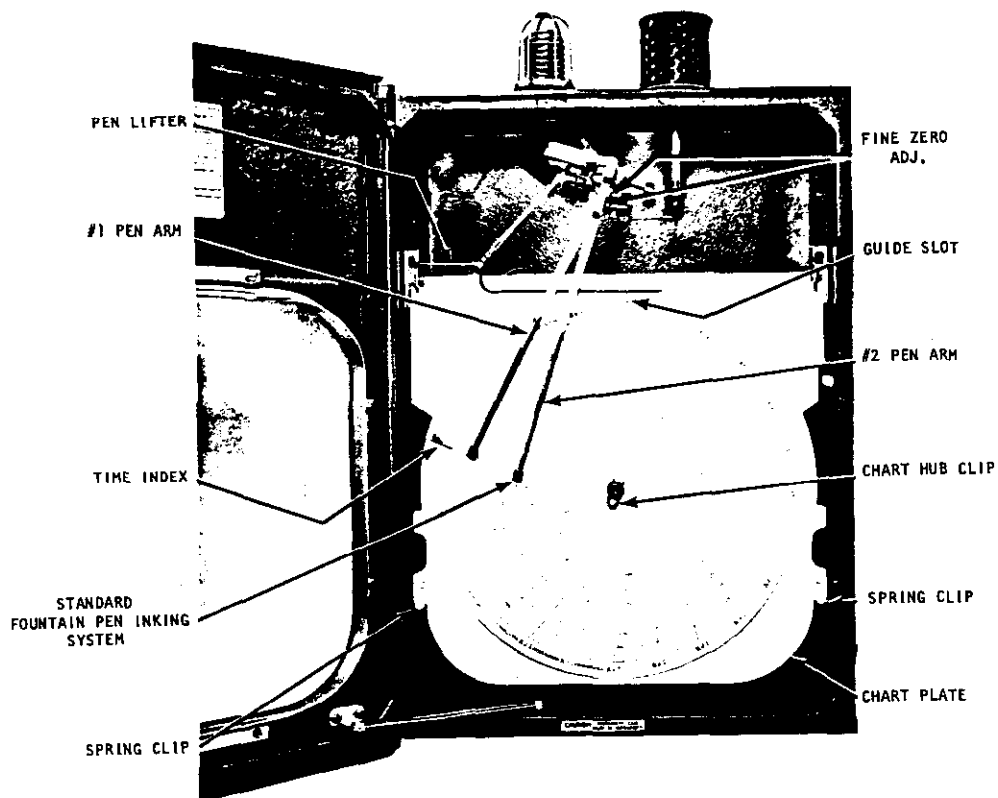


Figure 1. Typical Recorder w/ 12-Inch Chart (Series 500)

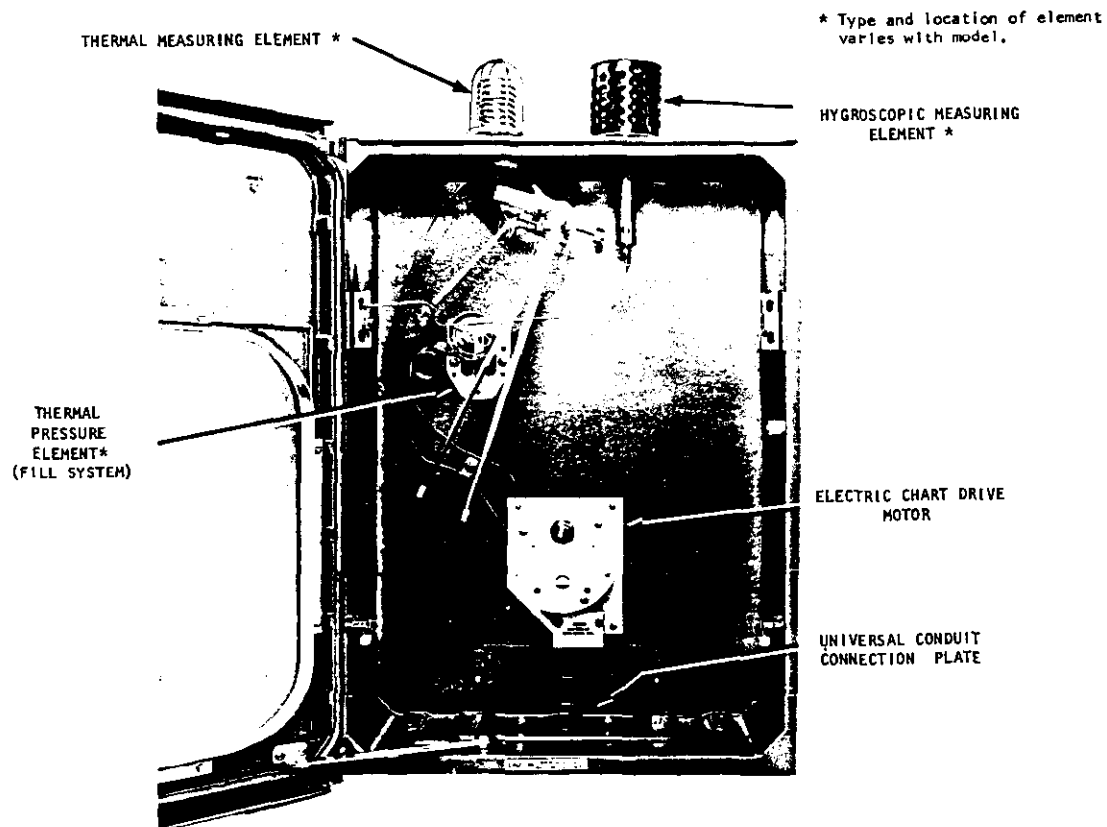


Figure 2. Interior of Recorder (12-Inch Type)

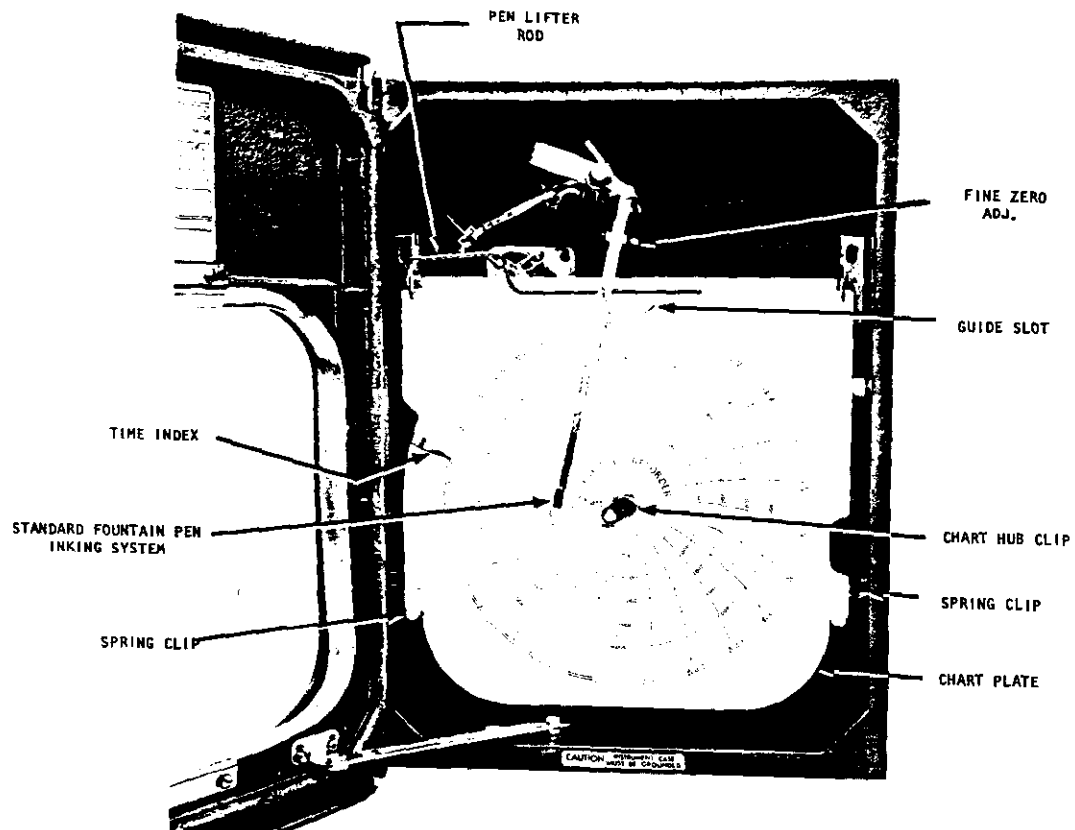


Figure 3. Typical Recorder w/ 8-Inch Chart (Series 530)

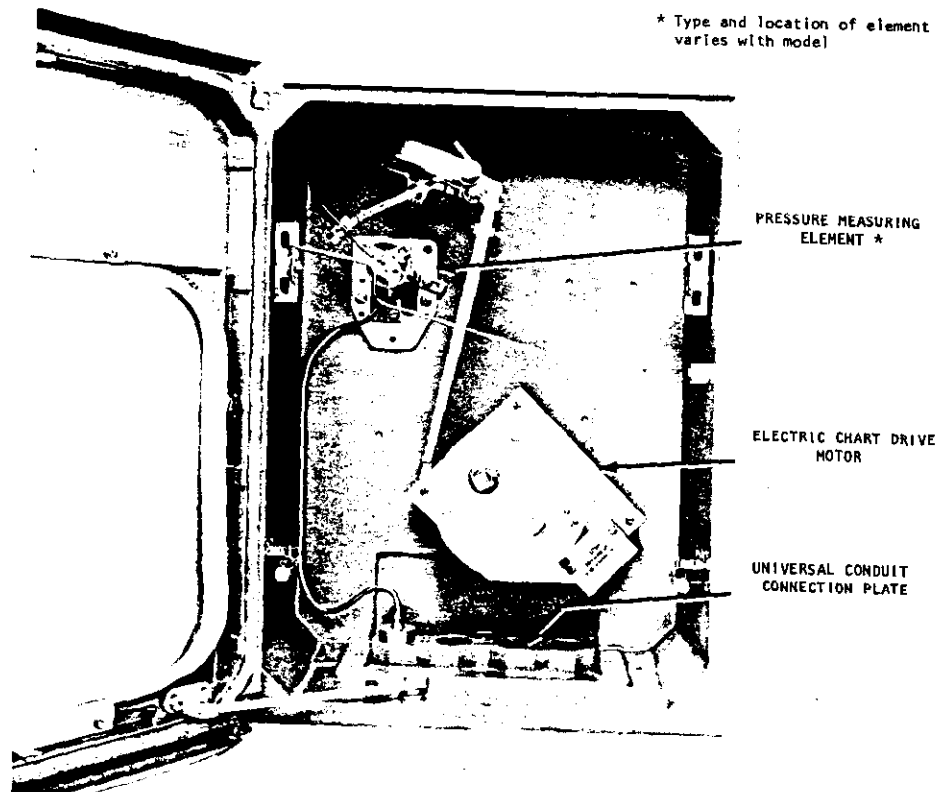


Figure 4. Interior of Recorder (8-Inch Type)

6.5 If readings at upper end of scale are still in error, more detailed calibration will be required. Refer to instructions W18042 for "Calibration of Four-Bar Linkage."

7. CLEANING

A clean instrument not only looks better, it runs better ...

Accumulated dirt can very often bring on problems that are difficult to trace. Likewise, prolonged operation in harmful atmospheres can cause premature failure of critical components. For best results, the instrument should be inspected and cleaned at regular intervals based on location and usage.

Before any cleaning is attempted, it is important that the instrument be isolated from the a-c power line. In addition, any other dangerous unswitched potentials present at the terminals should also be removed to prevent shock.

Internal components of the instrument may be brushed or vacuumed to remove loose dust. Proceed cautiously as some components can easily be thrown out of calibration or damaged by mishandling.

In general, the exterior and interior of the case can be cleaned with a solution of warm water

and household detergent. Apply solution sparingly with a moistened cloth. Never pour, dump or spray liquid on the instrument as damage may result.

Chart plates, indicating scales and glass windows may be cleaned with a mixture of warm water and mild soap. Surfaces should be sponged and wiped dry after cleaning to prevent soap film.

8. MECHANICAL MAINTENANCE

Measuring Systems. Each system is different and requires specialized attention. Refer to separate instructions for measuring systems contained in this manual.

Pen Arm Linkages. These linkages must be kept free of dirt, grease and film in order to achieve efficient operation. The cleaner recommended for this application is BRISTOL Instrument Cleaning Fluid, part number 305700-00-6. Apply fluid with brush or cloth and wipe dry. Proceed cautiously as some components are easily thrown out of calibration or damaged by mishandling.

Purging Systems. On instruments employing air purge systems, the vent hole should be inspected to make sure it is open and clear. Air entering the case should be reasonably clean and dry. Any associated air filters in the supply line (if included) should be replaced regularly based on local usage.



Bristol Division

40 BRISTOL STREET, WATERBURY, CONNECTICUT 06720

AMERICAN CHAIN & CABLE COMPANY, INC.

INSTRUCTIONS F16030
Reprint: 9/73

INSTRUCTION NO. F16030

LIQUID FLOWMETER

Note: This instruction covers only liquid-flow installation and operation. See separate instructions for gas and air flow, steam flow, differential manometers, primary devices, etc., as required.

A. Meter Lines

1. **Piping.** Meter piping between primary device and manometer should be as short as possible, preferably less than 50 feet. Pipe runs up to 100 feet are permissible for some applications. Longer runs are not recommended under any circumstances.

Copper tubing is recommended for connecting the manometer to the primary device, but steel pipe may be used. The following gives suggested pipe sizes for various meter runs: Up to 50 feet use 1/2" pipe; beyond 50 feet use 3/4" pipe.

It is advisable to have as much slope in the piping between primary device and manometer as possible. The minimum slope of horizontal runs should be 3 inches in 10 feet for hard copper tubing or steel pipe and at least 1 inch per foot for soft copper tubing. The use of soft copper tubing is not recommended for lengths greater than 50 feet because of the difficulty in straightening the tubing and avoiding pockets.

No leaks can be tolerated in the lines between the primary device and the manometer. A leak would cause an error in the instrument reading.

2. **Heating Meter Lines.** Heating is necessary in metering highly viscous fluids or in cases when the meter lines are exposed to low temperatures. This may be accomplished by running a small steam line between the two meter lines and lagging the lines together.

3. **Valves.** Gate valves should be used in horizontal runs of pipe; globe or needle valves should be used only in vertical runs of pipe.

A manifold assembly including three valves V, W, and Z (shown on piping diagrams) for connections to the manometer is furnished with each instrument when specified on the order.

4. **Precautions for Pressure Pens** (mercury-type manometers only).

When pressure pens or pressure gauges are used in conjunction with mercury-type manometers, it is recommended that static-pressure gauge piping be carried to a separate tap in the metered line or to the pressure tap at the primary device. Avoid making connections directly to the manometer or manometer manifold because diaphragm or helical pressure elements are made of cuprous alloys, silver solder, etc. that will be rapidly attacked by mercury or mercury vapors. Be sure to make pressure connections so that mercury, which may be accidentally blown out of manometer, cannot drain down into the pressure element.

B. Filling Meter Lines

1. **Meter Below Primary Device.** See Figures 50 and 51. With valves X and Y closed,

open valves V, W, and Z. Remove plugs A and B and vent valves F and G. Fill with line fluid alternately at A and B until full. Replace plugs A and B. Fill lines at F and G until liquid overflows, tapping pipes gently to dislodge bubbles and remove air. Replace vent valves F and G. Be certain that all air has been removed from system. When system has been filled with line fluid as directed above and all air removed from system, the recording pen or pointer should stand slightly above the chart zero because of the buoyancy effect of the fluid on the float. Reset pen (or pointer) to zero with micrometer adjustment on pen. Check to make sure vent valves F and G are closed. Meter is now ready to start.

2. Meter Above Primary Device. See Figures 52 and 53. With valves X and Y closed, open valves V, W, and Z. Remove plugs A and B and vent valves F, G, M, and N. Fill with line fluid alternately at A and B until full. Replace plugs A and B. Fill lines at F and G until liquid overflows, tapping pipes gently to dislodge bubbles and remove air. Replace vent valves F and G. Proceed to fill lines with line fluid at M and N until liquid overflows, gently tapping pipes to dislodge air bubbles. Be certain all air has been removed from system. Replace vent valves M and N. Check to see that all vent valves are closed. Meter is now ready to start.

C. Starting Meter

With valves X, Y, V, and W closed and valve Z open, crack valves X and Y sufficiently to allow line pressure to build up in piping; then open valves X and Y wide. Crack valve V and open slowly until pressure is on both sides of manometer. Pen will remain at zero. Close valve Z. Slowly open W until open wide. Meter will now start to indicate or record, as the case may be.

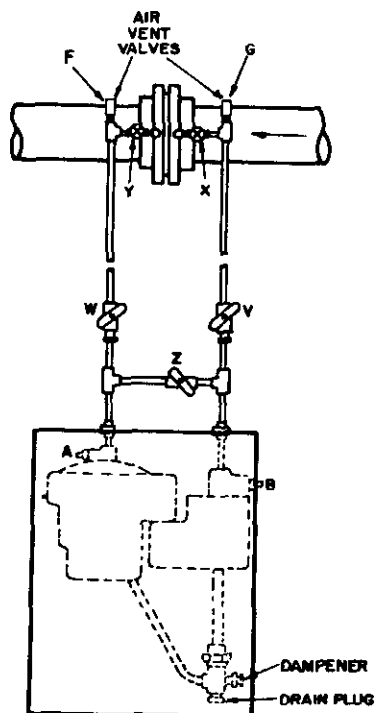


FIG. 50 PIPING DIAGRAM
MERCURY U-TUBE MANOMETER
FOR USE ON LIQUID FLOW
(METER BELOW ORIFICE)

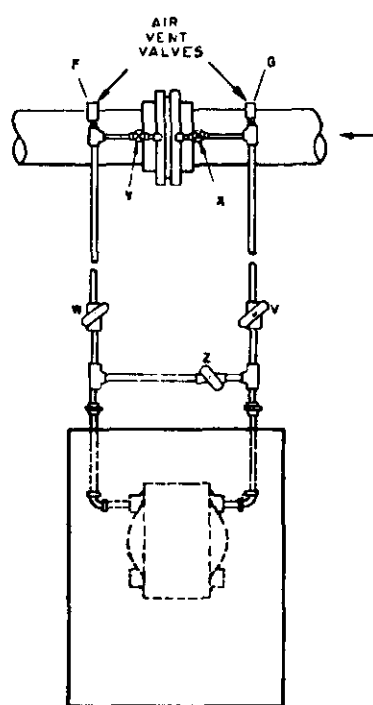


FIG. 51 PIPING DIAGRAM
BELLOWS TYPE DIFFERENTIAL
MANOMETER
FOR USE ON LIQUID FLOW
(METER BELOW ORIFICE)

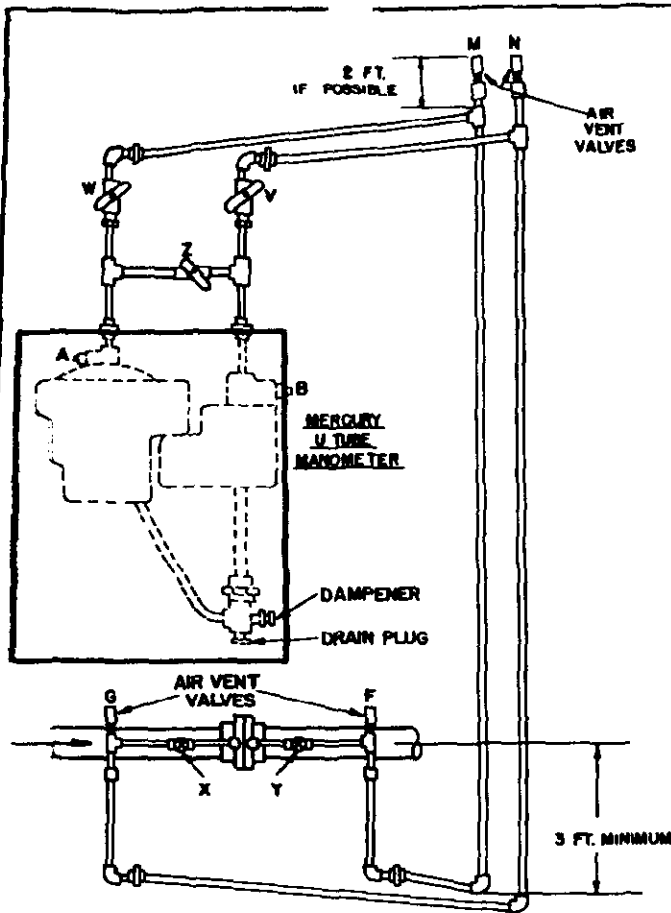


FIG. 52 PIPING DIAGRAM
MERCURY U-TUBE MANOMETER
FOR USE ON LIQUID FLOW
(METER ABOVE ORIFICE)

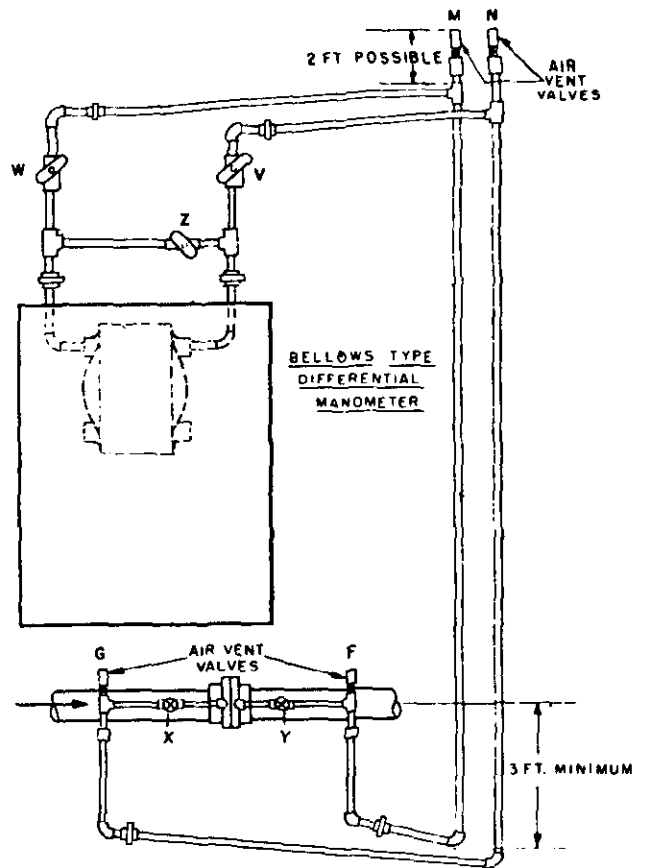


FIG. 53 PIPING DIAGRAM
BELLOWS TYPE DIFFERENTIAL MANOMETER
FOR USE ON LIQUID FLOW
(METER ABOVE ORIFICE)

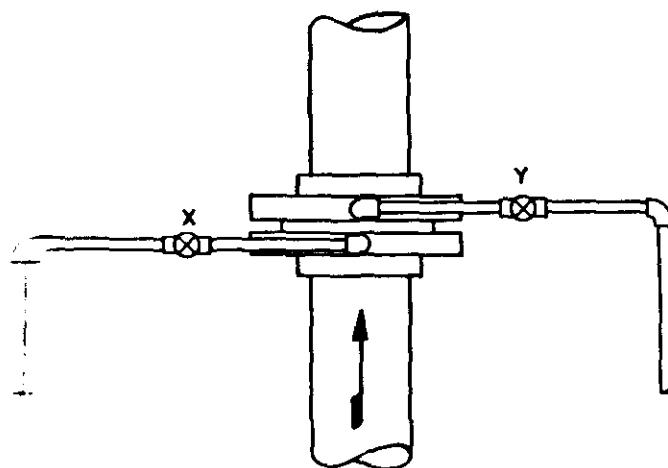


FIG. 54 INSTALLATION ON VERTICAL LINE

D. How to Stop Meter

Close valve W. Open valve Z slowly until equal pressure is on both sides of manometer. Pen should rest at zero under this condition. Close valve V. Meter may now be disconnected. If work is to be done on piping beyond valves W and V, close valves X and Y.

Caution: Do not disconnect manometer from piping without first closing valves W and V and opening Z. Do not disconnect any of the meter piping without first closing valves X and Y.

GENERAL INSTALLATION INSTRUCTIONS FOR ORIFICE PLATES, FLOW NOZZLES & VENTURI TUBES

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Bristol Division

40 BRISTOL STREET, WATERBURY, CONNECTICUT 06720

AMERICAN CHAIN & CABLE COMPANY, INC.

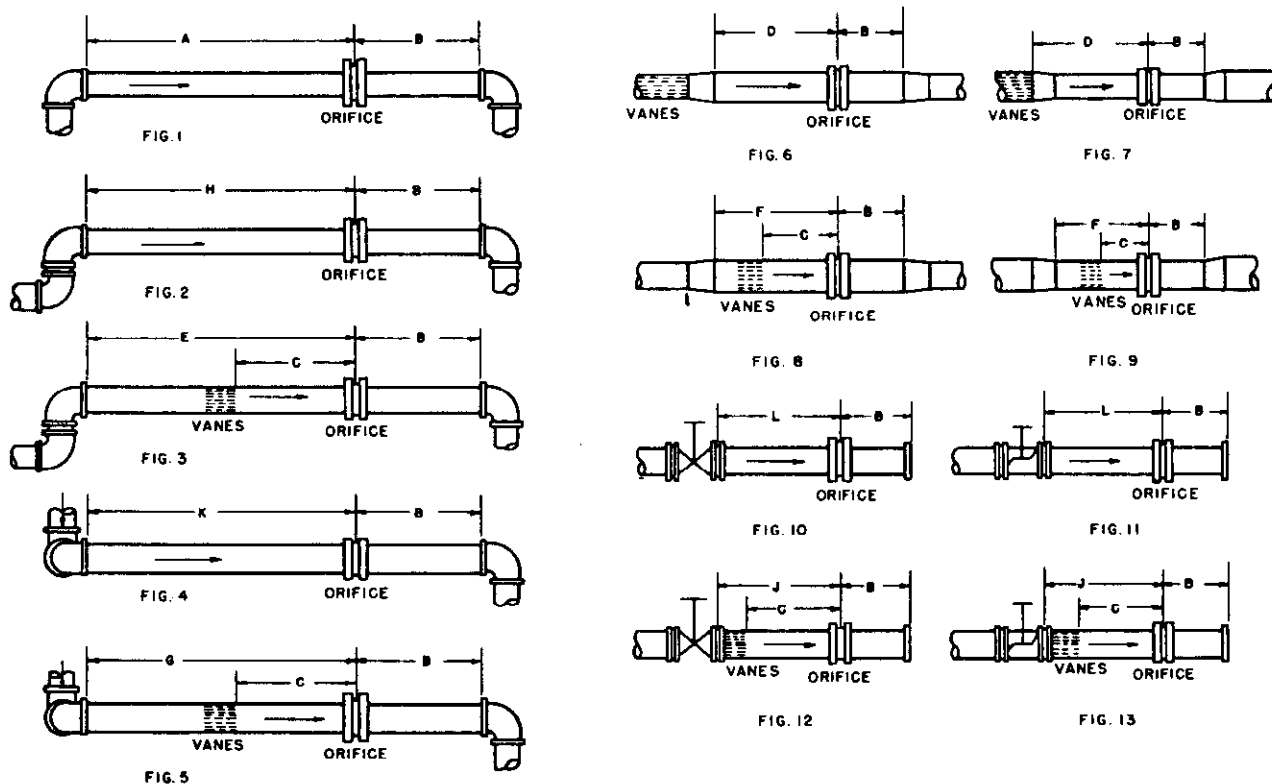
NOTE: This instruction covers only the installation of the primary devices. See separate instructions furnished for the differential manometer, recorder system, control system, etc. as required.

SECTION I ORIFICE PLATES AND FLANGES

A. The Orifice Plate (See Figures 1 thru 14)

The orifice plate is the most common and also the most convenient type of primary device. The orifice plate consists of an accurately bored hole in a flat plate. The plate may be from 1/16" to about 3/8" thick depending on the pipe size. However, the thicker plates are beveled on the downstream side so that the thickness of the plate at the entering edge is usually about 1/50 of the pipe I.D. Always install beveled plates with the flat side upstream (this side is marked inlet on the handle) and the beveled side downstream. Orifice plates should be carefully cleaned before installation. If plate is greasy, wash it with gasoline or other solvent. Do not clean orifice with emery or sandpaper because this will round the edges of the orifice and destroy the accuracy of the plate and the calibration of the recording or indicating instrument.

1. Location. In order to take full advantage of the accuracy built into Bristol's flowmeters, the orifice plate should be installed in the pipe line at a point where the longest possible straight run of pipe will exist upstream from the orifice. For this reason it is important to select the location of the orifice carefully. Pipe fittings, sharp bends, valves, etc., close to the orifice set up eddy currents and disturbances that effect the differential pressures across the orifice, sometimes enough to cause inaccurate readings. The orifice is designed for a particular pressure tap location as specified on the order, there is no choice of location after the plate has been drilled.



LOCATION OF PRIMARY DEVICES AND STRAIGHTENING VANES

β	A	B	C	D	E	F	G	H	J	K	L
0.10	6.0	2.4	5.0	6.0	8.5	8.5	9.5	8.5	9.5	14.0	16.0
0.20	6.0	2.7	5.0	6.0	8.5	8.5	9.5	8.5	9.5	14.5	17.5
0.30	6.0	3.0	5.0	6.0	8.5	8.5	9.6	8.5	9.5	16.0	19.5
0.40	6.0	3.3	5.0	6.0	8.5	8.5	9.6	8.5	9.5	17.8	21.6
0.50	6.8	3.6	5.3	7.4	9.2	9.5	10.0	10.0	10.3	20.2	25.0
0.60	9.0	3.9	5.7	9.4	10.4	10.4	11.3	13.4	12.0	24.7	30.0
0.70	14.0	4.3	6.6	12.0	12.2	12.0	13.0	18.5	15.0	30.5	38.0
0.80	20.0	4.5	8.0	15.0	15.5	15.0	16.5	25.0	19.5	40.0	50.0
β = ORIFICE INSIDE DIAMETER DIVIDED BY PIPE INSIDE DIAMETER											

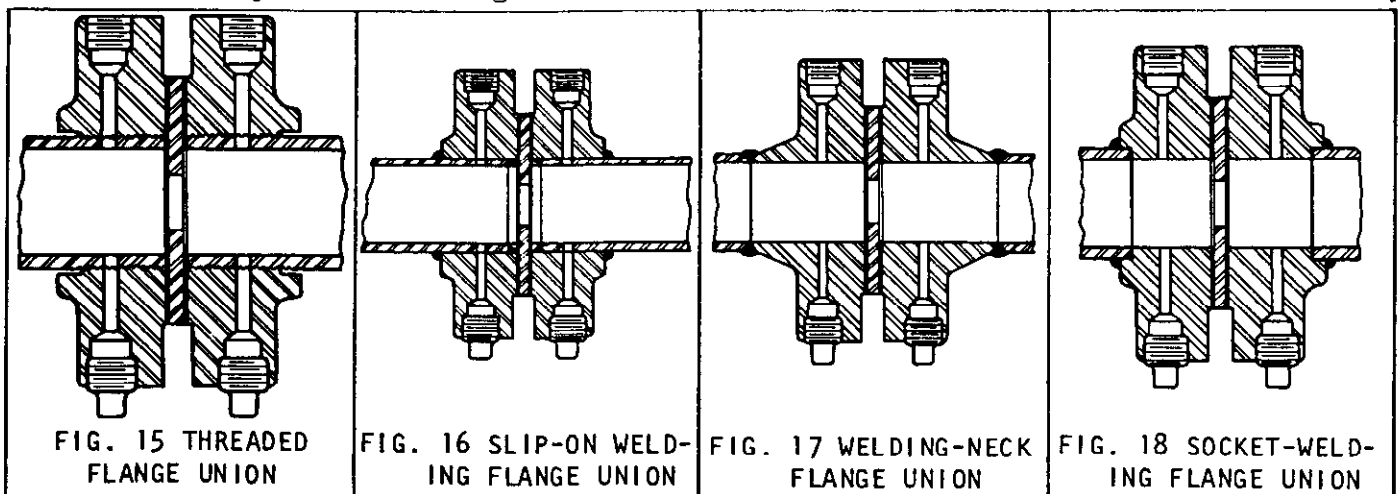
FIG. 14 MINIMUM LENGTHS OF STRAIGHT PIPE IN TERMS OF PIPE DIAMETER FOR ACCURATE MEASUREMENT WITH FLOW METER USING FLANGE CONNECTIONS.

2. Installation. The orifice plate may be inserted between any standard pipe flanges. Generally, orifice flange unions are used except where vena-contracta or pipe taps (2½ and 8) are used. The plate must be clamped so that the orifice is concentric with pipe without distorting orifice plate or pipe. The orifice plate is designed to clear the bolt holes in the flanges by approximately 1/16". It is desirable to have the end of the pipe flush with face of flange, thus leaving no recess between end of pipe and orifice plate except that due to the thickness of the gasket. In no case should the face of the flange extend beyond the end of pipe so that recess exceeds 1/4". Gaskets should have openings as large as the outside diameter of the pipe and should be fastened on flanges with shellac or other suitable adhesive. The use of white lead or some other non-adhesive is preferred between the gasket and orifice plate.

B. Orifice Flange Unions (See Figures 15 thru 18)

Orifice flange unions are designed and furnished as a convenient device for holding the orifice plate and for measuring the differential pressure across the plate. They consist of two flanges, each drilled for two pressure connections located 180 degrees apart. The diameter of these pressure taps varies with the pipe size of the flange (1/4" drill for 2½" pipe and smaller, 3/8" drill for 3" and 3½" pipe, 1/2" drill for 4" pipe and larger). Each pressure tap is reamed and threaded (to a maximum depth of 1") to receive 1/2"-diameter meter piping (note: Taylor Forge furnishes 900- and 1500-lb. flanges with 3/4" pipe taps).

Each union is furnished complete with the standard number and diameter of bolts or studs required for the same rating pipe flange. Also, each flange is furnished with a jackscrew to separate the flanges to facilitate installation or removal of the orifice.



Orifice flange unions are available in two standard materials: cast iron and steel (forged or cast).

1. Cast Iron. Cast-iron unions are offered with threaded flanges only, for use with pipes having threaded ends. Cast-iron flanges are not suitable for welding.

Note: Bristol furnishes cast-iron orifice flange unions only in 250# rating.

Drilling dimensions (same as 300# steel flanges) and other pertinent data can be found in any mechanical or piping handbook.

2. Steel Unions. Forged-steel orifice unions are furnished in four standard types as follows:

a. Steel Threaded Union. Figure 15 shows a threaded-type flange union. These unions may be back welded to insure a pressure-tight and reinforced joint.

b. Steel Slip-on Union. See Figure 16. Slip-on flanges, as the name implies, are designed to slip over the end of the pipe in such a manner that the face of the flange projects approximately 3/16" beyond the pipe end.

Flange must be properly lined up and square with the pipe axis before it is welded.

This type of flange requires two welds: one bead between the hub and the pipe exterior, and one bead between the interior surface of the flange and the pipe end.

The welding should be done carefully to insure strength and a pressure-tight joint. It may be necessary to machine the bead at the end of the pipe to prevent interference with the facing of the flange against the orifice plate.

c. Steel Welding-Neck Union. See Figure 17. As shown in the sketch, the inside diameter of the welding-neck flange is the same as the pipe.

These unions are designed with an elongated hub or neck which is beveled on the end so as to form a groove when butted against a pipe having a similar beveled end. This groove provides a trough for the weld material.

Care must be exercised to make certain that the flange is lined up exactly with the pipe. Also, highly skilled welding is required if the joint is to be strong and pressure tight and, at the same time, flexible and neat in appearance.

d. Steel Socket-Weld Union. As shown in Figure 18, a socket is machined into the hub of the flange in such a way that the hub will slip over the pipe end for a distance between 1/4" and 1", depending on the pipe size. It is necessary that the pipe end be absolutely square.

Since the strength of the joint is entirely dependent on one weld bead, it is very essential that the workmanship be of high caliber, otherwise, the joint will be weak or will not be pressure tight.

Note also that the inside diameter of the union must be the same as the I.D. of the pipe.

C. Pressure Connections

In general, pressure connections for the piping from the primary device to the instrument should be made as follows:

For gas or air installations connect to the top or side of pipe or flange. Never connect to the bottom. For liquid installations connect to the side of pipe or flange. Never connect to top or bottom. For steam installations connect to the top of pipe or flange when instrument is above the line and the pressure is below 15 PSI, and to the side of pipe in all other cases. Never connect to the bottom. See installation diagrams furnished.

1. Location of Flange Taps. Flanges are supplied with two tap holes already drilled in each flange. These holes are located 180 degrees apart. The hole not used

should be plugged. The tap holes are so drilled that the centers of the pressure taps are approximately one inch from the orifice plate. (See Figure 19)

2. Location of Pipe Taps. Where orifice is designed for pipe taps, the upstream tap should be $2\frac{1}{2}$ pipe diameters from the upstream face of the orifice plate. The downstream tap should be placed 8 pipe diameters from the upstream face of the orifice plate. (See Figure 20)

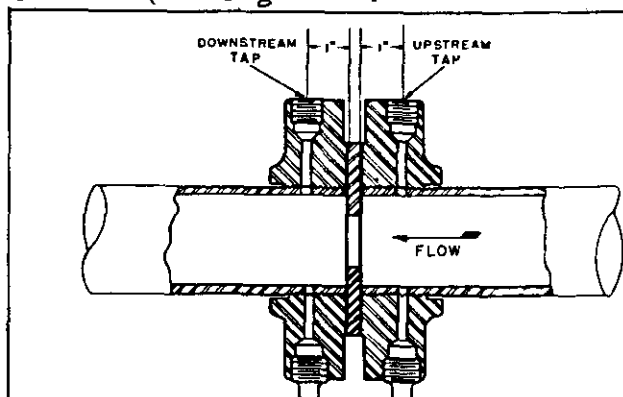


FIG. 19 FLANGE TAPS

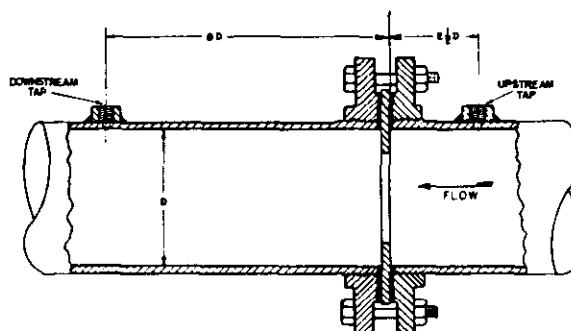


FIG. 20 PIPE TAPS

3. Location of Vena-Contracta Taps. (Note: Vena contracta is the point of maximum jet constriction downstream from an orifice plate.) Where orifice is designed for vena-contracta taps, the center of the upstream tap should be one pipe diameter from the upstream face of the orifice plate. The center of the downstream tap is located by the ratio of pipe and orifice inside diameters. The mean distance, shown in the table below, should always be used for locating the downstream tap. (See Figures 21 and 22)

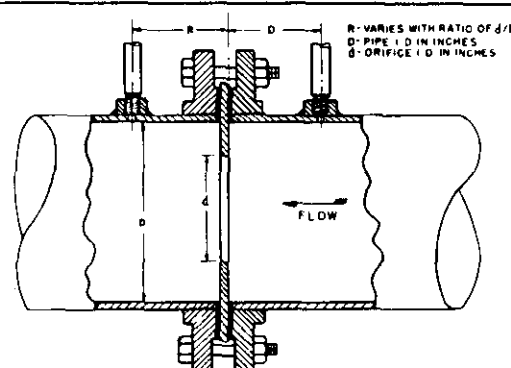


FIG. 21 VENA CONTRACTA CONNECTIONS

Ratio of Inside Pipe Diameters to Inside Orifice Diameter	Distance of Downstream Tap Inlet Face of Orifice in Pipe Diameters (R)		
	Minimum	Mean	Maximum
0.10	0.30	0.90	1.50
0.20	0.40	0.85	1.30
0.30	0.44	0.80	1.15
0.40	0.48	0.73	1.00
0.50	0.47	0.66	0.84
0.60	0.42	0.56	0.70
0.65	0.38	0.52	0.64
0.70	0.33	0.45	0.56
0.75	0.26	0.38	0.48
0.80	0.22	0.32	0.41
0.825	0.21	0.30	0.39

FIG. 22 LOCATION OF DOWNSTREAM PRESSURE TAP FOR VENA-CONTRACTA TAPS

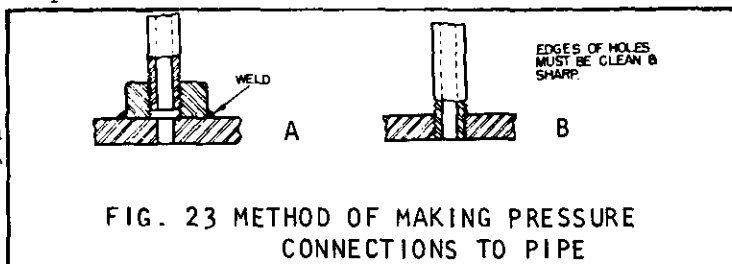
D. Tap Holes

1. Diameter of Tap Holes. For flange taps, the diameter of the taps at the inner surface of the pipe should be $\frac{1}{4}$ " for a pipe size of $2\frac{1}{2}$ " and under. For 3" and $3\frac{1}{2}$ " pipe, the diameter of the tap should be $\frac{3}{8}$ " inside. For all pipe sizes of 4" and over, the diameter of the tap should be $\frac{1}{2}$ " inside. For vena-contracta and pipe taps, the diameter of the tap on the inside of the pipe must never be less than $\frac{1}{4}$ ".

2. Drilling, Tapping, and Burring Tap Holes. Both taps should be on the same side of the pipe and perpendicular to the longitudinal axis of the pipe. The edges of the tap holes inside the pipe should be free from burrs and chamfered if possible.

With orifice using vena-contracta and pipe taps, the location for each pressure hole should be spotted on pipe with a centering punch, and then a hole of proper size should be drilled through pipe (see Figure 23B). Generally, a half coupling or weld-o-let is welded on the pipe at that point because the wall thickness of the pipe does not permit a threaded connection of sufficient strength (see Figure 23A). When a fitting is welded on the pipe, care must be taken to make sure that inside of pipe is not distorted in any way by the heat. The hole in the pipe should be drilled after the welding is done, using the fitting as a template.

With orifice using threaded or slip-on welding flanges, the flanges should be installed first before the tap hole is drilled in the pipe. The tap hole in the flange may be used as a template for the tap hole in the pipe.



E. Straightening Vanes. (See Figures 1 thru 14)

Straightening vanes are sometimes used in pipe to eliminate swirls and eddies caused by pipe fittings on the upstream side of the primary device.

When the 2 elbows shown in Figures 4 and 5 are closely preceded by a third which is not in the same plane as the middle or second elbow, the piping requirements shown by K and G should be doubled.

For vena-contracta and pipe taps, add distances between the orifice and the pressure connections to the distances shown in the table, Figure 14, to get the total lengths of pipe up and downstream.

SECTION II FLOW NOZZLES

Flow nozzles are sometimes used in place of orifice plates and flanges, particularly on high-velocity flows such as are encountered in steam lines.

Most Bristol installation drawings show an orifice plate as the primary device, but the flow nozzle may be used wherever the application calls for it, provided the instrument is calibrated for use with the flow nozzle.

Pressure Connections

On horizontal and inclined pipes, pressure connections for the piping from the flow nozzle to the instrument should be made as follows:

For gas or air installations, connect to the top of the pipe. Never connect to the bottom. For liquid installations, connect to the side of the pipe. Never connect to the top or bottom. For steam installations, connect to the top of the pipe when the instrument is above the line and the pressure is below 15 PSI, and to the side of pipe in all other cases. Never connect to the bottom.

On vertical pipes, the pressure connections may be made on any side of the pipe.

1. Location of Flow-Nozzle Taps. It is necessary to drill and tap at least one hole for pressure connections, depending on the design of nozzle. Where long-radius nozzles are used, such as illustrated in Figure 24, two taps have to be drilled. The upstream or high-pressure connection is placed one pipe diameter upstream from the inlet of the nozzle. The downstream or low-pressure connection is usually 1/2 to 3/4 pipe diameter from inlet of nozzle as specified on installation sheet, depending on the nozzle design. In no case should the low-pressure connection be beyond the out-let of the nozzle.

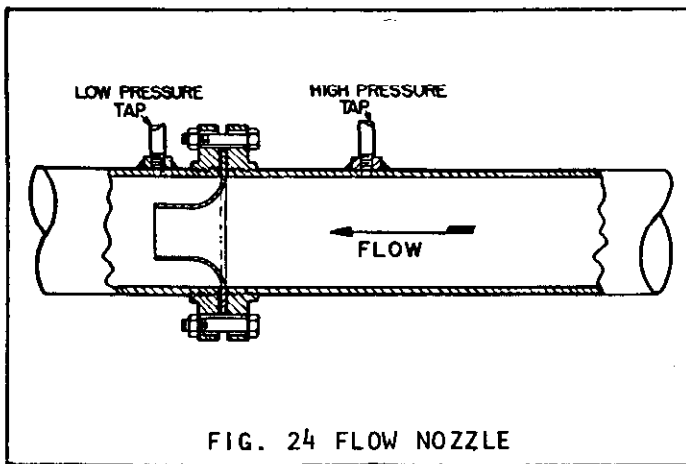


FIG. 24 FLOW NOZZLE

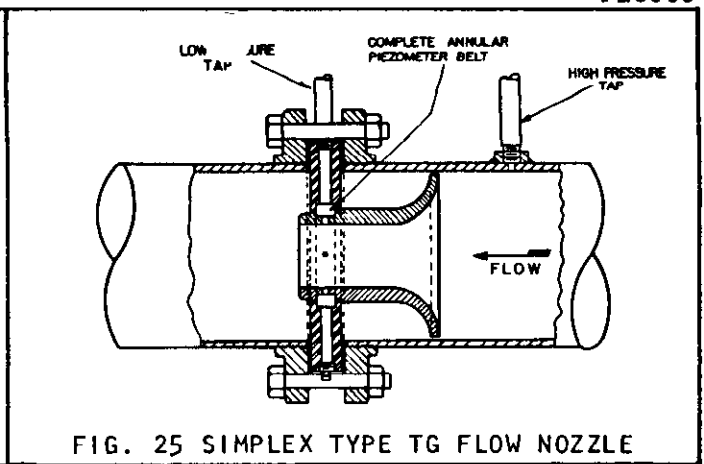


FIG. 25 SIMPLEX TYPE TG FLOW NOZZLE

On the Simplex-type TG nozzle, only one tap hole need be drilled in pipe as the other is integral with the nozzle (see Figure 25).

B. Location of Flow Nozzle

The flow nozzle should be installed in the pipe line at a point where the longest possible straight run of pipe will exist upstream from the flow nozzle. The straight run of pipe required for a flow nozzle is the same as for an orifice plate. See Fig. 1 thru 14 for straight run of pipe required.

Pipe fittings, sharp bends, valves, etc. close to the flow nozzle set up eddy currents and disturbances that affect the differential pressures across the flow nozzle. For this reason, it is important to select the location of the flow nozzle carefully.

SECTION III VENTURI TUBES

The venturi tube is universally accepted as the most efficient primary flowmeter device available. A typical venturi tube is shown in Fig. 26. The sections of a venturi tube are identified as follows: 1) The entrance cone- consisting of a short section of straight pipe (usually one pipe diameter) preceding the high-pressure connection and leading into a converging section. 2) The throat section- where maximum convergence and minimum pressure of the flowing fluid occurs. 3) The exit cone- a diverging section which permits the flowing fluid to expand gradually.

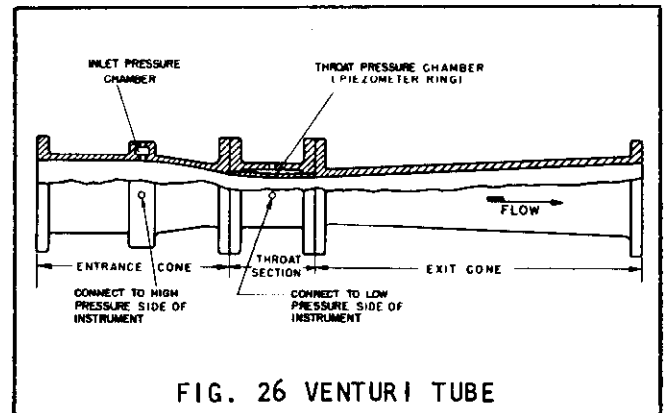


FIG. 26 VENTURI TUBE

Most Bristol installation drawings show an orifice plate as the primary device, but the venturi tube may be used wherever the application calls for it, provided the instrument is calibrated for use with a venturi tube.

A. Pressure Connections

On horizontal and inclined pipes, pressure connections for the piping from the venturi tube to the instrument should be made as follows:

For gas or air installations, connect to the top of the pipe. Never connect to the bottom. For liquid installations, connect to the side of the pipe. Never connect to the top or bottom. For steam installations, connect to the top of the pipe when the instrument is above the line and the pressure is below 15 PSI, and to the side of pipe or flange in all other cases. Never connect to the bottom.

On vertical pipes, the pressure connections may be made on any side of the pipe.

1. Location of Venturi-Tube Taps. Pressure connections for venturi tubes are located at entrance and throat. Instead of a single hole at each tap, there are usually several holes evenly spaced around the periphery of the tube. These are joined together by means of an integral annular ring called a piezometer ring. With this arrangement if one hole becomes plugged, accuracy of the measurement is not impaired.

B. Location of Venturi Tube

The venturi tube is set in the pipe in the same manner as an ordinary section of pipe, the shorter cone forming the inlet or upstream end. It is not essential that the tube be installed in a horizontal pipe; it may be installed in inclined or even vertical pipes.

A straight length of pipe of the same diameter as the meter should always be placed immediately before the inlet. Preferably, the length of this pipe should be at least 6 times the diameter of the tube for sizes up to 24 inches and at least 12 feet for larger sizes.

RECEIVED
FEB 1 1960
FBI - NEW YORK

CONVERSATION MEMORANDUM

DATE 12-22-82FILE 29-7322NAME OF PARTY Gray - City Water SupervisorEMPLOYEE Jim Johnson

RE: The above called in reference to my 12-17-82 letter to inform me that the well # 30 was not located within the NENE sec. 35 but rather in NWNE sec 35.

I called H. W. Jones and he said that he had drawn the well location on the field map based upon field notes and that the map he used did not have sufficient detail to show which 40 acre tract the well was in. He checked another map of the city at my request and confirmed that the location ^{of the well} ~~was~~ in fact within the NWNE sec 35.

RECEIVED



State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

A. KENNETH DUNN
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

December 17, 1982

RE: Permit No. 29-7322

City of Pocatello
P.O. Box 4109
Pocatello, ID 83201

Gentlemen:

A representative of this Department made an examination of the works covered by your Permit No. 29-7322 and has found the following:

Amount of water that can be recognized as beneficially used under Idaho law: 17.07 cfs Source: groundwater

The maximum quantity diverted shall not exceed n/a acre feet per year.

Point of diversion: NE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 35, NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 15, NE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 16, Twp. 6S, Rge. 34E

Beneficial use: Municipal use within the city limits of Pocatello.

Priority date established: April 25, 1976 (late proof)

In order for the Department to issue the above license, it will be necessary for you to amend the permit to correspond with the findings of the field examiner. We are enclosing a partially completed amendment form for your use in this matter.

Please sign the amendment application and return it to this office along with a \$20.00 filing fee within 30 days in order that we might issue your license as set forth above. If you do not concur with these findings or have any questions, please contact us within the 30-day period.

Sincerely,

JIM JOHNSON
Water Distribution Supervisor

JJ:kw
Enclosure

State of Idaho
DEPARTMENT OF WATER RESOURCES
FIELD REPORT

29-7322
Permit No.

CONTACT WITH PERMIT HOLDER

	DATE	INITIALS	REMARKS
☐ Appointment letter mailed:			
☐ Telephone call made: (List Telephone No. used)			
☐ Appointment scheduled for: (Date, time, location)			

EXAMINATION

Date 7-22-81 + 9-8-81 Accompanied by Clint Buchanan Total Q measured 17.07 cfs
If source is surface water, estimate total flow of source _____
Methods of measurement Bristol Chart Recorder* Meets Permit requirements? Yes

Measurement calculations:	Well #30	2500 spm = 5.57 cfs	gpm figures taken from chart recorder on each pump
	Well #31	3600 spm = 8.02 cfs	
	Well #32	1550 spm = 3.45 cfs	
	<u>17.07 cfs</u> capacity		

WELL/DIVERSION* NO.	HP	MOTOR MAKE	MOTOR SERIAL NO.	PUMP MAKE	PUMP SERIAL NO.	MEASURING DEVICE TYPE	CONDITION OF MEAS. DEV.	REMARKS
#30	400	Westinghouse	NA	Wellline	T80259	Recorder	Good	
#31	400	Westinghouse	45-77	Peerless	NA	Recorder	Good	
#32	200	Westinghouse	7803	Peerless	235166	Recorder	Good	

System Description The above 3 wells in addition to others in the City of Pocatello pump to various storage tanks for municipal use.

*Code with map on reverse side. Disregard code if only one.

RECOMMENDED AMOUNTS

USE	Irrigation requirement =		AFA/Acre	
	Q (cfs)	V (afa)	FROM	TO
<u>Municipal</u>	<u>17.07</u> ✓		<u>Jan. 1</u>	<u>Dec. 31</u>

Remarks * Bristol chart recorders ^{are accompanied by} ~~with~~ orifice plates to measure rates of flow.
The orifice plate and recorder is installed as a system.
Dec 1/27/83
(Per telecon w/ examiner)

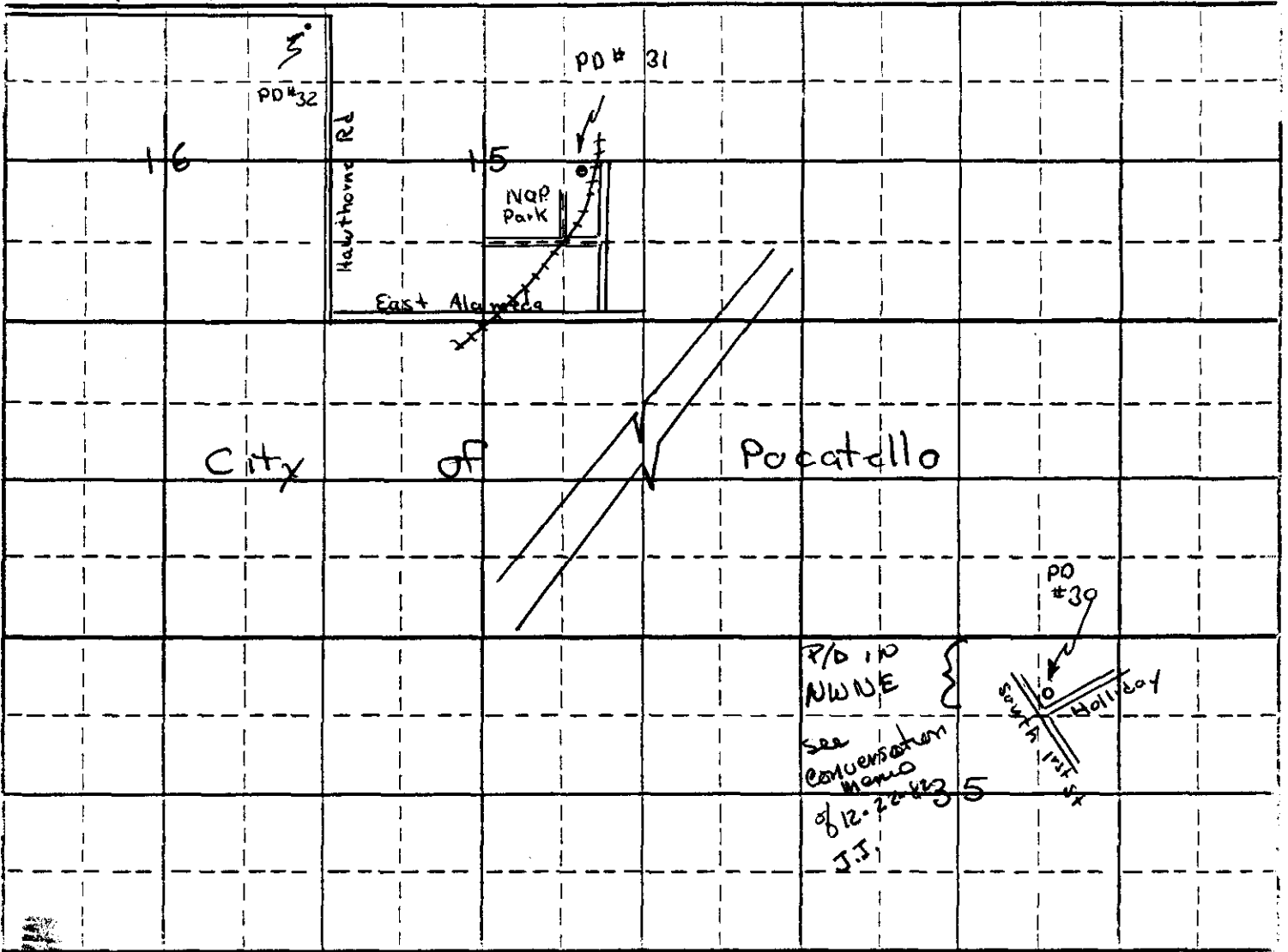
11-6-81

R34E

MAP (Attach Aerial Photo)

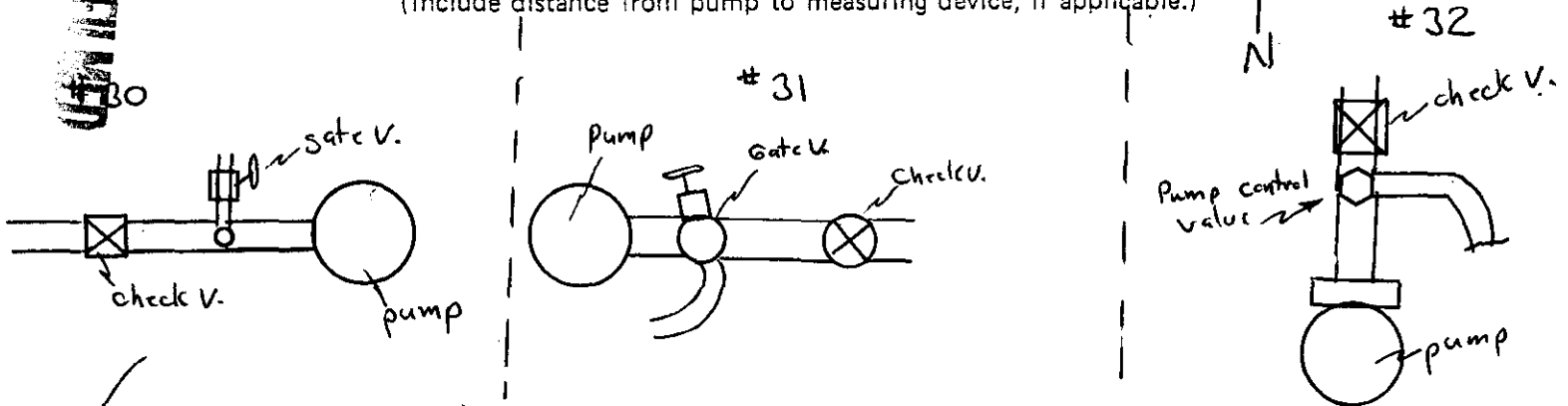
West Quinn Rd

TGS



SCHEMATIC DIAGRAM OF SYSTEM

(Include distance from pump to measuring device, if applicable.)



Point(s) of diversion: #30 - NW 1/4 NE 1/4 SECT 35, #31 - NE 1/4 of SE 1/4 SECT. 15, #32 - NE 1/4 of NE 1/4 SECT. 16 TGS R34E

Place(s) of Use

TWP.	RGE.	SEC.	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTALS
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	

City of Pocatello

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

Examiner's Signature

Checked by

Approved by

Date 9-8-81

Date 12-8-81

Date 11-5-82



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
EASTERN REGION

John V. Evans
Governor

C. Stephen Allred
Director

1515 Lincoln Road
Idaho Falls, Idaho 83401
(208) 523-7186

July 10, 1981

RE: Permit No. 29-7322

City of Pocatello
P.O. Box 4169
Pocatello, Idaho 83201

Gentlemen:

~~Permit reinstated and priority advanced to April 25, 1976.~~
~~We acknowledge receipt of the proof of beneficial use card~~
submitted for the above referenced permit.

Before a license can be issued, a field examination must be made by a representative of this department. We cannot tell just when this examination will be made, but our examiner will try to contact you at the time he makes the examination so that you may show him the system.

If you have any questions regarding the field examination, please contact our eastern regional office.

Very truly yours,

BOBBIE R. STEPHENS
Principal Clerk

cc: IDWR - State Office

DEPARTMENT OF WATER RESOURCES

The Idaho Department of Water Resources will consider this card a statement that the permit holder(s) has completed development to the extent shown below. Permit No. 29-7322

Name(s) of Permit Holder: CITY OF POCA TELLO

Post Office Address: P.O. Box 4169 POCA TELLO, IDAHO

Tel. No. 232-4311

Source of Water: DEEP WELLS

Extent of Use: ☐ Domestic (number of households)
☐ Stockwater (number and type of stock)
☐ Irrigation (acres)
☒ Other MUNICIPAL

Measuring Device: ☒ Required? ☒ Yes ☐ No Installed? ☒ Yes ☐ No

Access Port: ☒ Required? ☐ Yes ☐ No Installed? ☐ Yes ☐ No

The above information is a true statement of the extent to which the above numbered permit has been developed.

5-20-81

Date

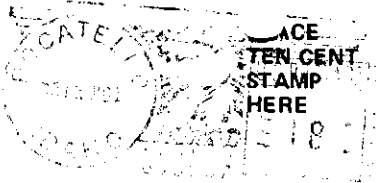
CHARLES W. MOSS
CITY MANAGER

Signature of Permit Holder

CITY OF POCA^{to}LO

P.O. Box 4169

POCATELLO, IDAHO



Department of Water Resources

MAY 20 1981

RECEIVED

8 Jim Johnson

IDAHO DEPARTMENT OF WATER RESOURCES
STATEHOUSE
BOISE, IDAHO 83720

INTER-DEPARTMENT MEMO — 1

FROM Rita Fleck

DATE June 11, 1981

TO File 29-7322

SUBJECT Priority date - Reinstatement order

The advancement of the priority date was determined by using the date the extension request was submitted to the office instead of the statement of beneficial use, as provided in Section 42-218a, Idaho Code, loss in priority is that priority loss.


SIGNATURE

May 19, 1981

City of Pocatello
Charles W. Moss
City Manager
P.O. Box 4169
Pocatello, Idaho 83201

Dear Mr. Moss,

RE: Permit No. 29-7322

Enclosed is the Proof to Beneficial Use card as we discussed in our telephone conversation.

Please fill it out and return it to us as soon as possible.

Sincerely,

JIM JOHNSON
Water Distribution Supervisor

Enclosure

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
REQUEST FOR EXTENSION OF TIME

RECEIVED

To provide additional time in which to submit APR 30 1981
proof of beneficial use on a water right permit

Department of Water Resources

CITY OF POCAHELLO of P.O. Box 4169
(Name) (Address)

State of IDAHO, deposes and says:

That he is the holder, or the duly authorized agent of the holder*, of Permit to Appropriate the Public Waters of the State of Idaho No. 29-7322.

That under the terms and conditions of said permit, work thereunder was required to be completed on or before APRIL 1, 1981.

That he has heretofore performed the following work described under said permit: _____

DRILLED 3- 20" WELLS TO A DEPTH OF 300'
WELL # 30
WELL # 31
WELL # 32 Costing \$ 125,000⁰⁰

That he is unable to complete the remainder of the work within the required time for the following reasons, to-wit: WELL # 30 CANNOT BE PUT INTO OPERATION TILL
3,375' OF DISCHARGE PIPE IS INSTALLED. WELL # 31 &
WELL # 32 IS IN OPERATION AT THIS TIME. 525' RAILROAD
CROSSING REQUIRED WITH DISCHARGE PIPE CONSTRUCTION.

Wherefore, he asks that the Department of Water Resources extend the time for the completion of obligations under said permit to APRIL 1, 1982.

Charles W. Moss
CHARLES W MOSS
(Signature)*
CITY MANAGER

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

IT IS HEREBY ORDERED that the above application for extension of time be _____

Superseded by
beneficial use
statement submittal

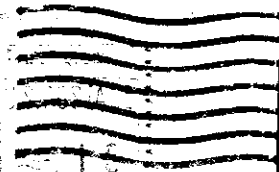
Signed this 10 day of APRIL, 1982.

CITY OF POCA TELLO

Where People Are Important

P. O. Box 4169
Pocatello, Idaho 83201

Water Sup't.



IDAHO DEPARTMENT OF WATER RESOURCES
STATE HOUSE
BOISE, IDAHO 83720

RECEIVED

CONVERSATION MEMORANDUM

DATE 5/18/81FILE 29-7322NAME OF PARTY CHARLES MOSSEMPLOYEE Jim Johnson

RE: Mr Moss called today and we discussed the Request for Extension of time he had submitted.

The work to be completed as indicated on the extension request has been done and he requested that a proof to beneficial use card be mailed to him rather than pursuing the extension request.

I informed him that the priority date would be delayed one day for each day that we did not receive the proof.

WARNING

CANCELLED OR LAPSED

This permit has been officially CANCELLED or LAPSED.

Ninety days following the date of official action this file will be DESTROYED.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

STATEHOUSE
BOISE, IDAHO 83720
(208) 334-4440

CITY OF POCA TELLO
P.O. BOX 4169
POCA TELLO, ID 83201

APRIL 03, 1981

DEAR PERMIT HOLDER:

YOU ARE HEREBY NOTIFIED THAT UNDER THE PROVISIONS OF SECTION 42-218A OF THE IDAHO CODE, PERMIT NO. 29-7322 HAS LAPSED SINCE YOU HAVE NOT NOTIFIED US THAT YOU HAVE COMPLETED THE PROJECT BY THE DATE REQUIRED ON YOUR PERMIT. YOU WERE PROVIDED FORMS FOR THAT PURPOSE IN OUR NOTICE TO YOU DATED JANUARY 31, 1981.

YOUR PERMIT CANNOT BE REINSTATED UNLESS YOU SUBMIT THE STATEMENT OF BENEFICIAL USE POSTCARD, ENCLOSED, OR SHOW OTHER REASONABLE CAUSE WHY THE PERMIT SHOULD BE REINSTATED WITHIN 60 DAYS FROM THE DATE OF THIS LAPSE NOTICE.

C. STEPHEN ALLRED
DIRECTOR

ENCLOSURE

CERTIFICATION OF MAILING

I hereby certify that on April 22, 1981
a true and correct copy of this document was
deposited in the United States mail,
postage prepaid addressed to the
individual(s) named above.

Pete Fleck

S T A T E O F I D A H O
D E P A R T M E N T O F W A T E R R E S O U R C E S

STATEHOUSE
BOISE, IDAHO 83720
(208) 334-4440
CERTIFIED MAIL

CITY OF POCATELLO
P.O. BOX 4169
POCATELLO, ID 83201

138359

JANUARY 31, 1981

DEAR PERMIT HOLDER:

ONE OF THE CONDITIONS OF APPROVAL OF YOUR WATER PERMIT NO. 29-7322 WAS THAT EVIDENCE OF THE EXTENT OF DEVELOPMENT MUST BE SUBMITTED TO THIS OFFICE ON OR BEFORE APRIL 01, 1981. (SEE LAST PAGE OF YOUR APPROVED PERMIT). ENCLOSED IS A POST CARD WHICH MAY BE USED TO SUBMIT THE REQUIRED PROOF OF BENEFICIAL USE.

IF YOU HAVE NOT FULLY COMPLETED YOUR PROJECT, AND YOU HAVE NOT PREVIOUSLY RECEIVED AN EXTENSION OF TIME, YOU MAY REQUEST AN EXTENSION OF TIME PROVIDED THE DELAY IS FOR REASONABLE CAUSE AS INDICATED IN SECTION 42-204, IDAHO CODE, AMENDED. IF YOU HAVE BEEN PREVENTED FROM PROCEEDING BY A GOVERNMENTAL AGENCY OR BY LITIGATION, MORE THAN ONE EXTENSION OF TIME CAN BE GRANTED. A REQUEST FOR EXTENSION OF TIME FORM IS ENCLOSED FOR YOUR CONVENIENCE. PLEASE NOTE THAT A FEE OF \$15.00 MUST BE SUBMITTED WITH THIS FORM.

EITHER THE BENEFICIAL USE POST CARD OR A REQUEST FOR AN EXTENSION OF TIME MUST BE RECEIVED BY THIS DEPARTMENT ON OR BEFORE THE ABOVE MENTIONED DATE, OTHERWISE, THE PERMIT WILL LAPSE AND BE OF NO FURTHER FORCE OR EFFECT WITHIN 60 DAYS.

SINCERELY,

RITA FLECK
SR. SECRETARY

ENCLOSURES



STATE OF IDAHO

RECEIVED

DEPARTMENT OF HEALTH AND WELFARE

APR 29 1976

Department of Water Resources
Eastern District Office

DIVISION OF ENVIRONMENT
636 Pershing
Pocatello, Idaho
83201

28 April 1976

Ronald D. Carlson, Supervisor
Eastern Region
Idaho Department of Water Resources
1515 Lincoln Road
Idaho Falls, Idaho 83401

Re: Application #29-7322
(Bannock County)

Dear Mr. Carlson:

We are in receipt of subject application to appropriate public waters of the State of Idaho, submitted by the City of Pocatello.

We have no comments to make at this time.

Yours very truly,

Monty G. Marchus
Monty G. Marchus
Environmental Engineering Spec.

MGM/md
CC: Larry Koenig

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.

JUL 5 1977

[illegible]



State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

C. STEPHEN ALLRED
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

July 28, 1980

Dear Wateruser:

The enclosed Order changes the measuring device condition of approval on your water right permit.

The changed condition is less restrictive and provides you the option to install an access port or have your system measured and certified by a professional engineer. Instructions for access port installation are also enclosed.

If you have questions regarding this matter, please contact the Regional Office nearest to you.

Sincerely,

DAVID R. TUTHILL JR., P.E.
Supervisor, Water Allocations Section

DRT:jg

Enclosures

Northern Region Office
Rt. #5 Box 203, Government Way
Coeur d'Alene, Idaho 83814

Southern Region Office
1041 Blue Lake Boulevard North
Twin Falls, Idaho 83301

Eastern Region Office
1515 Lincoln Road
Idaho Falls, Idaho 83401

Western Region Office
92 South Cole Road
Boise, Idaho 83705

April 30, 1976

Re: Permit No. 29-7322

City of Pocatello
P.O. Box 4169
Pocatello, ID 83201

Gentlemen:

Enclosed is a copy of your approved Application for Permit No. 29-7322. We direct your attention to the conditions of approval as listed on the fourth page.

Be sure to note that a special condition requiring you to install and maintain a measuring device at your point of diversion has been placed upon your permit. We are enclosing a letter describing different types of measuring devices accepted by this office.

Sincerely,

BOBBY D. FLEENOR
Chief, Water Rights

Enclosure: Copy of permit

April 12, 1976

RE: Application for Permit No. 29-7322 CITY OF POCA TELLO

Mr. Henry L. Moran
Regional Environmental Supervisor
Department of Health & Welfare
Division of Environment
636 Pershing
Pocatello, Idaho 83201

Dear Mr. Moran:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and if you have any comments, submit them to our Department as soon as possible. The last date of protest is April 26, 1976, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Very truly yours,

RONALD D. CARLSON
Supervisor,
Eastern Region

RDD: CW

Enclosures

April 7, 1976

RE: Application for Permit No. 29-7322 CITY OF POCA TELLO

Idaho State Journal
Box 431
Pocatello, Idaho 83201

Gentlemen:

On April 6, 1976, a representative of the City of Pocatello submitted a legal notice for advertising concerning the above referenced application for permit, to be published in your paper on April 9 and April 16, 1976. Because of time complications, the city requested they be allowed to submit the advertising, and, therefore, it is imperative that we have a galley proof to allow us time to check for errors before the second publication date.

Your cooperation in this matter is greatly appreciated.

Very truly yours,

RONALD D. CARLSON
Supervisor,
Eastern Region

RDC: CW

Bill submitted 4-26-76 by cw

BDC:CM

Eastern Region
Subdivision
RONALD D. CARLSON

Very truly yours,

Your cooperation in this matter

to check for errors before it
and, therefore, it is important
communications, the city needs
to be notified in your behalf
notice for advertising concerns
on April 2, 1976, a representative

gentlemen:

Pocatello, Idaho 83401
Box 431
Idaho State Journal

RE: Application for permit No.

April 2, 1976

Legal
Linda

NOTICE OF APPLICATION
FOR WATER PERMIT

Notice is hereby given that City of Pocatello, Pocatello, Idaho has on 4-06-76 submitted application No. 29-7322 for a permit to appropriate 20.0 cubic feet per second of water from ground-water sources by means of wells and pumps within the SW 1/4 SEC 9, NE 1/4 SEC 15, NW 1/4 SEC 35, T. 8S, R. 34E., B.M., Bannock County; to be used from Jan. 1 to Dec. 31 for domestic purposes within City of Pocatello.

If issued, this permit will be subject to all prior water rights. Protests against the granting of the permit must be filed with the Idaho Department of Water Resources, 1515 Lincoln Road, Idaho Falls, Idaho, 83401 on or before April 26, 1976.

R. Keith Higginson
Director
April 9, 16, 1976
No. 982

to allow us time
the advertising
because of time
location for permit
submitted a legal

NOTICE OF APPLICATION FOR WATER PERMIT

Notice is hereby given that City of Pocatello,
Pocatello, Idaho

has on 4-06-76 submitted Application No. 29-7322
for a permit to appropriate 20.0 cubic feet per second ~~also 1000 per annum~~
of water from ground-water sources
by means of wells and pumps
within the SW $\frac{1}{4}$ Sec. 9, NE $\frac{1}{4}$ Sec. 15, NW $\frac{1}{4}$ Sec. 35, T. 6S, R. 34E,
B.M., Bannock County;

to be used from Jan. 1 to Dec. 31
for domestic purposes
within the City of Pocatello

If issued, this permit will be subject to all prior water rights. Protests
against the granting of the permit must be filed with the Idaho Department of
Water Resources, 1515 Lincoln Road, Idaho Falls, Idaho, 83401 on or before _____
April 26, 1976.

R. KEITH HIGGINSON
Director

Published in the Idaho State Journal, Pocatello, Idaho
on April 9 and April 16, 1976

Handwritten notes:
- Mr. H.
- Mr. H.
- Mr. H.

DEPARTMENT OF WATER RESOURCES
- STAFF ANALYSIS -

Item Initial Date

Application No. City of Pocatello

☒ Source
☒ Point of Diversion
☒ County
☒ Quantity of Water and Period of Use
☒ Description of Diverting Works
☒ Time required for B/U of water
☒ Place of Use or Acres Irrigated
☒ Map
☒ Signature
☒ Fee

(1) RDC 4/6/76

In form to receipt **YES**

(2) " "

Send Copies to:

☒ Idaho State Health Department
☐ Idaho Fish and Game Department
☐ Bureau of Land Management

(3) " "

☐ Request Special Use Permit from U.S.F.S.
☐ Request Easement from B.L.M.
☐ Request Information from Applicant

(4) _____

In form for advertising **YES**

(5) _____

Platted on Map No. _____

(6) _____

Located within Water District No. _____

(7) _____

Critical groundwater area: yes _____ no _____

(8) _____

Groundwater levels:

_____ Declining, _____ Stable, _____ Increasing

(comment) _____

(9) _____

Other rights on the same place of use

(10) _____

Comments: _____

(11) CW 4-26-76

Affidavit of Publication received (date) April 26, 1976

(12) CW 4-26-76

Final date for protests April 26, 1976
Protests received: yes _____ no X

(13) RDC 4/26/76

All requested information received from agencies or applicant: yes X no _____

(14) " "

Action recommended:

☒ Approve

APR 27 1976 Deny

4/6/76 Proposed Priority Department of Water Resources

Reason for Reduction _____

☒ Measuring device required

See attached sheet for other conditions of approval

No special conditions for approval

(15) District E By RDC Date 4/26/76

Judy [unclear]